

# **RIGHT-OF-WAY (ROW) PLAN ROUTING MANUAL**

March 31, 2021



**DEPARTMENT OF PUBLIC SERVICE  
DEPARTMENT OF PUBLIC UTILITIES  
DEPARTMENT OF RECREATION AND PARKS  
DEPARTMENT OF TECHNOLOGY**

## **Purpose:**

The City of Columbus strives to provide quality and timely review of plans submitted for utility work within its corporation limits. Plan review is essential for new development and various construction projects in the public rights-of-way. The Right-of-Way (ROW) Plan Routing Manual is a guideline for companies proposing to construct facilities in the City's rights-of-way. All work must comply with City Code, Chapter 903, Standard Drawing 1441, 2301, 2319, 2332, 2301, the City Construction and Material Specifications (latest edition) (CMSC) and rules and regulations promulgated by the Director of Public Service for all work in the City of Columbus.

## **Online Application Submittal Process / Plan Routing Form:**

The online application / plan routing form, along with a set of design drawings of the proposed work, shall be submitted to the Department of Public Service Permit Section by way of the online portal at <https://portal.columbus.gov/permits/default.aspx>. Provide single PDF of full size permit drawing. PDF shall be flattened and the page labels shall match the printed page numbers. The PDF will also follow the CAD standards as outlined <https://www.columbus.gov/publicservice/Design-and-Construction/Document-Library/>. Upon submission, a reference number is generated. Permit staff will review each submittal for completeness of required information according to the manual, and will identify each City department involved in the plan review process. Specific division information can be found in the online portal by utilizing the reference number provided at submission.

In addition to email updates, the applicant will be able to follow along with the processing status through the online portal. The 'Processing Status' tab in the dropdown menu highlights which divisions are reviewing, requiring revisions, or have approved the request. In the case of revisions, the reviewer will upload comments or redlined plans. The applicant will have download capabilities should they be required. Once the revised drawings are complete, the applicant will upload the revised plans through the portal, and contact the reviewers at ROWPermitReviewers@columbus.gov.

## **Plan Review:**

The applicant will receive emails with status updates informing them of the change in status when the reviewer has performed their review. The applicant shall be responsible to check the review process and verify the approvals from each city department identified on their permit plan routing form and in the processing status of the online portal.

Each city department identified as required for review will have twenty (20) business days from the date of submittal to complete the initial review. A plan drawing rejected for any reason, shall be resubmitted with the necessary changes and uploaded into the portal and labeled as revised drawing with the date. Ten (10) business days will be allowed for all re-submittals to department(s) for approval. Permit reviews cannot be due on a weekend or holiday. Due dates should be set for the next business day.

A proposed drawing, rejected for any reason resulting in the proposed work to be relocated, shall be resubmitted for review, to **all** identified City departments, including the approved department(s). The new revised drawings will need to choose ROW Plans under category and this will email reviewers automatically. Once the drawings are uploaded to the portal an email will need to be sent to the reviewers making them aware of the upload. Also, including a brief description of what the revised drawing is correcting for the reviewer. Applicant should advise reviewers that the plans have been uploaded and provide a brief description of the corrections made in the body of the email and should include this info (or something similar): "Revisions have been uploaded to Accela for EP-##-#####, addressing MOT & UT's rejections, and Water's approval with comments"

In the portal, under Processing Status, when the plan is approved a green check mark will appear next to all identified City departments, and an hourglass will be shown next to Plan Coordination. An email needs to be sent to [colspemits@columbus.gov](mailto:colspemits@columbus.gov) requesting the permit along with the approximate start date. A permit will be issued with a start date not sooner than 48 hours after date submitted with approved plans uploaded into the portal identified as final approved plans. This is when the balance due on permit would be paid, including any inspection fees, or deposits that the plans deem required.

Upon approval of the plan, the applicant has 180 days from the last signature date to submit the email requesting the permit be issued to the Permit Section. If 180 days has elapsed, the applicant may be required to resubmit a new online application / plan routing form and a new set of plan drawings for approval.

### **Plan Design:**

PLEASE NOTE - Developers, designers, engineers, consultants etc., who create and/or submit drawings or plans for review by the City of Columbus, shall adhere to the provisions in the Ohio Revised Code, specifically 3781.27 and 153.64, that require those parties to submit a Design notification to the protection service. A Design notification may be submitted to OHIO811 by calling 811, 1-800-362-2764 or by utilizing the i-dig remote ticket entry program. More information can be found at [www.OHIO811.org](http://www.OHIO811.org).

Subsequently, the applicant is responsible for showing the vertical and horizontal alignment of all City facilities identified as a part of the above Design notification requirement on their proposed design drawings. If additional information is required the applicant should contact each City department for those details.

Plan drawings shall be approved based on the information below. If one or more of these items are not reflected on the proposed design drawings, they are subject for rejection. Plan drawings shall include the following basic criteria for submittal:

- Project Title Sheet with a clearly distinguishable Site Location Map – This site location map should clearly delineate all proposed work locations and limits, with all street names being clearly legible
- When roadways and/or sidewalks are impacted by proposed construction activities, a maintenance of traffic plan (vehicular and pedestrian) is required. This plan shall be prepared in accordance with maintenance of traffic standard drawings available within the Department of Public Service's web site "Document Library", and/or the Manual of Urban Traffic Control devices.
- Street, and/or intersection on plans where work is proposed
- The distance to the nearest intersections when there is no intersection included on the proposed plan
- Include all addresses of each parcel in the working zone
- Excavation dimensions (W x L x D)
- Show & label all existing and proposed city utilities, pull boxes, manholes, controller cabinets, trees, poles etc.
- Identify existing pavement markings, signs, signals, traffic conduit, cables, loop detection (TR)
- Include a note on plan requiring the contractor to replace any disturbed pavement marking, lane lines, etc.

- Proposed work clearly identified (bold, highlight, etc.) (Do not use “red” for proposed route or call-outs as that is reserved for redline corrections/revisions).
- Size of proposed pipe, conduit, or cable with proposed depth
- Clearly identify station breaks when no work is proposed
- Identify limits of required paving per CoC Standard Drawing 1441 on plan sheet (by light shading or hatching)
- Identify specialized pavements on plan sheets (i.e. Bricks, cobbles, granite slabs, etc.)
- Identify specialized sidewalk per type on plan sheet (i.e. Brick, Buff-Wash per CMSC Item 608.031, etc.)
- Distance off of ROW or centerline to outside edge of conduit, pipe, pole or equipment
- Must state on plans: Proposed facilities shall maintain a minimum 3’ horizontal and 1’ vertical clearance from existing utilities
- Scaled plan and profile view; minimum 1" = 40'. Must display the horizontal and vertical scale on each page
- Include a line type legend and symbols list on the proposed plan
- Push and receiving pits identified with dimensions
- Must state if plan being submitted is based upon other state or local government project improvement plans and include the project number, contract number, E-Plan, CC plan, purchase order, etc.
- Bore, push, or open cut method of construction must be clearly stated
- Include pole details for proposed poles being placed
- Water & sewer lines to include the construction plan number
- Utility crossings shall be shown installed perpendicular
- The proposed alignment shall maintain a consistent distance from the R/W or center line of roadway, with the intent of minimizing the number of crossings to any City of Columbus owned utilities in the area. If alignment has to vary, please be prepared to indicate why.
- Notes indicating that any contractor performing excavation, including but not limited to disturbing the earth with powered or non-powered equipment, drilling and/or boring, shall cause notice to be given to the Ohio Utilities Protection Service (OUPS) now doing business as OHIO811 by calling 811 or 1-800-362-2764, or online at [www.ohio811.org](http://www.ohio811.org) at least 48 hours but not more than 10 working days before excavating.

**Each City department that reviews and approves design plans for proposed utility work has established guidelines that may not be included in the required basic criteria. Applicants shall incorporate the following guidelines from each division. City plan reviewers reserve the right to amend the requirements based upon the current circumstances for the proposed plan area.**

## **DEPARTMENT OF PUBLIC UTILITIES**

### **MAPROOM (GIS) – INFORMATION REQUESTS**

Please email all infrastructure data requests to [DPU\\_GIS\\_MAPPING@COLUMBUS.GOV](mailto:DPU_GIS_MAPPING@COLUMBUS.GOV). Individuals calling into the Maproom to make a data request will be referred to the email address listed. The request will not be processed until an email is received.

Pursuant to O.R.C. §149.433(A) (2) and O.R.C. §149.433(A) (3) (B), the data being provided is not considered a public record and is not to be redistributed in any form. The information being provided is for construction purposes only. Any other use of this data is not permitted. This exemption applies to all images, drawings and maps, both hardcopy and in electronic form, as well as any associated electronic GIS/CAD data which shows the location of the utility's infrastructure assets.

While every reasonable effort has been made to ensure the accuracy of this information, it is provided without warranty of any kind, whether expressed or implied. The City of Columbus assumes no liability arising from any use of this information and is not responsible for its accuracy or completeness. Those using this information for any reason are solely responsible for its use and do so at their own risk.

- Name:
- Company Name:
- Contact Number (in case we need to contact you for clarification of your request):
- City Project Manager (if project has a City Project Manager assigned):
- Type of Data being requested (Shapefiles or TIFF Images) (Electric, Water, Sewer or All):
- Summarized purpose of the data being requested:
- Attach an image or GIS/CAD file to the email which clearly shows a bounding box of the area needed (.jpg, .shp, .dwg, etc.)

## **DEPARTMENT OF PUBLIC SERVICE**

### **DIVISION OF DESIGN & CONSTRUCTION ROADWAY PLAN RECORDS REQUEST PACKAGE**

The Department of Public Service (DPS) retains record files for roadway improvement plans developed for the department, such as Drawer E & D plans.

- DPS Plan Request Forms can be obtained by emailing [dpsplanrequests@columbus.gov](mailto:dpsplanrequests@columbus.gov).
- Plan request are returned in the order that they are received.

## **DEPARTMENT OF RECREATION & PARKS**

### **DIVISION OF FORESTRY – Additional Plan Requirements**

1. Clearly show the location of all ROW trees within the construction area on the plans, including their DBH, (Diameter at 4.5 ft. above the ground).
2. Identify all public trees that need to be removed due to the construction. Clearly label by placing an 'X' over each affected area and mark with 'TBR' to identify its intent to be removed.
3. Applicant must contact the City 311 Call Center (614-645-3111) prior to any impact to any public trees; this includes the cutting of trees, roots, or branches within the city's public rights-of-way.

4. Submit a tree protection plan with a drawing for any work located within the drip line of a tree. Please see enclosed standard drawing.
5. Public trees must be protected against injury or damage to branches, trunks, or roots from construction and excavation, as described in the "Best Management Practices - Managing Trees During Construction" a companion publication to ANSI A300 Part 5.
6. Construction materials and excavation debris, chemicals, fuel, equipment or vehicles are not to be stockpiled, stored, dumped or parked within the drip line of public trees. Vehicles or equipment shall remain on paved surfaces unless specifically being used for the excavation.
7. Heavy equipment will not be allowed to compact the soil over the root zone of existing trees. Restricted equipment access routes shall be established before work is begun. Temporary paving materials such as  $\frac{3}{4}$ " plywood, lumber or rubber matting spread over root zone may be required to prevent compaction. (reference ANSI A300 Part 5, Managing Trees During Construction)
8. Installation of utilities under the drip line of existing trees must be directionally bored or drilled below the drip line. Top of the bore or tunnel should be no higher than 3 feet deep. Open trenches within the drip line must be avoided.
9. Where grade change is required within the drip line of public trees, a sufficient residual root zone to provide for the good health of the trees should remain undisturbed and protected by either a dry well or retaining wall if the grade is to be raised or lowered.
10. Failure to contact a City Forestry representative in advance of construction will result in the applicant reimbursing City Forestry for the cost of any and all damage as determined by the current edition of the "Guide for Plant Appraisal" published by the International Society of Arboriculture or the valuation method adopted by City Forestry.
11. Tree removal will be at the expense of the ROW permit holder and must include stump removal. Upon inspection by City Forestry, a tree removal permit will be issued at no additional cost to the contractor.
12. No permit holder shall excavate (open trench or pit) along a City of Columbus right-of-way, under the drip line of a tree without contacting City Forestry prior to the excavation. Failure to comply with the notification will result in the halting of the construction projects, and potential fines.
  - A. If the excavation causes a tree to become unstable and dangerous, the permit holder will be required to have the tree and stump removed at their own expense. The value of the tree at the time of removal shall be paid by the permit holder to the City of Columbus "Tree Fund".
  - B. If the excavation of a construction project occurs within the drip line of a tree, whether on private or public property, the permit holder shall be required to notify the owner of the tree in writing about the conflict, and the potential dangers of an unstable tree. Failure to comply with the notification will result in the halting of the construction projects.
  - C. If the resulting work diminishes the integrity, aesthetics, or value of the tree, but not to the extent where it is deemed necessary to remove the tree, value of said tree will be assessed by City Forestry and the value lost from the damage will be paid by the permit holder into the City Forestry Tree Fund.

## **DEPARTMENT OF PUBLIC SERVICE**

### **DIVISION OF TRAFFIC MANAGEMENT - Additional Plan Requirements**

#### **REQUESTING UNDERGROUND TRAFFIC FACILITY RECORD DRAWINGS**

- The Division of Traffic Management is a member of OHIO811, formerly known as Ohio Utility Protection Service (OUPS). Requests for underground traffic facilities should be made through the Ohio 811 service as a design ticket prior to submitting any permits for review. Provide the project limits on the design ticket. Please use public streets and footages from public streets as reference points of the work area as this is how the Division catalogs its records. If the Division has facilities in the area, plans will be emailed to the requestor at the email listed on the OHIO811 ticket using the assigned OHIO811 ticket number. Note that Traffic Management is a separate entity from Public Utilities. A request to the Public Utilities Map Room does NOT include underground traffic facilities.

#### **MAINTENANCE OF TRAFFIC AND TRAFFIC CONTROL**

- Any work to be performed within the influence area of a signalized intersection, (any work within 500 feet of a signalized intersection approach stop bar, shall have all traffic control items shown. This includes, but not limited to, the signal control box, signal strain poles, signal mast arm poles, signal span or mast arm with type and location of signal heads and overhead signs, pedestals, pedestrian heads, pushbutton locations, type and location of vehicular detection, conduits, pull boxes, street name signs, lane control signage, all signage within the ROW and all pavement markings. Label traffic facilities TR. Use legible colors (black or dark gray). Draft all signal poles at 3' diameter or 3'x3' square.
- When work affects pavement lane markings or within a lane with markings extending beyond the called out influence distances, then all elements associated with those markings shall be shown in their entirety. For example, a signal with turn lanes over 500', the entire turn lane(s) shall be shown as part of the signal.

#### **MAINTENANCE OF TRAFFIC (MOT) PLAN**

- A copy of the Approved Permit with MOT plan must be on site at all times and available upon request
- Required: Sheet 1500, 6H-29 (TA-29), Columbus MOT typical(s) or Site Specific TCP's & MOT notes  
MOT Sheet 1500 (updated 1/2020) with the following:  
MOT Symbols – examples of common symbols used to design a traffic control plan  
MOT Notes – MOT Notes 1-6 that provide guidance in TTC, MOT, & TCP design  
Table 1 – Taper calculation chart to determine length of Shoulder, Merging, Shifting tapers.  
Table 2 – Spacing calculation chart to determine Advance Warning Sign spacing  
Table 3 – Tangent calculation chart to determine Tangent length between shift & merge tapers.  
Table 4 – Bikes, recommended signs & spacing for Bike Lane closures & Bike detours.  
MOT Signs – recommended signs when necessary to close sidewalk & detour pedestrians
- All work in the public ROW requires a MOT plan including locates for utilities, vacuum excavations or "POTHOLING", hand holes, and turn pits within paved areas.

- Site specific detailed Traffic Control Plans (TCP) are required for work within signalized intersections and may require phased (multiple) TCP's. Site specific TCP's must address all possible potential users' impacted which include but not limited to pedestrian safety, Bike safety & school buses, stops & school zones, COGO bike stations & COTA buses.
- City typical MOT drawings, tables, notes and charts may be used with permission of the Maintenance of Traffic Coordinator Plan/Permit reviewer (614-645-2682) or where lane configurations are an exact match.
- The plan will be determined by the type of work performed and must be specific to that work.
- A detailed MOT plan may consist of, barricades, portable concrete barriers, pedestrian barrier, drum locations and spacing (see OMUTCD part 6 figure 6F-4), use of temporary pavement, use of temporary markings, detour routes, detour and work zone warning signage (OMUTCD table 6C-1), flashing arrow panels, street closures, pedestrian detours and sidewalk barricades with signage, proper taper rates in accordance with OMUTCD part 6 Table 6C-2, flagging set-ups when used, covering of existing signs and signal heads, temporary vehicle detection, and signal timing changes.
- All items shall be clearly labeled, stationed or distances shown. Sign design codes and sign sizes shall be shown with each sign.
- Special attention must be given to provide the safest and least inconvenient plan for motorists, pedestrians and bicycles alike. ODOT standard MT-drawings will not be accepted.

## **TEMPORARY AND PERMANENT TRAFFIC CONTROL NOTES**

- Temporary and permanent traffic control notes shall be inserted into **all** plans requiring work within the public ROW.
- Notes shall be modified to coincide with the scope of work being performed within the public ROW along with the maintenance of traffic plan. The plan reviewers will provide a traffic control notes packet and will direct what notes are required to be incorporated.
- Notes shall be inserted as plan pages. Stapling of notes to plan drawings as a separate document is prohibited. Notes are to be in a legible font and readable when printed to scale.
- Notes related to the MOT shall be modified specifically for the project.
- Acceptable clearance for traffic strain poles and mast arms are different from other utilities. See traffic notes packet for more information on the various clearance requirements and the notes required. No excavation is allowed within five (5) feet of any foundation of a signal pole that supports signal span or a mast arm with traffic signal displays or signs. Excavation includes boring. The Contractor is responsible for following the requirements listed in the standard notes, including support and relocations.

## **TRAFFIC CONTROL PLAN**

- All existing and proposed traffic control items shall be shown within the project limits and 200 feet beyond the project limits; this is 200' before the first and after the last sign for the TCP design, having each intersection shown in full including side street lane markings when work is performed within the public ROW. If within 500 feet of a signalized intersection, the entire signalized intersection must be included.



- Items to include are all pavement markings (stationed), lane widths (dimensioned), all driveways and curb cuts, signage with sign design codes and sizes (stationed with offsets), street names labeled, street name signs, public ROW lines, sidewalks, ADA ramps, crosswalks, utility poles and street lighting, hydrants, edge of pavement and parking meters.
- Include a note on plan to replace any disturbed pavement marking, lane lines, etc

**DEPARTMENT OF PUBLIC UTILITIES**

Contact information for all three City of Columbus utilities must be included on ROW plans

Division of Sewers & Drains  
 1250 Fairwood Ave.  
 Columbus, OH 43206  
 Phone: 614 645-7102 (SMOC 24/7 dispatch line)

Division of Power  
 3500 Indianola Ave  
 Columbus, OH 43214  
 (614) 645-7627

Division of Water  
 910 Dublin Rd  
 Columbus, OH 43215  
 (614) 645-7788

**DIVISION OF POWER - Additional Plan Requirements**

- Identify the location of all Division of Power (DOP) poles, manholes, pad mount transformers, overhead and underground lines, and duct banks within 25 feet of the work zone.
- Label these facilities, in addition to the “UGE” and “OHE” line designators, as belonging to DOP. For example: “DOP UG Street Lighting” with an arrow to the line.
- DOP standard note to be added to the plans’ notes. Include the underlined title and all 3 paragraphs. *The standard note is:*

**FOR THE DIVISION OF POWER**

The Division of Power (DOP) may have underground or overhead Primary Power, Secondary Power, conduit systems and street lighting at this work location. The contractor is hereby **required** to contact Ohio 811 at 811 or 1-800-362-2764 forty-eight (48) hours prior to conducting any activity within the construction area.

Any required relocation, support, protection, or any other activity concerned with the City’s electrical facilities in the construction area is to be performed by the contractor under the direction of DOP personnel at the expense of the project. DOP shall make all final connections to DOP’s existing electrical system at the expense of the project. The contractor shall use material and make repairs to a City of Columbus street lighting system by following DOP’s “Material and Installation Specifications” (MIS) and the City of Columbus “Construction and Materials Specifications” (CMSC). Any new or re-installed underground streetlight system shall require testing as referred to in section 1001.18 of the CMSC manual. The contractor shall conform to DOP’s existing Street Lighting Lockout/Tagout (LOTO) Procedure, MIS-01, copies of which are available from DOP

If any electric facility belonging to DOP is damaged in any manner by the contractor, its agents, servants, or employees, and requires emergency repairs, the DOP Dispatch Office should be contacted immediately at (614) 645-7627. DOP shall make all necessary repairs, and the expense of such repairs and other related costs shall be paid by the contractor to the Division of Power, City of Columbus, Ohio.

- Contractor is responsible for following the requirements listed in the standard note, including support and relocation.
- Consider a redesign of work when a conflict with DOP facilities is identified.
- A profile showing when project construction crosses DOP facilities, with facilities and depths labeled

**DIVISION OF WATER - Additional Plan Requirements**

- All addresses must be shown in the work area zone.
- All water crossings must be perpendicular only and provide a profile.
- All water main lines must be identified by size and plan number.
- In the plan view, all water mains with diameter equal to or greater than 20-inches should be shown with two lines to delineate the actual size.
- All water service lines must be identified by size and when available private water service plan number.
- Show all water service lines, fire hydrants, curb boxes and valves.
- Maintain consistent distance from the ROW; explain if not.
- Provide the distance from ROW/center line to proposed conduit, cable or pipe and to existing/proposed water line outside diameter.

The following notes must be included for every plan submitted for water review:

- Expose water line at crossing(s) to verify depth and location prior to and during any directional boring.
- The contractor is responsible for located all customers owned service lines. The contractor shall field verify the horizontal and vertical location of any City or customer owned main or service line that may be affected by the proposed construction activities. Field verification shall take place prior to an activity that may jeopardize the integrity of the facility and at a location nearest the point of possible conflict.
- Any repair to City or customer owned water lines are the responsibility of the contractor. The contractor shall contact the City of Columbus, Division of Water at 614-645-7788 prior to any repairs on City owned water facilities. The contractor must be a City of Columbus licensed water contractor. The contractor shall maintain a minimum of 3' horizontal and 1' vertical clearance from the outside diameter of all water lines at 8' from any "tee" connection, bands, and ends of the water lines, from outside diameter to the nearest edge of the facility being placed.
- If during excavation, the polyethylene encasement of the existing water main becomes damaged, the contractor shall repair the polyethylene encasement per manufacture's specifications and DOW Standard Drawings L-1003 and L-1004, at their own expense. Ensure that the entire exposed area shall be covered with new polyethylene encasement and securely taped, prior to backfill.

If the alignment of the proposed infrastructure is crossing or is parallel (within in 5-feet) of a 20-inch or larger prestressed concrete cylinder pipe (PCCP), the following note must be included on the plan submitted for Water review:

- Prior to installation of the proposed infrastructure that is to cross or is parallel (within in 5-feet) of the identified prestressed concrete cylinder pipe (PCCP), the Contractor shall expose the existing PCCP water main. The PCCP water main shall be exposed sufficiently enough to verify that no damage will occur during installation of proposed infrastructure.
- When paralleling, the existing PCCP water main shall be exposed at the beginning, end and every 100-feet through the proposed infrastructure alignment. When crossing, the existing PCCP water main shall be exposed where the proposed infrastructure crosses the existing PCCP water main.
- A City inspector will be required to be on-site to witness the excavation of the existing PCCP water main. The Contractor is to contact the DPS Division of Design & Construction at 614-645-0433 to schedule the inspection.

The following notes must be included for every plan submitted that is proposing any infrastructure near DOW Lime Slurry Discharge (Sludge) Lines:

- Field verification of the sludge line shall take place prior to any activity that may jeopardize the integrity of the line. Where trenchless installation methods are used, field verify the sludge line depth and location by exposing the line at all proposed trenchless crossing locations prior to performing the trenchless installation.
- New or relocated utilities shall be installed with a minimum 1' vertical and 3' horizontal clearance from the sludge line.
- In addition to notifying the Ohio Utilities Protection Service (OUPS), provide 24 hours advanced notification to City of Columbus Division of Water Technical Support Section, 614-645-7100, and the Hap Cremean Water Plant, 614-645-7168, prior to exposing the sludge line.
- If the polyethylene encasement on the existing sludge line becomes damaged, it shall be repaired per manufacturer's specifications and DOW Standard Drawings L-1003 and L-1004 at no extra cost to the City. Ensure that the entire exposed area is covered with new polyethylene encasement and securely taped prior to backfilling.
- In the event of a line strike or rupture of the sludge line, notify the City of Columbus immediately by calling DOW Control Center at 614-645-7168 and the Hap Cremean Water Plant at 614-645-3194. Relay information about the leak, including physical description of the fluid (e.g., whitish or greyish fluid), the nearest street address, and a call back number.

#### **DIVISION OF SEWERAGE AND DRAINAGE – Additional Plan Requirements**

- The contractor shall maintain a 3' horizontal & 1' vertical clearance from the outside diameter (O.D.) of all non-brick sewers and appurtenances. Clearances must be measured from the outside diameter to the nearest edge of the facility being placed, not center to center.
- For brick or block sewers ONLY. The contractor shall maintain a 10' horizontal and 5' vertical clearance from all brick sewers
- Brick sewers must NOT be exposed as this may cause a collapse or the sewer

- Brick sewer wall thickness shall be shown as 4" for every ring of brick. The number of rings is typically shown on the associated sewer plans. The brick sewer shall be shown as 12" (3 rings) if not otherwise called out on the sewer plan.
- The contractor must maintain a 3' clearance from the O.D. (horizontal and vertical) of all proposed sewers and appurtenances unless otherwise stated on the proposed sewer plan. This is to allow for excavation and backfill in preparation of the new sewer being placed.
- The width of all sewer lines over 24" in diameter shall be shown on plans and include the wall thickness of the pipe
- **Approximate pipe wall thickness (for sewers):** Calculate 1" for every foot of the diameter of the concrete pipe and add 1" to the total.  
Example: 36" pipe = 3" + 1" = 4" (+/-) Total wall thickness
- All sewer lines shall be labeled with the size of pipe and the type of sewer: i.e. **SAN** = sanitary; **STM** = Storm; **CMB** = combination of sanitary and storm
- All brick /segmented block sewers shall be labeled **BRICK**
- All sewer symbols should look like the sewer symbols shown on the Atlas map symbols legend
- The applicant **MUST** state on the ROW permit application of the plan being submitted is based upon the other state or local government proposed plans and include the plan number, project number or CIP number such as Dr-E###, CC-#####. The proposed sewer must also be shown and labeled on the ROW plan being submitted.
- Storm sewer plans often contain Best Management Practices otherwise known as Green Infrastructure or GI. All GI must be shown and labeled on all ROW plans. Green Infrastructure is shown on the Department of Public Utilities Atlases and individual storm or street plans. See the atlas legend for symbols that identify GI and use plans for specific details. GI must **NOT** be disturbed. GI often consist of specific layers of materials or design to aid in storm water mitigation. For more details on GI please go to the City of Columbus, Department of Public Utilities website and search for the **GREEN INFRASTRUCTURE DESIGN GUIDELINES** under Blueprint Columbus. GI can consist of a swale, or ditch, an oversized pipe or detention pond as well as many other structures. Please refer to the details on each individual sewer or Dr. E road plan. GI is an integral part of the City's Sewer Infrastructure and must be included on all ROW plans.
- A Brick sewer deposit and video(s) will be required when crossing all brick/block sewers. The deposit will be calculated based on the final approved ROW plan. All preconstruction videos shall be turned into the requestor of the DOSD plan review group, for sewer assessment prior to excavation. The post construction video shall be turned into the DOSD plan review group within 30 days of the completion of the ROW project. Deposits will be refunded, in full, after pre and post construction videos have been turned in and reviewed. Please allow 4-6 weeks for funds to be returned. The plan review group must view the pre-construction video prior to construction to ensure there is no existing damage to the brick sewer. This will certify that existing damages were not caused by the contractor and allow DOSD to make necessary repairs prior to the contractor beginning work.
- Private sewer service lateral information may be obtained at the sewer/water permit office located at 111 N Front St, Columbus, OH, 1<sup>st</sup> floor DPU permit counter or by calling 614 645-7490

- For answers to sewer questions or design concerns please contact one of the DOSD plan reviewers listed on the ROW Permit Routing form

The following Division of Sewers and Drains notes must be included on all ROW plans:

General notes for the Division of Sewers and Drains:

Utility locators will only locate and mark mainline sewers, after an OH-811 locate request is placed. The contractor is responsible for field verifying the location of all main line sewers and locating all private sewer service laterals. The Contractor will be held responsible for any damages to sewer mains and/or service laterals caused during construction. All repairs to the sewer lines and/or service laterals must be completed by a City of Columbus licensed sewer contractor under a separate sewer permit.

The contractor must maintain a 3' Horizontal & 1' Vertical clearance from the O.D. of all sewers and appurtenances to the nearest edge of the facility being placed. For brick sewers maintain 10' Horizontal & 5' Vertical clearance from O.D. to nearest edge of proposed facility.

\*See specific note for PROPOSED sewers\*

PAVEMENT CUTTING, SAWING AND EXCAVATION OPERATIONS NOTE:

All public agencies and private contractors performing pavement-cutting operations on City of Columbus streets and roadways shall protect the environment from discharges created by their pavement cutting operations. Note that Columbus City Code 1145 prohibits non-Storm water discharge into the City of Columbus sewer system, curb inlets and any part of its MS4 (municipal separate storm sewer system).

The requirement includes but is not limited to wet or dry saw-cutting, jack hammering, excavation equipment use, etc. The public agency and/or private contractor work crews shall recover and dispose of debris, polluted waters, or such discharges resulting from their pavement cutting operations and protect all storm sewer inlets from receiving any discharges from the construction operations. The agency or contractor responsible for each pavement cutting activity shall be solely liable for Notice of Violations (NOV/s) and fines issued by City of Columbus and/or State of Ohio Authorities.

Equipment, materials and methods shall be provided by the responsible public agency and/or private contractor to work crews performing the pavement cutting activity and made available to work crews for use in cleaning up discharges resulting from such cutting activities and preventing runoff. All work crews shall be trained to exercise and employ equipment, materials, and environmental protective measures to prevent polluted discharges from entering the City of Columbus storm sewer system and waters of the State of Ohio.

The public agency and/or private contractors are solely responsible for ensuring that the inlet protection is adequate. The most stringent project plans, notes and/or drawings including Storm water Pollution Prevention Plan (SWP<sup>3</sup>) or Spill Prevention/Remediation Plan shall apply to all pavement cutting, sawing or excavation operations.

## **DEPARTMENT OF TECHNOLOGY**

### **NETWORK INFRASTRUCTURE /TELECOMMUNICATIONS**

- The Contractor will provide all required notes to the City of Columbus (CoC) Department of Technology (DoT), Cable Interconnect Section/ (I-Net) Network Group.
- The Contractor will identify the location of all CoC-DoT poles, manholes, hand holes, pull boxes, pad mount cabinets, overhead and underground lines, inner ducts and duct banks within 25 feet of the work zone.
- Label these facilities as belonging to City of Columbus – Department of Technology with an arrow to the object or the “CoC-DoT” label on the conduit line, manhole, hand hole, pull box, pad mount cabinet or other CoC-DoT facility.
- CoC-DoT standard note is to be added to the plans’ notes. The plans will include the underlined title and the following paragraph as shown below:

#### **FOR THE CITY OF COLUMBUS – DEPARTMENT OF TECHNOLOGY**

CoC-DoT may have overhead and underground fiber cables existing at this work site. Any required relocation, support, protection, or any other activity concerned with CoC-DoT’s cables, conduits, manholes, hand holes, pull boxes, pad mount cabinets or other facilities and/or materials in the construction area is to be performed by the Contractor under the direction of CoC-DoT personal and at the expense of the project. The Contractor shall use materials and make repairs to a CoC-DoT’s system by following the CoC-DoT material and installation specifications in I-Net’s General Specifications Document, hereafter referred to simply as the “IGSD”. Any re-installed fiber shall require testing as referred to in IGSD. The Contractor shall be City of Columbus approved for fiber splicing plus meet IGSD requirements. If any cable facility belonging to the CoC-DoT is damaged in any manner by the Contractor, his agents, servants or employees, that would require emergency repairs, the CoC-DoT Maintenance Contractor shall make all necessary repairs, and the expense of such repairs and other related costs shall be paid by the Contractor to the Division of Technology City of Columbus. NOTE: Any work performed or materials installed by the Contractor that has not been approved by CoC-DoT personal or has been constructed outside of the requirements of the IGSD will be replaced or rebuilt at the Contractors expense. Contact (614) 645-7756 CoC-DoT Fiber Physical personal for questions.

- Any contractor performing excavation or installation, including but not limited to disturbing the earth with powered or non-powered equipment, must contact OUPS at 811 or 1-800-362-2764 forty-eight (48) hours prior to conducting any activity within the construction area.
- The Contractor will expose all known CoC-DoT ducts at all crossings prior to and during any directional boring to verify depth and location of CoC-DoT facilities.
- Any damage done to the City of Columbus cables, conduits, manholes, hand holes, pull boxes, pad mount cabinets or any other City owned facilities will be the sole responsibility of the Contractor to repair or replace at the Contractors expense per the discretion and direction of the DoT Engineer or Agent. These repairs and/or replacements will be done per the requirements of the CoC-DoT General Specifications Document.

- The contractor shall contact the City of Columbus, DoT, and Cable-Interconnect Section at (614) 645-7756 prior to performing any repairs on City owned fiber optic lines, conduits, inner-ducts, manholes, hand holes, pull boxes, pad mount cabinets or any other City owned facilities. Failure to do so may result in the Contractor being required to replace the installed materials at **the Contractor's expense** as directed by the Manager or the Engineer.
- The Contractor is responsible for locating all CoC-DoT customer owned laterals. The contractor shall field verify the horizontal and vertical location of any City customer owned cables, conduits, man- holes, hand holes, pull boxes or other facilities and/or materials in the construction area that may be affected by the proposed construction activities. Field verification shall take place prior to any activity that may jeopardize the integrity of the facility. Failure to do so may result in the Contractor being required to replace the installed materials at **the Contractor's expense** as directed by the Manager or the Engineer.

## **DEPARTMENT OF PUBLIC UTILITIES**

### **DAMAGE PREVENTION REQUIREMENTS**

The City of Columbus Department of Public Utilities (DPU) is a member of OHIO811 and receives excavation notices that will be submitted as part of this project. DPU Damage Prevention Staff will mark all DPU owned facilities to the best of its ability. Any contractor performing excavation activities shall also follow all applicable provisions in the Ohio Revised Code 3781.25-3781.38 and 153.64 as it relates to their work. Contractors may notify OHIO811 by calling 811, 1-800-362-2764 or by utilizing the i-dig remote ticket entry program. More information can be found at [www.OHIO811.org](http://www.OHIO811.org).

The excavator shall protect and preserve the markings until those markings are no longer needed.

After obtaining excavation notice(s), DPU Damage Prevention Staff will contact the individual listed on the excavation notice to initiate determining a mutually agreed upon marking schedule that coordinates the marking of underground utilities with actual excavation activity and field conditions. DPU staff will be requesting some basic information about the project including but not constrained to:

- Start date/location(s) within the project boundaries
- Number of crews expected to be onsite
- Contact information for company representative who has knowledge of the project and authority to coordinate marking activities with DPU Damage Prevention Staff for this project
- Determine if onsite meeting will be needed and schedule accordingly

It is expected that during the course of this project, both the Contractor and DPU Damage Prevention Staff will remain in contact with each other to communicate changes of work locations/scope/schedule etc. or other information pertinent to the coordination of utility marking with actual excavation activity and field conditions.

In order to facilitate the exchange of pertinent information, please email locating questions pertaining to DPU owned facilities to the following email: [JJJohnson@Columbus.Gov](mailto:JJJohnson@Columbus.Gov)

The contractor is responsible for locating all customer owned service lines/laterals. The contractor shall field verify the horizontal and vertical location of any City or customer owned main or service line/lateral that may be affected by the proposed construction activities. Field verification shall take place prior to any activity that may jeopardize the integrity of the facility and at a location nearest the point of possible conflict.

**Any damages to City or customer owned facilities should first be reported to OHIO811 by calling 811 or 1-800-362-2764. The permit holder may also call the City utility company at the time of the hit, but OHIO811 must be contacted first.**

Any repair to City or customer owned water or sewer facilities are the responsibility of the contractor. Such repairs shall be completed by a City of Columbus licensed sewer and/or water contractor. Repairs to sewer facilities shall require a separate sewer permit.

For more information regarding **OHIO811** please visit <https://www.oups.org/>



#### **ADDITIONAL RESOURCES**

THE OHIO UTILITIES PROTECTION SERVICE (OUPS) NOW DOING BUSINESS AS OHIO 811

<https://www.oups.org/the-law/>

[https://www.oups.org/wp-content/uploads/2019/12/OHIO811\\_Excavator\\_Manual\\_Dec-2019\\_watermarked\\_Aug2019.pdf](https://www.oups.org/wp-content/uploads/2019/12/OHIO811_Excavator_Manual_Dec-2019_watermarked_Aug2019.pdf)

<https://www.oups.org/idig/>



## Sewer Abbreviations and Definitions

<b>RCP</b> .....	Reinforced Concrete Pipe
<b>VCP</b> .....	Vitrified Clay Pipe
<b>CONC</b> .....	Concrete
<b>BR</b> .....	Brick and/or Segmented Block
<b>STM</b> .....	Storm line also abbreviated ST or STM
<b>SAN</b> .....	Sanitary line also abbreviated SA or SAN
<b>COMBO</b> .....	Combination Sewer (combined storm and sanitary)
<b>INV</b> .....	Invert the inside bottom of a pipe. Most sewer elevations are measured to the invert.
<b>TP</b> .....	Top of Pipe
<b>BP</b> .....	Bottom of Pipe
<b>Crown</b> .....	Inside top of pipe
<b>RP-123 Record Plan</b> .....	As built plans that have been verified and become record
<b>CC-123</b> .....	This plan could be preliminary and not built yet
<b>CO-123</b> .....	Usually refers to County sewers annexed into the City of Columbus
<b>MM-123</b> .....	Older city sewer plans that have not been record planned
<b>P Atlas</b> .....	The sewer department used to document sewers maps. These plans usually do not contain profile information.

Useful links:

<https://www.columbus.gov/publicservice/Design-and-Construction/Document-Library/>

<https://www.columbus.gov/publicservice/streets/>

<https://www.columbus.gov/utilities/>

<https://www.columbus.gov/utilities/document-library/>

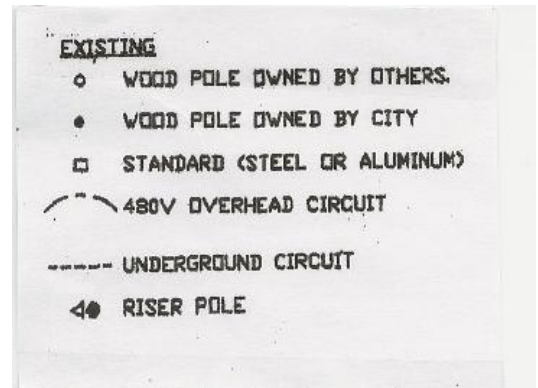
<https://www.columbus.gov/utilities/contractors/>

## DIVISION OF POWER SYMBOLS

When reviewing street lighting maps provided by DOP or the Map Room, the following symbols lists may be helpful.

### ELECTRIC

- ⊠ Transformer
- Underground Structure
  - ⊠ Handhole
  - Manhole
  - ⊠ Vault
- ⊠ Dynamic Protective Device
- ⚡ Fuse
- Power Factor Correcting Equipment
- ⊠ Primary Meter
- ⊠ Switch
- ⊠ Voltage Regulator
- Miscellaneous Network Feature
  - ⊠ Lighting Control Center
  - Other
- ⊠ Riser
- Electric Station
- ↑ ServicePoint
- Anchor Guy
- ◆ Streetlight
- Support Structure
  - H-Frame
  - Non-Wood Power Pole
  - Non-Wood Streetlight Pole
  - Tower
  - Wood Power Pole
  - Wood Streetlight Pole
- Primary Conductor
  - Primary Underground
  - Primary Overhead
- Secondary Conductor
  - Streetlight Overhead
  - Streetlight Underground
  - Secondary Overhead
  - Secondary Underground
- Conduit System
  - <all other values>
  - Duct Bank



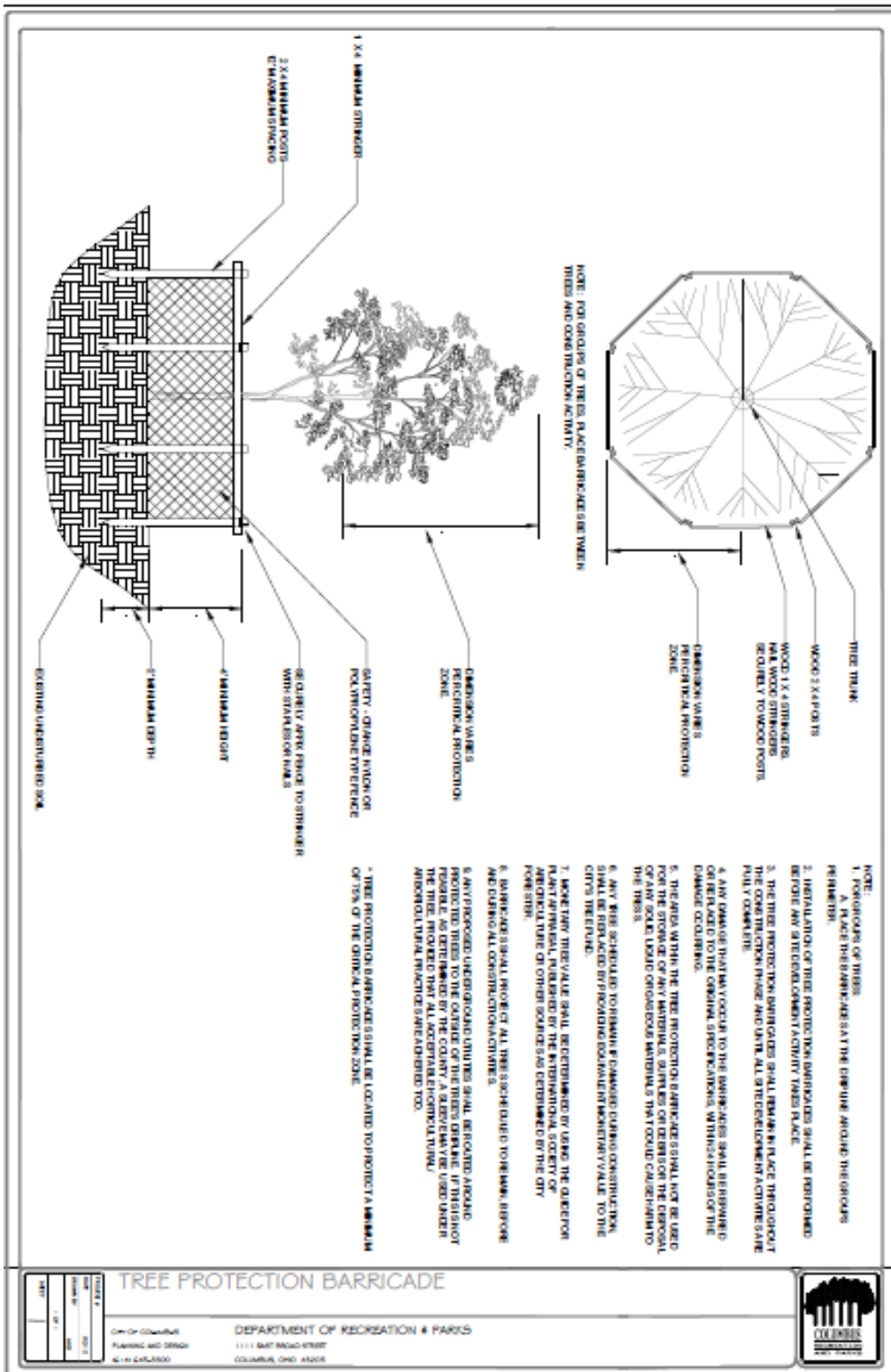
### CAD/Drafting Quality control tips:

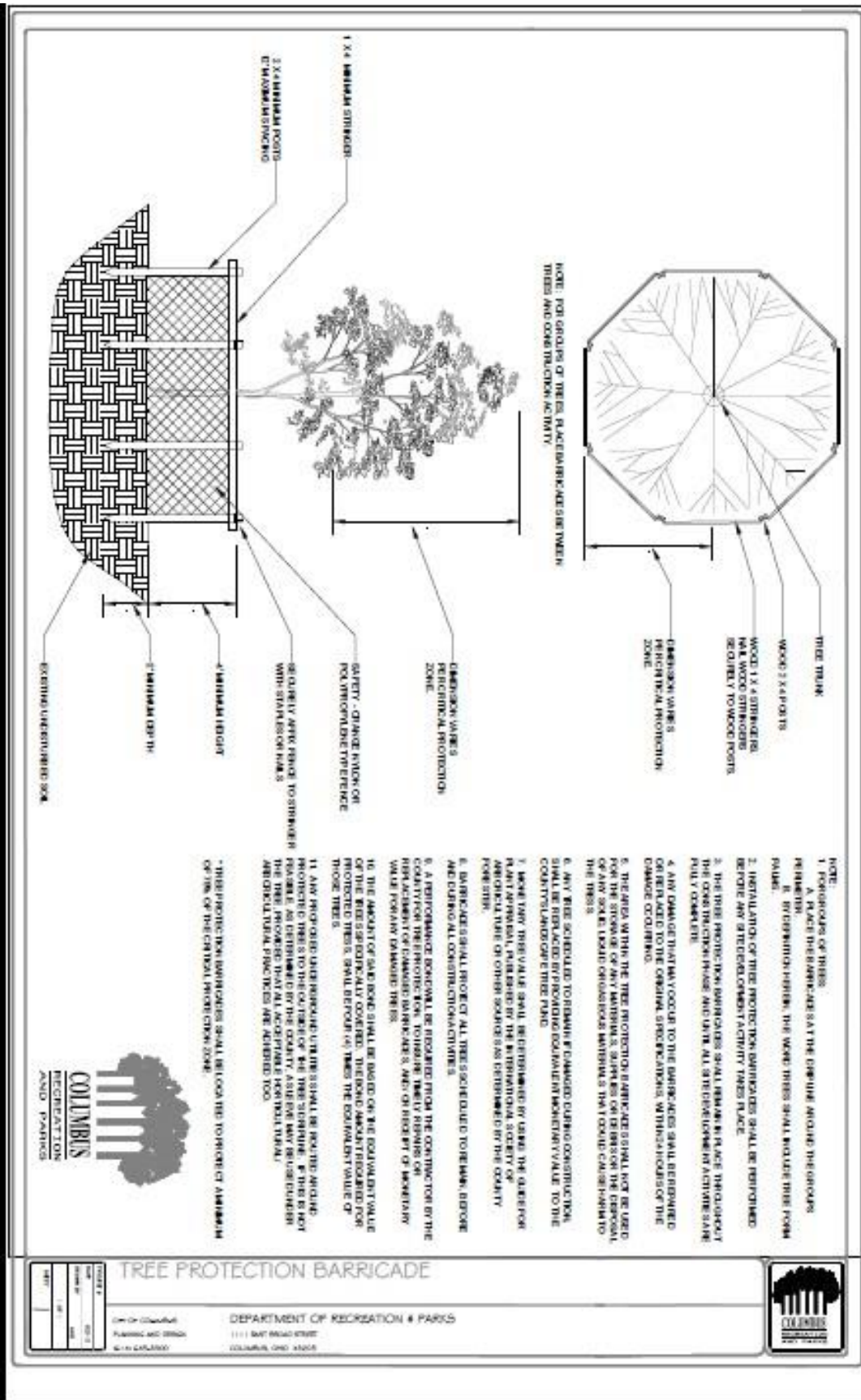
- The plan title sheet shall include a location map that clearly delineates proposed project areas and limits. It should also include at least one major intersection, a north arrow, and be large enough to read the street names.
- Leader arrows should touch the line that is being referenced and should not cross text.
- Do not obstruct text: example Text over text; lines through text.
- Remove all text that does not apply to the current plan.
- Always indicate the horizontal and vertical scales that corresponds with that plans sheets actual scales.
- Verify that street names are spelled correctly and contain the proper suffix, i.e. Walnut **Street, Park, Lane, Avenue, and Alley**. This is how we recall the proper atlas maps and plans for reviews.
- Include a north arrow on every plan sheet.
- Do not use red text, leaders and lines. Plan reviewers mark up plans in red ink or pencil, this will avoid confusion.
- All routing forms must contain a reference number prior to being submitted to individual departments.
- Routing form information should be complete with contact information and street names. The described location should match the associated plans.

# DEPARTMENT OF RECREATION AND PARKS

## DIVISION OF FORESTRY

### TREE PROTECTION DETAIL





NOTE: FOR GROUPS OF TREES, PLACE BARRICADE BETWEEN TREES AND OVER HOLLOW ACTIVITY

- NOTE:
1. FOR GROUPS OF TREES, PLACE THE BARRICADES AT THE CURBLINE AROUND THE GROUPS PERIMETER. IF THERE IS A HOLLOW UNDER THE TREES, THE WOOD TREES SHALL INCLUDE TREE FORM PALLETS TO PROTECT THE HOLLOW.
  2. INSTALLATION OF TREE PROTECTION BARRICADES SHALL BE PERFORMED BEFORE ANY SITE DEVELOPMENT ACTIVITY TAKES PLACE.
  3. THE TREE PROTECTION BARRICADES SHALL REMAIN IN PLACE THROUGHOUT THE CONSTRUCTION PHASE AND UNTIL ALL SITE DEVELOPMENT ACTIVITY IS COMPLETE.
  4. ANY DAMAGE THAT MAY OCCUR TO THE BARRICADES SHALL BE REPAIRED OR REPLACED TO THE ORIGINAL SPECIFICATIONS, WITHIN 48 HOURS OF THE DAMAGE OCCURRING.
  5. THE AREA WITHIN THE TREE PROTECTION BARRICADE SHALL NOT BE USED FOR THE STORAGE OF ANY MATERIALS, SUPPLIES OR DEBRIS OR THE DISPOSAL OF ANY SCALE, LOGS OR SOLID WASTE MATERIALS THAT COULD CAUSE HARM TO THE TREES.
  6. ANY TREE SCHEDULED TO BE REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY PROVIDED EQUIVALENT IN WORKMANLY VALUE TO THE COUNTY/LANDSCAPE TREE PLANT.
  7. WORKMANLY TREE VALUE SHALL BE DETERMINED BY USING THE GUIDELINES FOR TREE APPRAISAL, PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) OR OTHER SOURCE AS DETERMINED BY THE COUNTY FORESTERS.
  8. BARRICADES SHALL PROTECT ALL TREES SCHEDULED TO REMAIN, BEFORE AND DURING ALL CONSTRUCTION ACTIVITIES.
  9. A PERFORMANCE BOND SHALL BE REQUIRED FROM THE CONTRACTOR BY THE COUNTY FOR THE PROTECTION, TO INCLUDE THE TREE REMOVAL OR REPLACEMENT OF DAMAGED BARRICADES, AND/OR REPAIR OF WORKMANLY VALUE FOR ANY DAMAGED TREES.
  10. THE AMOUNT OF BOND SHALL BE BASED ON THE EQUIVALENT VALUE OF THE TREES SPECIFICALLY COVERED. THE BOND AMOUNT SHALL BE FOR PROTECTED TREES, SHALL BE FOR UP TO 10 TIMES THE EQUIVALENT VALUE OF THOSE TREES.
  11. ANY PROPOSED LAND REMOVAL WITHIN SHALL BE PLACED AROUND PROTECTED TREES TO THE CALIBER OF THE TREE STEMMING. IF THIS IS NOT FEASIBLE, AN OTHERWISE BY THE COUNTY ASSESSOR MAY BE USED DURING THE TREE REMOVAL TO ALL ACCEPTABLE HORIZONTAL AND VERTICAL PROTECTION AREAS AND DISTANCES TO ALL ADJACENT PROPERTIES AND UTILITIES.

\* TREE PROTECTIVE BARRICADES SHALL BE LOCATED TO PROTECT CRITICAL ROOTS OF TREES OR THE CRITICAL PROTECTIVE ZONE.



TREE PROTECTION BARRICADE

DATE:	
BY:	
FOR:	
PROJECT:	

City of Columbus  
Planning and Design  
610 Columbus

DEPARTMENT OF RECREATION & PARKS  
1111 EAST WALK STREET  
COLUMBUS, OHIO 43260

