

Mayor Michelle Wu, City of Boston

Jascha Franklin-Hodge, Chief of Streets, Transportation and Sanitation Julia Campbell, Deputy Chief of Streets for Infrastructure and Design PWD Michael Brohel, Superintendent of Street Operations PWD Nick Gove, Commissioner of Transportation Sara Anders, Chief of Staff, Streets Cabinet Norman Parks, Chief Engineer PWD Kristen McCosh, Commissioner for the Office of Persons with Disabilities Cathy Garcia, Manager, Permits Division PWD Stephen Flaherty, Budget Unit, PWD Dion Irish, Chief of Operations Jodi Sugerman-Brozan, Deputy Chief, Worker Empowerment Enrique Pepen, Executive Director of Neighborhood Services Irgisola Budo, Director Bos:311 Para Jayasinghe, City Engineer PWD Ed Hesford, Chief Engineer BTD Paul J. Taylor, Director of Technology PWD CIU: Construction Inspection Unit Michael Somers Senior Civil Engineer CIU Troy Harris, CIU Chief Inspector Mark Cardarelli, PWD Consultant

COVID 19 HEALTH EMERGENCY ENDS MAY 11TH, 2023!

- Beginning Friday May 12th, All Permittees will no longer be required to attach COVID 19 safety plans to permit requests as well as notification emails
- The City sincerely appreciates the shared cooperation you exhibited during the worst health crisis in our country in 100 years!
- Your number one goal during your construction work was to protect the health and welfare of your workers and the general public
- We all went through this scary time together but with our <u>MUTUAL</u> cooperation and commitment utility permitted work from May of 2020 until the present day was at the same average rate of permits issued in 2019!



WELCOME BOSTON UTILITIES & CONTRACTORS

Utility Construction is a Demanding & Difficult Job!

- Dependable utility service is crucial to the quality of life and the growth of the Boston economy.
- Repairs & upgrades are a fact of life.
- Roadway layout & Subsurface conditions complicate work







WHY ARE SENDING THIS EMAIL REMINDER

- The City acknowledges the busy schedules associated with construction.
- Your work impacts both the residents of Boston and the City's infrastructure.
- Working in Boston comes with higher expectations than working in other cities/towns.
- There is a need to meet before the start of every construction season. Reinforcement is a "Good Thing".
- Reviewing the Kick off presentation via email will ensure that you fully understand the City's Rules and Specifications, as well as the expectations the City has for everyone during construction.
- After going through the presentation it is **unacceptable** to later state that you did not understand or "**were not aware**" of the City's Rules and Specifications.



Professionalism

- We all chose this profession.
- Our work affects the daily lives of everyone in Boston.
- The CIU may need to communicate to you that you have not followed the City's rules from time to time.
- Nobody likes to be told that they are not doing a good job; however, that's when professionalism must come to the forefront.
- We cannot have pushback regarding violations of the City's rules, especially when it comes to the repair of defective/failed work. Our timelines were established to make sure that defective work does not linger.
- Our rules stipulate that if you do not repair defective work in the time established we have the right to hold up new permit requests.



PWD's Responsibility

Our Goals



Ensure Public Safety Throughout Construction

Minimize Inconvenience To Public Protect and Preserve City Infrastructure



Permittee's Responsibility

Be a good temporary neighbor!





Following BTD
Traffic Plan &
Work Hours

Preserving the Quality & Ensuring Safety on our Right-Of-Ways



PROPER BEHAVIOR

In your job, you may end up interacting with the public.

When dealing with the public, you can't be rude or unprofessional even if you feel that the person is being rude to you.

Remember you represent your company or an owner and you need to keep that in mind at all times when working in the City.

If we find a crew or a person on that crew treating the public egregiously, PWD/BTD has the right to shut that job down and possibly put new permit requests on hold until a meeting can be scheduled.

This is how seriously PWD/BTD treat your interactions with the public.

Obviously we don't want to take that action but we may if we are forced to.

Let's hope we don't have to do that!



BE A GOOD NEIGHBOR

When the City gives you a permit to work on a street, it is for a set period of time

During that time period, the City wants you to think of yourself as one of the neighbors on that street.

Think of a major construction project pulling up on your street.

We want you to be the best neighbor you can be while you are working.

People get overwhelmed with signs and equipment and they sometimes need direction from you.

A polite word or helpful instructions with the local residents goes a long way while you are working.

Make sure you leaflet and post as required. Make sure that the work zone is safe for pedestrians and vehicular traffic. Make sure that the work zone is clean and safe when you leave for the day.

We know you have a job to do, but part of that job is taking into account the impact and inconvenience you cause and doing your best to minimize that impact and inconvenience.



PROTOCOLS & APPROVED MATERIALS TO BE USED

The following slides relate to PWD/BTD Protocols

- Flex Posts
- Bus Lane/Stops
- Sinkholes
- Safety affidavits (Mattocks-Higgins)
- Sidewalk deposits
- Occupancy work
- Loop Detector/Pavement Marking damages
- Bad Patch & Casting Repairs/Sidewalk Repairs
- Winter Moratorium
- Guaranteed street cuts
- Reports Cards will be back in 2023!
- Materials to be Approved



MUST FOLLOW FLEX POSTS PROTOCOLS

You must be aware of your potential impact on the high number of FLEXS POSTS we have installed in the last few years

- Flex posts should be removed and securely stored during construction [they often end up piled up by the side of the road]
- Where possible, flex posts should be reinstalled during any extended pause in construction (more than 5 working days) or a temporary barrier must be installed
- Upon project completion, functional and undamaged posts can be re-installed. Posts w/ missing or damaged poles or which do not function correctly (e.g. pole does not stand upright) must be replaced with a new post that meets City specifications
- Your company is responsible to internally track all flex posts needing replacement



MUST FOLLOW BUS LANE/STOP PROTOCOLS

You must be aware of your potential impact on bus lanes and bus stops in the City of Boston. Some bus facilities serve thousands of riders per day and a safe and functional service depends on well maintained infrastructure.

- Pavement Markings including <u>bus stop boxes</u>, "BUS ONLY" and similar lettering, and <u>red paint for bus lanes</u> - when disturbed, MUST be repainted.
- Generally, white thermo letting is used for lane markings and letters. Ruby Lakes Red Paint is used for bus lane painting; do not use MMA paint for red bus lanes.]
- Upon completion of work, you must contact transit@bosotn.gov within 3 business days for pavement markings/paint specifications.
- Failure to restore to specifications in the time required may result in permits being delayed.



Sinkhole Proximity to Castings

• If a sinkhole develops within 30 inches of a casting belonging to a Permittee and testing determines that there is no undermining of the sub-base from underground leaks, that Permittee will be responsible for repairing the sinkhole per City Ordinance 11-6.20.



Sinkhole Protocol: Less than 3 Yrs

- If a sinkhole develops within a Permittee's excavation that is less than 3 years old, and testing determines that there is no undermining of the sub-base from underground leaks, that Permittee will be responsible for repairing the sinkhole.
- The City will also notify any other Permittee with a cast iron structure in the affected area. Those Permittees will be responsible for investigating to determine if their infrastructure may be the cause of the sinkhole. Unless the investigation determines otherwise, the owner of the permitted excavation will be considered the responsible party and will be required to perform the repair.
- <u>Contesting Sinkhole Responsibility on Excavation Work Less than 3 Years Old</u>
 If a Permittee feels that previous excavation work is responsible for the sinkhole, then the burden of proof belongs to that Permittee.
- The City will not be responsible for the repair of any sinkholes that happen within previous or active utility excavation work less than 3 years old.



Sinkhole Protocol: Over 3 Yrs

- The City will only be responsible for a sinkhole in an excavation where the original work is greater than 3 years old, is not within 30 inches of a cast iron structure, and testing determines there are no leaking pipes.
- If during the investigation it is determined that the sinkhole is due to the failure of underground infrastructure, the City will hold the appropriate utility responsible for the repair of the sinkhole and for the costs incurred by the City for the investigation and any temporary repairs undertaken by the City.



Sinkhole Repair Timelines

Public Safety

 Protect Within 1 Hour of Notification. Start Repairs Under the Emergency Dig Safe Guidelines

• If the sinkhole is a threat to public safety then your company must treat the repair as an emergency protecting the area within 1 hour, and dispatching a repair crew to be on site within 3 hours ready to perform all necessary repairs.

 All Dig Safe requirements are to be followed. Protection of the site is mandatory until the excavation can proceed.



Sinkhole Repair Timelines

Non-Public Safety

- Protect Within 4 Hours of Notification. Start Repairs Within 72 Hours of Dig Safe Notification.
- If the sinkhole is **not** determined to be a public safety concern at the time of notification and/or during your inspection your company must protect the sinkhole with cones, barrels, barricades, sawhorses, tape, etc. and make the necessary repairs within 72 hours.
- This will require your company to notify Dig Safe within the 4 hours of the notification, or at the earliest availability. Your company will be responsible for monitoring the sinkhole until all repairs have been made.
- If at any time the sinkhole becomes a threat to public safety then you will be required to make repairs in accordance with the Public Safety Protocol.
- <u>All Dig Safe requirements are to be followed.</u> Protection of the site is mandatory until the excavation can proceed.



Sinkhole Notification for Inspection

- When your company has assigned a crew to perform sinkhole repairs you must notify the Public Works Department by submitting the work through the agile point notification link.
- https://t.ly/3BNL
 - * NOTE: If your crew is unable to have access to the notification link which should not happen.. Then call 617-635-4500 and leave your information with the BOS:311 staff.

 No crew should hold up repairs awaiting inspection personnel or notification. It is the responsibility of your company to notify the Public Works Department, preferably before the crews arrive on site.



Sinkhole Repair Standards

- The Permittee will be required to *fully expose the sinkhole* to determine the extent of the repair. The Permittee will then be required to assess the condition of the exposed subbase material. Any subbase material found unsuitable (wet, contaminated, etc.) must be removed until a dry, solid, and suitable sub base is found. Then approved processed gravel must be used to fill and compact the sinkhole.
- Permittees are required to match the existing asphalt cross section of the street with use of a mechanical roller. Any street with a concrete or cobblestone base must be restored with approved concrete material to the existing cross section before asphalt is placed.
- All requirements for backfill and asphalt paving in the <u>Rules and Specifications</u> for <u>Excavation Activity in the City of Boston</u> must be followed.



SAFETY AFFIDAVIT REQUIREMENT

- Before being issued a 2023 construction season permit, all permittees must fill out a new affidavit for the year (even if you have already filled one out, we need an updated one for this year (2023).
- Note: You are required to fill out an updated Mattocks-Higgins Safety Affidavit any time you receive a OSHA violation, before applying for a permit.
- https://www.boston.gov/departments/public-works/affidavit-licensed-contractor-violation-history-online-form (A NEW AGILE POINT ONLINE AFFIDAVIT MAY BE UPDATED SOMETIME IN 2023)
- The Commissioner, or designee, shall have the discretion to issue a stop work order for any open permits and/or deny the issuance of a permit due to failure to disclose any and all OSHA violations or demonstrated history of unsafe, hazardous or dangerous practices.



SIDEWALK DEPOSIT REQUIREMENTS

- Anyone doing construction that may impact a sidewalk is required to put up a sidewalk deposit to cover the cost of any potential damage done during construction.
- In the past, the City had to pay out of its own money to repair sidewalks broken and damaged during construction work.
- Permittees applying for a sidewalk deposit and subsequently requesting an inspection for the return of your sidewalk deposit collected by the Public Works Permit branch can now perform these tasks using our online portal. https://www.boston.gov/departments/public-works/sidewalk-deposits
- You can also check the status of your request using the online portal.
- Remember you are required to notify the City 48 hours before starting your permanent sidewalk restoration work by using PWD Street Construction notification app https://t.ly/3BNL

OCCUPANCY PROTOCOL

- Occupancy work affects traffic flow and BTD needs to know where every crew is while working in the City
- Posting and notification requirements must be followed
- Permittees need to pull an individual permit for each location unless otherwise approved by BTD and Public Works.
- You need to notify the City 48 hours prior to the start of work using the City of Boston PWD Street Construction Notifications App https://t.ly/3BNL
- All the information must be correct including the name of the streets
- The City reserves the right to hold up Occupancy permits if you are not following our requirements



LOOP DETECTOR DAMAGE PROTOCOL

- The City has been extremely disappointed in the repair rate of loop detectors damaged by utility work and paving work.
- Loop detectors are a critical tool for allowing traffic to move as smoothly as possible throughout the City.
- One damaged loop for an extended period of time can create unnecessary backup.
- You need to track when your construction damages a loop. (You must contact BTD ASAP once a loop is damaged) btdpermitbranch@boston.gov
- We acknowledge that sometimes they're underground and you won't be able to see them.
- The City will send you an email that will include the plan to restore along with a vendor list.
- You need to restore the loops in the timelines established by BTD (72 hours).
- BTD may be a little flexible in extending it depending on extenuating circumstances.
- We will hold up permits if you are not repairing in a timely manner.



PAVEMENT MARKINGS DAMAGE PROTOCOL

- <u>MUST</u> Maintain pavement markings during construction (paint).
- Partial damage to crosswalks results in complete restoration.
- Public's Safety possibly compromised
- Temporary or damaged pavement markings must be restored with thermal plastic per BTD specs no later than <u>72 hours after completion of work unless otherwise authorized</u>
- All permanent pavement marking restorations must be coordinated with the BTD and meet BTD specs
- Permittees must internally track pavement markings locations needing replacing
- We will hold up permits if you are not repairing in a timely manner.



ALL BAD PATCHES MUST BE REPAIRED BEFORE MAY 31ST

Bad Patch Response Procedures

Bad Patch Type	Response Time
Public Safety (Shifted Plate, Patch Down 6", etc)	Protect site within 1 hour; Mobilize crew for repair within 3 hours
2" or Greater Settled	Must repair within 2 business days of notification
Less than 2" settled	Within 7-13 Days of notification
Permanent Sidewalk Repair	Return to existing within 60 days after initial repair City is currently allowing sidewalks to be repaired by neighborhood resulting in some cases of >60 days before repair, but with greater production
Pavement Marking/Loop Detectors	Within 3 days of notification



NO PERMITS WILL BE ISSUED IF YOUR BAD PATCHES ARE NOT REPAIRED BY MAY 31ST

PWD/BTD are issuing neighborhood permits for repairs from April 1-Dec 15th

We have been sending weekly bad patch emails to utility companies all winter long, as well as emails to individual private contractors.

For patches from Mass Ave. in, the May 31st deadline will not apply but the permit date will.

For those will a large amount of bad patch locations, if you allocate enough resources to repair those patches simultaneously while excavating, we will allow you to start work on May 31st.

If the PWD determines that your rate of repair is not acceptable, we will hold up your permits until all the bad patches are repaired.

PLEASE WORK WITH US AND WE WILL WORK WITH YOU



NO PERMITS WILL BE ISSUED IF YOUR BAD CASTINGS ARE NOT REPAIRED BY MAY 31ST

PWD/BTD are issuing neighborhood permits for repairs from April 1-Dec 15th

We have been sending a daily email to the major utility companies that lists casting locations with erosion that need immediate patching.

We have also been sending a weekly summary of all castings needing repair.

For castings from Mass Ave. in, the May 31st deadline will not apply but the permit date will.

For those will a large amount of bad castings locations, if you allocate enough resources to repair those castings simultaneously while excavating, we will allow you to start work on May 31st.

If the PWD determines that your rate of repair is not acceptable, we will hold up your permits until all the bad castings are repaired.

PLEASE WORK WITH US AND WE WILL WORK WITH YOU



NO PERMITS WILL BE ISSUED IF YOUR SIDEWALKS ARE NOT RESTORED IN THE TIME SPECIFIED

PWD/BTD are issuing neighborhood permits for sidewalk repairs from April 1-Dec 15th

- Permanent repair to be made within 60 days of temporary repair unless otherwise authorized
 - Abide by City material/installation specs.
 - Edge stone to be reset within area of repair.
 - Entire flag must be replaced
 - Must notify City 24 hours before PCC work takes place via our notification app
 - MA AAB/ADA compliant (see Item 12)
 - If any portion of an existing pedestrian ramp is disturbed by construction, Permittee shall be required to reconstruct the ramp to current ADA/AAB regulations.
 - Permittee not responsible for AAB reciprocal provision.
- Utilities must maintain database of sidewalk restoration locations.

PLEASE WORK WITH US AND WE WILL WORK WITH YOU!



Winter Moratorium Ends April 15th, 2023

- Generally extends from November 15th through April 15th
- Materials & workmanship negatively affected by cold weather.
- All permits must be approved by Moratorium Board.
- Plated locations hazard to City plowing efforts.





Cold Weather Leads to Repercussions That Last Well Beyond the Winter

- Castings needing patching
- Sunken castings needing adjustment or full replacement
- Patches and trenches failing
- Frost heaves
- Potholes
- Sinkholes
- Cracking of roadways
- Damaged sidewalks
- Edge stone sinking



Winter Moratorium Board

In order to obtain permission to work during the Winter Moratorium

- All pending bad patches, sidewalk locations not repaired within 60 days, pavement markings, and loop detectors are fully repaired or restored.
- Your company must be in good standing with the City (Compliance Rating)
- You must bring in a Hardship Letter with your request indicating:
 - Where the work will take place
 - Why the work can't wait until spring
 - How long the work will take
- The Winter Moratorium Board will vote either Yes or No, dependent upon the request and forecasted weather.



Winter Work Procedures

- All crews must follow Winter Moratorium Guidelines
 - http://www.cityofboston.gov/publicworks/construction/excavation.asp
- All plates must be Recessed unless otherwise approved by the PWD
 - A leveling course of HMA material will be used when recessing the plates
- Crews must fax a copy of the Winter Plate Notification Form to the City Snow Office and the CIU whenever a plate is placed, no matter what time of day or night.
- Crews must be prepared to backfill, pave, and remove all equipment from the work site upon request by the PWD for pending inclement forecasts.
- All Permittees will be required to provide snow plowing and snow removal of their entire work zone(s) during the Moratorium period.
- Cold weather should not negatively affect your final product.
- Any repeated Violations or lack of cooperation will result in a suspension in your ability to receive permits during the Winter Moratorium.

Winter Inspection Requirements

- Permittees are to perform post-inspection of all permits issued during the Winter Moratorium 14 days after the work has been completed, and 30 days after the 14 day inspection.
- Inspection findings are to be emailed back to the BPWD Construction Management Division reporting the status of the patch/trench.
- Major utility companies will provide weekly reports summarizing their findings in advance of the Moratorium meetings.
- A failure to submit the required inspection findings will result in suspension of all active work sites, as well as no longer being issued permits during the Winter Moratorium.



Eliminate Cuts in New Streets

- One of Mayor Wu's goals is to eliminate utility cuts into Guaranteed Streets.
- When a recently paved street becomes littered with utility cuts, it gives the appearance of apathy to the general public regarding coordination. This is obviously unacceptable to the Public Works Department.
- COBUCS Reports allows you to see the City's program for the year. In addition it will be on our website.
- Digging into new streets will not be tolerated!





City of Boston Public Works Department GUARANTEED STREET COBUCS CONFLICT DETAILS **Guaranteed Street Cut Request Form** COBUCS GUARANTEED PAVING DATE: PERMITTEE INFORMATION Company Name: Date of COBUCS Entry: COBUCS # Contact Name: Contact Phone Number: Place X Next to Appropriate Category of Who is Requesting Work Home Owner Developer General Contractor Site Plan Engineer **Business Owner** In-House (UTILITY COMPANIES ARE NOT REQUIRED TO FILL OUT BELOW DETAILS UNLESS REQUESTED BY CITY) Originator Name: Company Name: Date of Request: Contact Phone Number: Email: SCOPE OF WORK INFORMATION Neighborhood: Street Name: Address: <u>In addition to the form</u>, your company must Limits (From-To) If Applicable: Explanation of Why Guaranteed Street Needs To Be Cut Into

Service (Oil to Gas)

[Gas Companies Only]

Casting Repair/Replacement

Emergency Conversion to EXCA

Other

Cut Size 3:

Cut Size 6:

Sprinkler

Estimated Completion Date:

Work Type: Place X Next to Appropriate Name

Excavation Area Information (Length X Width)

Service (Existing Structure)

Maintenance

Emergency

Emergency (Private Contractors)

Total Estimated Sq Feet Area: Estimated Time Table of Work Estimated Start Date:

Cut Size 1:

Cut Size 4:

Additional Cut Details:

Service (New Building

Construction)

New Main/Conduit

Emergency Illegal Sewer

Connection (BWSC Only)

Cut Size 2:

Cut Size 5:

Estimated Number of Cuts:

When COBUCS notifies you that your

- proposed work is in conflict with a Guaranteed Street you must immediately fill out the Guaranteed Street COBUCS Conflict Details form and email it to the Public Works Department (see below).
- submit a Hardship Letter to Chief Engineer, **Norman Parks**, explaining the need to excavate the Guaranteed roadway and agreeing to pay for the associated cost of restoring the roadway to it's Guaranteed state.

quaranteedstreetconflict@boston.gov

Guaranteed Street Cut Procedures

- Dig Safe must not be called on non-emergency work into a Guaranteed Street until the request has been approved by the City.
- All openings must be saw cut prior to asphalt placement.
- Mandatory CIU inspection for all backfill and paving operations, unless otherwise approved by the PWD.
- Vibratory roller must be used on ALL phases of patch/trench paving.
 - If a vibratory roller is unable to fit within the patching area during the <u>BINDER</u> course a plate compactor will be allowed. A vibratory roller is MANDATORY for the top course.
- "Average" or even "Good" patches will NOT be acceptable!
- All final patches must be "Excellent"!
- Dig Safe marking must be **power-washed** off after OK from Dig Safe or otherwise approved by PWD.



REPORT CARDS ARE BACK!

- By compiling all of the CIU's inspection findings in the field, the Public Works Department created a rating system for each permittee's construction practices.
- The CIU was extremely proud that it sent out weekly report cards to the major utilities for many years.
- It was an important tool used by the utility companies used to improve their construction practices.
- It was extremely disappointing that when we went to the new permit system we could not technically create the report cards.
- It's been a big regret for the CIU.
- Some time later this year we finally feel confident that we will be able to send out report cards to the major utilities either on a monthly or bimonthly basis with the goal of weekly reports cards. In addition we will eventually include the major private contractors
- The report cards and ratings are not meant to embarrass anybody, but to point out your areas for growth when working in the City of Boston.

Cooperative Effort

In 2007 the BPWD began weekly transmissions of rating summaries (Report Cards) to major utilities.

- Valuable tool for City & utilities.
- Provides comparison to citywide average.
- We welcome feedback.



APPROVED MATERIAL VENDORS ON OUR WEBSITE

- All gravel used for backfilling utility excavations, open voids, roadway and sidewalk reconstruction projects must be approved by the City of Boston
- https://www.boston.gov/departments/public-works/approved-gravel-vendor-list
- All concrete used for sidewalk restoration, utility casting adjustment and open voids, must be approved by the City of Boston https://www.boston.gov/departments/public-works/approved-concrete-vend-or-list
- All asphalt used for resurfacing or reconstruction of our roadways and sidewalks must be approved by the City of Boston
- https://www.boston.gov/departments/public-works/approved-asphalt-vendor -list
- Vendors not on the approved list can email the Construction Management Division at cmdoffice@boston.gov and must pass the City's Quality Control Testing to be added to the list.



CIU ORIGINS AND RESPONSIBILITIES

The following slides will be in regards to the Construction Inspection Units (CIU) origin, responsibilities and inspection findings.

- Valuable tool for City & utilities.
- Brief History of the CIU
- Reasons for number of street cuts
- Explain ratings system.
- Violations need to be taken serious .
- Must acknowledge violations and take steps to avoid in the future
- THE CONSTRUCTION PRACTICES HAVE TUMBLED DOWNWARD THE LAST FEW YEARS... YOU NEED TO IMPROVE YOUR RATING ASAP!!



CIU - Construction Inspection Unit

A specialized unit created in 2003 to increase oversight personnel to combat poor workmanship.

Mayor Wu Demands Perfection!

- BWSC CSO initiative.
- Electrical infrastructure upgrade
- Telecommunication
- Growth in Boston real estate markets
- Angle of Influence work
- OLD INFRASTRUCTURE
- CIU Assists regular BPWD workforce
- Changing expectation of construction in Boston



Inspection

Documentation

Evaluation

Enforcement

Boston's Street Opening Management System

Utilize the Permitting and Inspection program to Store and Evaluate Permittee Data

- ✓ Tracking Permittee Work & Violations
- ✓ Develop Report Card for Contractors
- ✓ Report Card Helps Educate and Enforce Rule & Specs
- ✓ Benefiting Utilities

Ensure a "Top-Down" Support Structure

- ✓ Starts with Mayor Wu and Chief of Streets, Transportation and Sanitation Jascha Franklin Hodge
- ✓ City Annual Report

Construction inspection unitNoncompliance Rating Summary

		,	-			
7.0.72008 to 7.0.172008						
Ne specificare Brains	# OF INSPECTIONS	# OF VIOLATIONS	Period Company RATING	Pared City Wide RATING	York-To-Date Company RATING	Year-To-Oa City Wilde RATING
1.Cure at Permit Pie seat? Repend current? Call-in loggest? Propier Signaps?	489	9	1.84%	1.34%	0.79%	0.84%
2 Abiting to Permit Restrictions? Test-way half of Police Data? Work House? Stockpains?	482	3	0.62%	0.55%	0.18%	0.30%
3 Safe work Zone? Smalleg? Guaded workstee? Ex comps, blevels, laps ob.	47.6	0	0.00%	0.00%	0.04%	0. 16%
4. Stitable Peitsed Gravel Materia P What the cruterial tested prior to use?	0	0	NO INSP	0.00%	0.00%	0.00%
5. St table New Gravel Material? Tested material? Cartation test on the?	142	0	0.00%	0.00%	0.00%	0.07%
6. Compacted is 8" Maxim on Lifts? #or life, in the density type of a quaprient used; if or passes	150	0	0.00%	0.29%	0.00%	0.07%
7. Controlled Density Fill (CDF)? Proper List of CDF?	0	0	NO INSP	0.00%		0.00%
8. Opening Secured? Seed Metric Represent or Bornest Cold Report 48 has INO Gravel	609		0.66%	1.11%	1.35 %	1. 19%
9. Edges Straight and Veirtba P Cut Squard/Use TecCost? CNLY AT END	187	0	0.00%	0.29%	0.00%	0.09%
10. Two 1-1/2" Lifts of Hot Mix Asphalt? 3" total theorem, parallel to road surface, MUST we theress	77	0	0.00%	0.00%	0.00%	0.00%
Poachway Satts factorily Complete? Organia, Acceptable, Net Acceptable, & 6 emergely or level?	194	10	5.15%	5.68%	1.74%	1.88%
12. Temp Skie walk Complete? Orgong, Acceptable, Not Acceptable, Sea 1-1.07 life of HMA?	9	0	0.00%	0.00%	0.00%	0.39%
13. Permate stStlewak Complete? Organia, Acceptable, Not Acceptable, Bushed, Tooled, and Cornel Biops?	3	0	0.00%	3.45%	0.00%	1. 16%
14. Loop Detectors/Crosswalks? What is the condition? Danaged?	0	0	NO INSP		0.00%	0.00%
15. Public Safety Issue? Delinitive Inspet? Describe?		1.				
\$-	2818	- 26		200713127		

KevSpan

Of Site Vista = 1290

Rating Scale %

0.00 ≤ GOOD ≤ 0.67

0.67 ≤ FAIR < 1.35

1.35 ≤ NEEDS IMPROVEMENT < 2.00

2.00 < POOR



Reasons for Street Opening Cuts

- Age of Utility Infrastructure
- Geography
- Changing Population (New Services and Upgrades)
- Technological Advancements

- These four independent factors lead to continuous street excavation work throughout the City of Boston.
 - The bottom line is that the City of Boston is one of the busiest cities in the United States when it comes to utility service and repair work.



Doing Your Part

• Since 2012 the City has categorized the types of roadway excavation work you perform in the City and the resulting square feet of excavation. (approximate)

 New Conduit and/or Main 60% Shows the City of Boston that the utility companies are making a huge investment in replacing their old infrastructure!

• Service 15%

Maintenance 15%

• Emergency 10%

- 2012-2019 (Will update in 2023), through mutual coordination, utilities have increased their capital budget to bridge the gap between annual City paving, and old main replacement.
- The City appreciates your cooperation in the upgrade of your aging infrastructure (conduits, mains, etc.)
- Upgrading aging infrastructure improves the quality of life for the residents and is beneficial for street preservation (no emergency cuts on new streets)

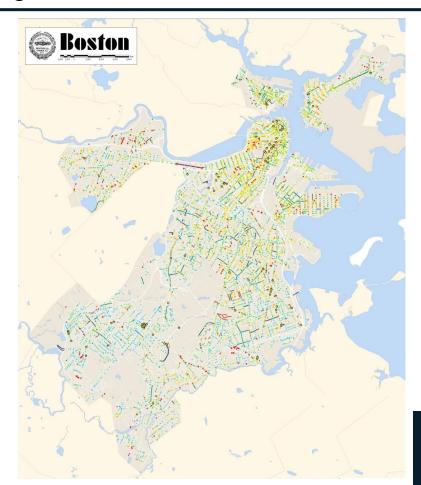
Boston Utility Worksites

During the 2018 (Will update in 2023) Construction Season there were an average of 150 active worksites and over 275 plates daily.

- Excavating
- Sidewalks
- Pipe/Conduit Installation
- Backfilling
- Plating
- Paving

Between 2012 and 2018, approximately 6000 excavation permits were issued annually. (Will update in 2023)

- 4000 excavation
- 2000 emergency
- (Permit activation average not including extensions)





"It's Construction"

The City acknowledges that construction is difficult and complicated.

Construction is a chain-of-command.

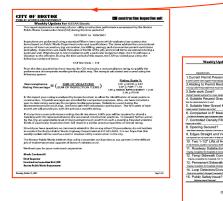
Breakdowns in communication can happen.

However, the CIU will not accept blatant disregard, cutting corners, indifference, or apathy as an excuse for not following the Rules and Specification and state: "It's Construction".



CIU Weekly Report Card Update

City of Boston leading the way...



Cover sheet w/ explanation & # of inspections

| Test |

Individual Violations



Bad Patch Locations



Noncompliance Rating

Ratings changed to a 100% point Scaling System.



(SUM OF VIOLATIONS SUM OF INSPECTION ITEMS)

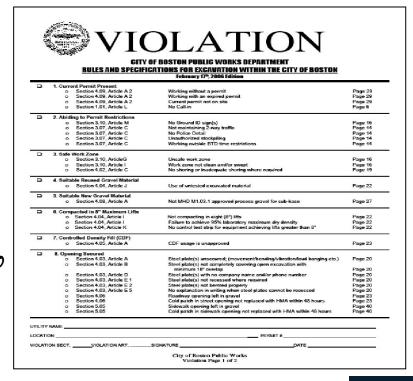
100.00% ≤ Good < 99.33% 99.33% ≤ Fair < 98.65% 98.65% ≤ Needs Improvement < 98.00% 98.00% ≤ Poor

Scale developed from historical data as collected by CIU inspections.



Violation Sheet

- Issued to crew on active work sites. For inactive sites, the CIU maintains a copy of the Violation and a notice is sent.
- Sites section/article from City Rules & Specifications
- CIU violations will be e-mailed to you immediately from the field. This will allow you to make corrections right away. This will also allow you to assess the weak points in your construction practices sooner rather than later.





VIOLATION EMAIL NOTIFICATION

Your company needs to take all violations seriously and investigate why the violation happened and take measures to avoid it in the future.

You are required to acknowledge via email that your company has received this Violation(s) within 1 HOUR.

If you do not rectify the violations in the time set forth by the CIU, your work site will be put on hold until rectified.

All violations could result in the shut down of the work site. Public safety violations will automatically result in a shut down of the work site and the possibility of new permit requests put on hold.

We will adamantly enforce the timeline requirements and repercussions of the violation!



Enforcement

Zero Tolerance on Individual Work Zone Violations

- Immediate job site shut down <u>may result</u>, in a scheduled meeting in City Hall to discuss with the supervisor and crew ways to not repeat the violation(s) and improve their construction practices

 The City cannot allow mediocre work to continue to affect the public ways without repercussion.
- Overall compliance rating < 98.00% <u>may result</u> in a scheduled meeting with managers to discuss the crew's construction practices and how to improve.
- No improvement after a scheduled meeting <u>will result</u> in a citywide non-emergency shutdown of permits and a another managers meeting scheduled in City Hall.
- Continued lack of improvement <u>shall result</u> in another shutdown and require that the highest representatives of the company meet with Chief Franklin-Hodge and the Mayor's office to discuss their repeated lack of improvement of their construction practices and possible further repercussions
- Elevated individual items (e.g. Plates) will result in similar shutdown procedures.
- The Permittee shall be held accountable for any actions performed by its personnel. If the
 personnel of a Permittee is cited for three shutdown meetings for the same inspection item, the
 Permittee will bear equal responsibility.

Mayor Wu takes Public Safety Seriously!

Need Improvement in Compliance Rating

- Over the last few years the Utility Companies and Private Contractors have been observed to be in a steady downward trend after a 5 year climb in their construction practices.
- We need Improvement in:
 - Better communication with the public before and during construction
 - Work zones being properly secured/Not leaving messy and at times unsafe work zones behind
 - Using approved signage/Always posting accurate dates of work/Showing up on posted days
 - Leaving behind a better final paving product, including neatly cutting and squaring off patches/trenches and following Utility Repair Tag standards.
 - Crews really need to focus on how they leave their plates at the end of the day.
 - The crews need to take their time to properly secure your plates... including clearly visible to the public your name and phone number

Permittees need to do a better job repairing their identified bad patches within the timeline specified in the Rules and Specifications.



Steps Taken to Improve your Rating

The City will be strictly employing the following procedures:

- PWD enforces a **0 tolerance** policy on all violations.
- Work zones <u>may be shut down</u> and a meeting scheduled in City Hall to discuss, **no matter** what the violation.
- Emergency Locations in Violation may delay Standard Permit issuance.
- Unacceptable patch/trench repairs; pavement markings or loop detectors, etc. not restored within 7-13 days unless otherwise authorized; or sidewalks not permanently repaired within 60 days unless otherwise authorized <u>may result in a suspension of new permits.</u>
- Multiple violations, or the poor Non Compliance rating of a contractor <u>may result</u> in the suspension of their ability to work in the City for a to-be-determined time period.
- A single egregious violation, or hostile behavior by a contractor <u>may result</u> in the suspension of their ability to work in the City for a to-be-determined time period.



PRE CONSTRUCTION RESPONSIBILITIES

The following sides are in regards to your responsibilities before even starting your work

- MUST meet with the CIU before all MAJOR off hours scheduled work begins
- MUST send letters to constituents on major work including ONS
- MUST follow BTD'S leafleting and posting requirements at all times
- <u>MUST</u> be mindful and cooperate with City services (Street sweeping and trash removal)
- MUST follow street lighting and BTD protocol for damaging infrastructure
- <u>MUST</u> follow Ground Water Trust protocol
- MUST use online notification app
 *Rules and Specifications to be updated in 2023



Major Project Coordination Night & Weekend Work

- Must meet with CIU before commencing work to review:
 - Scope of Work
 - Dates of Work
 - Contact Information
- Asphalt plants may not be open during off-hours and crews may not have the approved asphalt material on hand.
 - Hot mix asphalt tends to cool down in the time between when it was picked up at the plant to when it will be used for the night work, resulting in poor a paving job.
- Will result in <u>mandatory use of a hot-box after hours</u>, unless otherwise authorized by PWD.



Major Project Notification Procedures

- Utility major projects take months, or even years, to plan. For that reason it should not be a burden for any utility company to provide adequate advanced notice to the surrounding affected residents and businesses regarding these projects.
- All Permittees are required to contact the Office of Neighborhood Services (ONS) **30** days in advance of major work.
 - ONS will determine whether or not a Community meeting will be necessary before the project is approved.
- All Permittees must contact the BTD a <u>minimum</u> of 30 days in advance of major work (as determined by BTD).
 - Permittees must have their Traffic Management Plan in place for review and approval before obtaining permission to work by the PWD.



Letters to Constituents for Major Work

- All Permittees will send letters to all residents two weeks in advance of the start of work.
 - PDF Emails must be sent to designated City Personnel on the day the letters are distributed.
 - Letters must explain the reason for the work, the estimated start & complete date, name of the contractor, and 24 hour contact information including the name of Permittee Supervisor, etc.
- All utility companies and private contractors must take into consideration the impact the construction has on the residents of the affected street, and try to the best of their ability to coordinate & cooperate with the neighborhood.
- ONS may require a neighborhood meeting before work starts



Leafleting & Posting Procedures: New Mains, Conduit Installation, Major Work

- As per BTD requirements, all Permittees must leaflet affected streets a minimum of 72 hours before the start of any construction.
- Approved BTD No Standing signs must be posted 48 hours in advance of work, clearly visible to vehicular and pedestrian traffic.
- On major projects, only post where your crews will be actively working within the next 48 hours.
 - No longer will you be able to post a block or two at a time when you know the work won't take place for a week or longer
- Crews must move the BTD No Standing signs down the road in advance of the progressing active work.



Be Mindful of Daily City Services

- The City understands that your company has a job to perform, however throughout the entire project the crew should be mindful of the public.
 - Be aware of Trash and Recycling pickup schedules
 - Be aware of Street Sweeping efforts
 - Work with moving trucks and post delivery
- At all times crews should keep the street as fully functional as possible.
- Boston Groundwater Trust (BGwT)
- STREET SWEEPING
 https://www.cityofboston.gov/publicworks/sweeping/
- TRASH AND RECYCLING
- https://www.boston.gov/departments/public-works/trash-and-recycling-day-schedule-and-search

Know the Schedule

- It is your responsibility to be aware of scheduled trash and recycling pickup days for the street you are working on.
 - Your crews must provide access for trash and recycling pickup
 - If your work prevents pickup, your crews must bring the trash and recycling to the nearest accessible curb for pickup
- Pickup schedules can be found on the City's web page:
 - http://www.cityofboston.gov/myneighborhood/
- Preventing access to trash and recycling pickup is a health and safety concern.



Damaged or Exposed Street Lighting Conduit Protocol

Any contractor who accidentally strikes or damages a street lighting conduit must immediately contact the Street Lighting Section.

- Monday 7am to Saturday 7am please call 311 (617-635-4500) or open a case with the 311 app AND call 617-635-5810.
- Saturday 7am to Monday 7am please call 311 (617-635-4500) or open a case with the 311 app AND call the Street Lighting On Call Phone 617-592-0063
- You must not close the excavation until an inspector has reviewed the conduit. An Inspector will be sent to the site to identify the line that was damaged.
- Minor damage shall be repaired by the lighting section.
- Major damage shall be repaired by the contractor. The contractor you hire to repair the City's street lighting conduit needs to have experience in electrical conduit work.
- The conduit must be inspected by the Street Lighting Section prior to backfilling at no cost to the City of Boston.

Damaged or Exposed Street Lighting Conduit Protocol

- Any damage that is discovered by the street lighting section after the Contractor has left the location shall be the responsibility of that Contractor for repair.
 - The Street Lighting Section shall bill the appropriate Contractor for all work necessary for the repair and/or replacement of conduit and cables.
- It is to the Contractors benefit to notify the Street Lighting Section of any damage.
 - Damage to conduits and cables could potentially cause stray voltage which could harm the General Public.
- We will thoroughly investigate any incident; and if a Contractor is responsible for the stray voltage, they will be held liable for any and all damage (property as well as personal) sustained by creating this situation.
- Any Permittee who strikes or damages a street lighting conduit and does not follow our protocol will have that job shut down with the possibility of all active work suspended and new permit requests put on hold.



Damaged or Exposed BTD Conduit Protocol

- Any contractor who strikes or damages BTD Traffic Signal Conduit must first immediately contact The Boston Transportation Department at:
 - 617-635-4430 (Mon-Fri , 7AM-8PM; Sat 9AM-5PM)
 - 617-635-4500 (Weekends except Sat 9AM-5PM, Holidays, and Mon-Fri, 8PM-7AM)
 - The excavation must not be closed until a BTD inspector has assessed the situation and determined which line/conduit was damaged.
 - Damage that has not been reported to BTD or has been discovered by BTD after the contractor has left the location shall be the responsibility of that contractor to repair.
 - Damage to BTD conduit and/or cables must be repaired by a BTD approved traffic signal contractor and the work must comply with BTD specifications.

Damaged or Exposed BTD Conduit Protocol

- Any damage that is discovered by the BTD after the Contractor has left the location shall be the responsibility of that Contractor for repair.
- Any utility infrastructure that is struck or damaged that directly affects BTD conduit(s) (i.e. Damage to Eversource Electric conduits feeding traffic signal cabinets) must be reported to both NSTAR and BTD.
- To avoid striking BTD conduits please contact BTD to request plans showing the approximate location of BTD owned conduits before performing any excavation near or at a signalized intersection.
- Any Permittee who strikes or damages a BTD conduit and does not follow our protocol will have that job shut down with the possibility of all active work suspended and new permit requests put on hold.



CONTACT PROTOCOL WHEN EXPOSING OR DAMAGING STREET LIGHTING/BOSTON TRANSPORTATION AND EVERSOURCE ELECTRIC INFRASTRUCTURE

Reporting Exposed or Damaged Street Lighting Conduit

- Monday 7:00am to Saturday, 7:00am: please call immediately 311 or Open a Case with the 311 App and Call 617-635-5840.
- Saturday 7am to Monday, 7:00am: please call immediately 311 or Open a Case with the 311 App and Call 617-592-0063.

Reporting that the Repair to the Street Lighting Conduit is Complete

Monday - Friday, 7:00am until midnight please immediately call 617-635-7501.

Reporting Exposed or Damaged Traffic Conduit to BTD

- Monday Friday, 6:00am until 10:00pm please immediately call 617-635-4430.
- Saturdays, 9:00am until 5:00pm please immediately call 617-635-4430.
- Monday Friday, 10:00pm until 6:00am, weekends except Saturdays 9:00am until 5:00pm, and holidays, please immediately call 617-635-4500.

Reporting that the Repair to the BTD Conduit is Complete

- Monday Friday, 6:00am until 10:00pm please immediately call 617-635-4430.
- Saturdays, 9:00am until 5:00pm please immediately call 617-635-4430.

Reporting Exposed or Damaged Eversource Electric Conduit

24 hours a day, 7 days a week please immediately call 1-800-592-2000.

SUMMARY

Reporting Exposed or Damaged Eversource Electric Conduit where you know either BTD or Street Lighting has been affected as well

 Eversource Electric: 24 hours a day, 7 days a week please immediately call 1-800-592-2000.

Street Lighting

- Monday 7:00am to Saturday, 7:00am: please call immediately 311 or Open a Case with the 311 App and Call 617-635-5840.
- Saturday 7am to Monday, 7:00am: please call immediately 311 or Open a Case with the 311 App and Call 617-592-0063.

BTD

- Monday Friday, 6:00am until 10:00pm please immediately call 617-635-4430.
- Saturdays, 9:00am until 5:00pm please immediately call 617-635-4430.
- Monday Friday, 10:00pm until 6:00am, weekends except Saturdays 9:00am until 5:00pm, and holidays, please immediately call 617-635-4500.

You must never leave your work zone or backfill the excavation until a representative from Street Lighting, BTD, or Eversource Electric has arrived on site to assess any possible damage done to the infrastructure.

Protocol when Construction Damages or **Exposes Electrical** Conduit

Boston Groundwater Trust (BGwT)

- BGwT Groundwater Observation Wells in Sidewalk
- In Lower Beacon Hill, Back Bay, South End, Fenway, North End, Bulfinch Triangle, Fort Point Channel, Chinatown, Leather District, Central Waterfront, & East Boston Neighborhoods
- Over 800 wells throughout the City
- Website has Google based map of all well locations at bostongroundwater.org
- Preserve like **any other utility roadway box**
- If destroyed cost is \$4,000 to replace

QUESTIONS? PLEASE CONTACT BELOW Christian Simonelli, Executive Director csimonelli@bgwt.org bostongroundwater.org 617.859.8439 office 617.913.0712 cell



PWD Expanded Its Notification of Work Applications in 2016

CAN ALL BE SENT VIA ONE APP!! (SEE BELOW)

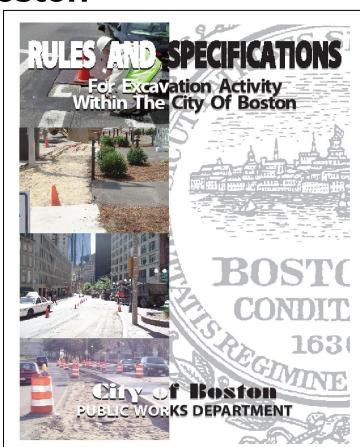
- EMERGENCY WORK
- OCCUPANCY WORK
- EXCAVATION PLANNED WORK
- WINTER PLATE USAGE
- ROADWAY RESTORATION WORK
- SIDEWALK RESTORATION WORK
- JOB COMPLETED REPORT
- END OF EACH WORK SHIFT STATUS UPDATE (TO BE REQUIRED SOMETIME THIS CONSTRUCTION SEASON)
- https://t.ly/3BNL



Rules & Specifications for Excavation Activity within the City of Boston

http://boston.gov/publicworks

- Created with input from utilities & various agencies
- In the process of being updated.
- Newest version will be completed by the by this fall.
 - Edits and changes include Utility Repair Tags, Hansen, patch and sidewalk repair, edge stone, casting responsibility, etc.
 - OUR RULES AND SPECIFICATIONS IN 2023



CIU 15 POINT INSPECTION REPORT

The following slides will be in regards to the the actual work oversight by the CIU

- Each points rules and expectations will be thoroughly explained
- There should be no excuse as to not know what the City <u>expects and</u> demands in the field
- Please read and understand these slides fully... it will help you have a great successful construction season



Inventory

- Before the start of the Construction season you must check all your equipment to be sure they are in good working order. None of us want to have your work stopped suddenly due to shoddy equipment or breakdown.
- Signage
 - All Permittees must have ALL appropriate signage for utility construction work. Lack of proper signage will result in immediate shutdown.
 - <u>All signage must have lettering that is clearly visible</u>. Damaged signs should be replaced. At no time should a sign be illegible to the public.
 - At a minimum, all companies should own at least two ID signs for every permitted job site they intend to have active at the same time.
 - All companies must have the proper Sidewalk Closed signs for each job.
- Delineation of work site
 - Cones, tape, barrels, interlocking barricades, etc.



"It's Construction" (REPEATED IN THIS PRESENTATION)

The City acknowledges that construction is difficult and complicated.

Construction is a chain-of-command.

Breakdowns in communication can happen.

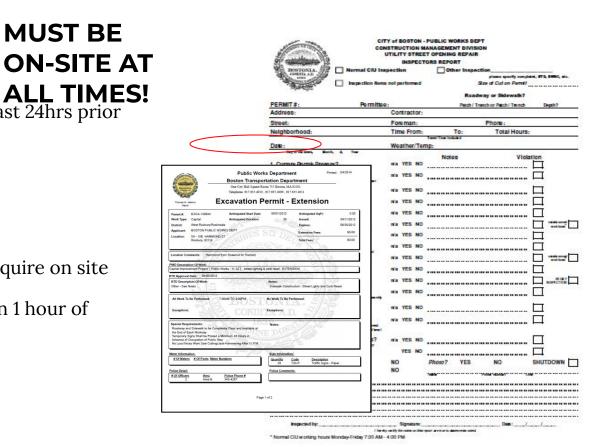
However, the CIU will not accept blatant disregard, cutting corners, indifference, or apathy as an excuse for not following the Rules and Specification and state: "It's Construction".



Item 1 - Permitting & Job Start

MUST BE

- Current PWD Permit,
- Jackie's Law Permit
- BTD Traffic Plan
- Competent Person
- Submit the online Call-In Form t least 24hrs prior to:
 - Start
 - Backfill
 - Pave
 - Completion
 - Sidewalk Permanent Repair
 - If batching in field, may require on site testing
- Emergencies must be called in within 1 hour of work



Emergency Permits

- Used by major utilities for Emergency Situations
- Purchased in blocks from PWD permit office
- Must be notified using online app within 1 hour of commencement of work
- Must apply for EXCA permit after 24hrs of work
- Delay of EXCA permit request unacceptable
- Delay of job requires reason in writing
- Use of an Emergency permit for non-emergency work will result in an automatic shutdown of all new permit requests.



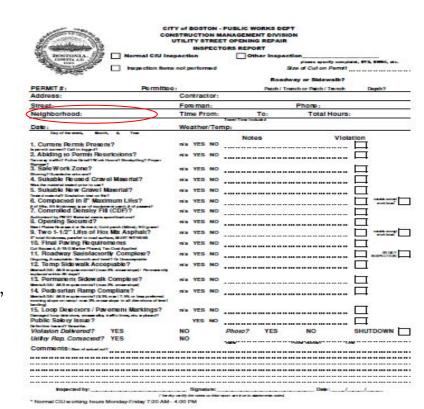
Neighborhood Permitting

- Major Utility Companies have had neighborhood permits for permanent sidewalk restoration, unacceptable patch/trench repair, and cast iron infrastructure repairs for the past year.
- A proven success in expediting repairs and streamlining the permit process!
- Individual Permits required for Downtown, Chinatown, North End, Beacon Hill and on Main Arterials in South End and Back Bay.
- BTD determines the day/time restrictions.
 - All BTD restrictions must be followed; e.g.
 - Major Arterials, 9:30 start
 - Proper police detail
 - TMP signs must be posted 48 hours in advance of work
 - Proper Site delineation
- Permittee must email designated BTD and PWD personnel the locations to be worked on 48 hours in advance.



Item 2 – Abiding to Permit Restrictions

- BTD Approval Form must be on job site at all time.
- Traffic flow
- Police Detail
- Work Hours
- Stockpiling only where approved
- Site is leafleted 72 hours and posted at least 48 hours in advance
 - Do not extend posting beyond area of active construction
 - All posting dates are accurate with dates and permit information clearly visible
- Utility Repair Tags are installed in every asphalt patch, as required.
 - If there are multiple excavations, each excavation will require a tag.



Leafleting & Posting Procedures

- As per BTD requirements, all Permittees must leaflet affected streets a minimum of 72 hours before the start of any construction.
- Posting must be placed 48 hours in advance of work, clearly visible to vehicular and pedestrian traffic.
- Crews must remove signs after work is completed.



Leafleting & Posting Complaints

- The City has received numerous complaints to its Mayors CRM system regarding inadequate postings:
 - Missing dates or Per Numbers
 - Illegible signs
 - Posting beyond work limits
 - Crew's NOT showing up on posted dates
 - Extending dates
 - Constituents cooperate by not parking on the street.
 - Frustration grows when crews don't show up on the dates posted.
- We know the project is ultimately good for the Neighborhood you're working in, but it is an inconvenience and accurate posting will go a long way in making the job smoother for everybody.



'No Standing' Signage

- Template will be provided to Utility Companies and Private Contractors performing major work.
- You'll have the ability to adjust template based on BTD permit restrictions.
- Any handwritten information must be legible!
- More professional, easy to understand sign.
- Will be better for everyone affected.



Remove Signs After Work is Completed

- The Public Works Department received many calls in 2022 about signs being left up on streets long after the work was completed.
- Your crews must remove "No Standing" signs immediately upon finishing your work.
- Remember to remove your "Steel Plate Ahead" and "Uneven Surface" signs as well.





Utility Repair Tags

Remember to order your 2023 tags!

- •ALL Permittees working in the City of Boston are required to install <u>2023</u> Utility Repair Tags on all asphalt patches.
- •Companies without Utility Repair Tags must contact the Construction Management Division of PWD to identify what their company's tag should look like for ordering.
- •Any company found to not be installing their Utility Repair Tags, or installing them improperly, may be shut down and have a meeting scheduled in City Hall to discuss proper tag placement technique.



Utility Repair Tags

Utility Repair Tags are installed during the final lift of paving. **The tags must** be pressed into the asphalt BEFORE compaction of the final lift commences.

- The tags shall be imbedded at zero grade tolerance, or slightly below, and must be of one piece construction.
- The use of nails to secure tags is prohibited.

 NOTE: The color-coded Utility Repair Tags are NOT intended to identify underground utility infrastructure. The Utility Repair Tags are only to identify the Permittee who is responsible for maintaining the compliance of a temporary roadway or sidewalk patch/trench.



Utility Repair Tags

- Utility Repair Tags must be used on any temporary cold patch, silvex, or asphalt material placed.
- Utility Repair Tags should not be placed within 12" from any casting unless space does not allow otherwise.
- Utility Repair Tags should be placed away from direct wheel traffic when able.
- The Permittee is responsible for replacing damaged or faded identification **Utility Repair Tags** throughout the three year guarantee period of a utility patch/trench repair.
- The Permittees will not be responsible for maintaining their patch/trench if the excavation is interrupted by another utility, or if the location is permanently repaired.

Utility Tag Placement Guideline

Patch/Trench Length	Tag Placement		
X < 50'	1 tag placed in the center of the patch		
50' ≤ X ≤ 100'	1 tag placed at each end of the patch/trench approximately 12" from the edge	ALL LATERALS	
100' ≤ X ≤ 400'	I tag placed in the beginning, center, and end of the trench, with the beginning and end tags approximately 12" from the edge. An additional tag must be placed at every intersecting street	EXTENDING FROM MAIN PATCH OR TRENCH MUST HAVE THEIR OWN TAG IN	
X > 400'	I tag placed at the beginning and end of the trench approximately 12" from the edge, and at every 200 linear foot intervals. An additional tag must be placed at every intersecting street	THE CENTER OF THE LATERAL!	

Item 3 – <u>Safe Work Zone</u>

- OSHA / ADA / AAB / Dig Safe requirements maintained at all times.
- Jackie's Law applicable on unattended trench excavations.
- Safe & Guarded Work Zone
- Continuous Barricades (where required)
- Shoring (where required)
- Sidewalk Closed Signs required at closest ramps. Federal Requirement (ADA)



Be sure to keep a safe, clean & well defined jobsite!

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Public Salo v Issue?		YES	NO			
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Violation Delivered? YES	NO			Photo? YES NO	SHUTDO	
Utility Rop. Contacted? YES	NO					
Comments: No stated of?						

Be aware of the Impact of Construction/Safety #1 Priority!

- Your construction work has a real and significant impact on the residents and commuters of Boston.
- The Traffic Management Plan approved by BTD is designed to protect andreduce the inconvenience of construction work to the public.
- Personnel should try and visualize themselves from the perspective of the residents and commuters.
 - How would I feel if I was driving through this work site?
 - What would I think if I was trying to navigate around this work zone?
 - This is especially important for persons needing mobility assistance such as a walker, white cane, or wheelchair.
- Your supervisors and crews must keep the public in mind, and how their work is affecting them, when occupying and excavating the public way. It will make you think differently.
- At all times Safety is paramount, both to your crew and to the public.



Protecting Your Work Zone

- Boston is densely populated. You must take care in protecting your work zones. (One of your biggest weaknesses the last few years)
- The Permittee must surround the excavation with cones, barrels, barricades etc. NO TAPE IS ALLOWED UNLESS OTHERWISE AUTHORIZED
- The barricaded workzone is to protect the pedestrians, workers and vehicles passing through the work zone. **You need upper and lower barricades! Unless otherwise authorized**
- Continuous barricades must be used where specified by the BTD
- There will be no exceptions and violations for noncompliance will be issued and the job will be shut down.







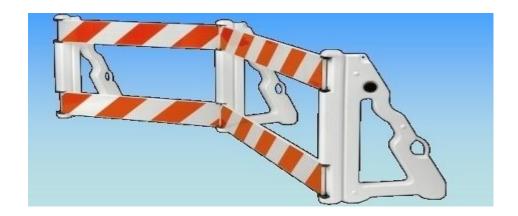
Barricades

- Both the PWD and the BTD have determined that locations require more than just tape and rope between cones to secure a **work site for the protection of pedestrians and workers**
- THE USE OF TAPE AND ROPE WILL NOT BE ALLOWED UNLESS OTHERWISE AUTHORIZED
- The BTD & the CIU have determined that work zones will require the use of Some sort of Barricade.
 - Barricades are for delineation of active excavation outside of pedestrian areas sites and are not compliant for pedestrian path of travel.
 - The Barricades <u>must have an upper and lower</u> installation/fastening/hooking ect
- These barricades must adhere to MUTCD and OSHA specifications.
- The PWD enlisted the assistance of certain contractors to begin testing the use of Continuous Barricades.
 - Those contractors, along with BPD Detail officers, agreed that the barricades provided superior protection of the workers, motorists, and pedestrians alike.
- BTD will sign off on the type of barricades to be used based upon location and traffic needs.



Temp Pedestrian Path of Travel

- Certain BTD Traffic Management Plans may require the application of temporary pedestrian paths of travel (Jersey Barriers, etc).
- The BTD may require an ADA compliant pedestrian barricades and channelizing devices for the visually impaired on a case by case basis.



MUTCD STATUTES

R302.4

Pedestrian barricades and channelizing devices shall be continuous, stable, and non-flexible and shall consist of a wall, fence, or enclosures specified in section 6F-58, 6F-63, and 6F-66 of the MUTCD (incorporated by reference; see R104.2.4).

R302.4.1

A continuous bottom edge shall be provided 150 mm (6 in) maximum above the ground or walkway surface.

R302.4.2

Devices shall provide a continuous surface or upper rail at 0.9 m (3.0 ft) minimum above the ground or walkway surface. Support members shall not protrude into the alternate circulation path



Sidewalk Access During Construction

- When working on a public sidewalk, or along the curb in the roadway, it is important for the crew to always maintain a safe, traversable pedestrian path around the work site.
 - The BTD may require, in some instances, that a safe and compliant temporary path of travel be established around the work zone.
- In most instances, working in the sidewalks in Boston means reducing the path of travel to less than the ADA required four foot diameter, and therefore will result in the crew temporarily closing access.
- When a crew must close access to a sidewalk they must notify all pedestrians that the sidewalk is closed by placing "Sidewalk Closed" signs at the closest pedestrian access ramps at either end of the sidewalk being worked on.
 - Sidewalk Closed signs must only be placed where there is both a crosswalk and a corresponding pedestrian access ramp across the street allowing individuals requiring mobility assistance to safely, and successfully cross.
 - o If there are no reciprocating ramps across the street from the closed sidewalk the crew must locate the safest accessible route and direct pedestrians along that path.

Supervisor's Checklist for Items 1-3

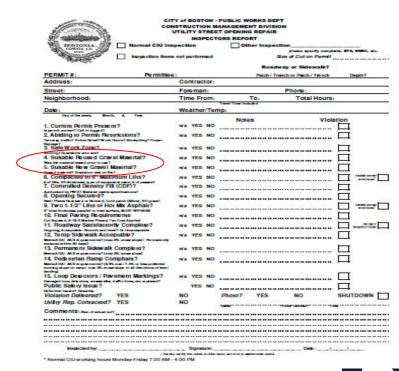
- Before excavation begins the Supervisor must have performed the following:
 - Checked to be sure the current permit is valid and on site.
 - Made sure that all required signage has been placed properly (ID, sidewalk closed, utility ahead, etc.)
 - Verified that all BTD traffic regulations are being upheld, allowing traffic flow (cones, interlocking barricades, barrels, tape, etc.).
 - Excavation area has been secured and cordoned off.
 - Competent Person is on site.
 - Utility Repair Tag markers are on site for installation in patch/trench work.

Only after each of the above requirements has been established can the work take place.



Items 4 & 5 - Backfill Material

- (MHD M1.03.11) "Process Gravel for Sub-base" required, from an approved source
- Re-used and Recycled excavated material requires laboratory test results signed by a professional engineer that the backfill material conforms to MHD M1.03.11
 - The City is currently revising its position on the requirements for recycled material.
- Annual submission of current testing (sieve analysis & proctor)
- Random onsite & source verification testing
- Where a layer of concrete, cobblestone, granite pavers, or other supporting material exists, the Permittee shall replace with concrete prior to installation of temporary pavement.







Approved Material Sources

- All material used for roadway and sidewalk construction in the City of Boston must come from an approved source. Materials include:
 - Backfill material
 - Asphalt
 - Concrete
- The City will maintain an updated list of approved vendors on the Public Works website.
- A Permittee may request to use a vendor not listed on the City's website. The requested source will be subject to testing before approved by the City.
 - If approved that vendor will be added to the website.



Failed Test Consequences

- The City's position is to allow all vendors to sell or use your material as long as it meets City specifications.
- If your company fails a material test, you will automatically be suspended from using or selling that material.
- You must reach out to our consultant testing company, **Briggs Engineering**, to schedule a retest of the material.
- If the material passes, you will be allowed to resume using or selling that material.
- Please respect that the City of Boston must ensure that its roads and sidewalks are restored to their original conditions.



Item 6 - Compaction

This is a critical step in street opening restoration

- Standard 6" lifts sufficient for standard equipment (jumping-jack).
- Control-strip required for equipment capable of greater compaction depth.
- Crowded trench can prohibit standard compaction.
- Poor compaction results in unacceptable patches/trenches.
- Any Permittee work zone found to be in egregious violation of Item 6 shall be shut down.
- Trust will have been broken!
 - Possibility of all active work zones being shut down (Excluding Emergency work)





After-Hours Backfill & Pave

- Work where the backfill and paving operations are scheduled to take place on weekends or after normal working hours must have prior approval by the BPWD.
- If a company performs emergency work after 4:00pm during the week, or on a weekend, the City may require the location to be plated until such a time that a CIU Inspector can be assigned to witness the backfill and/or pave on their next scheduled work day.
- The CIU reserves the right to require any Permittee to perform compaction testing (Nuclear Density) at the cost of the Permittee.



Settlement of 2 or More Inches

- Properly backfilling your excavation is the most important step in construction.
- Failure to compact gravel to specifications results in uneven and settled patches.
- Every bad patch that needs to be repaired due to poor construction practices is money out of your company's pocket. Do work right the first time for your own benefit!



Settlement of 2 or More Inches (Continued)

- Roadway patches and trenches that have settled 2 or more inches must be given the highest priority for repair.
- As a condition of receiving a permit your company has pledged to the City that you will repair any locations found to be unacceptable to the Rules & Specifications.
- This means providing the resources to meet any backlog of repairs as well as newly identified unacceptable locations.
- Any roadway patch identified as settling 2" or more must be repaired by your company prior to the City's patch repair program. This includes placing new gravel to prepare for permanent restoration.



Reasons for Settlement >2"(Continued)

- Material did not meet City specifications
- Material was too dry at the time of backfill
- Material was frozen at the time of backfill
- Material was too wet at the time of backfill
- Backfilling happened in inclement weather
- Improper backfill compaction equipment was used
- Backfilling in lifts greater than 6 inches with standard equipment
- Backfilling in lifts greater than 2 feet with approved equipment
- Too few passes with approved compaction equipment
- All of these reasons are unacceptable and can be avoided



Improper Compaction is the Leading Cause to Patch Failure









Gravel Requirements of MassDOT M 1.03.11

Recycled material for backfill

Sieve	Size	Specifications		
Standard	Alternate	M1.03.1 Processed Gravel for Subbase		
75 mm	3"	100		
37.5 mm	1-1/2"	70-100		
19 mm	3/4"	50-85		
4.75 mm	#4	30-60		
0.075 mm	#200	0-10		

Percent Recycled Material

Asphalt, % 5 max Soil and Natural Gravel, % 50 min

- Boston is allowing the use of recycled material that meets M1.03.11 specifications for utility excavation backfill.
- Boston knew that recycling is the way of the future and we understand that the use of recycled material for utility backfill will be the standard soon.

Gravel Testing

- Annual gravel testing and lab-certification of current maximum dry density, and corresponding moisture content (ASTM D 1557) of granular material has been performed and submitted to PWD for approval, as specified in Section 9.01(E).
 - The PWD will periodically test gravel samples throughout the construction season, both in the field and at the vendor's plant.
 - A list of approved vendors is available on our PWD website.
- We expect every gravel supplier to be fully on board with the mix design and not have multiple failures as in previous years.
- Failure to adhere to the City's specs will result in that supplier only being allowed to provide approved processed M 1.03.11 Gravel.
- The City, depending on the number and degree of failure, will temporarily suspend that supplier from providing or selling gravel to be used in backfilling utility excavations city-wide.



Commitment to Repair Failed Street Cuts or Infrastructure

- Permittees must repair all unrepaired bad patch locations before permits will be issued.
 - The City will consider approving permits to Permittees who designate crews to simultaneously repairing locations while new work takes place.
 - The PWD will not waiver on that position.
- The repairs cannot be minimal or superficial. The crews must fully address the roadway issues.



Supervisor's Checklist for Items 4-6

- Before backfilling takes place the Supervisor must have performed the following:
 - Is the gravel being supplied from an approved source?
 - Reject any material that is frozen, too wet, too dry, or otherwise visually appearing out of specifications.
 - Even if the gravel is coming from an approved source, if a supervisor has what the CIU determines to be unacceptable backfill material, the supervisor is liable.
 - All standing water pumped out of excavation
 - On standard backfill compaction equipment (Jumping-Jacks, plate compactors, etc) the supervisor must perform no more than **6**" lifts with at least 5-7 passes each lift.
 - The maximum allowed lift size for a hoe pack is 2', unless otherwise authorized by PWD.
 - An Asphalt Plate Compactor is NOT an acceptable tool for gravel compaction during backfill procedures.



Item 7 - Controlled Density Fill (CDF)

- Flow-Fill to be used only with permission from PWD
- 24" gravel buffer to be provided below pavement structure for drainage
- Min. 24 hr setup



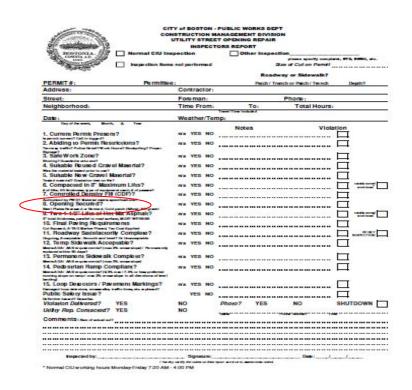
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Item 8 – Opening Secured

- City expects all active work sites to be backfilled and paved every day.
- Steel Plates
 - To be used when conditions dictate
 - Manpower and production reasons not valid
 - City must be made aware of plated locations via EMAIL to the CIU,
 - Permittees are responsible for daily monitoring of plated locations.
- <u>Plate</u> installation
 - Minimum 18" over excavation
 - "Bermed" (24" ramp in path of travel)
 - Plate must have visible ID and Phone # for emergency contact on both sides.
 - Monitor sidewalls, especially in wet weather
 - Recessed (Leveling Course)





Steel Plate Ahead Signage

- Plating active excavations comes with the territory.
- Sites are typically plated 16 hours per day which creates a major liability.
- It is so important for the vehicles to be aware the of plates ahead before reaching the work zone.
- Boston will be the leader on notifying the public of steel plates in use.

Steel Plate Ahead signs will be required throughout both Construction Season and Winter Moratorium.



Steel Plate Ahead Specifications (Continued)

- Retro Reflective Fluorescent Orange (Type 4) Material
- Securely bracketed to pole 6' from bottom of sign to ground.
- Posted 200'-300' in advance of plated area.
- Must be placed in both directions if plates span across centerline.



Steel Plate Ahead Signage (Continued)

- Signs will be secured to existing poles and will remain up until plates are removed.
- Required throughout both Construction Season and Winter Moratorium.
- Signs must be taken down after work is completed.





Skid-Resistant Plates (Continued)

- In November of 2012 the City began exploring the use of skid-resistant roadway plates for "High Concern" locations that needed a greater amount of protection (bike lanes, bus lanes crosswalks, sidewalks, etc.).
- The City gave you a year notification regarding the use of skid-resistant plates.
- This allowed you to begin to find the best methodology and cost for obtaining skid-resistant plates.
- These plates are currently being used by all contractors throughout the City for the Winter Moratorium, and reports from both the contractors and our City inspectors have indicated that the plates are an improvement.
- Skid Resistant plates have been mandatory since April 15th 2014 for all Permittees in "High Concern" locations throughout the City.
- The City may decide to expand the use of Skid Resistant plates once it has been given a chance to further review the use and effectiveness of them.



Skid-Resistant Plates (Continued)

• Skid Resistant plates are now mandatory for <u>ALL</u> Permittees in 'High Concern' areas throughout the City.

- 'High Concern' areas include:
 - Crosswalks
 - Sidewalks
 - Bike Lanes
 - Bus Lanes
 - Steep Inclines
- Skid resistant plate surface (grip) should be equal to or greater than the adjacent existing street or roadway surface.
- Speak to your fellow contractors for information on where to buy/rent skid-resistant plates.
- Make sure these plates are beige in color.
- If the inspectors determine your skid-resistant plates do not meet our specifications, they will be rejected for use.
- PWD will require you to provide us your inventory of these plates to ensure compliance.



Need to Improve Plating (Continued)

- You need to vigilant every time you are properly securing the work zone at the end of the day.
- Crews need to focus on ensuring there is sufficient overlap of steel plates on the roadway (at least 18") and that there is no movement or bending of the plates from traffic.
- The asphalt or cold patch berm around your plates must be compacted with a plate compactor.
 - on the non-driven sides of the plate, and <u>18</u>" on the non-driven sides of the plate. This provides a smooth ride and reduces the risk of shifting.
- Failure to properly secure your plates is a serious violation and can result in an immediate shutdown of your active work.



Not Acceptable!











Acceptable



Trench Awaiting Final Top Signage

- Mandatory on all projects where binder will be left down for extended period of time.
- The City understands the best procedure regarding final paving of major trenches is to apply the binder course first, and then wait for the services to be installed before the final top course.
- By doing that, we leave the binder trench course down for extended periods of time.
- This has led to complaints to our mayor's hotline, with the feedback being that it's either a bad job or with questions on why the trench is down.





Inactive locations & Jackie's Law

Jackie's Law

- Applies to unattended open trenches.
- Any public safety violation on unattended trenches will be sited under "Jackie's Law" as well as BPWD Rules and Specifications.
- Any public safety violation on attended trenches will be a violation of OSHA as well as BPWD Rules and Specifications.

Any site where the excavation is in excess of 3' below grade and the depth of which is, in general, greater than the width, but the width of the trench, as measured at the bottom, is no greater than 15' will be subject to "Jackie's Law" and all regulations therein.





Item 8 -Opening Secured Reminders

- Any steel roadway plate(s) located in a high concern area must have a skid resistant coating applied for the safety of the riders (Mandatory as of April 15th, 2014).
- Absolutely No openings are to be left in gravel, unless otherwise authorized by PWD
- <u>Cold Patch/Silvex</u> Any excavation left to grade in Cold Patch asphalt must be monitored and replace within 48 hrs unless otherwise approved.
- Temporary Pedestrian Ramps must be ADA/AAB compliant at the end of each day.
- The City will not tolerate excavations that have not been secured as specified in the Rules and Specifications.
- The City will not accept excuses, lack of effort, or a lack of professionalism when it comes to securing job sites in the City of Boston.
- Securing the Public's Safety comes before the convenience of doing work.



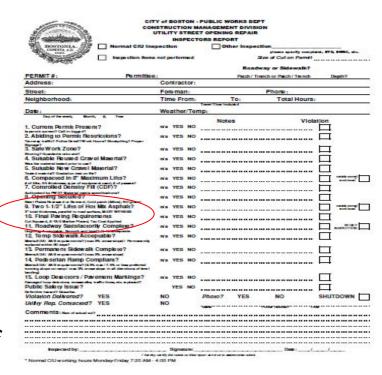
Supervisor's Checklist for Item 8

- Before the Supervisor and crew leave the job site at the end of their shift, they
 must have performed the following:
 - All paved areas (Cold Patch or HMA) are to grade of the existing roadway.
 - The work zone is swept and clean of debris and ADA/AAB compliant.
 - The sidewalls of the excavation has been inspected for stability and shored where needed before plating.
 - All plates must have the ID name and emergency contact phone number clearly visible.
 - The crew has observed vehicular traffic traveling over the plates to verify that no banging, bouncing, shifting, warping, vibration, etc. is taking place.
 - All posting dates are accurate with dates and permit information.
 - No equipment or material is stockpiled without the express permission from the BTD.



Items 9 & 10 – Final Paving Requirements

- All openings must be precut in a neat line using motorized wheel cutting, saw cutting, cold planing, or pneumatic chiseling.
- Pavement edges shall be trimmed to a neat vertical face, free of loose materials and neatly aligned with the centerline of the trench.
- The shape of the pavement cut-outs shall be rectangular.
- All irregular shaped cuts or damaged pavement shall be repaired at the expense of the Permittee.





Items 9 & 10 – Final Paving Requirements

- A Tack Coat shall be painted to the pavement sidewalls of the entire excavation to prevent water infiltration.
- The asphalt cross-section is to be applied in two even lifts. **This is critical to have a good smooth level patch**. Leave at least 1.5" of space between the base course and the grade of the road to allow for enough top to be placed.
- The first lift must consist of 1.5" Boston dense binder or Boston modified top unless otherwise approved.
- The last lift must consist of 1.5" Boston top unless otherwise approved.
- Proper compaction equipment must be used.
- Utility Repair Tags must be installed in any temporary cold patch, silvex, or asphalt material placed in a patch or trench.



Not Cut Squared, No Tack Coat, Road Gouged, No Tag... Unacceptable!





Cut Squared, Smooth & Level









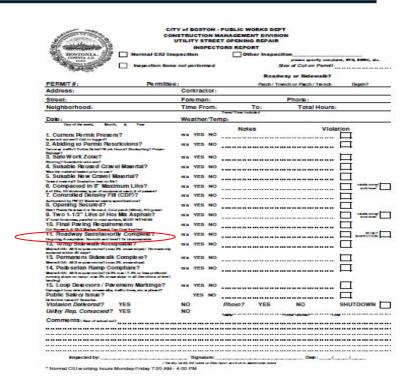
Supervisor's Checklist for Items 9 & 10

- Before the final paving has taken place, the Supervisor must have performed the following:
 - The pavement cut has been squared off with vertical sidewalls in neat, straight lines.
 - The pavement sidewalls are clear of debris and have had a tack coat applied.
 - The crew has a supply of both HMA Binder and Top.
 - Trench Uneven signs posted for major work.
 - Proper compaction equipment is available, and used (mechanical roller, plate compactor, etc.).
 - Asphalt is compacted in two even lifts with approved material.
 - Utility Repair Tags are updated and enough are on site for every cold patch, silvex, or asphalt patch/trench.



Item 11 – Roadway Satisfactorily Complete

- If our procedures are followed, the final result should be (and remain) smooth & level.
- Violations regarding the failure of roadway patches and trenches remain the biggest contributor to the unacceptable compliance rating.
 - Settled patches
 - Patches humped above grade
 - Not cut squared
 - Not smooth and level
 - Improper pavement material, etc.





Unacceptable Patch/Trenches

"Bad Patch" - procedure must be followed

- Identified by CIU as "unacceptable" under Items 11, 12, & 13
- Bad patch locations will be e-mailed to the permittee from the field
- The Utility companies will also be emailed a weekly summary list of all their bad patch locations
- Permittee has 48 hrs to confirm or contest
 - Contested patches on hold until field meeting
 - Confirmed have until end of following week to repair
 - No communication results as "confirmation" of ownership
- Failure to address bad patches result in possible suspension of permits
- Public Safety locations require immediate response
- Report Card Tool used for self evaluation
- No New Permit Requests will be issued until all existing bad patches have been repaired as required unless otherwise authorized



Need Commitment to Repair Failed Street Cuts or Infrastructure

- Permittees must repair all unrepaired bad patch locations before permits will be issued unless otherwise authorized.
 - The City will consider approving permits to Permittees who designate crews to simultaneously repairing locations while new work takes place.
 - The PWD will not waiver on that position.
- The repairs cannot be minimal or superficial. The crews must fully address the roadway issues.



BAD PATCH RESPONSE TIMELINES/UNLESS OTHERWISE AUTHORIZED

Bad Patch Type	Response Time
Public Safety (Shifted Plate, Patch Down 6", etc)	Protection site within 1 Hour ; Mobilize crew for repair within 3 Hours
2" or Greater Settled	Must repair within 2 business days of notification unless otherwise authorized
Less than 2" Settled	Within 7-13 Days of notification unless otherwise authorized
Permanent Sidewalk Repair	Return to existing within 60 Days after initial repair unless otherwise authorized (Alternative - PWD will allow Repairs by Neighborhood = Increases production)
	Within 3 Days of notification unless

otherwise authorized

Pavement Marking/Loop Detectors

90-Day ReInspection - CIU's Most Critical Inspection

- The CIU inspects excavation work a minimum of 90 days after the completion of construction work.
- If your patch or trench patch remains smooth & level at least 90 days after your work is completed it is not likely settle.
- The City considers this to be the most important statistic, and a true indicator of the effectiveness of the CIU.
- The initial final repair inspection is important, but if this percentage is unacceptable then it's all for naught.
- Compaction is the key to having quality work.
- The Hansen Permitting and Reporting Program will now track 90 day inspection findings.
- In past years the average acceptability rating has been over 98%

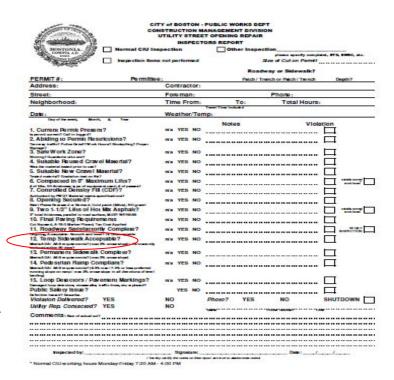


CASTING REPAIR RESPONSE TIMELINES

Erosion Repairs	Response Time
Public Safety - Erosion	Temp Repair within 3 Hours
Public Safety - Liosion	Perm Repair within 14 Days
Non Public Safety - Erosion	IP and 1's Temp Patch within 1 Business Day unless otherwise authorized 2's & 3's Temp Patch within 2 Business Days unless otherwise authorized Perm Repair within 14 Days unless otherwise authorized
Adjustment Repairs	Response Time
Adjustment Repairs Public Safety - Adjustment	
	Response Time Make Safe within 3 Hours Repair within 48 Hours

Item 12 – Temporary Sidewalk

- Temporary Sidewalk repairs are to be made immediately
 - MA AAB/ADA compliant
 - Sidewalk cross slope must not exceed 2% (Strive for 1.5%)
 - Ramp cross slope must not exceed 8.3% (Strive for 7.5%)
 - Maintain a compliant temporary passageway of a minimum of 4' around construction area (See BTD Traffic Management Plan)
 - If unable to maintain minimum 4' passageway the Permittee must provide two (2) MUTCD R9-10 "Sidewalk Closed Use Other Side" signs for either side of the site at the nearest intersecting pedestrian ramps.
 - 3" HMA installed in 2 even lifts, smooth and level.



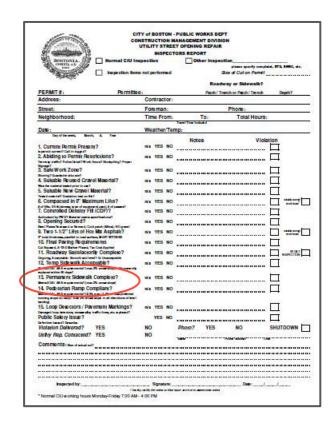


Not Acceptable!



Items 13 – Permanent Sidewalk

- Permanent repair to be made within 60 days of temporary repair unless otherwise authorized
 - Abide by City material/installation specs.
 - Edge stone to be reset within area of repair.
 - Entire flag must be replaced
 - Must notify City 24 hours before PCC work takes place.<u>https://t.ly/3BNL</u>
 - o MA AAB/ADA compliant (see Item 12)
 - o If any portion of an existing pedestrian ramp is disturbed by construction, Permittee shall be required to reconstruct the ramp to current ADA/AAB regulations.
 - o Permittee not responsible for AAB reciprocal provision.
- Utilities must maintain database of sidewalk restoration locations.



Concrete Requirements

- Concrete shall be air entrained, 4000 psi, and three-quarter (¾) inch maximum size aggregate with 660 lbs of cement per cubic yard of concrete. Entrained air shall be between 5.5% and 7.5% with a slump not to exceed four-and-one (4½) half inches. ASTM C150 Type 11 cement shall be used. The use of mineral additives or supplements such as Ground Granulated Blast Furnace Slag, Fly Ash, Silica Fume or Micro Silica is prohibited. Normal weight aggregate shall conform to ASTM C33, containing no deleterious substances, which cause surface spalling. The Permittee must certify that no alkali reactivity is produced with the proposed aggregate-cement combinations when tested in accordance with ASTM C227.
 - All concrete shall be produced in accordance with the approved mix designs. The Permittee shall comply with ACI 304 and 309 as herein specified.
 - The Permittee shall be allowed to add water for slump adjustment, but is required to adhere to the standards of ASTM C94. This standard allows for slump adjustment on site if the truck arrives with a concrete slump less than four-and-one-half (4½) inches. This shall only be allowed if the following conditions are satisfied:
- The water addition shall not increase the water cement ratio above the maximum permitted by the specification.
- The water shall be added to the entire batch, not in the middle or end of the batch.
- Water addition is not allowed to bypass the 1½ hour or 300 revolution criteria.
- Water shall be added into the batch at the head section of the drum or by injection into the head and discharge section of the drum.
- Water added requires an additional 30 revolutions at mixing speed.
- The driver's delivery ticket shall document any water withheld at the batching plant.



Testing Specifications

- All permittees will be required to notify Public Works 24 hours before pouring concrete sidewalks: https://goo.gl/FTFF2M
 - 24 hour requirement will include field batching of concrete.
 - Major utility companies must submit a monthly list of completed sidewalk locations to PWD via email for inspection purposes.
- Materials will be tested at the plant or on site.
 - Material must meet all contract specifications including: strength, 4000 psi, ¾" aggregate, ≤4% slump, etc. (see contract specifications for more details)
- Sidewalks must be poured to meet the depth of adjacent sidewalk, but not less than 6"
- Concrete testing is at the expense of the Permittee.



Concrete Testing: Mobile Mixers

- All suppliers will provide their mix formulas to Briggs Engineering for testing: **sskorohod@briggsengineering.com**
- All personnel for companies restoring concrete sidewalks must be qualified and experienced in performing sidewalk repair work. The City will require proof of qualification.
- The City may require crews to meet with Briggs Engineering and/or City Engineers in the field to verify all necessary equipment and materials are on site to properly perform the work.
- Once approved you will be allowed to sell and provide concrete in the City of Boston.
- Your company must never tamper with the job mix formula in the field.
 - Need job mix formula with slip on work site at all times.
- The City will periodically test your material in the field.



Concrete Testing: Mobile Mixers

- All suppliers will provide their mix formulas to Briggs Engineering for testing (sskorohod@briggsengineering.com)
- All personnel for companies restoring concrete sidewalks must be qualified and experienced in performing sidewalk repair work. The City will require proof of qualification.
- The City may require crews to meet with Briggs Engineering and/or City Engineers in the field to verify all necessary equipment and materials are on site to properly perform the work.
- Once approved you will be allowed to sell and provide concrete in the City of Boston.
 - A list of approved vendors is available on the PWD website.
- Your company must never tamper with the job mix formula in the field.
 - Need job mix formula with slip on work site at all times.
- The City will periodically test your material in the field.





Graffiti





Slope must be ADA/AAB compliant or else it will be REJECTED by the Public Works Department (<2%)

Brick Sidewalk Repairs

- The CIU reports show that many Permittees performed unacceptable brick work in the past couple of years.
 - Every Permittee must have a competent crew that specializes in brick restoration.
- All Permittees will be responsible for adjusting any edge stone within the limits of the sidewalk repair.
- Proper material and testing requirements must be met.
 - Material and specifications are available on the PWD website.



Unacceptable Workmanship!







Bricks should be wire cut and professionally laid





Sidewalk Repair Requirements

- Each month the CIU will provide all Permittees a list of overdue (beyond 60 days) permitted sidewalk locations requiring permanent repair.
- Upon receipt of this list all Permittees will have 7 days to acknowledge ownership (via email) and present a planned schedule for restoration to the PWD.
- If overdue restorations are not completed within 30 days unless otherwise authorized, PWD will deny all new permit requests.
- Repairs by Neighborhood may be an option instead of within the 60 day requirement, pending PWD approval.
 - Approval may result in the above timelines not being enforced for that company.
- All Permittees must be vigilant regarding the impact to, and safety of, pedestrians during construction.



REMINDER

- All Permittees will be required to provide the CIU/BTD with the repair schedule of sidewalk locations 24 hours before performing the work.
 - Your company will use the City's Online Sidewalk app notifying the City of your pending construction: https://t.ly/3BNL
 - Any email inquiries may be sent to: cmdoffice@boston.gov
 - Failure to notify the City as required may result in the suspension of new permits or possibly active jobs.
- All concrete testing requirements are at the expense of the Permittee.



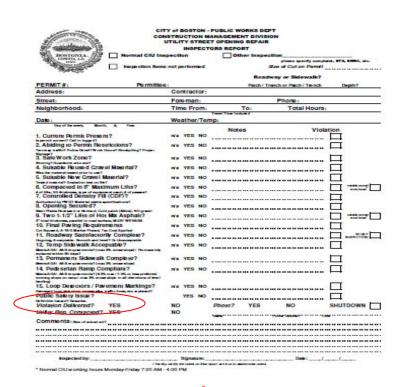
Supervisor's Checklist for Items 12 & 13

- Does your permit allow for sidewalk work?
- Has CIU/BTD been notified at least 48 hours in advance?
- If access to the sidewalk will be affected, do you have approved sidewalk closed signs?
 - Signs must be placed at the nearest pedestrian ramp on either side of the construction.
- For work on the sidewalk where Pedestrian access is not blocked is there at least 4 feet of access?
 - All sidewalk work must have approved MUTCD barricades in place.
- Any edge stone within your permanent restoration limits must be reset, even if it was not damaged due to your work.
- Are you using approved material?
 - All excavated sidewalk material must be repaired in kind.
- All temporary and permanent sidewalk repairs must meet ADA/AAB slope requirements.



Item 14 – Permanent Ramp Compliance

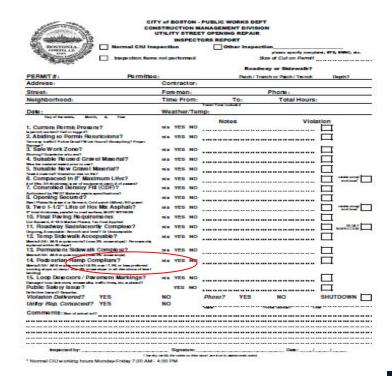
- If any portion of a Pedestrian Access Ramp is disturbed, including the landing or abutting edge stone, the ramp becomes the responsibility of the Permittee for repair.
- All unacceptable ramps must be replaced to ADA/AAB specifications with appropriate cross slope requirements.
 - 8.3% max running slope on ramp with
 7.5% or less preferred
 - Max 2% cross slope in all directions of level landing



If in doubt, call the City. Our Engineers will be happy to assist vou!

Item 15 - Pavement Markings/Flex Posts & Loop Detectors

- Loop detectors, Flex Posts, pavement markings, signage etc.
- Maintain pavement markings during construction (paint).
- Partial damage to crosswalks results in complete restoration.
- Public's Safety possibly compromised
 - Damaged pavement markings must be replaced no later than <u>72 hours after</u> <u>completion of work</u> unless otherwise authorized
- Must restore any damage flex post to BTD specs
- Permittees are responsible to internally track pavement markings, flex posts and loop detectors locations needing replacement





Pavement Markings

- Pavement Markings on Arterials must have temporary tape applied before the required 72 hour permanent replacement application unless otherwise authorized.
- The BTD and the CIU have increased their vigilance regarding Disrupted Pavement Markings.
- Pavement Markings that have been impacted by a Permittee and not repaired within the required period of time may compromise the public's safety.
- When excavation work interrupts a crosswalk, the entire crosswalk must be restored by the Permittee, unless otherwise authorized by the PWD and BTD.
- Patches or trenches without the required pavement markings are an incomplete product. This conveys to the public that City and the Permittees are not doing the job "right".
- Disrupted pavement markings are now added to the "Bad Patch" listing.



Loop Detectors

- Contractors shall notify the BTD Traffic Management Center (617-635-4430), at least 48 hours prior to starting any construction that will impact loop detector/signal operations.
- Contractors shall replace loop detectors within 72 hours of completion of work, unless otherwise authorized and notify the BTD Traffic Management Center to schedule a traffic signal inspection of the intersection.
- Loop detectors shall be replaced by a BTD approved traffic signal contractor in accordance with BTD specifications.



Bike Lanes/ Flex Posts

- Boston Bikes is part of the Mayor Wu's vision for a vibrant and healthy city that benefits all its citizens.
 - Since 2007 the City has increased the number of bike lanes throughout Boston dramatically.
 - New bike lanes and flex posts are added each year.
 - Before starting your work...
 - All permittees must be keenly aware of restoring any bike lanes or flex posts affected by your work to BTD specifications
- All bike lane routes are in COBUCS.
- On any proposed utility or contractor work in conflict with completed bike lanes in the COBUCS, the Permittee MUST coordinate with the BTD Engineering Department to review plans and determine whether or not the project will disrupt any bike lane markings.

Bike Lanes/ Flex Posts

The Public Works Department will not release a COBUCS entry in conflict with completed bike lane markings until either receiving confirmation by the BTD that your work does not interrupt the pavement markings, or until your company provides a copy of sketching detailing the replacement of the bike lane(s).

All bike lane markings must be replaced within 3 days of completion of work unless otherwise authorized

All damaged or removed flex posts must be reinstalled to BTD specs

Any steel roadway plate(s) located within a bike lane must have a skid resistant coating applied for the safety of the riders.

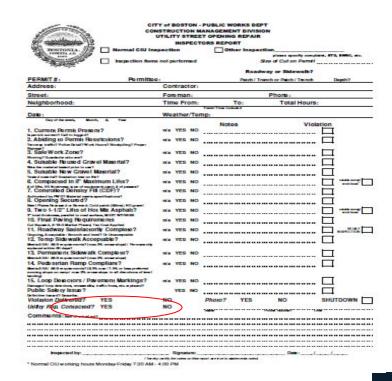






Public Safety

- Signals an egregious disregard for City Rules and Specifications
- Will result in meeting/shutdown
- Possibility of all active work zones being shut down (Excluding Emergency work)
- Public Safety violations will be taken into account during Winter Moratorium requests.
- The City of Boston keeps record of ALL violations against the Rules and Specifications.
- Such violations are taken into consideration, especially in regard to public safety, in the Permit Application Process.







City of Boston and Utility Capital Improvement

- City: Capital Programs
- Utility Companies: Capital Upgrades, Service Requests, Maintenance upkeep and Emergency Repairs
- Private Contractors: Residential/Business
 - Utility and Contractor work occurs throughout Boston.
 - The City wants to pave the streets that are in need of repair.
 - PWD needs to be sure that the streets paved aren't cut into for at least 5 years.



Coordination is a Must!

- The constant construction can be extremely frustrating to City officials who are responsible for planning, resurfacing, and reconstruction projects in the City.
 - The ability to maintain capital street improvement programs is severely compromised by the frequency of utility construction.
 - The City's pavement structure is weakened with every utility excavation.

Since 2012 there have been over 70,000 excavation permits activated.



Truly Cleared?

- The goal of the Public Works Department is to improve coordination to the point where each newly paved streets lives to the full extent of its intended lifespan without becoming plagued by utility construction cuts which jeopardize the infrastructure of the City roadways.
 - Resurfaced streets should remain undisturbed for at least 5 years
 - Reconstructed streets should remain undisturbed for at least 10 years
- City recommends identification of trouble mains/conduits for full replacement before any City resurfacing project takes place.



COBUCS

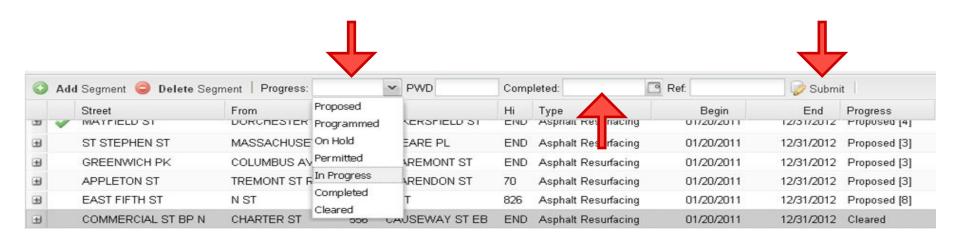
- City developed an online coordination tool in 2010 called the City of Boston Utility Coordination System
- All entities seeking excavation permits must enter all of their proposed work into COBUCS
 - Over 65,000 conflicts have been coordinated. That's 65,000 fewer potential Guaranteed Street cuts!!!
 - The 65,000 coordinated conflicts represent a savings of \$100 Million in unnecessary repaving costs
 - It is the City's expectation that all utilities, at a minimum, enter their two-year capital plans for work.
 - COBUCS checks all entered work against Guaranteed Street List to determine if the entered data lies on, or intersects, a Guaranteed Street.
 - COBUCS checks all entered work against all City programs in order to determine if the entered data lies on, or intersects, a street proposed for a City of Boston resurfacing or reconstruction program.

COBUCS Address: https://pwdapps.cityofboston.gov/cobucs/



USING COBUCS/CAPITAL PLANS

- Absolutely NO PERMITS shall be issued by the Boston Public Works Permit Branch until that Permittee's proposed work has been entered into the COBUCS program.
- The proposed **start date** (also called the "Reserve Date") must always be on the day you become **aware of the project!/Go to the end of the year on your reservation**
- The PWD recommends that you extend your proposed **completion date** to the end of the Construction Season, regardless of your actual planned completion date.
 - This allows the City to coordinate with you more efficiently.
 - Once the reservation date expires your entry is no longer being coordinated and could potentially end up with a needless street cut on a Guaranteed Street.
- Once work begins you must update the status from "Proposed" to "In Progress.
 - O By not indicating your work is complete even though it is, you're unnecessarily holding up paving projects which is unacceptable.
- Once the work is completed you must change the status to "Complete" and enter in a completion date.
 - o If you do not follow these procedures your permits may be placed on hold until all entries are accurately updated.



All entities are required to update the status of their programs <u>on a daily basis!</u> (In Progress, Completed, etc.)



COBUCS Conflict Notification Protocol

(Must be emailed as soon as conflict is found in COBUCS) PERMITS WILL BE HELD IF NO EMAIL IS SUBMITTED

- When you are in conflict with any City of Boston you must provide the following details:
 - What is the type of work? ______ (service, maintenance, capital improvement = new mains, conduits, etc.)
 - What is the approximate start date? ______
 - What is the approximate end date? ______
 - Do you plan on any other work within the proposed paving limits?
 - NOTE: If your work is being done for a new building development, or in preparation for a demolition, please indicate so in the email.
 - The engineers in charge of the paving programs must be included in the conflict email so that they can comment at any time. The COBUCS Conflict will not be released without a response from the Engineers in charge of that program. This could include coordination details.
 - We prefer that conflict emails contain a Print Screen (snapshot of the screen image) of the conflict. If you need instructions on how to create a Print Screen image of your conflict please email cmdoffice@boston.gov and he will provide you a walk-through.



Streamlining Email Notifications of COBUCS Conflicts

We've consolidated over fifteen e-mail addresses for conflicts down to four.

- Paving conflicts new e-mail address will be: pavingconflict@boston.gov
- 2. Special event conflicts new e-mail address will be: specialeventconflict@boston.gov
- 3. Guaranteed street conflicts new e-mail address will be: quaranteedstreetconflict@boston.gov
- 4. To inquire if your conflict has been approved: conflictapproval@boston.gov

Must e-mail Public Works within 24 hours of conflict. Multiple conflicts will require multiple e-mails.

PERMITS WILL BE HELD IF NO EMAIL IS SUBMITTED



COBUCS Reports

- COBUCS offers three reports to be reviewed to better aid your company.
 - The Guaranteed Street List
 - City of Boston's Capital Plans
 - Your Company's Capital Plans
 - To view a report, select the Reports icon on the COBUCS starting menu



Clearance Sign-Off

- All streets that will be resurfaced or reconstructed in 2023 will have been officially cleared and signed off on by the 20 major utility companies and City agencies.
- Every private contractor outside of the major 20 who performs roadway excavation work in the City of Boston has had access to all proposed streets, and the opportunity to contact the City for possible deferment.



The Bottom Line...

- The City's expectations are that all streets to be resurfaced or reconstructed in 2023 are free of any future utility planned or repair work for a minimum of 5 years.
- Your company was given every opportunity to defer City program streets throughout the clearance process.
- The cost of digging into a new street will be severe. It will range from, at a minimum, a curb to curb overlay fee, to the possibility of denial of a work permit for that street.



COBUCS 2.0

- Since 2010, no utility company, private contractor, or City project work can start without first being entered into our online reservation system.
- With the help of Paul Taylor, the City of Boston Utility Coordination System (COBUCS) was created and is the tool that we have been using ever since.
- Boston is proud of COBUCS. Since 2010 there have been over 65,000! avoided conflicts which would have resulted in the digging of newly paved streets, at a cost of almost \$100 million dollars!
- In the City's commitment to making available the latest technologies and most innovative tools, we are currently in the middle of a search for a COBUCS successor which will include automatic emails, mapping, editing, and flexibility which will allow for increased collaboration and coordination. Special events, which affect all of our construction projects, will now be fully implemented in COBUCS 2.0.
- This will be a more robust toolset to provide greater opportunities to coordinate work, prevent conflicting overlaps, navigate moratoriums, and provide all users with a better experience over.
- Most likely, COBUCS 2.0 will not be in place until 2024.





Conclusion

- Utility network key component in Boston's future.
- Upgrade, repair, and maintenance must be performed in a professional manner.
- Teamwork is critical in delivering shared goal of a superior infrastructure to Boston's Citizens.

SEE YOU OUT IN THE STREETS

