# CITY OF PETOSKEY

# CONSTRUCTION

# STANDARDS

Updated February 2019

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## PLANNING CHECKLIST FOR CONSTRUCTION



## CONSTRUCTION STANDARDS

# PLANNING CHECKLIST REGARDING UTILITIES AND RIGHT-OF-WAY

# PLANNING CHECKLIST FOR CONSTRUCTION WORK THAT IMPACTS CITY UTILITIES OR PUBLIC RIGHT-OF-WAYS

- When planning a project in the City of Petoskey you must be informed regarding City of Petoskey Construction Standards and other requirements.

- Necessary approval(s) obtained from the City Council, Planning Commission or Zoning Board of Appeals may have required conditions. All such conditions shall be met in the design and construction of your project.

- Financial planning for your project must include budgeting for necessary fees and charges required by the City of Petoskey to tap utilities or otherwise impact public infrastructure and is found in the City of Petoskey Schedule of Rates and Charges Schedule.

- The professional (such as architects, engineers, contractors, etc.) who prepares your bid and construction documents must review the City of Petoskey Construction Standards booklet.

- Construction work in a public right-of-way, public property or that utilizes, connects to, removes, alters, relocates, constructs or reconstructs a City utility shall meet the standards in the City of Petoskey Construction Standards booklet and shall be approved by the City prior to construction.

- Construction in a public right-of-way requires a Right-of-Way Permit.

- Before finalizing construction drawings and BEFORE PUTTING A PROJECT OUT FOR A BID OR ESTIMATE you shall obtain review and approval of plans and drawings for utilities, and for construction work in public right-of-way or public property from the City of Petoskey Department of Public Works.

- Included in this checklist are the following documents:

    1. City of Petoskey Construction Standards booklet with a Right-of-Way Permit form.

    2. City of Petoskey Utilities Fees and Charges Schedule.

- To obtain review and approval for your plans and construction work you should consult:

    Construction Supervisor (231) 347-2500

- It is your responsibility to obtain all other necessary permits such as building, soil erosion control, electrical, mechanical, demolition, etc. prior to any construction.

- You must also consult all other providers impacted by your project such as phone companies, cable television companies, natural gas providers, etc.

- Before you dig or perform any work, call Miss Dig three working days in advance at 1-800-482-7171.

Thank you for your cooperation.

# RIGHT-OF-WAY CONSTRUCTION CHECKLIST

# PUBLIC RIGHT-OF-WAY CONSTRUCTION CHECKLIST

The following steps must be taken before any work can proceed in the public right-of-way. Additional permits may be necessary (e.g. zoning compliance, building, soil erosion, etc.) before any site construction can commence.

All site approvals have been obtained by the Planning Commission, Zoning Board of Appeals or City Council. _____

City Construction Standards have been obtained and provided to Architects, Engineers, and Contractors. _____

Current City fees have been provided and budgeted. _____

Utility plans and construction drawings have been approved by the Department of Public Works; prior to work being put out for bid. _____

A Right-of-Way Permit has been obtained. _____

A Right-of-Way Occupancy Deposit (refundable) on file at City Hall. _____

Miss Dig has been contacted (Miss Dig 1-800-482-7171) three working days prior to work commencing. _____

# FAILURE TO OBTAIN A PERMIT

City of Petoskey
Department of Public Works
101 East Lake Street, Petoskey, Michigan 49770 • 231 347-2500 • Fax 231 348-0355

Enforcement:

1. Michigan law authorized the City of Petoskey to initiate both criminal and civil action. If a person fails to comply with any provisions of a permit, fails to obtain the appropriate permit, or undertakes activities in the right-of-way that are not permitted or are prohibited, the City will initiate whatever enforcement action it deems necessary to correct for the non-compliance. Costs incurred by the City in correcting for non-compliance, defective workmanship or materials shall be borne by the permit holder.

2. Enforcement guidelines. The following permit violations and corresponding corrective actions are outlined for the purpose of examples and shall not be construed to limit the City of Petoskey to the actions listed here:

    a. **Failure to obtain a permit:**
        i. $500.00 fine.
        ii. Obtain appropriate permit and pay the permit fee.
        iii. The City may halt the activity until a permit is obtained and the fine paid.
        iv. The City may deny future permits until there is compliance with these requirements.

    b. **Failure to comply with permit requirements:**
        i. $500.00 fine per occurrence.
        ii. The City may halt construction activity and/or use of the right-of-way until adequate corrections have been made.
        iii. The City may undertake repairs, maintenance, or complete the restoration of the right-of-way. The City may elect to do the work with its forces, or by contracting the work, at the expense of the owner or permit holder.
        iv. Emergency work deemed necessary by the City for public safety protection or repair of the right-of-way may be done without notice to the owner or permit holder, and will be at the owner or permit holder's expense.

# RIGHT-OF-WAY PERMIT REQUIREMENTS

# RIGHT-OF-WAY PERMIT REQUIREMENTS

All work that needs to be done in the City of Petoskey Right-of-Way must be pre-approved by the Department of Public Works. A Right-of-Way Permit application must be completed and submitted to the Department of Public Works 72-hours prior to any work beginning. A Right-of-Way Excavation Deposit may also be required prior to the commencement of any work (see “Utility Fees and Charges”).

## Permit to Use Public Right-of-Way

**101 East Lake Street, Petoskey, Michigan 49770 ● 231 347-2500 ● 231 348-0350**

**PLEASE PRINT** **PERMIT #**_____

| **Job Site Location** | | |
|---|---|---|
| Address: | | |
| Cross Streets: and | | |
| **Owner Information** | | |
| Name: | | |
| Address: | | |
| City: | State: | Zip: |
| Phone: | | |
| Email: | | |
| **Contractor Information** | | |
| Name: | | |
| Address: | | |
| City: | State: | Zip: |
| Phone: | | |
| Email: | | |
| **Subcontractor Information** | | |
| Name: | | |
| Address: | | |
| City: | State: | Zip: |
| Phone: | | |
| Email: | | |

**Proposed Use**

| | | | | |
|---|---|---|---|---|
| ☐ Curb Cut/Driveway | ☐ Storm Sewer | ☐ Irrigation System | ☐ Cable TV | ☐ Water Tap |
| ☐ Parking | ☐ Tree Planting | ☐ Natural Gas | ☐ Sanitary Sewer | |
| ☐ Sidewalk | ☐ Phone Cable | ☐ Sign/Awning | ☐ Other: _____ | |

**BEFORE YOU DIG, CALL MISS DIG 1 800 482 7171**

Description of Work:

_____

_____

Date of Proposed Work: _____ Depth of Excavation: _____ ☐ Plans Attached

**Office Use Only**

☐ Permit Approved Approved by: _____

☐ Permit approved subject to:

_____

_____

_____

_____

☐ Fee: _____ ☐ No Fee Required

☐ Deposit: _____ ☐ No Deposit Required

☐ Permit Denied

**CITY OF PETOSKEY**
101 E. LAKE STREET
PETOSKEY, MI 49770
(231) 347-2500

## RIGHT-OF-WAY EXCAVATING / OCCUPANCY DEPOSIT

DATE: _____

NAME FOR REFUNDING DEPOSIT: _____

MAILING ADDRESS: _____

NAME OF PROPERTY OWNER: _____

PROPERTY ADDRESS: _____

DEPOSIT AMOUNT: _____

RIGHT-OF-WAY PERMIT DONE: _____ YES _____ NO

**Deposit amount will be refunded after street work is completely repaired and inspected by our Department of Public Works. If street repair is not satisfactory, the deposit will be applied to our cost of repairing the street plus 20% overhead. A bill to the property owner will be generated for the difference.**

SIGNED: _____

SIGNED: _____

COMMENTS: _____

_____

_____

_____

DATE: _____

AMOUNT OF DEPOSIT REFUND: _____

ACCOUNT NO. & AMOUNT OF DEPOSIT APPLIED: _____

# HOURS OF WORK

# HOURS OF WORK

The City of Petoskey Code of Ordinances, Article IV, Section 12-62, Item #8, dictates that no construction work is to be done in the City of Petoskey, other than between the hours of 7:00 A.M. and 6:00 P.M., unless a permit is first obtained and approved from the City Clerk.

# SOIL EROSION
# AND
# SEDIMENT CONTROL PERMIT

City of Petoskey
Department of Public Works
101 East Lake Street, Petoskey, Michigan 49770 • 231 347-2500 • Fax 231 348-0355

## Application Requirements for Soil Erosion and Sediment Control Permits

The applicant for the Soil Erosion and Sediment Control (SESC) permit must be the property owner. If the applicant is someone other than the property owner, a letter from the property owner must be submitted with the application explaining who the applicant is and verify that this application is being submitted on behalf of the property owner. Any questions regarding the following requirements may be addressed to the Department of Public Works, C/o Jason Fate at 231-347-2500.

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**Fill out the *Application for Soil Erosion Permit* and submit to the Department of Public Works, along with a site plan.**

- All plans must contain, at minimum, the following information:
    - Name, address, and telephone number of the applicant;
    - Project location and proximity to lakes and streams;
    - Vicinity map to scale with north arrow;
    - Earth change limits;
    - Existing and proposed on-site contours or slope information;
    - Existing and proposed on-site drainage;
    - Existing and proposed site improvements;
    - Soils information;
    - On-site vegetation;
    - Description and location of all temporary and permanent SESC measures;
    - Schedule for installing SESC measures;
    - Earth change and construction schedule, including starting and completion dates of project.
- A check, in the amount per the attached fee schedule, must accompany the application. Please make checks payable to: *City of Petoskey*

# PERMIT APPLICATION for Part 91 SOIL EROSION AND SEDIMENTATION CONTROL

| OFFICE USE ONLY |
|---|
| Permit Number: |
| Date Issued: |
| Expiration Date: |
| File Number: |

## 1. APPLICANT (Please check if applicant is the landowner or designated agent*)

| Name ☐ Landowner ☐ Designated Agent | | | |
|---|---|---|---|
| Address | | | |
| City | State | Zip | Area Code/Telephone Number |

## 2. LOCATION

| Section | Town | Range | Lot Nos. | Township | Subdivision |
|---|---|---|---|---|---|
| City/Village | | County | | Street Address | |

## 3. PROPOSED EARTH CHANGE

| Describe Project | | Size of Earth Change (acres or square feet) |
|---|---|---|
| Name of and Distance to Nearest Lake, Stream, or Drain | Date Project to Start | Date Project to be Completed |

## 4. SOIL EROSION AND SEDIMENTATION CONTROL PLAN (Refer to Rule 323.1703)

| **Note: _____ complete sets of plans must be attached.** | Estimated Cost of Erosion and Sediment Control |
|---|---|
| | Plan Preparer's Name and Telephone Number ( ) |

## 5. PARTIES RESPONSIBLE FOR EARTH CHANGE

| Name of Landowner (if not provided in Box No. 1 above) | | | Address | |
|---|---|---|---|---|
| City | State | Zip | Area Code/Telephone Number | |
| Name of Individual "On Site" Responsible for Earth Change | | | Company Name | |
| Address | City | State | Zip | Cell Phone Number |

## 6. PERFORMANCE DEPOSIT (If required by the permitting agency)

| Amount Required $ _____ ☐ Cash ☐ Certified Check ☐ Irrevocable Letter of Credit ☐ Surety Bond | | | | |
|---|---|---|---|---|
| Name of Surety Company | | | | |
| Address | City | State | Zip | Area Code/Telephone Number |

I (we) affirm that the above information is accurate and that I (we) will conduct the above described earth change in accordance with Part 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, applicable local ordinances, and the documents accompanying this application. I further authorize City of Petoskey staff members to enter upon the property for which I am making an application for soil erosion permit approval.

| Landowner's Signature | Print Name | Date |
|---|---|---|
| Designated Agent's Signature | Print Name | Date |

*Designated agent must have a written statement from landowner authorizing him/her to secure a permit in the landowner's name.

Michigan Department of Environmental Quality
Land and Water Management Division

## Permits Required for Construction Activities Under the Natural Resources and Environmental Protection Act, 1994 PA 451, as Amended

1. Does your project involve an *earth change* that disturbs one or more acres of land or is located within 500 feet of a *lake or stream*? (Part 91)……No ☐ Yes ☐

   *Lake* means "the Great Lakes and all natural and artificial inland lakes or impoundments that have definite banks, a bed, visible evidence of a continued occurrence of water, and a water surface area equal to, or greater than, one acre."

   *Stream* means "a river, creek, or other surface water course which may or may not be serving as a drain, as defined in the drain code, and which has definite banks, a bed, and visible evidence of the continued flow or continued occurrence of water, including the connecting waters of the Great Lakes."

   If your project disturbs five or more acres, a stormwater permit is required from the Surface Water Quality Division (SWQD), Michigan Department of Environmental Quality (MDEQ). Please call (517) 373-1949 for further information.

2. Is your project in or near an *inland lake or stream*? ……No ☐ Yes ☐
   *Inland lake or stream* means "a natural or artificial lake, pond, or impoundment; a river, stream, or creek which may or may not be serving as a county drain as defined by the drain code; or any other body of water that has definite banks, a bed, and visible evidence of a continued flow or continued occurrence of water…." "Inland lake or stream **does not include**…. a lake or pond that has a **surface area of less than 5 acres**."

3. Does your project impact a *wetland*? (Part 303) ……No ☐ Yes ☐
   *Wetland* means "land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support wetland vegetation or aquatic life, and is commonly referred to as a bot, swamp, marsh….."

   If work in wetlands cannot be avoided, a permit from the MDEQ may be required; and wetland mitigation to compensate for the loss of the wetland and its functions may also be required. For questions regarding regulated wetlands, please contact your local LWMD Field Office or the Inland Lakes and Wetlands Unit at (517) 373-1746.

   The MDEQ's Wetland Assessment program assists property owners in identifying wetlands on their property. For more information on the Wetlands Assessment Program call (517) 241-8485.

4. Is your project in or adjacent to the *Great Lakes*? (Parts 323, 325, and 353) ……No ☐ Yes ☐

5. Does your project involve constructing, maintaining, or altering a *dam*? (Part 315) ……No ☐ Yes ☐

   *Dam* means "an artificial barrier, including dikes, embankments, and appurtenant works, that impounds, diverts, or is designed to impound or divert water or a combination of water or any other liquid or material in the water."

If you answered yes to any of the above questions, a permit may be required from the Land and Water Management Division (LWMD), MDEQ. Please direct your questions to the Permit Consolidation Unit (PCU) or one of the LWMD offices listed below.

**MDEQ**
**LWMD PCU**
**P.O. BOX 30204**
**LANSING, MI 48909-7704**

**LWMD home page: www.deq.state.mi.us/lwm**
**PCU email: DEQ-LWM-PCU@state.mi.us**
**PCU phone: (517) 373-9244**
**PCU fax: (517) 241-9003**

| | | | |
|---|---|---|---|
| **Cadillac District** | **(231) 774-3960** | **Grand Rapids District** | **(616) 356-0500** |
| Gaylord Field Office | (989) 731-4920 | **Jackson District** | **(517) 780-7690** |
| **Marquette District** | | **Kalamazoo District** | **(616) 685-6851** |
| Negaunee Field Office | (906) 475-2040 | **Saginaw Bay District** | **(989) 686-8025** |
| Crystal Falls Field Office | (906) 875-2071 | **Shiawassee District** | **(517) 625-5515** |
| Newberry Field Office | (906) 293-5131 | **Southeast Michigan District** | **(734) 953-8905** |

A permit application and appendices can be downloaded from the LWMD's home page or you may request a copy from the PCU. All permit applications should be sent to the PCU at the above address.

**Parts of the Natural Resources and Environmental Protection Act**
**1994 PA 451, as Amended**
**Administered by the Land and Water Management Division**

**1. Floodplain Regulatory Authority found in Part 31, Water Resources Protection**

A permit is required to:

- Occupy, construct, fill or grade within the 100-year floodplain of a river, stream, drain or lake. Bridges and culverts are considered an occupation of the floodplain, as are activities that involve storage of materials in the floodplain.

**2. Part 91, Soil Erosion and Sedimentation Control**

A permit is required for:

- Earth changes within 500 feet of the water's edge of a lake or stream.
- Earth changes disturbing one or more acres.

**3. Part 301, Inland Lakes and Streams**

A permit is required to:

- Dredge or fill bottomlands.
- Construct, enlarge, extend, remove, or place a structure on bottomland.
- Erect, maintain, or operate a marina.
- Create, enlarge, or diminish an inland lake or stream.
- Structurally interfere with the natural flow of an inland lake or stream.
- Construct, dredge, commence, extend, or enlarge an artificial canal, channel, ditch, lagoon, pond, lake or similar waterway where the purpose is ultimate connection with an existing inland lake or stream, or where any part of the artificial waterway is located within 500 feet of the ordinary high water mark of an existing inland lake or stream.
- Connect any natural or artificially constructed waterway, canal, channel, ditch, lagoon, pond, lake, or wetland with an existing inland lake or stream navigation or any other purpose.

**4. Part 303, Wetlands Protection**

A permit is required to:

- Deposit or permit the placing of fill material in a wetland.
- Dredge, remove, or permit the removal of soil or minerals from a wetland.
- Construct, operate, or maintain any use or development in a wetland.
- Drain surface water from a wetland.

**Regulated wetlands are defined in Part 303 and the associated administrative rules.**

**5. Part 315, Dam Safety**

Permits are required for dams with a dam "height" of six feet or more and that have a surface area of five acres or more at the design flood elevation. A permit is required for new dam construction, enlargement of an existing dam or impoundment, dam repair, dam alteration, dam removal, dam abandonment, or reconstruction of a failed dam.

**6. Part 323, Shorelands Protection and Management**

*Designated Environmental Areas* – A permit is required for any of the following activities in a designated *environmental* area:

- Dredging, filling, grading, or other alterations of the soil.
- Alteration of natural drainage, but not including the reasonable care and maintenance of established drainage.
- Alteration of vegetation utilized for a preservation and maintenance of fish or wildlife, including identified colonial bird nesting areas.
- Placement of permanent structures.
- Farming of land is allowed without a permit if the person is engaged in the business of farming and the land is used for the production and harvesting of agricultural products using normal farming implements and generally accepted agricultural practices and if artificially draining, diking dredging, or filling are not used and the natural contour of the land is not altered.

The following counties have designated environmental areas:

| | | | | | |
|---|---|---|---|---|---|
| Alcona | Arenac | Charlevoix | Delta | Huron | Monroe |
| Alger | Baraga | Cheboygan | Emmet | Mackinac | Tuscola |
| Alpena | Bay | Chippewa | Houghton | Marquette | Wayne |

Designated High Risk Erosion Areas – A permit is required for the erection, installation, or moving of a permanent structure on a parcel of land where any portion is a designated high risk erosion area. Examples include homes, porches, septic systems, additions, substantial improvements of existing structures, and out buildings. With the exception of Alcona, Charlevoix, Macomb, Monroe, and Wayne Counties, all coastal counties have some designated high risk erosion areas.

**7. Part 325, Great Lakes Submerged Lands**

A permit is required for all filling, dredging, and placement of permanent structures (i.e., groins, docks, piers, pilings, etc.) below the "ordinary high water mark" and on all upland channels extending landward of the "ordinary high water mark" of the Great Lakes.

**8. Part 353, Sand Dune Protection and Management**

A permit is required for all proposed new uses in designated critical dune areas mapped in the "Atlas of Critical Dune Areas," prepared by the MDEQ. The following counties have designated critical dune areas:

| | | | | | |
|---|---|---|---|---|---|
| Alger | Berrien | Emmet | Luce | Mason | Ottawa |
| Allegan | Charlevoix | Keweenaw | Mackinac | Muskegon | Schoolcraft |
| Antrim | Chippewa | Leelanau | Manistee | Oceana | Van Buren |
| Benzie | | | | | |

Islands that have designated critical dune areas include Beaver Island, North Fox Island, South Fox Island, High Island, North Manitou Island and South Manitou Island.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER RESOURCES DIVISION

| FOR DEQ USE ONLY |
|---|
| NPDES Number |
| Receipt No.: |
| Permit Id: |

# NOTICE OF COVERAGE

FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITY

By Authority of R 323.2190 promulgated under Part 31 of Act 451, Public Acts of 1994, as amended
Failure to comply with the terms and provisions of R 323.2190 may result in fines up to $25,000
per day and the possibility of imprisonment.

Filing of this Notice of Coverage (NOC) with the Michigan Department of Environmental Quality (DEQ) is required before initiation of construction activities **that disturb 5 acres or more of land or is part of a larger common plan of development or sale** that requires a national permit pursuant to the provisions of 40 CFR Section 122.26(a). This constitutes notice that the construction permittee is authorized under R 323.2190 to discharge storm water associated with the construction activities. The construction permittee must be the landowner or the recorded easement holder of the property where the construction activity is located.

**INSTRUCTIONS AND FEE INFORMATION**: Soil Erosion and Sedimentation Control (SESC) coverage is required under Part 91, SESC, of Act 451 before submitting this NOC. The construction permittee will be deemed to have an NPDES permit for storm water discharges from a construction site when the DEQ receives the completed NOC**, a copy of the appropriate SESC permit, a copy of the approved SESC Plan, a site map and the $400 fee.** These must be received before construction begins. **This authorization to discharge construction storm water will expire** on the same day as the SESC permit originally submitted to the DEQ with this package. The expiration date will be specified in the NOC acknowledgement letter provided by the DEQ (please make sure you receive the NOC acknowledgement letter). NOC Authorization to discharge storm water may be extended (up to five years after original issuance date) by submitting a NOC Renewal form and a copy of the revised or extended SESC permit to the DEQ **prior** to the **NOC expiration**. If the SESC permit number changes, expires, is revoked or terminated, prior to the complete stabilization of the site, a **new** administratively complete NOC and all the requirements, including the fee must be submitted to obtain storm water authorization.

**PERMIT BY RULE REQUIREMENTS**: The permittee must abide by the requirements of R 323.2190 which states in part: (**a**) Not directly or indirectly discharge waste materials into the waters of the state in violation of Part 31, Water Resources Protection, of the Act or rules promulgated there under; (**b**) Be in compliance with a soil erosion and sedimentation control permit for the site; (**c**) Properly maintain and operate the soil erosion control measures; (**d**) Have the soil erosion control measures under the specific supervision and control of a storm water operator who has been certified by the Department; (**e**) Cause the construction activity to be inspected by a certified storm water operator once per week, and within 24 hours after every precipitation event that results in a discharge from the site. Refer to R 323.2190 for the complete listing of requirements at: http://www.michigan.gov/deq/0,1607,7-135-3313_3682_3716-23997--,00.html.

| **CONSTRUCTION PERMITTEE INFORMATION (Landowner, Easement Holder, or Authorized Public Agency)** | | | | | |
|---|---|---|---|---|---|
| LANDOWNER/PERMITTEE | | | AGENT FOR LANDOWNER (OPTIONAL) | | |
| CONTACT PERSON (FIRST AND LAST NAME) | | | CONTACT PERSON (FIRST AND LAST NAME) | | |
| E-MAIL ADDRESS (OPTIONAL FOR FASTER SERVICE) | | | E-MAIL ADDRESS | | |
| MAILING ADDRESS | | | MAILING ADDRESS | | |
| STREET | | | STREET | | |
| CITY | STATE | ZIP | CITY | STATE | ZIP |
| **STORM WATER CERTIFIED OPERATOR** (CONSTRUCTION ONLY) | | | **For Cashier's Office Only:** | | |
| CERTIFIED OPERATOR | | | | | |
| CERTIFICATION NUMBER (Number must look like **C-*****) | | | | | |

| SITE DESCRIPTION | | | | |
|---|---|---|---|---|
| TOTAL ACRES OF SITE | ACRES OF DISTURBANCE | | RECEIVING WATERS | |
| **PROJECT INFORMATION** | | | | |
| PROJECT NAME | | | COUNTY | TOWNSHIP |
| STREET | | | ¼ ¼ SECTION | |
| CITY | STATE | ZIP | TOWN (T) | RANGE (R) |
| **PART 91 SESC PERMITTING ENTITY INFORMATION** | | | | |
| NAME OF PART 91 SESC PERMITTING ENTITY OR APA AGENCY | | | | |
| E-MAIL ADDRESS (OPTIONAL FOR FASTER SERVICE) | | | PHONE NUMBER | |
| ADDRESS | | | SESC PERMIT NUMBER OR APA STATUS | |
| CITY | STATE | ZIP | ISSUE DATE | |

**CERTIFICATION** - Michigan regulations require this form be signed as follows:
**Corporation**: a principal executive officer of at least the level of vice president, or his designated representative, if the representative is responsible for the overall operation of the facility from which the discharge described in this form originates.
**Partnership**: a general partner.
**Sole Proprietorship**: the proprietor.
**Municipal, State, or other public facility**: either a principal executive officer, the mayor, village president, city or village manager, or other duly authorized employee.

I certify that I have read R 323.2190 and that all provisions of R 323.2190 will be complied with and that all information contained in this NOC is, to the best of my knowledge and belief, true, accurate and complete. I acknowledge that any discharge that is authorized by this NOC shall be in compliance with Act 451, Part 31, and the rules promulgated thereunder. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment. I certify under penalty of law that I possess full authority on behalf of the legal landowner/permittee to sign and submit this NOC.

| SIGNATURE (**ORIGINAL SIGNATURE REQUIRED**)<br>X | DATE TELEPHONE |
|---|---|
| PRINTED NAME | TITLE |

**MAKE CHECK OR MONEY ORDER IN THE AMOUNT OF $400 PAYABLE TO: STATE OF MICHIGAN**

MAIL COMPLETED APPLICATION, LOCATION MAP, SESC PERMIT AND PLAN, ALONG WITH THE **$400** FEE TO:

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
CASHIERS OFFICE - WRD-SW1
P O BOX 30657
LANSING, MI 48909-8157

ADDRESS FOR OVERNIGHT MAILING:

MDOT-ASC CASHIERS OFFICE FOR DEQ
WRD-SW1
425 WEST OTTAWA STREET
LANSING, MI 48933

IF YOU HAVE ANY QUESTIONS ABOUT THE PREPARATION OF THIS FORM OR DON'T RECEIVE ACKNOWLEDGEMENT WITHIN 30 DAYS OF SUBMITTAL, CALL 517-335-4137 OR E-MAIL: PLOEHNK@MICHIGAN.GOV.

City of Petoskey
Department of Public Works
101 East Lake Street, Petoskey, Michigan 49770 • 231 347-2500 • Fax 231 348-0355

# SOIL EROSION AND SEDIMENT CONTROL PERMIT

| AMOUNT | ACTIVITY |
|---|---|
| | ***INDIVIDUAL RESIDENTIAL SITES*** |
| **$ 50.00** | **PLAN REVIEW** |
| **$150.00** | **PERMIT AND INSPECTION DURING THE FIRST YEAR** |
| | ***INDIVIDUAL GARAGE, POLE BUILDING, ETC.*** |
| **$ 50.00** | **PLAN REVIEW** |
| **$ 75.00** | **PERMIT AND INSPECTION DURING THE FIRST YEAR** |
| | ***SUBDIVISIONS, MULTIPLE HOUSING, COMMERCIAL SITES, ETC.*** |
| **$ 50.00** | **PLAN REVIEW** |
| **$800.00** | **PERMIT AND INSPECTION DURING THE FIRST YEAR** |
| | ***UNDERGROUND CABLES AND PIPELINES*** |
| **$ 50.00** | **PLAN REVIEW** |
| **$300.00** | **PERMIT AND INSPECTION DURING THE FIRST YEAR** |
| | ***MISCELLANEOUS EARTHWORK, FILLS, EXCAVATIONS, ETC.*** |
| **$ 50.00** | **PLAN REVIEW** |
| **$250.00** | **PERMIT AND INSPECTION DURING THE FIRST YEAR** |

**ADDITIONAL FEES WILL BE CHARGED FOR INSPECTIONS REQUIRED BEYOND THE FIRST YEAR OF THE PERMIT. (THE ADDITIONAL FEE WILL BE ONE HALF THE ORIGINAL PERMIT FEE, PER ADDITIONAL YEAR)**

**PLEASE MAKE CHECKS PAYABLE TO: CITY OF PETOSKEY**

# CONTRACTORS PREQUALIFICATION REQUIREMENTS

# CONTRACTOR PREQUALIFICATION REQUIREMENTS

The City of Petoskey will pre-qualify contractors who wish to work in the City of Petoskey. These Construction Standards contain a "Bidder Prequalification Statement" which must be completed and submitted by prospective contractors to the City of Petoskey Director of Public Works office 30 days prior to any work in the City of Petoskey Right-of-Way. The City of Petoskey will review the submittals and issue upon request a list of contractors deemed qualified to work in the City of Petoskey.

# BIDDER PREQUALIFICATION STATEMENT

**GENERAL**
This Bidder Prequalification Statement is based on AGC Document No. 220 developed by the Associated General Contractors of America in cooperation with the Engineers Joint Contract Documents Committee.

The contents of this statement are CONFIDENTIAL.

**Submitted by:**

Name of Organization: _____

Name of Individual: _____

Title: _____

Address: _____

_____

_____

Telephone: _____

**Submitted to:**

Name: Jason Fate, Department of Public Works Supervisor
Address: City of Petoskey, 101 East Lake Street, Petoskey, MI 49770

Project Name: _____

**Contractor's General Business Information:**

Check if:

☐ Corporation ☐ Partnership ☐ Joint Venture ☐ Sole Partnership

**If Corporation:**

a. Date and State of Incorporation:

_____

_____

_____

b. List of Executive Officers:
Name Title

_____

_____

_____

**If Partnership:**

a. Date and State of Organization:

_____

_____

_____

b. Names of Current General Partners:

_____

_____

_____

Type of Partnership:

☐ General ☐ Publicly Traded ☐ Limited ☐ Other (describe): _____

**If Joint Venture:**

a. Date and State of Organization:

_____

_____

_____

b. Name, Address and Form of Organization of Joint Venture Partners: (indicate managing partner by an asterisk*)

_____

_____

_____

**If Sole Proprietorship:**

a. Date and State of Organization:

_____

_____

_____

b. Name and Address of Owner or Owners:

_____

_____

_____

_____

1. On Schedule A, attached, list major engineered construction projects completed by this organization in the past five (5) years. (If joint venture, list each participant's project separately).

2. On Schedule B, attached, list current projects under construction by this organization. (If joint venture, list each participant's projects separately).

3. Name of Surety Company and name, address and phone number of agent.

   _____

   _____

   _____

   _____

4. Is your organization a member of a controlled group of corporations as defined in I.R.C. Sec. 1563?

   ☐ Yes ☐ No

   If yes, show names and addresses of affiliated companies.

   _____

   _____

   _____

5. Furnish on Schedule C, attached, details of the construction experience of the principal individuals of your organization directly involved in construction operations.

6. Has your organization ever failed to complete any construction contract awarded to it?

   ☐ Yes ☐ No

7. Has any corporate officer, partner, joint venture participant or proprietor ever failed to complete a construction contract awarded to him or her in their own name or when acting as a principal of another organization?

   ☐ Yes ☐ No

8. In the last five years, has your organization ever failed to substantially complete a project in a timely manner?

   ☐ Yes ☐ No

   If yes, describe circumstances on attachment.

9. Indicate general types of work performed with your own work force.

   _____

   _____

10. If required, can your organization provide a bid bond for this project?

    ☐ Yes ☐ No

11. What is your approximate total bonding capacity?

    ☐ $500,000 to $2,000,000 ☐ $2,000,000 to $5,000,000

    ☐ $5,000,000 to $10,000,000 ☐ $10,000,000 or more

12. Describe the permanent safety program you maintain within your organization. Use attachment, if necessary.

    _____

    _____

    _____

    _____

13. Furnish the following information with respect to an accredited banking institution familiar with your organization:

    Name of Bank: _____

    Address: _____

    Account Mgr.: _____

    Telephone: _____

14. Provide information requested in Attachment "A".

I hereby certify that the information submitted herewith, including any attachments, is true to the best of my knowledge and belief.

Company: _____

By: _____

Title: _____

Date: _____

Attachment A

**Prequalification Statement**

Contractor shall complete this form and submit it to the Owner along with the Bidder Prequalification Statement.

A. Claims and Suits. (If the answer to any of the questions below is yes, please attach details)

1. Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers?

   ☐ Yes ☐ No

2. Has your organization filed any lawsuits or requested arbitration with regard to construction contracts within the last five years?

   ☐ Yes ☐ No

B. Worker's Compensation.

1. Bidder shall submit a copy of the Bidder's current Experience Modification Rates (EMR).

2. Bidder shall submit the Bidder's OSHA Form 300A recordable incidence rate for the last calendar year, per 200,000 man-hours, for:

   a. Total cases
   b. Lost workday cases
   c. Non-fatal cases per number of lost workdays

# SCHEDULE A

| Name, Location and Description of Project | Owner | Design Engineer | Date Completed | Contract Price | Reference/Contact: Include Address and Phone |
|---|---|---|---|---|---|
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# SCHEDULE B

| Name, Location and Description of Project | Owner | Design Engineer | Contract Price | Amount Completed | Date of Scheduled Completion | Reference/Contract: Include Address and Phone |
|---|---|---|---|---|---|---|
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# SCHEDULE C - Personnel

| Name | Position | Date Started with this Organization | Date Started in Construction | Prior Positions and Experience in Construction |
|---|---|---|---|---|
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# UTILITY RATES AND CHARGES, TAP-IN FEES, ROW AND SOIL EROSION FEES

# CITY OF PETOSKEY

## Schedule of Rates and Charges

## Effective: January 1, 2019

Approved by City Council: November 19, 2018

*Charges for FOIA requests are based on the City's FOIA Policy.

Schedule of Rates and Charges
January 1, 2019

# OFFICE OF CITY PLANNER

| | |
|---|---|
| Zoning Board of Appeals Application | $330.00 |
| Site Plan Review | $600.00 |
| Special Condition Use (Use Change Only) | $400.00 |
| Special Condition Use with Site Plan | $800.00 |
| Parking Plan Review | $250.00 |
| Special Condition Use and Parking Plan | $250.00 |
| Rezoning Application<br>(Map and Text) | $600.00 |
| Land Division Review: | $60.00 |
| Planned Unit Development: | |
| Preliminary PUD | $900.00 plus consultant costs |
| Final PUD | $1,100.00 plus consultant costs |
| Special Meeting | $150.00 |
| Zoning Permit | $30.00 |
| Fence Permit | $15.00 |
| Zoning Verification Letter | $50.00 |
| **Sign Permit Applications**** | |
| Temporary Sign | $15.00 |
| Directional Sign | $15.00 |
| Wall mounted Signs | $40.00 |
| Projecting Name Plate | $20.00 |
| Sandwich Board | $25.00 |
| Special Condition Sign | $60.00 |
| Freestanding Signs | $40.00 |
| Overhanging Signs | $40.00 |
| **Fee for installation before approval | $30.00 |
| **Penalty fee will be in addition to regular sign fee amount | |

Schedule of Rates and Charges
January 1, 2019

# DEPARTMENT OF FINANCE

| | |
|---|---|
| Notary Charge for non-City business | $5.00 |

**Business Licenses:**

| | |
|---|---|
| Auction | $50.00 per event |
| Bed and Breakfast | $150.00 initial; $100 annually |
| Boarding House | $150.00 initial; $100 annually |
| Door to Door Sales and Canvassing | $50 |
| Going Out of Business | $50.00, up to 90 days maximum |
| Hotel Operation | $150.00 initial; $100 annually |
| Outdoor Beverage and Food Service - without alcohol | $150.00 |
| Outdoor Beverage and Food Service - with alcohol | $200.00 |
| Redevelopment Liquor License - MCL 436.1521 a(1)(a) - new construction | $750.00 |
| Redevelopment Liquor License - MCL 436.1521 a(1)(b) | $500.00 |
| Liquor Licenses - Council Approval Required for State Licensing | $100.00 |
| New Business Registration | $50.00 at the business start-up |
| Transient Merchant | $25/day; $75/week; $200/season |
| Vacation Rental | $150.00 initial; $100 annually |
| Vacation Rental - return inspection visit | $25.00 fee each additional visit |
| Food Trucks: | |
| If vending on City Property - annually | $500.00 annually |
| If associated with a community event and on public property - daily | $40/day |
| If vending on private property - annually | $100.00 annually |
| If vending on private property - daily | $25/day |

| | |
|---|---|
| Fax – per page | $1.00 |
| Copies for public – per page 8.5" x 11" | $1.00 |
| Copies for public - large (ex. Plan documents) | $4.00 |
| FOIA Requests – hourly rate after 1st hour | $15.00 |
| *plus copying and postage costs | |
| Voter List per Ward: paper copy per ward | $40.00 |
| Voter List per Ward: E-mail listing per ward | $10.00 |
| Electronic media | $10.00 |
| Tax Abatement Application – CFT, IFT, etc. | $200.00 |

| | |
|---|---|
| Street Open-Cut Deposit | $500.00 |

| | |
|---|---|
| Residential Utility Deposit - Renters | |
| Water, Sewer and Electric | $150.00 |
| Electric - Only | $75.00 |
| Water & Sewer - Only | $85.00 |

*Residential utility deposits are returned after 1 year, if monthly bills are paid on time.

| | |
|---|---|
| Final Meter Reading - termination of utility service | $10.00 |

Schedule of Rates and Charges
January 1, 2019

**Electric:**

| | |
|---|---|
| Service Upgrade | $150.00 |
| Temporary Overhead | $150.00 |
| Temporary Underground | $150.00 plus $2.00 per foot |

**Customer provides trenching and installation of conduit, other costs may apply.**

| | |
|---|---|
| Permanent Overhead: | |
| 1 Phase | $200.00 |
| Permanent Underground: | $200.00 plus $2.00 per foot |

**Customer provides trenching and installation of conduit, other costs may apply.**

**All 3 Phase services shall be underground. Costs determined on a case by case basis.**

| | |
|---|---|
| Turn on/off Service: | |
| During Office Hours - 7:30 A.M. to 4:00 P.M. | $50.00 |
| After Office Hours - 4:00 P.M. to 7:30 A.M. | $150.00 |

**Water Service:**

| | |
|---|---|
| Turn on/off Service: | |
| During Office Hours - 7:30 A.M. to 4:00 P.M. | $50.00 |
| After Office Hours - 4:00 P.M. to 7:30 A.M. | $150.00 |
| Meter replacement due to damage | $240.00 |
| Water Meter Removal and Installation - construction | $50.00 |

Schedule of Rates and Charges
January 1, 2019

# DEPARTMENT OF FINANCE

| | Water Capital Charges | | Sewer Capital Charges | | Tap-In Fees | |
|---|---|---|---|---|---|---|
| Meter Size | Inside | Outside | Inside | Outside | Inside | Outside |
| 5/8" | $1,400.00 | $2,100.00 | $4,600.00 | $4,600.00 | $1,470.00 | $1,615.00 |
| 3/4" | $2,100.00 | $3,150.00 | $6,900.00 | $6,900.00 | $1,470.00 | $1,615.00 |
| 1" | $3,500.00 | $5,250.00 | $11,500.00 | $11,500.00 | $1,680.00 | $1,845.00 |
| 1-1/2" | $7,000.00 | $10,500.00 | $23,000.00 | $23,000.00 | $4,360.00 | $4,795.00 |
| 2" | $11,200.00 | $16,800.00 | $36,800.00 | $36,800.00 | $4,640.00 | $5,100.00 |
| 3" | $24,500.00 | $36,750.00 | $80,500.00 | $80,500.00 | $5,040.00 | $5,545.00 |
| 4" | $42,000.00 | $63,000.00 | $138,000.00 | $138,000.00 | $7,075.00 | $7,780.00 |
| 6" | $87,500.00 | $131,250.00 | $287,500.00 | $287,500.00 | $9,730.00 | $10,700.00 |

Tap-in fees include tapping of the water main by City crews (excavation by owner/contractor) and City supplied valving components for water service connection point at main. Owner/contractor is responsible for all excavating, trenching, service pipe and components from water main connection point to building, street and sidewalk replacements, and right-of-way restorations.

Schedule of Rates and Charges
January 1, 2019

# DEPARTMENT OF PARKS AND RECREATION

| **Magnus Park** | **Daily** | | **Monthly** | |
|---|---|---|---|---|
| | Non-Peak | Peak* | Non-Peak | Peak* |
| Full Hookup | $32 | $40 | $744 | $930 |
| Electric Only | $30 | $35 | $698 | $814 |

* July/August

**Note**: Sewer drop station for non-campers = $5.00/each time
Showers for non-campers = $1.00
Firewood = $5.00 per bundle

**Marina Services**

| | |
|---|---|
| Daily Launch | $5.00 per day |
| Annual Launch | $25.00 per year |
| Senior Launch (55 years +) | $20.00 per year |
| Pump Out (LOA < 60') | $5.00 per tank |
| Pump Out (LOA > 60') | $10.00 per tank |
| Pump Out-Seasonal Slip | Free |
| Block & Cube Ice | $2.00 per bag |

**Marina Seasonal**

| | |
|---|---|
| 30 foot Boat Slip | $ 2,430 |
| 38 foot Boat Slip | $ 3,154 |
| 42 foot Boat Slip | $ 3,570 |
| 45 foot Boat Slip | $ 3,960 |
| 60 foot Boat Slip | $ 5,520 |

**Note:** Continuous slip holders prior to and including the year 1996 are “grandfathered” into the boat length method for rate calculation. Slip holders entering the Marina after 1996 are charged under the state endorsed slip length method of rate calculation.

The above are 2019 DNR Waterways Commission rates for seasonal boaters. The Waterways Commission will establish the 2019 rates in mid-December of 2018. The 2019 rates will be adopted at the same tier for seasonal slips - Rate 3.

Schedule of Rates and Charges
January 1, 2019

# DEPARTMENT OF PARKS AND RECREATION

**Marina Transient: (Daily well rental- fees per foot rounded to nearest $1.00)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **25'** | $32.00 | **38'** | $52.00 | **51'** | $75.00 | **64'** | $95.00 |
| **26'** | $34.00 | **39'** | $58.00 | **52'** | $77.00 | **65'** | $96.00 |
| **27'** | $35.00 | **40'** | $59.00 | **53'** | $78.00 | **66'** | $98.00 |
| **28'** | $36.00 | **41'** | $61.00 | **54'** | $80.00 | **67'** | $99.00 |
| **29'** | $37.00 | **42'** | $62.00 | **55'** | $81.00 | **68'** | $101.00 |
| **30'** | $39.00 | **43'** | $64.00 | **56'** | $83.00 | **69'** | $102.00 |
| **31'** | $41.00 | **44'** | $65.00 | **57'** | $84.00 | **70'** | $104.00 |
| **32'** | $42.00 | **45'** | $67.00 | **58'** | $86.00 | **71'** | $105.00 |
| **33'** | $43.00 | **46'** | $68.00 | **59'** | $87.00 | **72'** | $107.00 |
| **34'** | $45.00 | **47'** | $70.00 | **60'** | $89.00 | **73'** | $108.00 |
| **35'** | $46.00 | **48'** | $71.00 | **61'** | $90.00 | **74'** | $110.00 |
| **36'** | $50.00 | **49'** | $73.00 | **62'** | $92.00 | **75' or >** | $1.48 per foot |
| **37'** | $51.00 | **50'** | $74.00 | **63'** | $93.00 | | |

The DNR Waterways Commission adopts the Marina Transient rates in mid-December 2018. 2019 rates for transient boaters will be adopted by the City at the same tier as 2018 - Rate D.

Schedule of Rates and Charges
January 1, 2019

# DEPARTMENT OF PARKS AND RECREATION

## Parks Reservation Fees
## For Gazebos, Shelters, and Special Areas

| Gazebos | Resident | Non-resident |
|---|---|---|
| **Sunset Park Gazebo (max. 50 people)** | (Must live within City Limits) | (Lives outside City Limits) |
| 9:00 A.M. to Noon | $75.00 | $125.00 |
| 1:00 P.M. to 4:00 P.M. | $75.00 | $125.00 |
| 5:00 P.M. to Dusk | $75.00 | $125.00 |
| | | |
| **Pennsylvania Park Gazebo*** | | |
| 9:00 A.M. to Noon | $75.00 | $125.00 |
| 1:00 P.M. to 4:00 P.M. | $75.00 | $125.00 |
| 5:00 P.M. to Dusk | $75.00 | $125.00 |
| | | |
| *Exception – Tuesdays | 11:00 A.M. to 2:00 P.M. | Closed for concert series |
| Fridays | 11:00 A.M. to 2:00 P.M. | Closed for concert series |
| | 6:00 P.M. to 9:00 P.M. | Closed for concert series |

| Shelters/Open Space | Resident | Non-resident |
|---|---|---|
| **Bayfront Park Festival Shelter (max. 75 people)** | (Must live within City Limits) | (Lives outside City Limits) |
| 9:00 A.M. to Noon | $125.00 | $175.00 |
| 1:00 P.M. to 4:00 P.M. | $125.00 | $175.00 |
| 5:00 P.M. to Dusk | $125.00 | $175.00 |
| | | |
| **Bayfront Park West (max. 150 people)*Open Space Only** | | |
| 9:00 A.M. to Noon | $75.00 | $125.00 |
| 1:00 P.M. to 4:00 P.M. | $75.00 | $125.00 |
| 5:00 P.M. to Dusk | $75.00 | $125.00 |
| | | |
| **Bear River Shelter/Mitchell Street Bridge (max. 140 people)** | | |
| 9:00 A.M. to Noon | $125.00 | $175.00 |
| 1:00 P.M. to 4:00 P.M. | $125.00 | $175.00 |
| 5:00 P.M. to Dusk | $125.00 | $175.00 |
| | | |
| **Mineral Well Shelter (max. 32 people)** | | |
| 9:00 A.M. to Noon | $75.00 | $125.00 |
| 1:00 P.M. to 4:00 P.M. | $75.00 | $125.00 |
| 5:00 P.M. to Dusk | $75.00 | $125.00 |
| | | |
| **West Side Shelter (max. 32 people)** | | |
| 9:00 A.M. to Noon | $75.00 | $125.00 |
| 1:00 P.M. to 4:00 P.M. | $75.00 | $125.00 |
| 5:00 P.M. to Dusk | $75.00 | $125.00 |
| | | |
| **Waterfall Area (max. 150 people)*Open Space Only** | | |
| 9:00 A.M. to Noon | $125.00 | $175.00 |
| 1:00 P.M. to 4:00 P.M. | $125.00 | $175.00 |
| 5:00 P.M. to Dusk | $125.00 | $175.00 |
| | | |
| **Special Event Application** | $75.00 | $125.00 |
| Fee applied to rental costs if applicable | | |

Schedule of Rates and Charges
January 1, 2019

# DEPARTMENT OF PARKS AND RECREATION

## Parks Reservation Fees
## For Gazebos, Shelters, and Special Areas

| Shelters/Open Space | Resident | Non-resident |
|---|---|---|
| **Riverbend Park Pavillion (max. 75 people)** | (Must live within City Limits) | (Lives outside City Limits) |
| 9:00 A.M. to Noon | $75.00 | $125.00 |
| 1:00 P.M. to 4:00 P.M. | $75.00 | $125.00 |
| 5:00 P.M. to Dusk | $75.00 | $125.00 |
| | | |
| **Resource Center (max. 20 people)** | | |
| 2-hour Reservation | $50.00 | $75.00 |
| Additional Hour | $25.00 | $35.00 |
| | | |
| **Winter Sports Park** | | |
| Skate Rental (reduced price for schools & non-profit groups - $2/person) | $5.00 per person | $5.00 per person |
| Hockey Rink - 1 hour block (Zamboni once) | $25.00 | $25.00 |
| Hockey Tournament Fee | $500.00 | $750.00 |
| Building Rental (off hours with 2 hour block) | $75.00 | $125.00 |
| Additional Hour | $20.00 | $30.00 |
| Birthday Party Rates | | |
| Upstairs during open hours (2 tables/2 hours) | $25.00 | $35.00 |
| Additional Hour | $10.00 | $15.00 |
| Downstairs Private Room (3 hour block) (Includes reduced skate rental ($2), private party room and restroom) | $125.00 | $200.00 |
| Additional Hour | $25.00 | $35.00 |

**Sports Fields – Non-affiliated Sports Groups**

| | |
|---|---|
| Unlighted Ball Field | $ 50.00 per fitting with a three game block |
| Lacrosse Field | $150.00 per striping with a two day maximum |
| Soccer Field | $150.00 per striping with a two day maximum |
| Volleyball Court | $25.00 per court/day includes initial drag |
| Mowing | $40.00 per mow |

** Groups must provide proof of insurance and verify coverage with the City of Petoskey listed as co-insured.

| **Park Resources** | | |
|---|---|---|
| Request for picnic tables - Specify Park Event (maximum of ten (if available) | $50.00 | $100.00 |
| Request for extra trash barrels (maximum of 5) | $25.00 | $35.00 |
| Performance Stage (up to 4 hours) | $150.00 | $175.00 |
| Additional Hour | $30.00 | $40.00 |
| P.A. System (up to 4 hours) | $25.00 | $35.00 |
| Street Closure | $100.00 | $150.00 |

Staffing requests, if approved, will be billed at overtime rates

**Cancellation Fees**

* A cancellation fee of $25.00 will be assessed if a reservation is cancelled five days prior to the event and the full reservation fee will be assessed if the reservation is cancelled less than five days prior to the event unless the facility is closed due to weather.

** A separate $50.00 refundable damage deposit is required with payment at time of reservation.

Schedule of Rates and Charges
January 1, 2019

## DEPARTMENT OF PUBLIC SAFETY

| | |
|---|---|
| Fingerprinting | $10.00 |
| DVD Copies | $10.00 |
| CD-ROM Photo Reproduction | $10.00 |
| Accident Reports | $5.00 |
| | |
| Private Events | |
| Use of fire engine | $500.00 |
| Personnel for fire engine per hour | $96.00 |
| Overtime per hour | $134.00 |
| Use of patrol unit | $250.00 |
| Personnel for patrol unit per hour | $48.00 |
| Overtime per hour | $67.00 |

**Charges for FOIA requests are based on the City's FOIA Policy.

## DEPARTMENT OF PUBLIC WORKS

| | |
|---|---|
| Right-of-Way Excavating/Occupancy Deposit | $500.00 |
| Permit to Use Public Right-of-Way Fee | $ 50.00 |
| Soil Erosion and Sediment Control Permit | Project Specific - See schedule of fees indicated on the last page of the permit application. |

# ELECTRIC SERVICE STANDARDS

City of Petoskey

101 East Lake Street, Petoskey, Michigan 49770 • 231 347-2500 • Fax 231 348-0350

# ELECTRIC SERVICE STANDARDS

## RESIDENTIAL/COMMERCIAL

- All services shall be a minimum of 100 AMPS.
- Location of services shall be pre-approved by the City.
- Standard 100 Amp and 200 Amp overhead and underground meter enclosures will be provided by the City. Any other metering devices shall be pre-approved by the City at the expense of the owner/contractor. Meter enclosures shall be of the ring-less-type.
- Type of metering shall be pre-approved by the City prior to installation.
- All applications must be completed and fees paid before service can be energized.

### TEMPORARY SERVICES

- Service supplied for construction purposes are of limited duration and delivered to a single point through one meter. The customer must pay the permanent service charge in addition to the temporary service charge.

### PERMANENT SERVICES

- Permanent service provides connection to customer's permanent location. Charges for permanent service are in addition to any charges paid for the temporary service.

### GENERAL REQUIREMENTS

- Owner/contractor shall submit to City service size and voltage requirements.
- When applicable owner/contractor shall submit to City site plan.
- No service will be energized until inspected, approved and released by appropriate Electrical Inspection Authority.
- Easements will be required when certain electric lines and equipment are placed on private property. Type and width of easement will be determined by City.
- All services shall comply with applicable State and National Electric Codes.
- All metering devices shall be located on the exterior of building and must be accessible to City personnel.
- In the event a metered area is later enclosed or otherwise made inaccessible or unsafe, the owner/customer shall, at their expense, have the meter facilities moved to a readily accessible outside location as determined by City.
- Meter enclosures shall be securely mounted in a plumb and level position on a solid wall or structure. The owner/customer shall be responsible for securely fastening the meter enclosure in order to withstand the normal forces required to routinely remove and install the meter.
- A clear space at least 36" from the front of all meter enclosures shall be maintained from ground to top of equipment, minimum of 36" in width (18" on each side of center line of meter enclosure) to allow easy and safe access for reading and testing.

- Customer purchased commercial and residential meter centers shall be approved prior to installation. Equipment not meeting City specifications will not be energized.
- Meter enclosures shall not be recessed or framed in any way that blocks access to meter or knockouts.
- Owner/contractor shall be responsible for all conductors from metering devices to City point of connection.
- All metering devices with two or more meters shall be permanently labeled specifying unit or address being metered.
- At the time that multiple meters are installed the owner/contractor will provide one or more representatives with appropriate communicative devices to verify that each premise address corresponds to the permanent marking on the meter enclosure. Any incorrect markings discovered during verification process will terminate future installations of meters until all meter enclosures have been correctly marked. Verification of correct markings is the responsibility of the owner/contractor.
- Electrical conductors **shall not** enter or exit the through the back of any meter enclosure.
- Meter locking devices **shall only** be removed by City personal.
- The City may refuse service to any new or altered installation, or disconnect service to any existing installation, which upon inspection, the City feels or authorized inspecting authority considers unsafe. The City may disconnect a service that shows physical evidence of tampering, hazardous condition, or current diversion as provided under State Statutes, Rules and Regulations of the City. The City shall not be responsible in any way for any defect in the customers wiring or damage resulting from such defects.
- Service connections, City owned meters and metering equipment, by law, **shall not** be removed or relocated except by City personnel or a duly authorized representative of the City.

**OVERHEAD SERVICES**

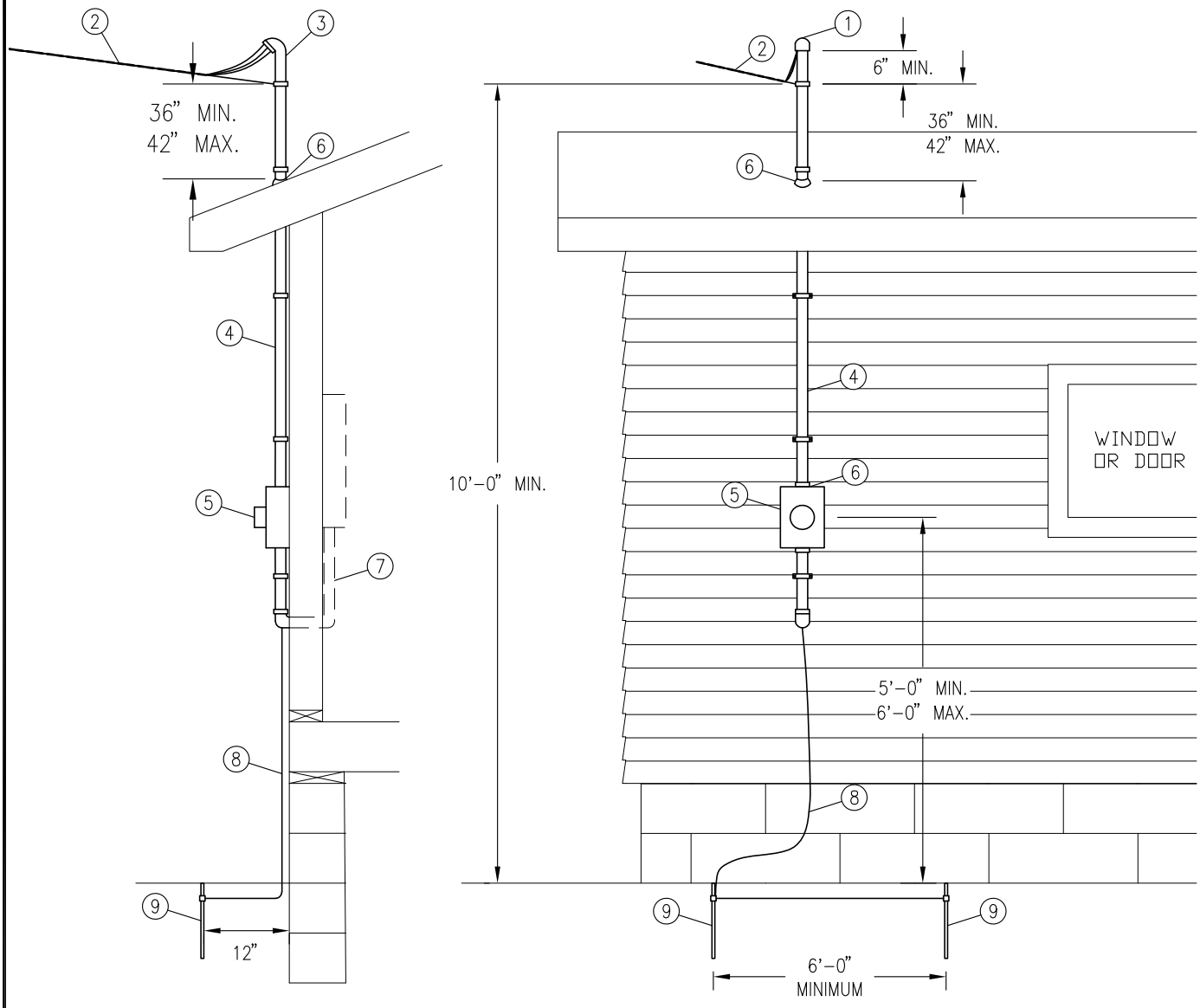
- All overhead installations shall conform to attached drawings labeled “Wiring Detail – Eave Installation” or “Wiring Detail – Gable Installation”.

**UNDERGROUND SERVICES**

- All underground installations shall conform to attached drawings labeled “Wiring Detail – Underground Service”.
- All services shall be buried in a gray schedule 40 PVC conduit size as specified by City.
- All excavating and restorations for conduit installations shall be the responsibility of owner/contractor.
- Conduit shall be buried at a minimum of 36”to top of conduit.
- Conduit shall be terminated in meter socket and properly attached to building.
- Conduits shall be inspected by City personnel prior to backfilling.
- Conduit shall be cleaned and strings installed before City crews will begin work.
- Installations within City right-of-way will require a Right-of-Way Permit. Permits may be obtained from the Department of Public Works. Fees and deposits will be determined based on scope of work.

**NEW DEVELOPMENTS**

- New developments will be handled on a case by case basis after a site review is completed by City staff.




1. WEATHER HEAD.
2. COMPANY'S SERVICE DROP, 10 FT. MIN. GROUND CLEARANCE AT POINT OF ATTACHMENT.
3. MINIMUM (2) FEET OF SERVICE ENTRANCE WIRE REQUIRED FOR CONNECTION TO SERVICE DROP.
4. NEC APPROVED SINGLE CONDUCTORS IN ELECTRICAL GRADE CONDUIT. CONDUIT MUST BE A MINIMUM OF 2" ID RIGID. EMT CONDUIT IS NOT ALLOWED.
5. METER BASE FURNISHED BY THE CITY, INSTALLED BY THE CUSTOMER. THE USE OF REAR KNOCKOUTS IS NOT ALLOWED.
6. WATERTIGHT CONNECTION/SEAL.
7. CUSTOMER'S SERVICE ENTRANCE EQUIPMENT, AS REQUIRED BY NEC AND LOCAL INSPECTION AUTHORITY.
8. MINIMUM #6 BARE COPPER GROUND ELECTRODE CONDUCTOR.
9. NEC APPROVED GROUND ROD CLAMP AND (8) FOOT MIN. GROUND RODS INSTALLED BELOW GRADE.

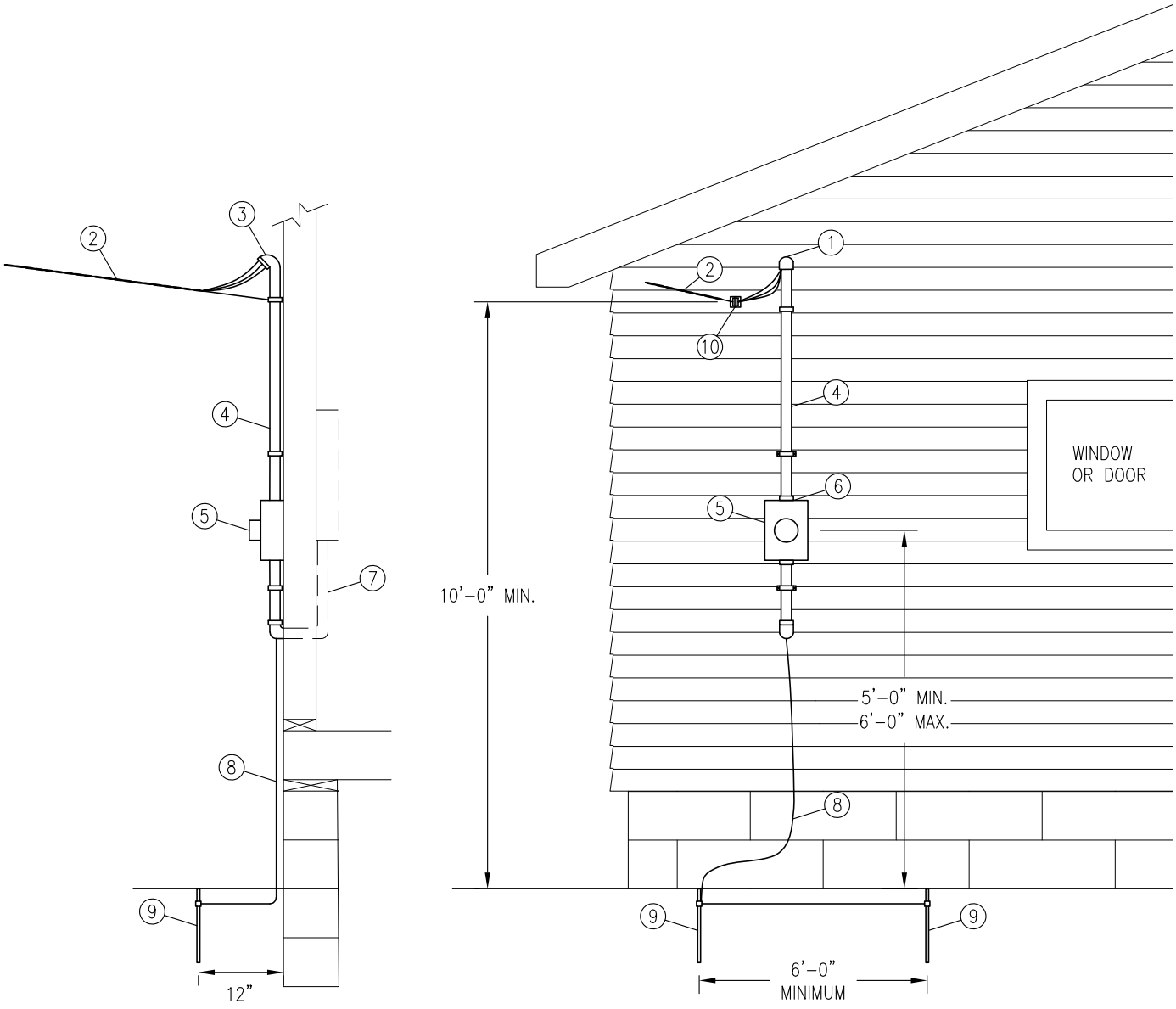
SPECIAL NOTES:

1. ELECTRICAL INSPECTION AND APPROVAL IS REQUIRED BEFORE SERVICE IS ENERGIZED. PLEASE CONTACT YOUR COUNTY ELECTRICAL INSPECTOR FOR CODE REQUIREMENTS.
2. THESE SPECIFICATIONS ARE TO BE USED WHERE NOT MORE THAN (4) FEET OF ROOF OVERHANG IS CROSSED BY SERVICE CONDUCTOR. IF MORE THAN FOUR FEET OF ROOF IS TO BE CROSSED, CONDUCTOR CLEARANCE MUST BE INCREASED TO 1 TO 3 FEET OVER THE ROOF.

NOTE: ALL INSTALLATIONS SHALL CONFORM TO STATE AND NATIONAL ELECTRIC CODES.

## WIRING DETAIL - EAVE INSTALLATION

REV: 02-20-2018




1. WEATHER HEAD.
2. COMPANY'S SERVICE DROP, 10 FT. MIN. GROUND CLEARANCE AT POINT OF ATTACHMENT.
3. MINIMUM (2) FEET OF SERVICE ENTRANCE WIRE REQUIRED FOR CONNECTION TO SERVICE DROP.
4. NEC APPROVED SINGLE CONDUCTORS IN ELECTRICAL GRADE CONDUIT. CONDUIT MUST BE A MINIMUM OF 2" ID PVC. EMT CONDUIT IS NOT ALLOWED.
5. METER BASE FURNISHED BY THE CITY, INSTALLED BY THE CUSTOMER. THE USE OF REAR KNOCKOUTS IS NOT ALLOWED.
6. WATERTIGHT CONNECTION/SEAL.
7. CUSTOMER'S SERVICE ENTRANCE EQUIPMENT, AS REQUIRED BY NEC AND LOCAL INSPECTION AUTHORITY.
8. MINIMUM #6 BARE COPPER GROUND ELECTRODE CONDUCTOR.
9. NEC APPROVED GROUND ROD CLAMP AND (8) FOOT MIN. GROUND RODS INSTALLED BELOW GRADE.
10. SERVICE ASSEMBLY – INSTALLED BY CUSTOMER, MUST BE SECURELY ANCHORED IN STUD.

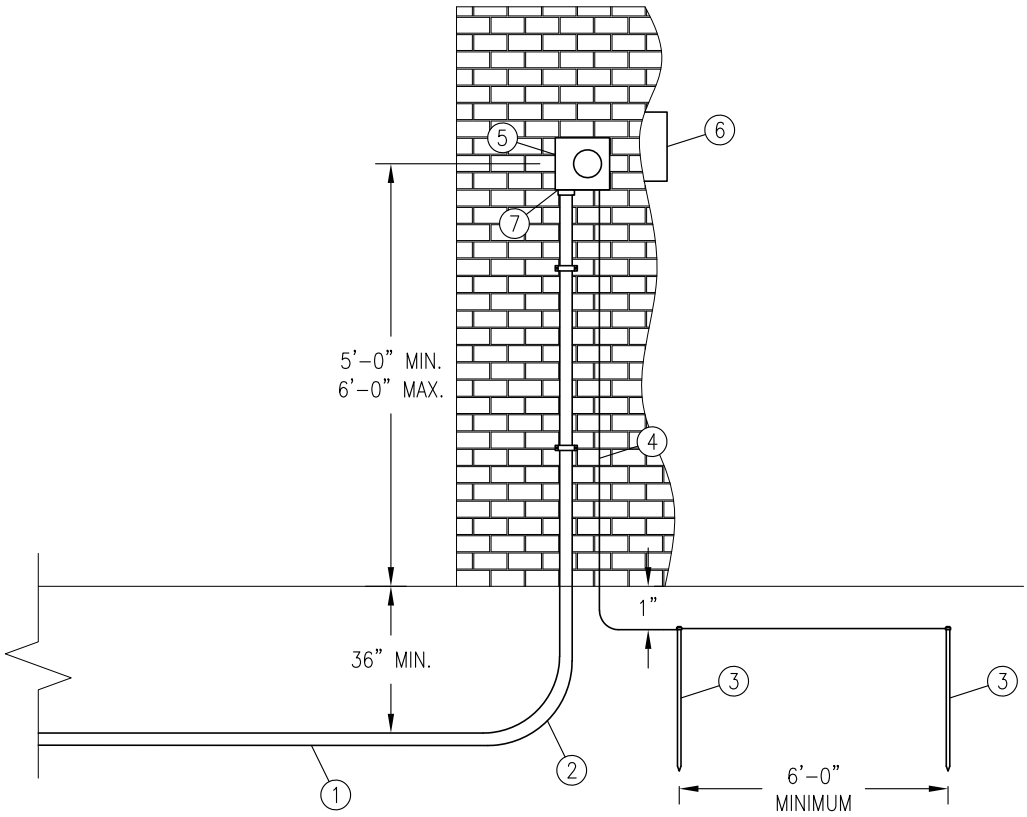
SPECIAL NOTES:

1. ELECTRICAL INSPECTION AND APPROVAL IS REQUIRED BEFORE SERVICE IS ENERGIZED. PLEASE CONTACT YOUR COUNTY ELECTRICAL INSPECTOR FOR CODE REQUIREMENTS.

NOTE: ALL INSTALLATIONS SHALL CONFORM TO STATE AND NATIONAL ELECTRIC CODES.

## WIRING DETAIL - GABLE INSTALLATION

REV: 02-28-2017




1. SECONDARY CONDUIT (2 OR 3 INCH) FURNISHED AND INSTALLED BY CUSTOMER. AFTER TRENCHING, THE TRENCH MAY BE BACKFILLED AND COVERED.
2. ANY UNDERGROUND SERVICE THAT REQUIRES (3) 90 DEGREE TURNS OR IS FURTHER THAN 150 FEET, THE CUSTOMER MUST USE A STANDARD STEEL 90 (18" TURN). ANY UNDERGROUND SERVICE WHICH IS LESS THAN 150 FEET WITH (2) 90 DEGREE TURNS, THE CUSTOMER IS ALLOWED TO USE A PVC LONG RADIUS 90 (36 INCH).
3. GROUND ROD MINIMUM 5/8"x8' COPPERWELD OR 1/2"x8' COPPER FURNISHED AND INSTALLED BY CUSTOMER. GROUND RODS ARE TO BE SET 1 INCH BELOW FINISHED GRADE.
4. METER BASE GROUNDING, MINIMUM #6 SOFT DRAWN COPPER, IN CONDUIT FROM THE METER BASE TO THE GROUND ROD, FURNISHED AND INSTALLED BY THE CUSTOMER. THE METER BASE GROUND WIRE MUST BE CONNECTED IN THE GROUND WIRE LUG WHERE PROVIDED AND NOT IN THE SERVICE NEUTRAL LUG.
5. METER BASE FURNISHED AND INSTALLED BY CUSTOMER. METER BASE MUST BE INSTALLED ON THE OUTSIDE OF THE BUILDING. METER BASE MUST BE MOUNTED BETWEEN 5 AND 6 FEET ABOVE FINISHED GRADE.
6. MAIN DISCONNECT, FURNISHED AND INSTALLED BY CUSTOMER, MUST BE LOCATED WITHIN 3 FEET OF THE METER BASE. MAIN DISCONNECT AND OR OTHER ELECTRICAL EQUIPMENT MAY BE MOUNTED ON THE OUTSIDE OF THE BUILDING. IT MUST BE OF WEATHER PROOF DESIGN IF MOUNTED ON THE OUTSIDE.
7. CUSTOMER WILL COMPLETE INSTALLATION OF CONDUIT INTO BOTTOM OF METER BASE USING MINIMUM SCHEDULE 40 PIPE FOR SECTION ABOVE GROUND INTO METER BASE.

NOTE: ALL INSTALLATIONS SHALL CONFORM TO STATE AND NATIONAL ELECTRIC CODES.

## WIRING DETAIL - UNDERGROUND SERVICE

REV: 02-28-2017

# WATER STANDARDS

# WATER STANDARDS

HYDRANTS: All hydrants will have a single 5" (5-inch) Storz pumper connection along with 2 (two) each 2 ½" (two and one-half inch) standard pumper nozzles.

The Storz connection shall have a Storz Blind Cap cover and the 2 ½" pumper nozzles shall have nose nozzle caps. All caps/covers shall be attached to the hydrant with cables or chains to insure they are not misplaced when moved.

Each fire hydrant is to have a hydrant marker as approved by the City of Petoskey.

GATE VALVES: Resilient-wedge open left with 5 and ½ inch street box with the word "Water" on the cover.

SERVICES: K-copper flared or restrained compression.

MAINS: Class 52 DIP with continuity/conductivity straps.

CORPORATIONS: Ford ¾" flared fittings #F-1000
Ford 1" flared fitting #F-1000
Mueller ¾" flared fitting #H-15000
Mueller 1" flared fitting #H-15000

CURB STOPS: Ford ¾" #Z22-333
Ford 1" #Z22-444
Mueller ¾" #H1502-1
Mueller 1" #H-1502-1

CURB STOP BOX: Tyler (EJIW) #95E

JOINT RESTRAINTS: No thrust blocking will be allowed. See Pipe Restraint Schedule for approved restraints.

MISCELLANEOUS: All watermains and services are to be a minimum of 6 ½ feet deep.

All water service fittings on corporations or curb stops will be brass, unless otherwise approved by the City.

No saddles are to be used on DIP or CIP. On existing transite (A.C.) main, saddles will be used.

No wedges are to be used for conductivity. Straps are to be used.

Hydrant valves shall be a minimum of 3 feet from hydrants. The City will not accept hydrants with valves attached.

Joint Restraints: Shall be Mega Lug glands or Grip Rings as manufactured by Romac, in conjunction with tie rods, or approved equals.

Since resilient wedge valves are epoxy coated and are therefore non-conductive, a No. 4 copper wire must be attached at the glands on each side of the valve, with the wire being run up to the surface inside the gate valve box, for accessibility (see "Water Valve Detail").

Prior to the City of Petoskey accepting any watermains or hydrants as part of the City of Petoskey system, flushing of these lines is required, to clean all debris out of this system. Contractor's inspector is to contact the Department of Public Works to witness and direct this flushing. (See "Cleaning and Flushing" in the Testing of Watermains section in these water standards)

# NEW WATERMAIN INSTALLATION

When installing a watermain for the City of Petoskey, the installation will comply with all AWWA Standards.

1. The minimum watermain size accepted by City is 6-inch, unless otherwise approved.
2. All piping and appurtenances must remain clean during construction, and protected from any potential contamination.
3. The newly installed watermain will be "Poly Pigged" prior to City acceptance, and must be witnessed by a designated City representative.
4. A continuity/conductivity test must be completed, witnessed and approved by a designated representative of the City.
5. The newly installed watermain will be pressure tested per City requirements, and the results must be given to the City. A designated representative of the City must witness this pressure test.
6. Before flushing highly chlorinated water out, know where the water will end up, do not allow such water into a receiving stream, river or lake before chlorine has been depleted.
7. A physical separation is required between the existing water system and the new watermain installation. This separation may be accomplished by using a blind flange plumbed above grade. This separation must be a minimum of 3 feet, with a tested backflow preventer, or a "City" hydrant meter/backflow preventer combo. An approved/licensed tester must certify either device, prior to usage, and a copy of these results is to be given to the City. Should the device be moved from the original test location, the certification process must be repeated.
8. In addition, a mechanical separation must be done to protect the backflow device from excess pressure.
9. The new watermain will be chlorinated to 50 ppm with at least 10 ppm after 24 hours.
10. Bacteriological testing must be done, and two (2) consecutive samples must be taken and must pass bacteriological requirements prior to making the physical connection to the existing water system.
11. The new watermain will be put into service only with permission of, and in the presence of, the City's designated representative.

## SECTION 02660 - WATER SUPPLY AND DISTRIBUTION

PART ONE - GENERAL

### 1.01 REFERENCES

A. All work is to be installed per the City of Petoskey's standards and specifications. In case of a discrepancy between the City standards and the technical specifications outlined in this section, the City standards shall prevail. All discrepancies shall be brought to the attention of the Engineer.

B. Performance and material requirements shall meet specific reference standards as referred to herein as:
ANSI - American National Standards Institute
ASTM - American Society of Testing and Materials
AWWA - American Water Works Association

### 1.02 SUBMITTALS

A. Certifications: All pipe, valves, hydrants and fittings delivered to the project site shall be accompanied by certification papers showing they have been tested in accordance with the applicable specifications for this project.

B. Details: Submit design details of joints and joint restraint for consideration and approval before ordering any pipe.

### 1.03 QUALITY CONTROL

A. Each piece of ductile iron pipe and each fitting shall have its weight and class designation conspicuously painted or cast on it. All other pipe materials shall have the class designation painted thereon.

PART TWO - MATERIALS

### 2.01 PIPE, JOINTS, and FITTINGS

A. Ductile iron pipe shall meet the requirements of NSF 61, AWWA C150 and AWWA C151, Class 52, and shall be designed for 150 psi working pressure with slip-on rubber gasket type joints.

B. Fittings for ductile iron pipe, such as tees, bends, reducers and other fittings shall be new ductile iron conforming to **ANSI/ AWWA C153**, with rubber gasket joints conforming to **ANSI/AWWA C111,** and shall be the same class wall thickness as the pipe. Linings shall be in accordance with **AWWA C104** for cement-mortar linings for ductile iron pipe for water.

C. Rubber gaskets shall conform to manufacturer's standards and AWWA C111. The joints shall be "Super Bell-Tite", "Fastite", or "Tyton", or approved equal.

D. Flanged pipe shall meet the requirements of AWWA C115.

E. All pipe and fittings shall be cement mortar lined in accordance with AWWA C104, standard thickness. The spigot ends of all pipe lengths, which have been cut in the field, shall be ground and beveled to a smooth surface and painted with two coats of asphaltum metal protective paint.

F. All pipe and fittings shall be coated on the outside with a bituminous coating of coal tar enamel, 1 mil thick, at the place of manufacture and in accordance with the specifications of AWWA C203.

G. Cast ductile iron river crossing pipe joints shall be a push-on type ball and socket joint utilizing a first-grade rubber gasket. The joint shall be capable of 15-degree full turning deflection without separation, leakage or restriction of the pipe waterway. Joint restraint shall be provided by a boltless means which is locked against accidental disengagement of the restraining component. Pipe shall be furnished with the necessary gaskets, lubricant and retainer locking accessories.

H. Joint Restraint: All pipe deflections over 20 degrees, and all tees and dead ends shall be restrained, tied or harnessed in a manner approved by the Engineer. The restraint shall be applied to joints in each direction from the deflection an adequate distance to resist the axial thrust of the test pressure. Details of all proposed joint restraint, showing the type and locations, shall be submitted to the Engineer for approval. Concrete thrust blocks will not be permitted. See City joint restraint schedule for length of restraint. Joint restraints shall be Mega Lug glands or Grip Rings as manufactured by Romac.

I. Water mains shall be tapped for corporation cocks where shown on the drawings or required for testing and sterilization of completed water mains. For ductile iron pipe, cocks shall be threaded directly into the pipe.

**2.02 VALVES**

A. All water gate valves shall be **Resilient Wedge**, Mechanical joint Gate Valves, test pressure 400 lbs., WWP 200 psi, open left, or approved equivalent. Resilient wedge gate valves shall comply with **AWWA Standard C509**.

B. All gate valves shall be provided with a new three piece cast iron 5 1/2" valve box, w/ cover. The valve box shall be **Tyler/Union 6860 series F**, or **EJIW 8560 series**, or approved equivalent, placed in conformance with the manufacturer's recommendations, completely supported independent of the valve, centered and plumb over the wrench nut, and not touching the valve at any point, extending to and flush with the proposed finished grade, and allowing ready accessibility to the valve wrench nut. Lids or covers shall be cast with the word "water".

C. A No. 4 copper wire shall be attached to glands on each side of the valve and run up to the surface inside the valve box for conductivity. See City detail for continuity at valves.

D. Check Valves shall be swing check type conforming to AWWA C508 with iron or steel body, 150 psi pressure rating. Valves shall have clear port opening and all valves shall be of one make.

**2.03 HYDRANT ASSEMBLY**

A. General: Hydrants shall meet the requirements of **AWWA C502**. Hydrants shall be lowered into the trench, inspected, and joined to pipe as specified above, and reaction or thrust backing provided. Hydrants shall be thoroughly cleaned in the manner specified above before they are set. Hydrants shall be East Jordan Iron Works Model 5-BR with one (1) 5" integral STORZ connection and two (2) 2½" pumper nozzles. Hydrants shall have a 36 inch long, 3/8 inch diameter flange mounted fiberglass marker.

B. Location: Hydrants shall be located to provide complete accessibility and to minimize the possibility of damage from vehicles or injury to pedestrians. The following provisions shall govern, unless other instructions are issued by the Engineer; all hydrants shall stand plumb; and nozzles shall be 36 inches above the finished grade and/or as directed by the City.

C. Connection to main: Each hydrant shall be connected to the main with 6 inch diameter pipe and shall be controlled by an independent 6 inch gate valve. The hydrant shall be no closer than three feet from the valve. Hydrants with valves attached are not acceptable**.**

D. Drainage: Hydrants drains shall meet all requirements of *Recommended Standards for Water Works*, latest edition. Hydrant drains shall be unplugged where they are above the seasonal high groundwater table, and shall be plugged where they are located below the seasonal high groundwater table. Hydrants shall be set in a 1 cubic yard 6A or 6AA stone pocket.

E. Reaction and Joint Restraint: Reaction & Joint Restraint per City standards shall be provided for each hydrant. The number and size of the tie rods shall be as shown on the contract drawings or as directed by the Engineer.

F. **Hydrant assembly** shall be as specified. The hydrant assembly **shall include** the **hydrant** constructed for 6 1/2 foot bury, **joint restraints**, one 6" **tee** & one 6" **gate valve**. Pipe between the hydrant and the main is NOT included and will be paid for as part of the water main pipe item. Hydrant shall comply with **AWWA Standard C502**. For additional fire hydrant information, see Fire Hydrant Specification of this Construction Standards Book.

**2.04 CONNECTIONS**

A. Where shown on the drawings, connection of existing mains to the new mains will be done only after the new mains are shown to be sterile by the results of the bacteriological analysis. All connections to existing village mains will be completed under the direction and supervision of the City. Street cuts, excavation and backfill, and testing will be done by the Contractor.

B. The City Inspector will supervise all new taps and connections to the existing City watermains. The contractor shall be responsible for coordinating all new connections and taps through the Department of Public Works.

**2.05 SERVICE LINES**

A. Copper Pipe and Tubing for 3/4 inch to 2 inches: Copper pipe shall conform to ASTM B88, Type K. Fittings for compression-type joints shall conform to ANSI B16.26, flared tube type. Underground installation shall be in accordance with AWWA C800. Mechanical fitting may be used, but only at the direction and approval of the City.

B. All water services above 1 inch diameter will have a 4 inch gate valve (minimum) at the main in lieu of a curb stop, and will be utilized as such.

C. Corporation stops shall be:
Ford 3/4" flared fittings # F-1000
Ford 1" flared fitting # F-1000
Mueller 3/4" flared fittings # H-15000
Mueller 1" flared fitting # H-15000

D. Goosenecks shall be Type K copper tubing. Joint ends for goosenecks shall be appropriate for connecting to corporation stop and service line. Length of goosenecks shall be in accordance with standard practice.

E. Curb or service stops shall be:
Ford 3/4" # Z22-333
Ford 1" # Z22-444
Mueller 3/4" # H-1502-1
Mueller 1" # H-1502-1

F. Curb boxes shall be **Tyler/Union, 6500 series, # 95E**, or approved equivalent.

G. Size of service lines and curb stops shall be as designated on the plans.

PART THREE - CONSTRUCTION

**3.01 HANDLING PIPE and SPECIAL CASTINGS**

A. All pipes and special castings shall be unloaded and distributed along the line of work in such a manner and with such care as will effectually avoid the cracking of any pipe or fitting. Dropping pipe or fittings directly from the truck will not be permitted. Care must also be exercised to prevent the abrasion of the pipe coating. Wherever the coating may be found to have rubbed off, the part shall be recoated as may be required by nature of the pipe coating. No saddles are to be used.

**3.02 DEFECTIVE PIPE and FITTINGS**

A. No pipe or fitting that is known to be defective shall be laid in the work. Any piece that is found to be defective after it has been laid shall be removed. If the major part of a defective pipe is sound, the good end may be cut off and used. Every such cut shall be square and ground smooth. Cut surfaces shall be painted with two coats of an approved asphaltum metal protective paint.

**3.03 TRENCH EXCAVATION**

A. All water lines and water mains shall have a minimum of 6 feet, 6 inches of cover after placement unless otherwise noted on the drawings.

**3.04 LAYING PIPE**

A. Installation of water main shall be in accordance with AWWA C600 latest edition.

B. Pipe shall be carefully laid to line and grade, and shall have bearing over its entire length except at joints where the joint hole shall be of such size as to give adequate room for working. Pipe shall be laid with a minimum 6 foot, 6 inch cover. Immediately before laying, each section of pipe or fitting shall be thoroughly cleaned of all debris, dirt or other foreign material. It shall be inspected for damage to coating or material and repairs made where required. Care shall be taken to keep the interior of the pipe clean and free from dirt and other foreign materials. Bulkheads or other means shall be used at the open ends of the pipe for this purpose.

**3.05 PIPE PLACED IN CASINGS**

A. Pipes shall be placed in casing pipe in location as shown on the drawings. Under this work, the Contractor shall place the carrier pipe on dielectric skids, fill the annular space between the casing and carrier pipe with impermeable dielectric material, place bulkheads, and complete all backfilling
B. All void spaces between the casing pipe and carrier pipe shall be filled with clean, uniformly graded sand, pea stone, or flowable fill. The fill material shall be placed by flushing or other methods approved by the Owner.

C. The annular space at ends of casing pipe shall be bulkheaded with a minimum of 8 inch thick solid masonry with a 1 inch fiberboard cushion between the masonry and carrier pipe.

D. All necessary dielectric skidding materials required to protect the carrier pipe shall be furnished. Coating of the pipe and the bonds at the joint shall not be damaged.

**3.06 JOINTING**

A. Ductile Iron Pipe: Will be push-on joints with the gaskets and lubricant in accordance with the applicable requirements of AWWA C600. Mechanical joints shall have gaskets, glands, and bolts in accordance with the applicable requirements of AWWA C600 for joint assembly, and with the recommendations of Appendix A to AWWA C111, are required.

B. Copper Tubing: Cut copper tubing with square ends and remove fins and burrs. Handle tubing carefully. For compression joints on flared tubing, insert tubing through the coupling nut and then flare tubing with an approved flaring tool. All water services will be “K” type copper.

### 3.07 BEDDING and BACKFILLING

A. All pipe and structure bedding and backfilling to be completed as per good construction practices. Trenches shall be compacted in “lifts” not exceeding 18 inches, with backfill and bedding materials being approved by the City. Trench material shall be compacted to 95% of its maximum unit weight as determined by a Standard Proctor. All backfilling of water piping must comply with AWWA Recommendations C600 and/or C605.

### 3.08 SETTING HYDRANTS

A. Under each hydrant the ground shall be excavated to a depth of at least 1 foot below the hydrant base and over an area approximately 3 feet square. This excavation shall be filled up to the elevation of the hydrant base with well-compacted, clean, pea gravel or crushed stone.

B. Each hydrant shall be set truly plumb and held firmly braced in this position. The connection of the hydrant to the branch shall be made by means of mechanical joints as herein specified under jointing. All joints between the hydrant and the main shall be restrained by the same means as used for the water main.

C. Each hydrant assembly shall be tested by the Contractor. The test shall consist of flushing the hydrant for a minimum of 10 minutes. During the test period the 6 inch gate valve shall be closed and opened. A testing schedule and a method of disposing of flushing water shall be submitted to the City for approval. The Contractor shall coordinate the testing schedule with the City.

D. Hydrants will be factory painted. After hydrants have been set and tested, the part above ground, if paint is damaged, shall be painted with two coats of first quality metal protective paint. Color will be the City's standard.

E. Hydrant drains shall be unplugged where they are above the seasonal high groundwater table, and shall be plugged where they are located below the seasonal high groundwater table. Hydrants shall be set in a 1 cubic yard of clean pea gravel, 6A or 6AA stone pocket.

### 3.09 ELECTRICAL CONDUCTIVITY

A. Continuity straps may be field applied to all pipe using the "Cadweld" system in accordance with the manufacturers recommendations. Straps shall a minimum 1/4" thick copper.

B. Conductivity testing shall be performed by sending an electrical charge, in the range of 500 to 600 amps, through the water main from a thawing machine or an arc welder.

### 3.10 WATER MAIN TAPS

A. For live mains, the Contractor must inform the City four days in advance of the scheduled time of the water main tap.

B. The Contractor, under the supervision of the City, shall open cut the street at the tap location and excavate an area around the existing main satisfactory to the City's supervisor.

C. The Contractor shall provide all required materials for tapping and support, and shall perform the tap per the City's Specifications & Standards.

D. The Contractor shall provide all pipe materials and fittings from the tap location and connect to the water system tap after approval by the City water system authority.

E. Backfill of the tap area shall be by the Contractor per Section 02210, Earthwork for Utilities.

F. All unconnected openings of special fittings shall be closed by standard plugs.

G. When new water mains are installed, all water service taps will be done in the trench as directed by the City. NO water mains will be tapped prior to being placed in the trench.

### 3.11 BLOWOFFS

A. Blow-offs shall be constructed where designated in conformance with the detail drawings. The valve boxes shall be firmly supported and centered and plumb over the blow-off valve, with sufficient clearance within the shaft of the valve box to permit easy access to the blow-off valve with a valve wrench. Blow-offs and flushing hydrants must achieve a flow velocity of 2.5 ft/s for the section being flushed.

### 3.12 MANUFACTURER'S RECOMMENDATIONS

A. In all situations, unless specifically designated otherwise in these documents or in writing by the City or its Engineer. The Contractor shall follow precisely the recommendations of the manufacturer or supplier for the handling and placement of the pipe, fittings and all other materials used.

### 3.13 SUBSTITUTIONS

A. Substitutions may be allowed for such materials as are designated on the plans or specifications by the term "or equivalent" only if authorized in writing by the City or its Engineer. The contractor shall supply such data as the City may request, describing and/or warranting the substitution.

### 3.14 INCIDENTAL WORK and MATERIALS

A. Work and materials needed to complete the project in accordance with the plans and specifications which are not listed as separate bid items on the bid sheet, shall be considered incidental to the project and separate payment will not be made for these items.

### 3.15 GROUNDWATER CONTROL

A. The Contractor shall provide and maintain adequate pumping and drainage facilities for removal and disposal of water from trenches or other excavations. Where work is in ground containing free water, the Contractor shall provide, install and maintain suitable drainage facilities such as well points connected to manifolds and reliable pumping equipment and shall so operate them to insure proper working conditions. In impervious materials, the Contractor shall construct suitable drains, underdrains, sumps and provide adequate pumping facilities to maintain the trench in a dry condition. Contractor shall take measures to protect pipe or structures from hydrostatic uplift. Discharge shall be to surface disposal, and shall be done without damage to adjacent ground and without depositing soils in natural water courses or on adjacent properties. All work is to be coordinated with and approved by the City.

B. Any necessary permits for dewatering shall be the responsibility of the Contractor.

### 3.16 PROTECTION of the ENVIRONMENT

A. Protection of the environment is of the essence in the City of Petoskey, including but not limited to existing ground cover, groundwater and streams. It is the responsibility of the Contractor that all work be planned and executed to preserve the environmental integrity of the project site and adjacent areas.

### 3.17 SEPARATION from SANITARY and STORM SEWER

A. Horizontal Separation: Watermains shall be laid at least 10 feet horizontally measured from edge to edge from any existing or proposed storm sewer, sanitary sewer or force mains. Any deviation under the ten foot minimum shall be done in such a way as to minimize the risk of contamination and only with the approval of the Engineer and the Department of Environmental Quality.

B. Vertical Separation: Watermains crossing sewers shall be constructed to provide a minimum vertical separation of 18 inches above or below the sewer main. A crossing above the sewer main is preferred if possible. At crossings, one full length of watermain shall be located so both joints will be as far from the sewer as possible. Special additional structural support for the pipes may be required. Diagonal crossing of utilities is forbidden.

C. Separation from Sanitary Manholes: No watermain shall pass through, under, or come in contact with any part of a sanitary manhole.

### 3.18 DISINFECTION

A. After completion of the entire system and prior to connection to the existing main, and when designated by the Engineer, the Contractor shall disinfect the system under the direction of the Engineer and in accordance with the requirements of **AWWA Standard C651 for Disinfecting Water Mains**. The water shall be chlorinated so that after a 24 hour holding period the chlorine residual is not less than 10 mg/l. After disinfection but before sampling, the watermains shall be flushed using potable water acquired from a suitable source. This shall be considered incidental to the project, and separate payment will not be made.

B. The Contractor shall be responsible for collecting samples for bacteriological testing in accordance with **AWWA Standard C651 for Disinfecting Water Mains**. Samples (at least 2) shall be collected at a minimum of 24 hours apart from each section of main. If the sample results show a positive coliform, repeat disinfection process until acceptable results are obtained.

C. Acceptable tests are negative for bacteria and as otherwise defined by **AWWA C651** and MDEQ regulations. Bacteriological analysis shall be made by a State certified laboratory.

### 3.19 PRESSURE and LEAKAGE TEST

A. After the pipeline has been laid and all service taps are made and with the corporation stops open, it shall be filled with water and subjected to a hydrostatic pressure test. Unless otherwise specified, the test pressure shall be 200 psi. A test shall be made only after a part or all backfilling has been completed and at least 36 hours after the last concrete thrust backing has been cast with high-early strength cement, or at least 7 days after the last concrete thrust backing has been cast with standard cement. The duration of the test shall be 2 hours unless otherwise directed by the Engineer.

B. Procedure: Each section of pipeline shall be slowly filled with water, and the specified test pressure shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Engineer. The pump, pipe connection, and all necessary apparatus and labor shall be furnished by the Contractor. The pressure test must be in accordance with **AWWA C600**, and must be preceded by flushing of the water main in accordance with **AWWA C600**.

C. Overall Leakage: No pipe installation will be accepted until or unless the leakage for the section of line tested is no greater than shown in **Table 1.** If the test leakage in any section is greater than that permitted, the Contractor shall locate and repair the defective joints at his own expense until the leakage is within the permitted allowance.

**TABLE 1**
**MAXIMUM ALLOWABLE LEAKAGE FOR WATER MAIN**

| | **NOMINAL DIAMETER** | | | | | |
|---|---|---|---|---|---|---|
| | 4" | 6" | 8" | 10" | 12" | 16" |
| **AVG. TEST PRESSURE** (psi) | | | | | | |
| 100 | 0.27 | 0.41 | 0.54 | 0.68 | 0.81 | 1.08 |
| 125 | 0.30 | 0.45 | 0.60 | 0.76 | 0.91 | 1.21 |
| 150 | 0.33 | 0.50 | 0.66 | 0.83 | 0.99 | 1.32 |
| 175 | 0.36 | 0.54 | 0.72 | 0.89 | 1.07 | 1.43 |
| 200 | 0.38 | 0.57 | 0.76 | 0.96 | 1.15 | 1.53 |
| 225 | 0.41 | 0.61 | 0.81 | 1.01 | 1.22 | 1.62 |
| 250 | 0.43 | 0.64 | 0.85 | 1.07 | 1.28 | 1.71 |

**GALLONS PER HOUR per 1,000 feet**

## 3.20 MISCELLANEOUS SPECIFICATIONS

A. Crossing of Surface Water: For the installation of water pipe, either above or below surface water, all work is to be done in compliance with Section 8.9 of the 10 States Standards and Part 11(13) of the Suggested Practice of Waterworks.

B. Placing Water Pipe in an Area of Known Contamination: Plastic materials are not permitted. All work must comply with Part 11(12) of Suggested Practice of Waterworks, as well as American Water Works Association (AWWA) C600.

C. Bore and Jack or Directional Drilling: All water installation work must comply with American Water Works Association (AWWA) Sections 4.5 and 4.6 of C600 for iron pipe, and Sections 7.3 and 8.4 for C605 for plastic pipe.

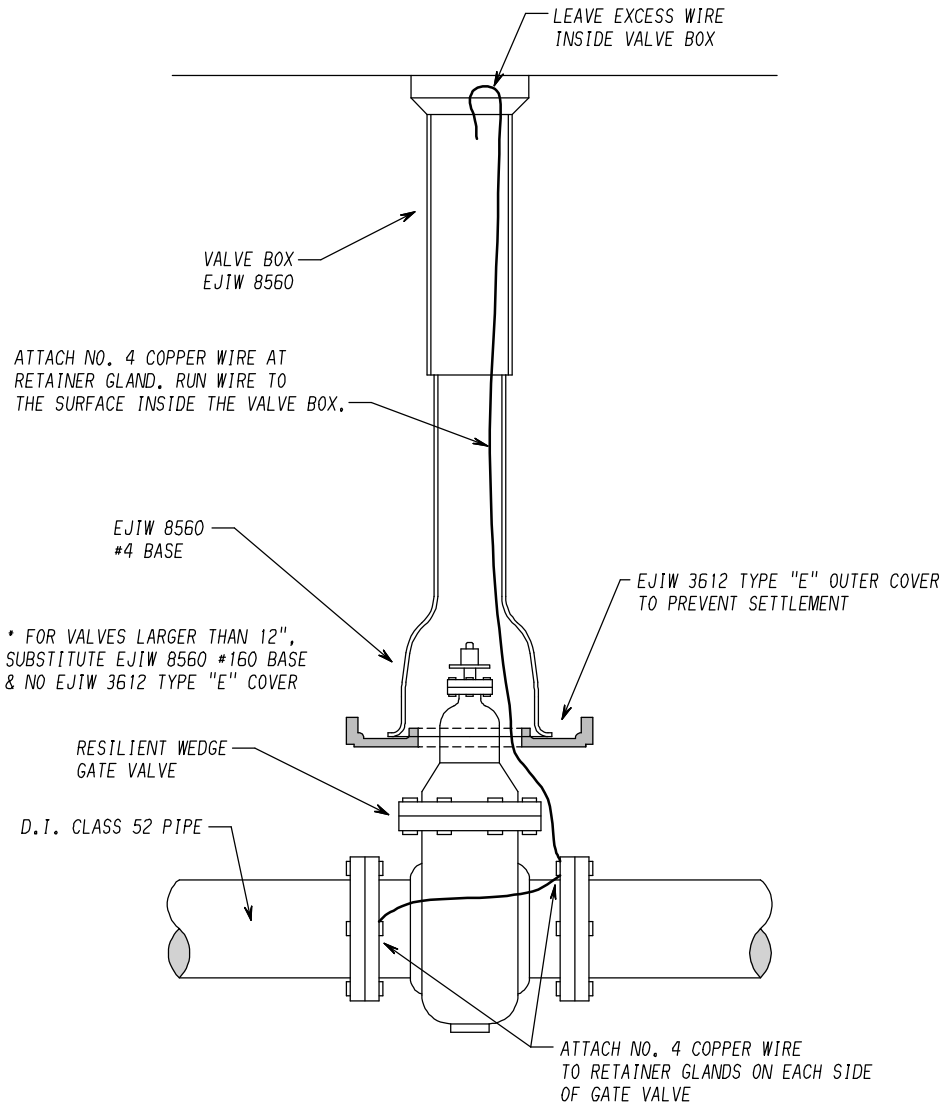
City of Petoskey
Department of Public Works
101 East Lake Street, Petoskey, Michigan 49770 • 231 347-2500 • Fax 231 348-0350

# WATER METER INSTALLATION STANDARD

After all fees are paid the following requirements must be met or the water meter(s) will not be installed:

- Only City personnel can install or remove meters;
- Meter bars are available at City Hall after all fees are paid;
- The water meter must be located in a heated room;
- The water meter must be between 1 to 4 feet above the floor. The area must be 8 to 10 inches from the wall;
- The water meter must be installed in a horizontal position;
- On/Off valves must be located on each side of the meter;
- When appropriate, a City approved "cross connection device" shall be installed;
- The meter must be accessible at all times. Other appliances or obstructions cannot be placed in front of the meter. There must be 2 feet of clear area on each side of the meter. The on/off valves must be within this two foot reach;
- A wire from the meter to the outside wall must be provided. A wire must be provided for each meter being installed. This wire must be near the electric meter on the outside of the house. This wire must be a minimum of 18 gauge, three wire. There must be enough slack for the City to connect from the meter reading device to the meter;
- On the outside wall, near the electric meter, the City will place a meter reading device. This area must be approximately 12 inches square for the reading device. The area must be flat and be clear of any obstructions. After the installation of the meter and meter reading device this device must be accessible at all times;
- Only City owned meters are allowed;
- A water service box is located at the end of the homeowner's water service line. The valve in this box must be centered inside the box and the box must be plumb and up to grade. All landscaping must maintain the water service box to grade. The lid of the box must be visible at all times.
- No water meters will be installed until all Emmet County plumbing inspections are completed and approved.

CITY of PETOSKEY

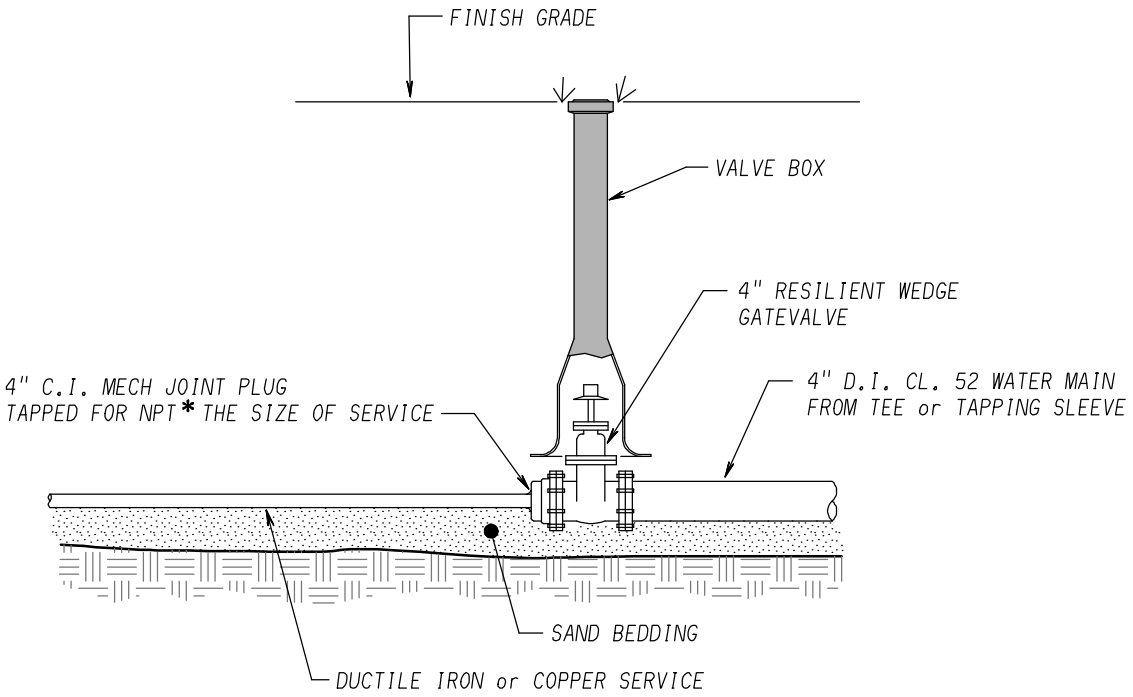



# WATER VALVE DETAIL

NOT TO SCALE

WATER VALVE DETAIL.gxd

CITY of PETOSKEY




* NATIONAL PIPE THREAD

**NOTE:**

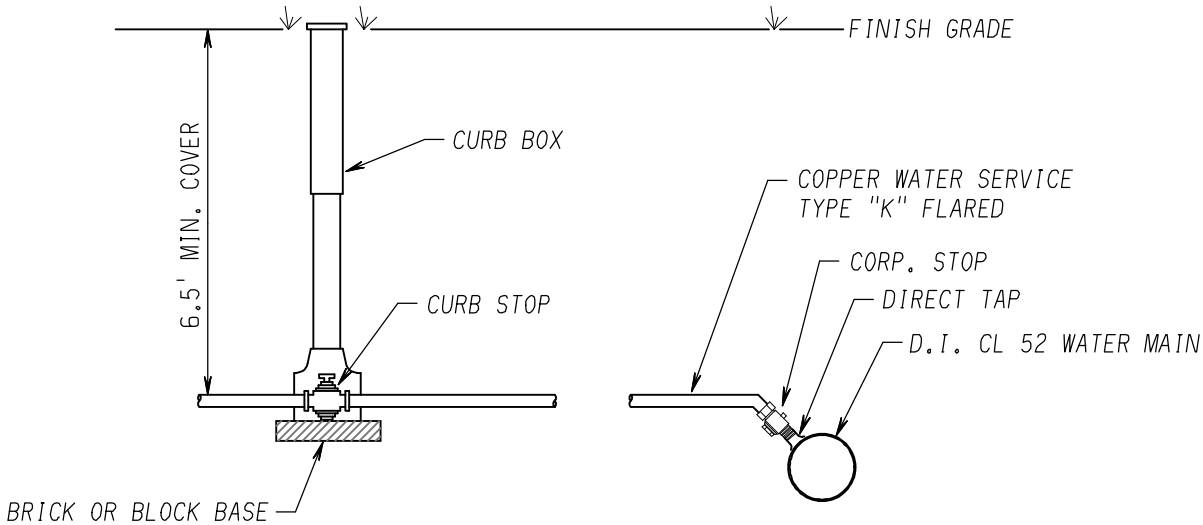
FOR SERVICES LARGER THAN 4" DIA., A 6" or 8" RESILIENT WEDGE GATE VALVE MAY BE REQUIRED

# WATER SERVICE CONNECTION LARGER THAN 1 Inch

NOT TO SCALE

WATER SERVICE LARGER THAN 1 INCH.gxd

CITY of PETOSKEY




3/4" to 1" SERVICES

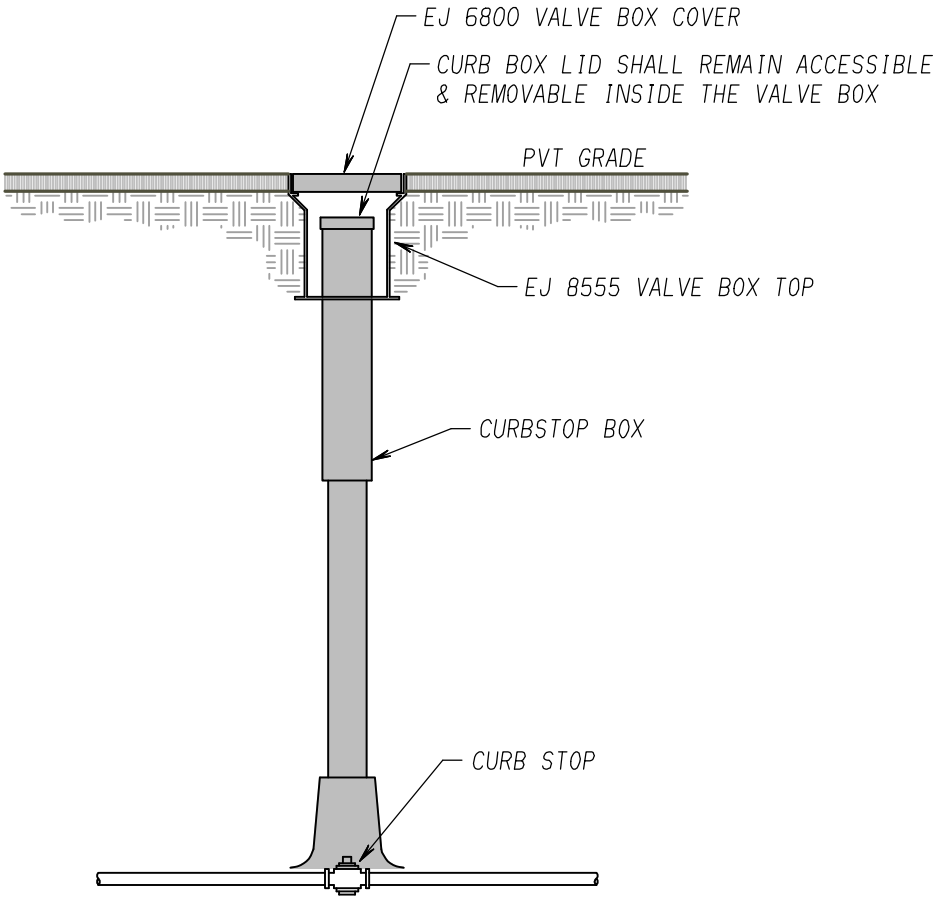
| | |
|---|---|
| SERVICE PIPE: | Type "K" Copper, Flared Only. |
| CORPORATION STOP: | Ford 3/4" Flared Fitting #F-1000<br>Ford 1" Flared Fitting #F-1000<br>Mueller 3/4" Flared Fitting #H-15000<br>Mueller 1" Flared Fitting #H-15000 |
| CURB STOP: | Ford 3/4" #Z22-333<br>Ford 1" #Z22-444<br>Mueller 3/4" #H-1502-1<br>Mueller 1" #H-1502-1 |
| CURB STOP BOX: | Tyler (EJIW) #95E |

# SINGLE WATER SERVICE CONNECTION

NOT TO SCALE

SINGLE WATER SERVICE CONNECTION.gxd

CITY of PETOSKEY




# CURBSTOP BOX IN PAVEMENT

NOT TO SCALE

CURB STOP BOX IN PAVEMENT.gxd

CITY of PETOSKEY

| LENGTH OF RESTRAINT REQUIRED (2) (FEET) | | | | | | | | DESIGN FORCE ON RESTRAINT REQUIRED (KIPS) (3) | |
|---|---|---|---|---|---|---|---|---|---|
| DEFLECTION ANGLE / PIPE SIZE | 22 1/2° | 33 3/4° | 45° | 56 1/4° | 67 1/2° | 78 3/4° | 90° OR TEE | 45° | 90° OR TEE |
| 6" | 3 | 6 | 11 | 16 | 23 | 29 | 37 | 2 | 5 |
| 8" | 4 | 8 | 15 | 22 | 31 | 41 | 50 | 3 | 9 |
| 10" | 5 | 11 | 18 | 28 | 38 | 49 | 61 | 4 | 14 |
| 12" | 6 | 13 | 22 | 33 | 45 | 59 | 73 | 6 | 20 |
| 14" | 7 | 14 | 25 | 37 | 52 | 68 | 84 | 8 | 28 |
| 16" | 8 | 16 | 28 | 42 | 59 | 77 | 95 | 11 | 36 |
| 18" | 8 | 18 | 31 | 47 | 66 | 86 | 107 | 14 | 46 |
| 20" | 9 | 20 | 35 | 53 | 73 | 95 | 118 | 17 | 57 |
| 24" | 11 | 23 | 40 | 61 | 85 | 111 | 138 | 24 | 81 |
| 30" | 13 | 29 | 50 | 75 | 105 | 136 | 170 | 37 | 127 |
| 36" | 15 | 34 | 59 | 88 | 123 | 160 | 199 | 54 | 183 |
| 42" | 17 | 39 | 67 | 101 | 141 | 184 | 228 | 73 | 250 |
| 48" | 19 | 43 | 75 | 113 | 157 | 206 | 255 | 96 | 326 |

(1) *THIS TABLE IS BASED ON A TEST PRESSURE OF 180 psi (OPERATING PRESSURE + WATER HAMMER). FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED PROPORTIONALLY.*

(2) *LENGTH OF RESTRAINT IN EACH DIRECTION FROM THE POINT OF DEFLECTION, EXCEPT FOR TEES, AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE TEE STEM REQUIRES RESTRAINT.*

(3) *IF TIE RODS ARE USED, USE 4 RODS MINIMUM, AND ADD 1/8" TO THE BAR DIAMETER FOR CORROSION ALLOWANCE.*

(4) *IN LIEU OF TIE RODS, THE "FIELD LOK" GASKET SYSTEM AS MANUFACTURED BY GRIFFIN PIPE, OR THE "AMERICAN FAST GRIP" GASKET AS MANUFACTURED BY AMERICAN DUCTILE IRON PIPE MAY BE USED IN COMPLIANCE WITH THE JOINT RESTRAINT SCHEDULE AS SHOWN ABOVE.*

# PIPE RESTRAINT SCHEDULE for GROUND BURIED PRESSURE PIPES (1)

NOT TO SCALE

PIPE RESTRAINT SCHEDULE.gxd

# TESTING OF WATER MAINS

**TABLE 1**
**MAXIMUM ALLOWABLE LEAKAGE FOR WATER MAIN**

**NOMINAL DIAMETER**

| **AVG. TEST PRESSURE** (psi) | 4" | 6" | 8" | 10" | 12" | 16" |
|---|---|---|---|---|---|---|
| 100 | 0.27 | 0.41 | 0.54 | 0.68 | 0.81 | 1.08 |
| 125 | 0.30 | 0.45 | 0.60 | 0.76 | 0.91 | 1.21 |
| 150 | 0.33 | 0.50 | 0.66 | 0.83 | 0.99 | 1.32 |
| 175 | 0.36 | 0.54 | 0.72 | 0.89 | 1.07 | 1.43 |
| 200 | 0.38 | 0.57 | 0.76 | 0.96 | 1.15 | 1.53 |
| 225 | 0.41 | 0.61 | 0.81 | 1.01 | 1.22 | 1.62 |
| 250 | 0.43 | 0.64 | 0.85 | 1.07 | 1.28 | 1.71 |

**GALLONS PER HOUR per 1,000 feet**

# WATER MAIN CLEANING AND FLUSHING

Before pressure testing the water mains to 200 psi pressure, any newly constructed water main shall be flushed or cleaned as here prescribed. During the construction operations, workers shall use care to assure that the interior surfaces of all pipe and fittings are maintained in a clean and sanitary condition. Every effort shall be made to keep loose, foreign material out of all pipe and fittings. Exposed open ends of pipe must be temporarily blocked or capped during construction. Particular care shall be taken to protect the main whenever work is temporarily interrupted.

All main sizes 6 inches and smaller shall be flushed through available fire hydrants as directed and witnessed by a designated City of Petoskey Water Division Representative or a Department of Public Safety Representative. Valving operations may be required to assure that all sections of the main are thoroughly cleaned. Flow rates for adequate flushing velocities shall be 1,000 gallons per minute for 6-inch mains or maximum available flows for the system. Sections of the main which cannot be flushed by valving and hydrant operations shall be cleaned as directed by the engineer. All water flushing shall be done through a certified and approved back flow preventer.

All mains 8 inches and larger shall be cleaned by passing a properly sized poly pig through the pipe. The poly pig shall have a minimum density of 5 pounds per cubic foot (30 kg per cubic meter), be coated with a double spiral warp without wire brushes or scraping tools. Acceptable poly pigs include: Pipeline Pigging Products Model B4, Girard Model RCC, and Knapp Model 1-C or approved equal. All poly pig cleaning operations are to be witnessed by a City of Petoskey Representative.

The Contractor shall prepare the main for the insertion and removal of the poly pig at points identified by the City of Petoskey as insertion ports, if required, and exit ports. In general, this will consist of providing all material, equipment and labor to insert the poly pig. The poly pig shall be inserted into the first length of the pipe during the initial installation. At the exit port, the Contractor shall prevent the backflow of purged water into the main by the temporary installation of mechanical joint bends and pipe joints to provide a riser out of the trench. On large pipe, additional excavation of the trench may serve the same purpose.

Where a trench is used, the excavation shall be lined with polyethylene. Pumps and/or ditches shall be provided to prevent contaminated water from re-entering the main. After the main is cleaned to the satisfaction of the Water Division Representative, the Contractor shall remove all temporary construction and complete all work necessary to secure the system prior to backfilling insertion and exit sites. Additional poly pig runs may be required by the Engineer when water purged from the main indicates the presence of excessive dirt or debris.

Prior to connecting to existing City water mains, the new main will have all testing completed. There will be a physical separation between the new water main, and the existing water main, until all testing is completed.

# FIRE HYDRANT SPECIFICATIONS

City of Petoskey
Department of Public Safety
101 East Lake Street, Petoskey, Michigan 49770 • 231 347-2500 • Fax 231 347-2471

The following requirements must be adhered to in the placement of fire hydrants.

1. Where water mains are six inches in diameter or larger, a fire hydrant with one 5" Storz steamer connection and 2½ inch pumper connections shall be used.

2. The height of the fire hydrant above finished grade shall be 36 inches measured to the center of the steamer connection. Finished grade is taken to mean a level surface within a three-foot radius around the fire hydrant. Scooping soils out, and creating a bowl to meet the height requirement is not acceptable. Water from any source should drain from the area surrounding the fire hydrant. Depth must be approved by City for any hydrants in hard surfaced areas.

3. Fire hydrants shall face the street or driving lane unless approved by the City.

4. No trees, shrubs or other obstructions shall be placed within a fifteen-foot radius of the hydrant connections. No obstructions or impediments shall be placed within two feet behind the fire hydrant.

5. A marker, approved by the City, must be installed for winter identification.

6. All fire hydrants must be covered until the hydrant is accepted by the City of Petoskey and is activated. Fire hydrant valves shall be operated and the fire hydrants flushed in accordance with National Fire Protections Association Standard 24, and America Water Works Association Standards. A representative of the Department of Public Works must witness the flushing and valve operation for acceptance. Arrangements must be made a week in advance for witnessing of such tests.

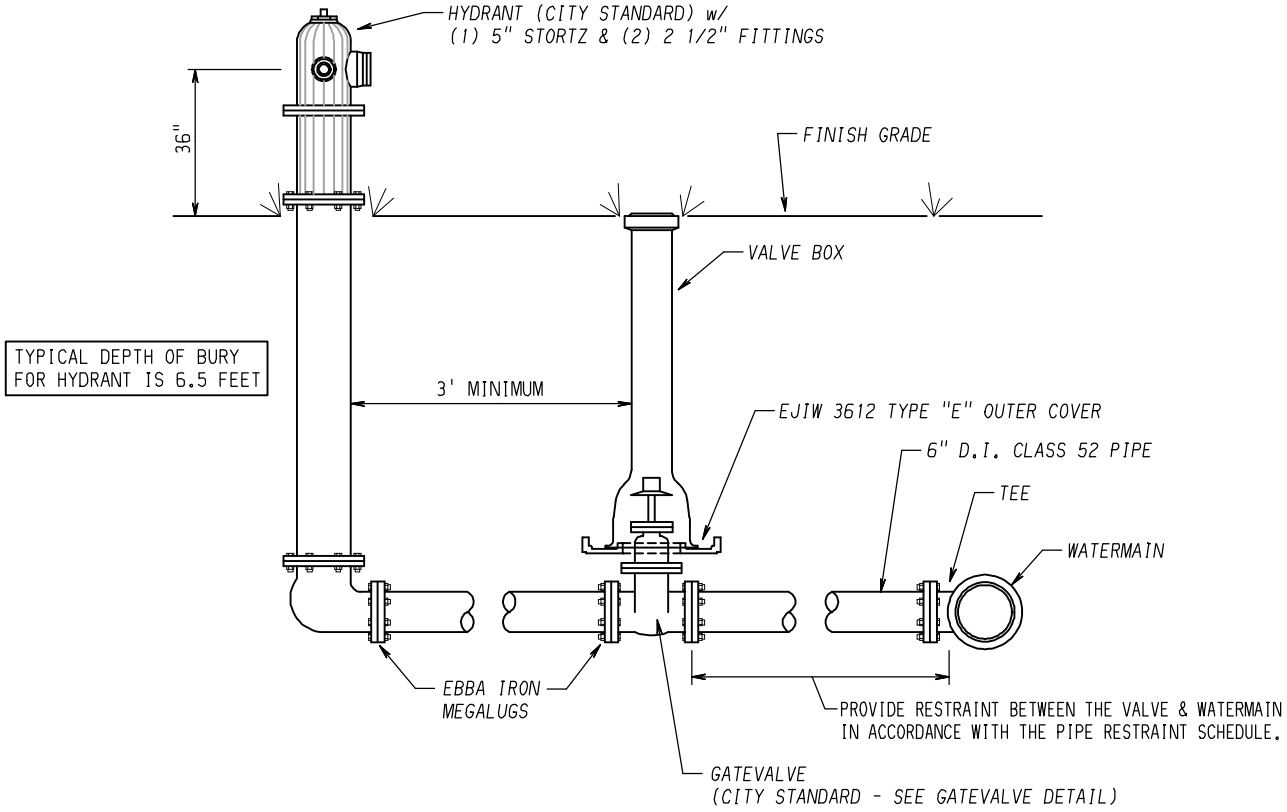
7. If fire hydrants are installed as part of a private fire service main, all legal requirements for the maintenance and testing of the hydrants must be worked out to the satisfaction of the City of Petoskey.

8. The installation of fire hydrants must also comply with other recognized standards as required.

9. If a fire hydrant is being installed to meet the requirements of a building with a fire suppression system, the fire hydrant shall be installed within 100 feet of the fire department connection.

10. Fire hydrants shall be placed no more than 500 feet apart in one and two family neighborhoods and no more than 300 feet apart in non-one and two family neighborhoods. Fire flow requirements may necessitate different spacing.

CITY of PETOSKEY




HYDRANT: EJ 5BR-250 W/ 5" STORTZ CONNECTION & (2) 2 1/2" CONNECTIONS
GATEVALVE: RESILIENT WEDGE, OPEN LEFT

RETAINER GLANDS ON ALL FITTINGS, VALVES & HYDRANTS

# HYDRANT ASSEMBLY

NOT TO SCALE

HYDRANT ASSEMBLY.gxd

FIRE HYDRANTS

Fire hydrants must meet or exceed the requirements of Underwriter Laboratories standard UL246 and AWWA standard C502 for dry barrel fire hydrants. All hydrants supplied must have the "U.L" insignia cast on the hydrant upper traffic standpipe.

Hydrants shall be equipped with two 2 ½" hose nozzles and one 5" Storz connection.

All hydrants must be supplied with a 24" in length fluted upper traffic standpipe and one fiberglass hydrant flag for improved winter visibility.

Brass nozzles must be designed with brass lugs and o-ring gasket as the means to form a pressure tight compression fit when attached to the hydrant bonnet. (No threaded-in nozzles allowed).

Hydrants shall be sized for a bury depth of 6' 6" or as plans specify, with a 6" mechanical joint inlet complying with ANSI A-21.11. As joint restraint, all fire hydrants shall use EBAA Iron MEGA LUGS on hydrant shoe, both sides of valves and on branch of MJ tee.

Hydrants must be traffic model design with a galvanized steel breakable stem coupling located near the ground line to minimize barrel and stem damage from traffic impact. The operating stem must be at least 1 ¼" in diameter.

Hydrant operating nut must be solid brass and attached to operating stem utilizing a standard acme thread at 5 t.p.l. (open left). Lubrication of the operating nut must be designed to use food grade grease only. No oil bath operating assembly designs allowed. No "V" threads allowed for operating stem or nut.

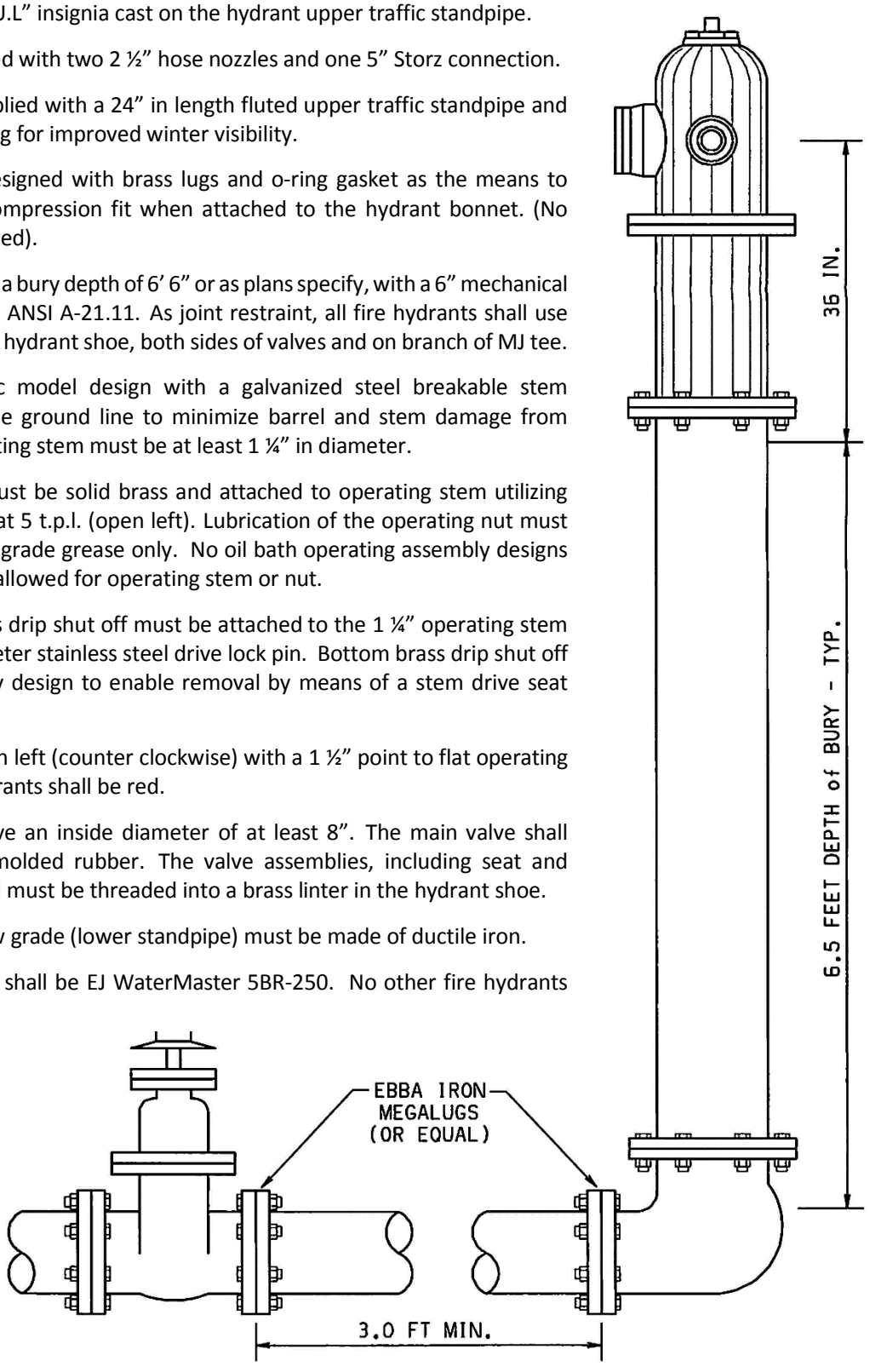
Fire hydrant bottom brass drip shut off must be attached to the 1 ¼" operating stem by means of a 7/16 diameter stainless steel drive lock pin. Bottom brass drip shut off must be of a heavy-duty design to enable removal by means of a stem drive seat wrench tool.

All fire hydrants shall open left (counter clockwise) with a 1 ½" point to flat operating nut. The color of the hydrants shall be red.

Hydrant barrels must have an inside diameter of at least 8". The main valve shall be formed of specially molded rubber. The valve assemblies, including seat and guides, shall be brass and must be threaded into a brass linter in the hydrant shoe.

Fire hydrant barrels below grade (lower standpipe) must be made of ductile iron.

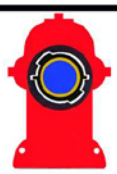
All fire hydrants supplied shall be EJ WaterMaster 5BR-250. No other fire hydrants shall be approved.

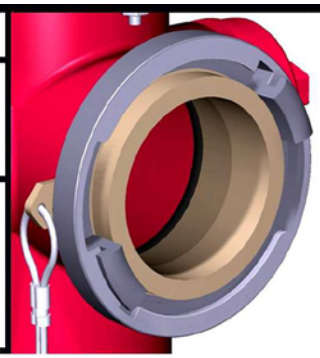


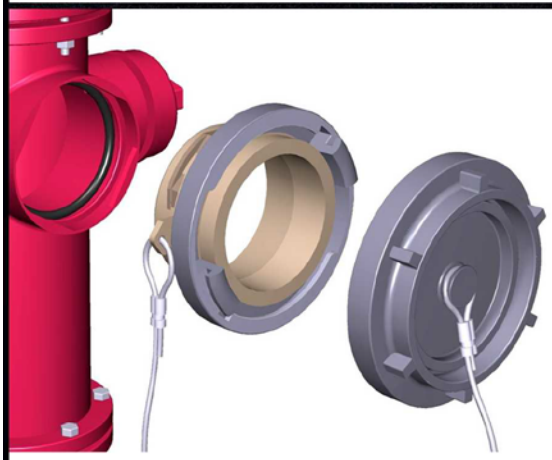
# HARRINGTON INTEGRAL HYDRANT STORZ™

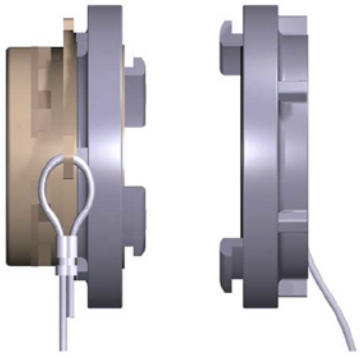
Harrington Integral Hydrant Storz™ - Metal Face Storz, an integral part of the hydrant, including Storz Blind Cap with Suction Seal and Aircraft Cable.

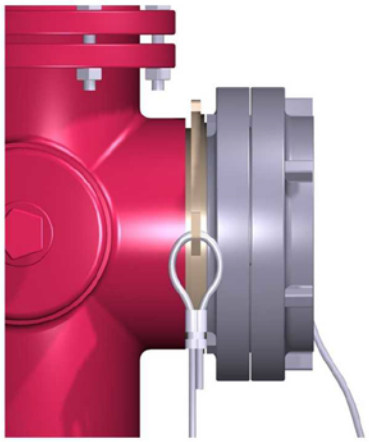
Harrington, Inc.
2630 West 21st Street
Erie, PA 16506
800-553-0078











## HIHS™ SPECIFICATIONS

The Integral Hydrant Storz nozzle is installed on new hydrants during assembly. The HIHS™ meets or exceeds the requirements of AWWA C502 regarding material and pressue testing. A Storz spanner wrench is required for cap removal.

The Storz nozzle shall have a brass metal face seal and hard anodized aluminum Storz ramps and lugs. The aluminum's finish shall be hardcoat anodized to Mil-A-8625f, Type 3, dark gray. The adapter shall be made of forged or extruded 6061-T6 aluminum.

The blind cap shall have hard anodized aluminum Storz ramps and lugs, made of forged or extruded 6061-T6 aluminum. The center cap shall be equipped with a suction seal. The cap shall be connected to the adapter or the hydrant with a 0.125" vinyl coated aircraft cable. The high torque cap requires a Storz spanner wrench for removal. Once installed, the Integral Hydrant Storz with cap extends less than 2" from the hydrant nozzle.

## SPECIFY: HIHS

# STORM AND SANITARY SEWER STANDARDS

# SEWER STANDARDS

STORM AND SANITARY SEWER STRUCTURES

Connecting sanitary laterals to the sanitary sewer main will be done by using a SDR35 PVC WYE, of the size as directed. No saddles will be allowed. Connections of this WYE to the main will be done using Fernco type fittings, installed per manufacturer's recommendations.

All sanitary laterals are the property owner's responsibility. In the right-of-way, all laterals are to be six (6) inch diameter.

All connections in the City of Petoskey right-of-way are to be inspected by the City of Petoskey's Department of Public Works, prior to backfilling. If 4" PVC lateral material is used on private property a clean-out is required at the right-of-way brought up to the surface and capped. The owner must provide a 8 ½" x 11" drawing to the City of Petoskey's DPW showing witnesses to these connections, WYE locations, and clean-outs. All inspections will be done during normal business hours Monday through Friday, between 7:30 A.M. and 4:00 P.M., and must be scheduled through our DPW Supervisor at 231-347-2500. The above mentioned drawing will be given to the inspector when he arrives on site.

- Sanitary sewer manhole castings to be EJIW #1040 Type A with City logo.
- Storm sewer manhole castings to be EJIW #1040 Type B with City logo.
- Catch basin castings to be EJIW #7000 with Type T1 back and Type M2 Sinusoidal grate.
- Catch basins to be furnished with 2' deep sump.
- Joints in structures to be pointed/mortared.
- Block structure to have ½" mortar layer below the casting, and on inside and outside of entire structure.
- All manholes shall have flow channels.
- No pre-cast flow channels are allowed in any manholes.
- Manholes shall not have sumps (except in special cases for storm manholes).
- Wooden shims are not allowed between structure and casting on storm or sanitary structures.
- The finished rim elevations are to be set 1/4" to 3/8" below the finished pavement surface.
- Sanitary and storm structures shall not have steps.
- Flow channels in sanitary sewer pipes are to be formed by running PVC sewer pipes through the manhole (with fittings as required) and then cutting the pipe to centerline and filling space between the pipe and the structure walls with concrete.
- Repairs to PVC sanitary sewer pipe shall be made using Fernco couplings, bedded in pea stone.
- Precast sanitary manholes are to be furnished with rubber boots for inlet and outlet pipes. The cavity in the boot is to be filled with concrete.
- All storm sewer pipe will be C-76 Class III or Class IV reinforced concrete pipe, as specified by ANSI/ASTM.
- Utility drawings will be submitted to the DPW for review at least 30 days prior to any construction.
- If a right-of-way excavation is necessary, a deposit will be required, per City of Petoskey Ordinance.
- This fee must be paid at City Hall a minimum of 72 hours prior to any construction.

# SANITARY SEWERS

PART ONE - GENERAL

## 1.01 REFERENCES

A. All work is to be installed per the Ten State's standards and specifications. In case of a discrepancy between the Ten State's standards and the technical specifications outlined in this section, the Ten State's standards shall prevail. All discrepancies shall be brought to the attention of the Engineer.

B. Performance and material requirements shall meet specific reference standards as referred to herein as:

ANSI - American National Standards Institute
ASTM - American Society of Testing and Materials
AWWA - American Water Works Association

C. Installation of sanitary sewer pipe shall be in conformance with ASTM D2321.

## 1.02 SUBMITTALS

A. Certification of Pipe: All pipe delivered to the job site shall be accompanied by certification papers showing that the pipe has been tested in accordance with applicable specifications and that the pipe meets the specifications for this project.

B. Joint Details: Furnish proposed details of the pipe joints for consideration and approval before ordering any pipe.

PART TWO - MATERIALS

## 2.01 SEWER MAINS

A. Polyvinyl Chloride Pipe (PVC) Gravity Sewer pipe and fittings shall be bell and spigot **ASTM D3034, SDR 35/26** with flexible elastomeric gaskets conforming to **ASTM D3212**.

B. Polyvinyl Chloride Pipe (PVC) Pressure Sewer Pipe and fittings for pipe larger than 4" diameter shall be **AWWA C 900** and for pipe 4" diameter and smaller shall be **ASTM D2241, SDR 21**. Each joint shall consist of a spigot and a formed bell complete with a factory-installed flexible elastomeric gasket meeting the requirements of ASTM D 3139 and D 3212.

C. Joints in all tee branches, wyes, fittings, riser pipes, and service laterals shall conform to joints furnished for the polyvinyl chloride sewer pipe. When necessary to field cut a standard length of pipe, the new spigot end shall be prepared as recommended by the manufacturer.

D. For sewer pipe penetrations of existing and new manholes, flexible and watertight connections shall be provided, such as link seals or elastomeric boot type connections.

## 2.02 SEWER LEADS

A. Gravity Sewer pipe and fittings shall be: **Polyvinyl Chloride Pipe (PVC) - ASTM D3034, SDR 35/26** with either elastomeric gasket or solvent welded joints.

B. Pressure Sewer pipe and fittings shall be either: **Polyvinyl Chloride Pipe (PVC) Pressure Sewer Pipe and Fittings - ASTM D2241, SDR 21** or **Polyethylene (PE) Plastic Tubing - ASTM D2737, SDR 11**.

C. All sanitary laterals in City right-of-way, and tying to City sewer mains must be 6 inches in diameter, Schedule 40 PVC.

D. Replacement of sewer lateral requires the old lateral to be cut and capped at the main and the abandoned sewer lateral will be bulkheaded at each end.

**2.03 VALVES**

A. Gate Valves

1. Gate valves shall be resilient wedge, open left, designed for 150 psi working pressure and meet the requirements of **AWWA C509**. Gate valves shall have a clear waterway opening equivalent when fully opened to that of the connecting pipe.

2. Gate valves which are not in valve vaults shall be furnished with cast iron valve boxes. Valve boxes shall be three piece adjustable type with cast iron covers with the word "Sewer" cast in raised letters.

3. Two Complete sets of accessories shall be furnished including operation wrench of suitable length for the 6 foot 6 inch minimum cover depth.

B. Check Valves

1. Check valves shall be the swing type conforming to **AWWA C508** with iron or steel body, 150 psi pressure rating. Valves shall have a clear waterway opening equivalent when fully opened to that of the connecting pipe.

**2.04 STRUCTURES**

A. Manholes and other sanitary structures shall be of precast reinforced concrete to the dimensions and profiles shown on the drawings. Provide metal frames, covers or gratings as shown. No steps are allowed in sanitary manholes.

B. Precast concrete structures shall comply with ASTM Specification for "Precast Reinforced Concrete Manhole Risers and Tops", C478. All precast manhole tops shall be the eccentric cone type. Precast manhole joints shall be plain tongue and groove with O-ring seals or premium rubber joints. All precast manhole joints shall also be pointed inside and outside. Lifting holes shall be plugged and mortared to a smooth surface finish.

C. Base slab for structures shall be precast reinforced concrete. All concrete to be used for fill and shaping flow channels shall be MDOT Grade S3.

D. Grade Adjustment Rings: Grade rings shall be Underground Technologies or approved equivalent. Brick or concrete blocks shall not be allowed for use to adjust manhole covers.

E. Concrete: Any concrete used in the construction of sanitary structures, cradles, and encasement shall be MDOT Grade S3.

F. Manhole frames and covers: Cast iron manhole frames and covers shall conform to the requirements of ASTM A48, Class No. 30B. They shall be heavy duty solid covers with "Sanitary" cast on the cover and be of the type noted on the drawings.

**2.05 LOCATION MARKERS**

A. Buried tracer wire shall be placed along all non-ferrous force mains and shall be brought to the surface inside valve boxes as shown on the plans.

PART THREE - EXECUTION

**3.01 EXCAVATION**

A. All excavations for pipes and structures to be completed as outlined in Section 02210, Earthwork for Utilities.

**3.02 LAYING PIPE**

A. All pipe shall be laid to the line and grade called for on the drawings. Each pipe, as laid, shall be checked by the Contractor with line and grade pole to ensure that this result is obtained. The finished work shall be straight and shall be sighted through between manholes.

B. Each pipe shall be inspected for defects prior to being lowered into the trench. The inside of pipe and outside of the tongue shall be cleaned of any dirt or foreign matter. Joint materials shall be placed as recommended by the manufacturer.

C. The pipe shall be centered in the grooves and pushed tight together to form a smooth and continuous invert.

**3.03 PIPE BEDDING AND BACKFILLING**

A. All pipe and structure bedding and backfilling to be completed as per good construction practices. Trenches shall be compacted in “lifts” not exceeding 18 inches, with backfill and bedding materials being approved by the City. Trench material shall be compacted to 95% of its maximum unit weight as determined by a Standard Proctor.

**3.04 PAVEMENT CUTS**

A. When the trench must be cut through pavement, driveway, or sidewalk, particular care shall be taken not to unnecessarily damage the adjoining areas of the pavement, driveway, or sidewalks. All cuts through existing surfaces shall be made with a concrete saw, sawing deep enough to allow a straight cut parallel with longitudinal and transverse construction or contraction joints.

**3.05 LASER ALIGNMENT**

A. Construction shall begin at the outlet end and proceed upgrade with the spigot ends pointing in the direction of flow. All pipe shall be laid to the line and grade specified on the drawings.

B. The Contractor shall use laser aligning equipment for the laying of sewers to the specified lines and grades. The Contractor shall furnish all necessary equipment and personnel required to operate the laser equipment.

C. The laser beam projector is to be rigidly mounted to its support platforms in a manner to be approved by the City's representative. This will ensure that all ground equipment vibrations will be kept to a minimum and will permit the laser beam to be projected coaxially through the center of the pipe. All units shall be furnished with equipment to control atmospheric conditions in the pipe which could affect the acceptable standard of construction.

D. The laser alignment method selected must be shown to have performed satisfactorily on at least three previous projects of a similar nature. The equipment shall be operated by competent, trained operators.

### 3.05.1 ALLOWABLE TOLERANCES IN SEWER GRADE

A. Sewers shall be constructed per the alignment and grade indicated on the drawings. Any variation of designed grade may be deemed sufficient reason for the work to be rejected and relaid.

### 3.06 CONCRETE CRADLE FOR PIPE

A. Where required on the drawings, pipe shall be installed with a concrete cradle. Each pipe shall rest on a 6 inch minimum thickness bed of concrete, shaped to fit the bottom of the pipe. After setting the pipe, the space between the outside of the pipe and the undisturbed trench bank shall be filled to a level equal to a point one-third of the diameter of the pipe invert with concrete, having a 2 inch slump and mechanically vibrated to ensure complete filling of the annular space between the excavated face of the original ground and the outside face of the pipe.

### 3.07 CONCRETE ENCASEMENT

A. Where required on the drawings, pipe shall be installed with a concrete encasement. The concrete encasement shall be a minimum of 12 inches thick around the entire pipe and fitting. It shall be cast against undisturbed earth and contain at least one wrap of 6 x 6 #10 mesh. The encasement shall extend 18 inches beyond each end of the fitting joint with the existing sewer pipe. Particular care shall be taken to bed the pipe in concrete so that a complete support of the pipe shall be made. Encasement at the side and top shall be placed in a manner so that the pipe will not be disturbed or floated from its bedding.

### 3.08 STUBS, BULKHEADS, AND MISCELLANEOUS WORK

A. The Contractor shall furnish all material and labor required to construct stubs, bulkheads, and miscellaneous work shown on the drawings or detailed in the specifications. The cost of this work shall be incidental prices for manholes, structures, and/or sewers.

### 3.09 SANITARY STRUCTURE INSTALLATION

A. Structures shall be constructed of the type and in compliance with the details and at the locations shown. All necessary metal frames and covers shall be furnished and installed. Covers shall be set at the required final elevation or flush with pavement or lawn elevations so subsequent adjustment shall not be necessary.

B. Grade Adjustment Rings: Grade rings shall be Underground Technologies or approved equivalent. Brick or concrete block shall not be allowed for use to adjust manhole covers.

C. Backfilling Around Structures: After the structure has set sufficiently to avoid damage, backfilling shall be done in a manner that will not cause unequal pressure on the structure. Backfill material other than sand shall not be placed within 3 feet of the structure.

D. By-Pass Pumping: By-pass pumping shall be incidental to the work of sanitary sewers as described in this section. Continuous and uninterrupted by-pass pumping shall be provided during construction wherever it is required to prevent sewage spill and contamination, and to maintain sewage flow past the construction area. All equipment, materials and labor required to provide by-pass pumping shall be provided by the contractor, including but not limited to a submersible sewage pump with back-up, hoses of sufficient length to reach the next downstream manhole and sewer invert, sewer plugs, power for operation independent of City power, continuous monitoring and supervision of the by-pass pumping operation, and all other means necessary for

the successful diversion of the sewage.

**3.10 TESTING**

A. Gravity sewers: A final visual inspection will be performed with the City's representative to note any defects, dips, or other problems. All gravity sanitary sewers shall be air pressure tested in accordance with **ASTM F1417** prior to final acceptance. A deflection test will be performed on all gravity sanitary sewers. The deflection test will be performed by passing a go-nogo ball through the pipe 30 days after construction. A maximum deflection of 5% will be permitted.

B. Pressure sewers: All pressure sewers shall be water pressure tested in accordance with AWWA Publication *No. M23; PVC Pipe - Design and Installation* and the requirements for water mains. The test will be conducted at 100 psi.

C. All corrective work shall be completed and additional testing performed until all work passes the testing requirements. This testing and inspection work is considered incidental to the cost of construction.

**SANITARY SEWER PRESSURE TEST**

Time required for loss of pressure from 3.5 psig to 2.5 psig for size and length of pipe indicated for Q = 0.003 (cft/min/sft of internal surface area).

| Pipe Dia. | Min. time (min:sec) | Length for min. time | Time for longer length (sec) |
|---|---|---|---|
| 4 | 1:53 | 597 | 0.190L |
| 6 | 2:50 | 398 | 0.427L |
| 8 | 3:47 | 298 | 0.760L |
| 10 | 4:43 | 239 | 1.187L |
| 12 | 5:40 | 199 | 1.709L |
| 15 | 7:05 | 159 | 2.671L |
| 18 | 8:30 | 133 | 3.846L |
| 21 | 9:55 | 114 | 5.235L |
| 24 | 11:20 | 99 | 6.837L |
| 27 | 12:45 | 88 | 8.653L |
| 30 | 14:10 | 80 | 10.683L |
| 33 | 15:35 | 72 | 12.926L |
| 36 | 17:00 | 66 | 15.384L |

***Example: 400 feet of 10 inch***

Time = 1.187 X L
= 1.187 X 400
= 475 sec (7 min 55 sec)

When (2) sizes of pipe are involved, the time shall be computed by the ratio of the lengths involved:

***Example: 400 feet of 10 inch and 200 feet of 6 inch***

Time = (Length1 X Time1) + (Length2 X Time2) ÷ (Length1 + Length2)
= (400 X 475 sec) + (200 X 170 sec) ÷ (400 + 200)
= (190,000 + 34,000) ÷ 600
= 373 sec (6 min 13 sec)

# GREASE INTERCEPTOR REQUIREMENTS

Restaurants serving certain types of food must have and maintain a grease interceptor /trap (device) on the kitchen line of the sanitary sewer. The City reserves the right to require a grease interceptor in the place of a grease trap. It is the responsibility of the business owner to insure that the unit is properly cleaned at regular intervals and the contents are properly disposed of. The business owners are required to maintain records of any maintenance, cleaning, grease disposal and inspections for three years.

The City of Petoskey Sanitary Sewer Ordinance # 662 requires the grease interceptor/trap waste not to exceed 100 mg/L of grease or oil mixture in water. Any waste being put through the grease device must remove grease and oil. Cleaning and maintaining the grease device keeps the discharge under the ordinance limit. Improper cleaning or maintenance causes the buildup of grease in the sewer system. This build up can cause sanitary sewer lines to stop flowing causing problems for customers using the sanitary system. The use of chemical treatments are not allowed as a substitute for a grease device. Chemicals cannot be added to the sanitary sewer system without the approval of the City Wastewater Treatment Supervisor. All devices must meet all State Plumbing Standards and Codes and must be sized to these codes.

CITY of PETOSKEY

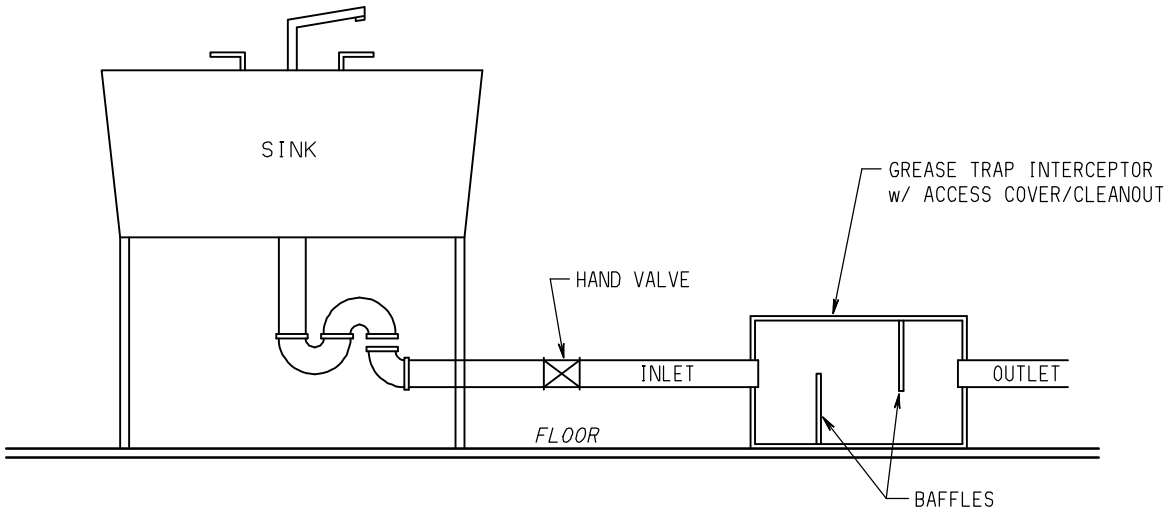



**Figure 1: In-Line Grease Trap**

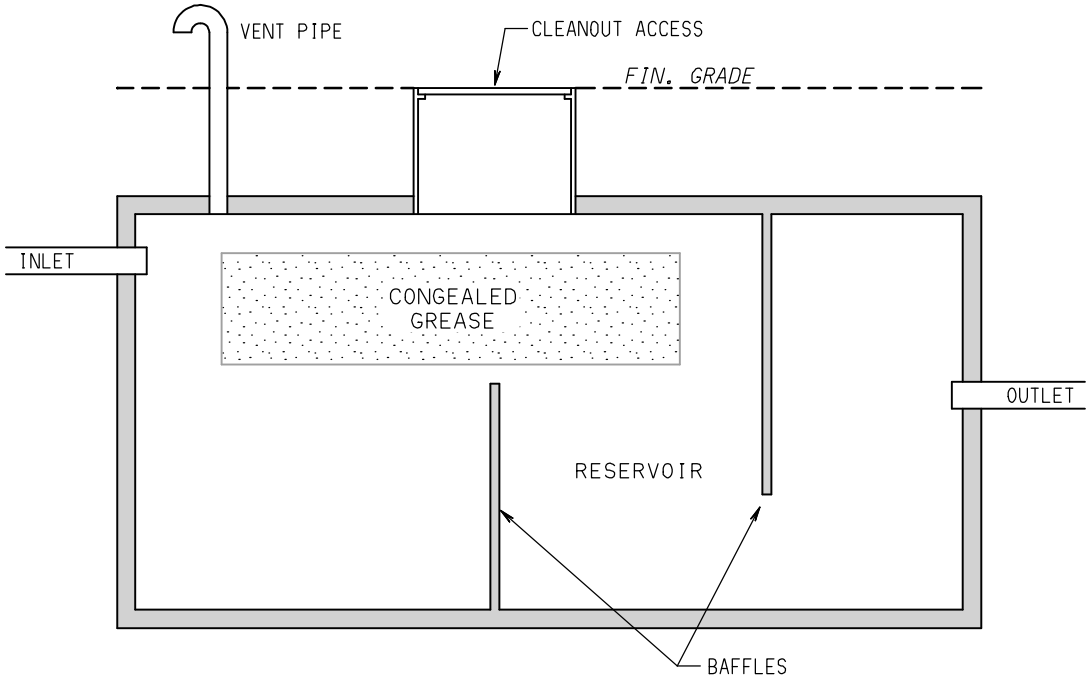
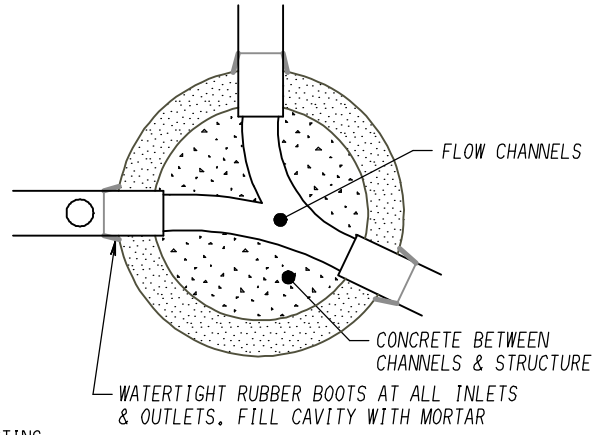



**Figure 2: Grease Interceptor**

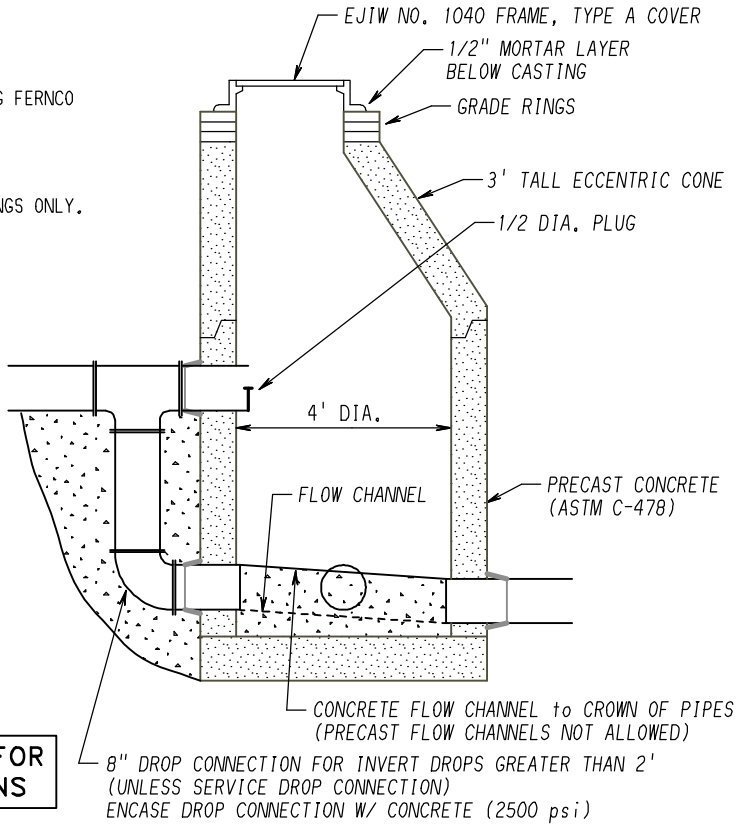
GREASE TRAP.gxd

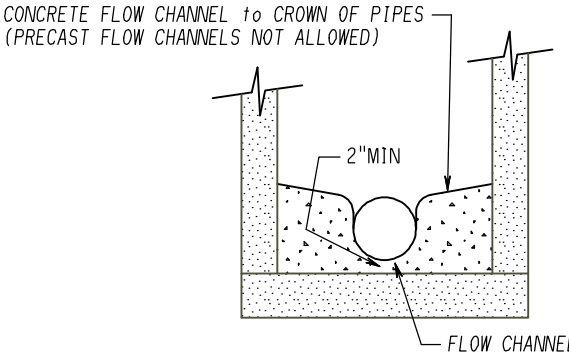
CITY of PETOSKEY

1. JOINTS IN STRUCTURES SHALL BE POINTED.
2. BLOCK STRUCTURES SHALL HAVE 1/2" MORTAR COAT INSIDE & OUTSIDE OF STRUCTURE, AND BETWEEN BLOCKS.
3. STRUCTURES SHALL HAVE A 1/2" MORTAR LAYER BELOW THE CASTING.
4. MANHOLES SHALL HAVE FLOW CHANNELS. NO SUMPS IN MANHOLES.
5. WOODEN SHIMS ARE NOT ALLOWED BETWEEN THE STRUCTURE AND THE CASTING.
6. THE FINISHED RIM ELEVATIONS SHALL BE SET 1/4" TO 3/8" BELOW THE PAVEMENT SURFACE.
7. SANITARY & STORM MANHOLES SHALL NOT HAVE STEPS.
8. REPAIRS TO PVC SANITARY SEWER PIPE SHALL BE MADE USING FERNCO COUPLINGS WITH FERNCOS BEDDED IN PEA STONE.
9. ALL MANHOLES SHALL BE FURNISHED WITH RUBBER BOOTS.
10. NO BRICKS or BLOCKS BELOW FRAMES or GRATES - GRADE RINGS ONLY.




PLAN



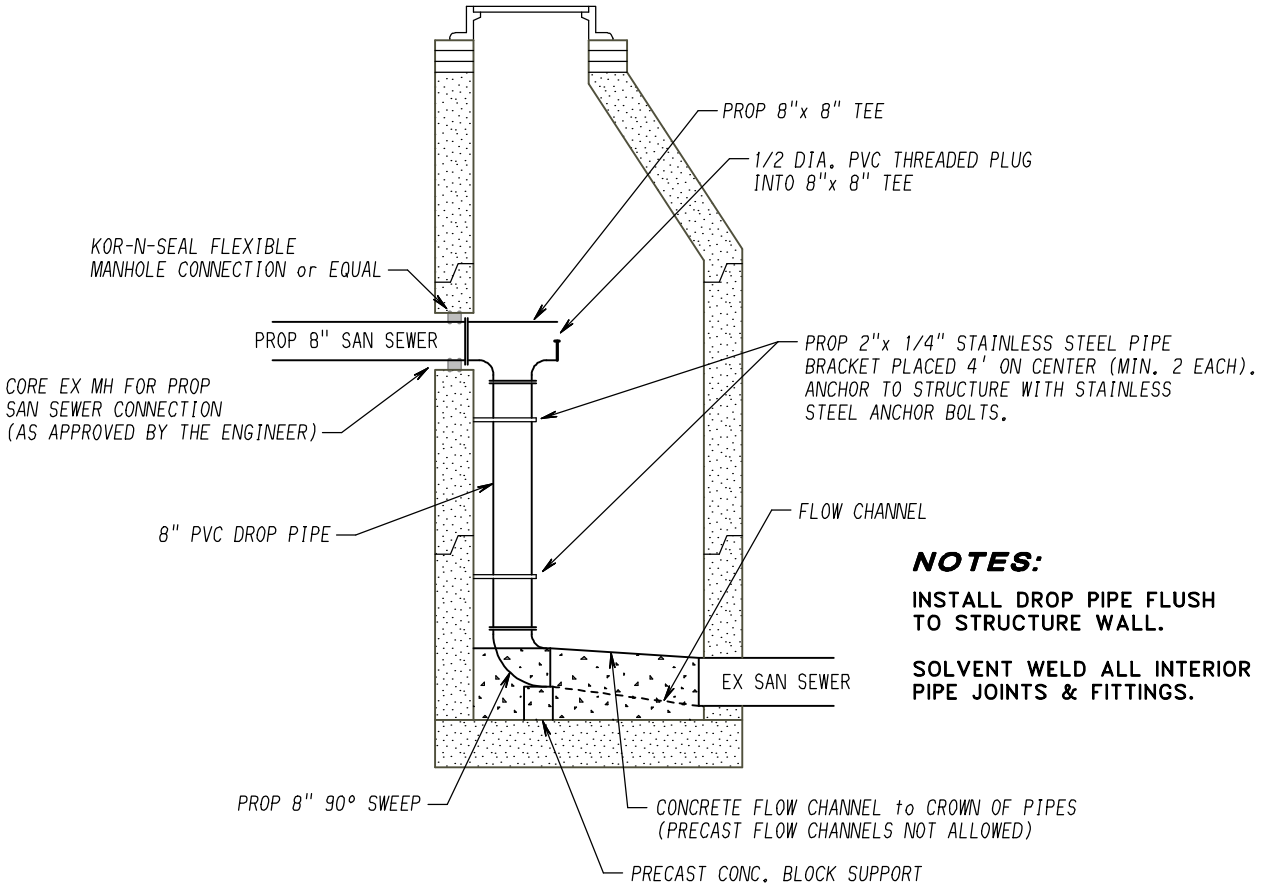

PROVIDE CONC. FLOW CHANNELS FOR ALL 6" SERVICE PIPE PENETRATIONS

# SANITARY MANHOLE w/ EXTERIOR DROP CONNECTION

NOT TO SCALE

SANITARY MANHOLE.gxd

CITY of PETOSKEY




***NOTES:***

**INSTALL DROP PIPE FLUSH TO STRUCTURE WALL.**

**SOLVENT WELD ALL INTERIOR PIPE JOINTS & FITTINGS.**

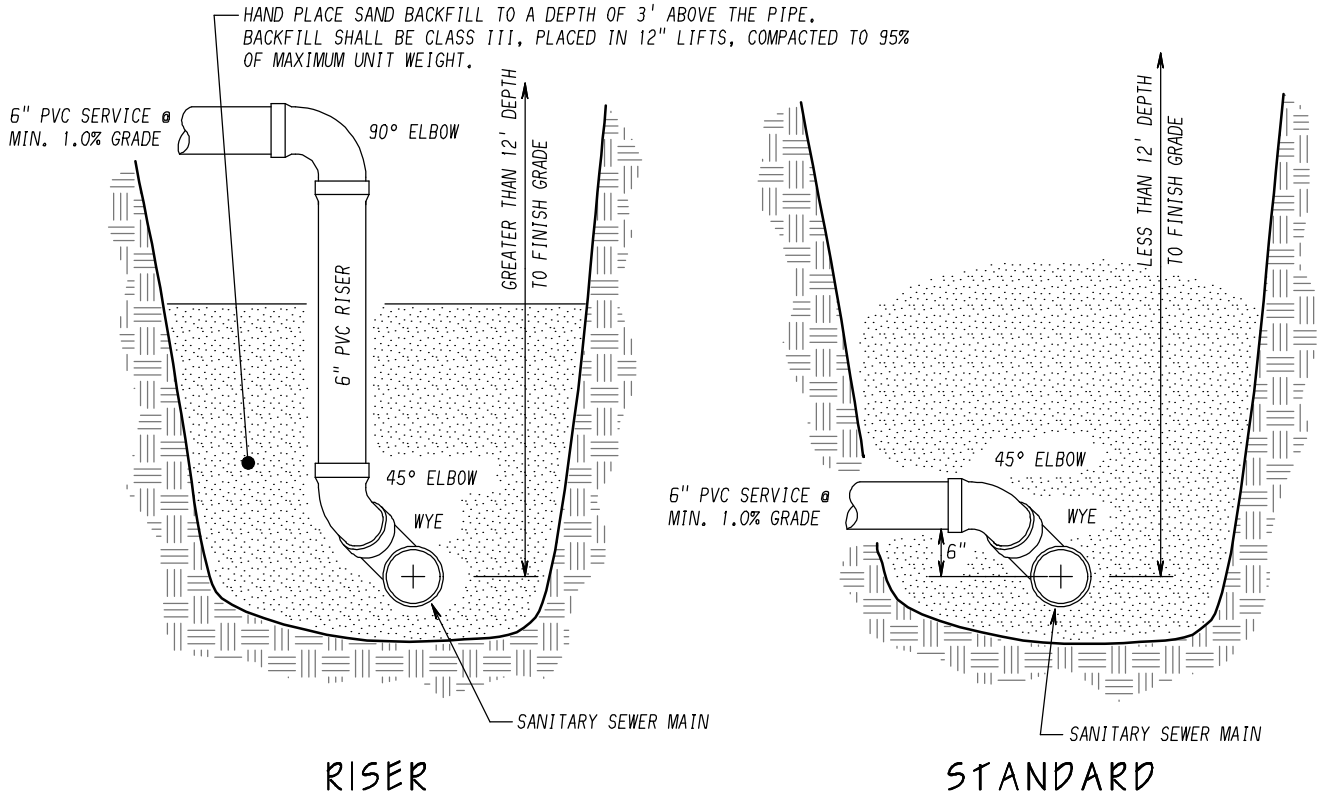
**THIS DETAIL SHALL BE USED ONLY UPON CITY APPROVAL & AUTHORIZATION**

# INTERIOR DROP CONNECTION to EX. SANITARY MANHOLE

NOT TO SCALE

SANITARY MANHOLE-INSIDE DROP.gxd

CITY of PETOSKEY




**NOTE:**

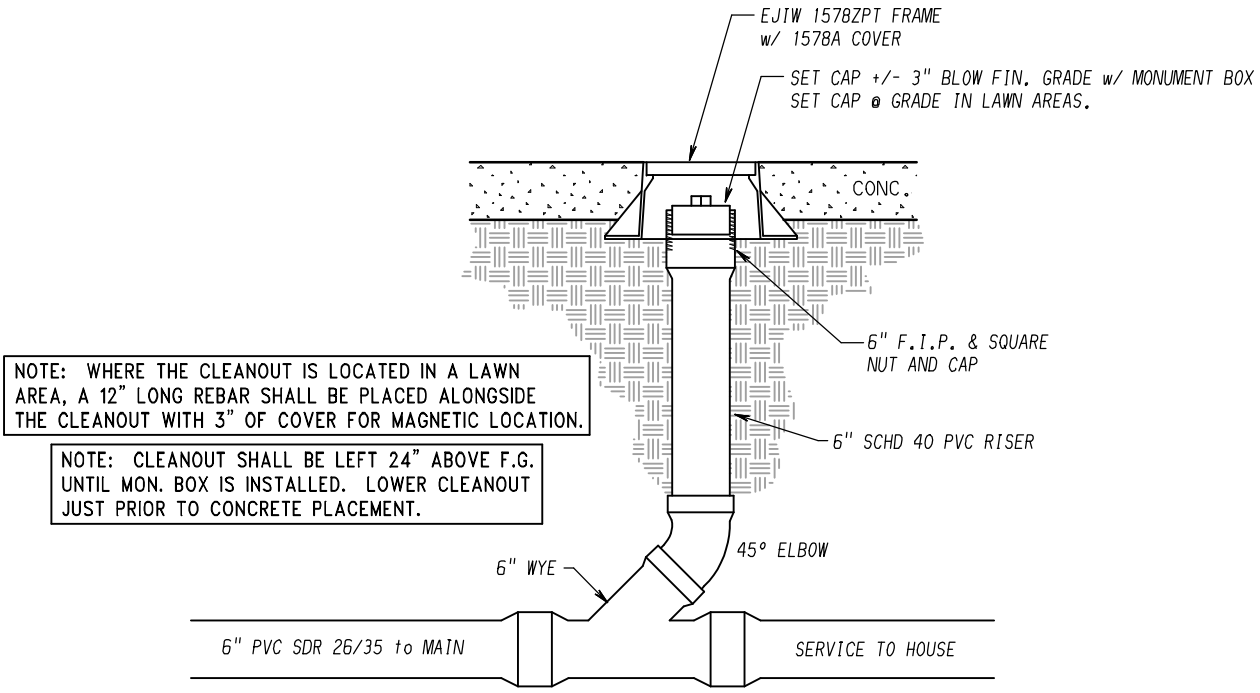
SERVICES SHALL HAVE A CLEANOUT LOCATED BETWEEN THE BACK-OF-CURB and THE RIGHT-OF-WAY (SEE CLEANOUT DETAIL). WHERE THE CLEANOUT IS LOCATED IN A LAWN AREA, A 12" LONG REBAR SHALL BE PLACED ALONGSIDE THE CLEANOUT WITH 3" OF COVER FOR MAGNETIC LOCATION.

# SANITARY SEWER SERVICE CONNECTIONS

NOT TO SCALE

SANITARY SERVICE CONNECTION.gxd

CITY of PETOSKEY

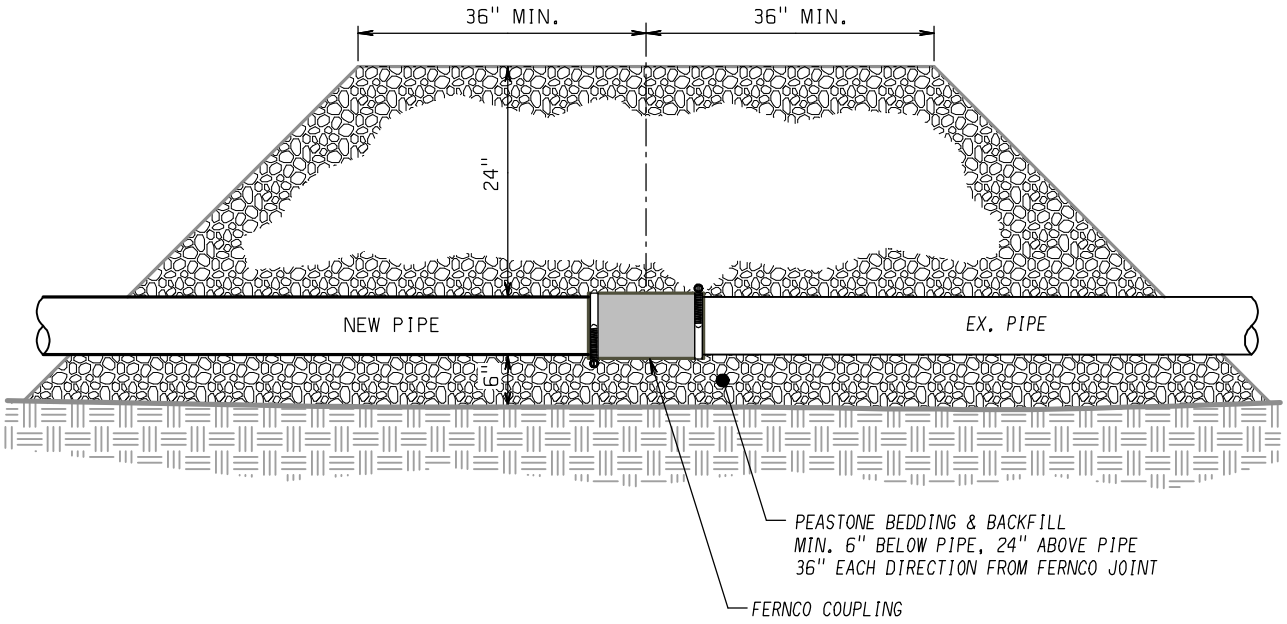



# SANITARY SERVICE CLEANOUT

NOT TO SCALE

SANITARY SERVICE CLEANOUT.gxd

CITY of PETOSKEY

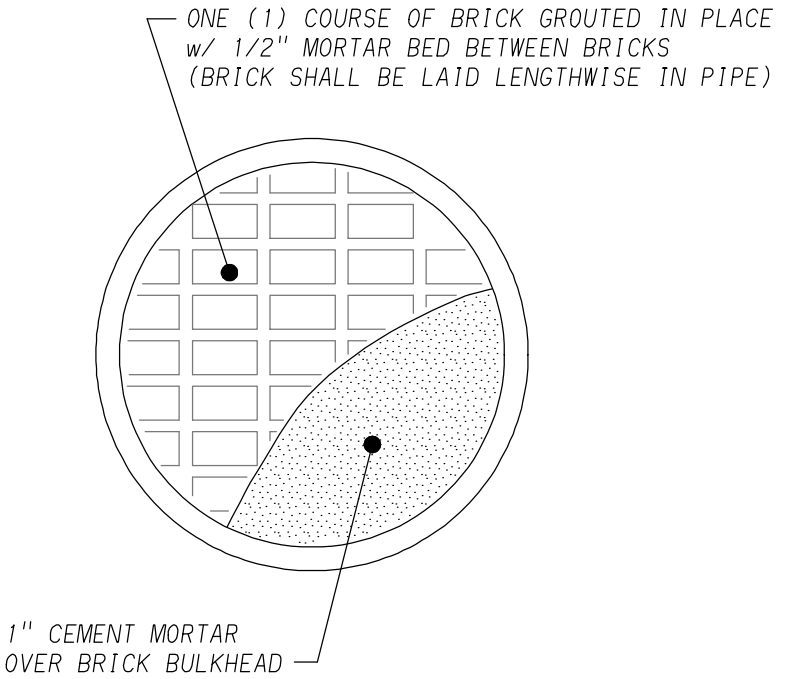



# FERNCO COUPLING BEDDING DETAIL

NOT TO SCALE

FERNCO COUPLING DETAIL.gxd

CITY of PETOSKEY



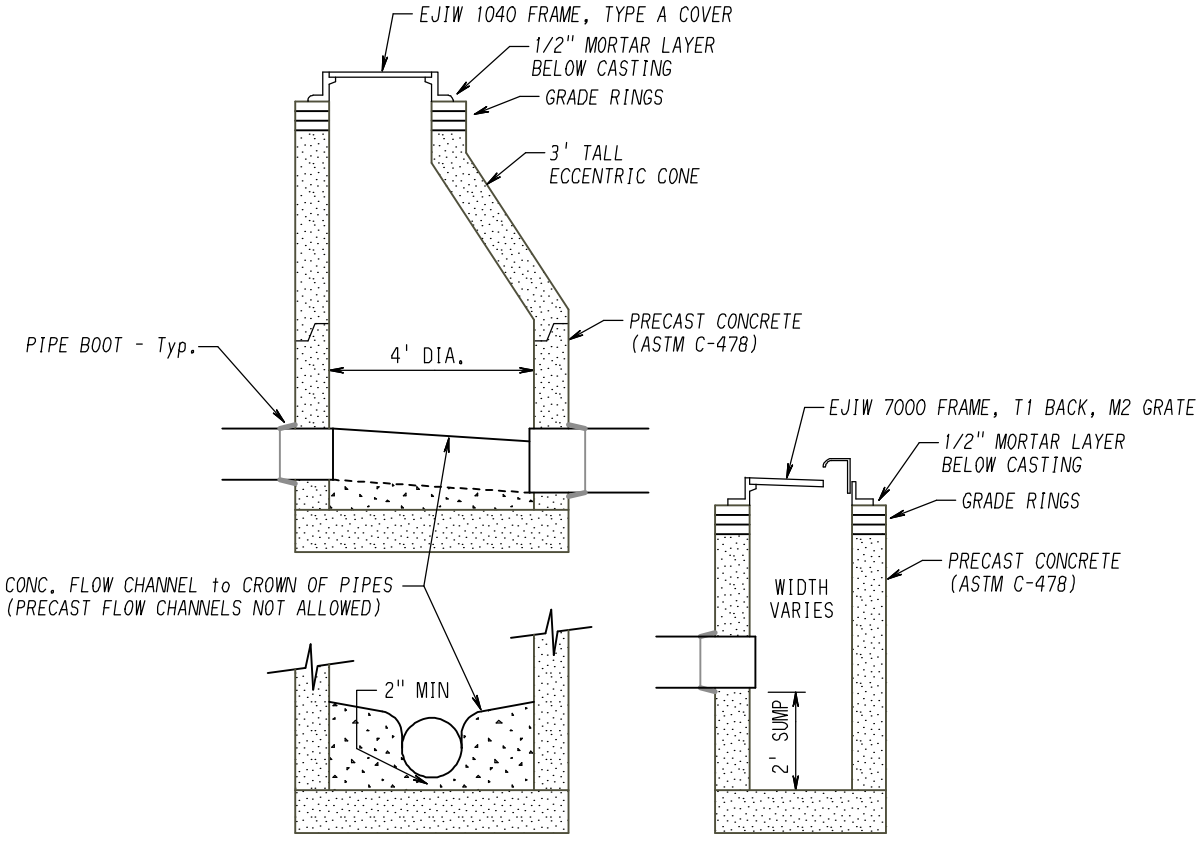

# BULKHEAD DETAIL

NOT TO SCALE

BULKHEAD DETAIL.gxd

# CITY of PETOSKEY

1. A MINIMUM OF 6" OF COMPACTED GRANULAR MATERIAL SHALL BE PLACED UNDER ALL STRUCTURES.
2. JOINTS IN STRUCTURES SHALL BE POINTED, AND ALL JOINTS & PIPE CONNECTIONS SHALL BE WATERTIGHT.
3. PIPES SHALL NOT PROTRUDE INTO THE STRUCTURE.
4. BLOCK STRUCTURES SHALL HAVE 1/2" MORTAR COAT INSIDE & OUTSIDE OF STRUCTURE, AND BETWEEN BLOCKS.
5. STRUCTURES SHALL HAVE A 1/2" MORTAR LAYER BELOW THE CASTING.
6. A BEAD OF FIBERIZED ROOF SEALER SHALL BE PLACED BETWEEN THE CASTING AND THE STRUCTURE.
7. CATCHBASINS SHALL HAVE 2' DEEP SUMPS.
8. WOODEN SHIMS ARE NOT ALLOWED BETWEEN THE STRUCTURE AND THE CASTING.
9. THE FINISHED RIM ELEVATIONS SHALL BE SET 1/4" TO 3/8" BELOW THE PAVEMENT SURFACE.
10. NO STEPS IN MANHOLES.
11. RUBBER BOOTS REQUIRED IN ALL MANHOLES.
12. NO BRICKS or BLOCKS BELOW FRAMES or GRATES - GRADE RINGS ONLY.




MANHOLE CATCH BASIN

## STORM STRUCTURES

NOT TO SCALE

STORM STRUCTURES.gxd

# SIDEWALK
# AND
# CURB & GUTTER
# STANDARDS

# CITY OF PETOSKEY
# SIDEWALK, CURB AND GUTTER
# AND PAVER BRICK CONSTRUCTION SPECIFICATIONS

2.1 All work shall be done in conformance with the 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION published by the Michigan Department of Transportation, the City of Petoskey CONSTRUCTION STANDARDS, the attached specifications, and all supplemental specifications.

2.2 All items are not detailed in Section "Supplemental Specifications". The City of Petoskey reserves the right to add or delete items, in cooperation with the Contractor, as necessary.

2.3 All construction staking shall be done by the City of Petoskey, unless otherwise noted. All re-staking, after the initial construction staking, shall be paid for by the Contractor.

2.4 To minimize the disturbance outside the existing sidewalk area, all sidewalk excavations and sidewalk removals are to be done using a "Skidsteer", "Bobcat", or loader/backhoe or the work may be done by hand. Any area disturbed or damaged, outside of the sidewalk area, is to be completely restored by the Contractor at their own expense.

2.5 Loading trucks is to be done at driveways, or other curb openings – no trucks are to be loaded by driving equipment across lawns – trucks are to be kept in the street, and not allowed in lawn areas or on driveway approaches. The site is to be cleaned up daily, with all open areas barricaded for the night and weekends. Arrangements to stockpile/store fill-sand in the right-of-way must be pre-approved with the City. All catch basins are to be covered with filter fabric prior to beginning removals or stockpiling sand.

2.6 All sidewalks are to be 4" thick unless crossing a drive. Residential driveway approaches are to be 6" thick, as is the sidewalk crossing this driveway. Commercial driveway approaches, along with all handicap ramps, are to be 8" thick. Sidewalks that cross commercial drives are also to be 8" thick.

2.7 All saw cutting that is required for the safe removal of curbs and sidewalks, so house walks and driveways are not damaged, and to match existing sidewalks and driveways, shall be incidental to the cost of the project. Any damage to curbs, house walks, driveways, steps, walls, streets, etc., due to lack of saw cutting by the Contractor, will be repaired or replaced by the Contractor, at the direction of the City of Petoskey, and will be incidental to construction.

2.8 All excavation and/or placement of sand base required to bring the sidewalk to proper grade as staked by the City of Petoskey shall be included in the bid item "4" Sand Base Below Concrete C.I.P.". All embankment brought in from off-site shall be CLASS II as specified in Section 902.07, 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, and shall be placed according to MDOT Specifications 301.03. The sand needed to bring the sidewalk to grade, which is a compacted-in-place cost, will be paid for as "4" Sand Base Below Concrete.

2.9 The Contractor shall clean up the construction site on a daily basis. Chunks of hardened concrete, rocks, tools, unused or removed forms, brush, branches, or removed tree roots, paper and wrappers shall be removed from the site daily. If the Contractor fails to maintain a clean construction site, the City of Petoskey reserves the right to hire another contractor to perform the task, or to perform the task himself, and will deduct the cost from the original Contract. No form materials are to be left unattended, but must be picked up daily.

2.10 The Contractor shall protect all poured concrete surfaces from vandalism, as well as from adverse weather conditions, until a sufficient cure time has been reached. Removal and replacement of any damaged walk, as determined by the City of Petoskey, will be incidental to the Contract.

2.11 Steel or wood forms shall be used in forming the sidewalk to the desired line and grade. Plastic forms are prohibited. All forms shall be full depth, i.e. 2"x4", nominal lumber will not be sufficient for 4" walk; full 4" forms are required, unless workmanship practices are approved by the City, and the Contractor "over excavates" below the forms, for additional concrete thickness. No concrete is to be poured without inspection of all forming.

2.12 Refer to the City of Petoskey CONSTRUCTION STANDARDS sidewalk specification for expansion and contraction joints, surface finish, and construction methods. All expansion material is incidental to construction and no additional monies will be paid for this. Note: Fiber type expansion material is not acceptable for use in walks or curbs. Rubber and vinyl expansion material is acceptable, with approval of the City of Petoskey prior to the placement of any concrete.

2.13 The concrete mixture is to be 6 sack with dolomite aggregate, having a minimum compressive strength of 4,000 PSI in 28 days.

2.12a Air Entrainment – will be between 5.0% and 8.0%.

Slump – for curb and gutter: 0" to 3"; for sidewalks, ramps and driveway approaches: 2" to 4" with no water reducer; 3" to 6" with water reducer.

Temperature – concrete will not be accepted with temperatures lower than 50 degrees minimum or higher than 90 degrees maximum.

2.13 All sidewalks, curbs and gutters are to be cured and sealed with a **CLEAR** fugitive dye, curing compound, and protected from vandalism as well as from the elements.

2.14 Topsoil shall be stripped and stockpiled on site, and reused in areas distributed during construction, prior to seeding. The re-applied topsoil shall be free from rocks and clumps, shall be raked and fine graded, and shall be placed to a thickness of 4". Excess sand and/or topsoil shall be removed and taken to an area designated by the City, at the Contractor's expense. Additional topsoil shall be placed and compacted so no settlement occurs. Topsoil surface shall be left in a condition to receive grass seed. The City of Petoskey will supply and place all seed and mulch to topsoiled areas, unless otherwise directed.

2.15 Sidewalks are to be radius formed around trees, leaving a minimum distance of 1' between the edge of the walk and the base of the tree. Expansion material is to be placed in the sidewalk on both sides of the tree so that root growth by the tree will only raise that specific section of walk.

2.16 Sidewalk, curb, and gutter removal items include, but are not limited to, all existing concreate flatwork and curbing that has to be removed, as directed by the City of Petoskey, as well as removal of any roots or other obstructions that would interfere with placing the new sidewalk and curbs at the proposed grade as directed by the City of Petoskey. Also included in this item is the removal of 1' wide bituminous, concrete, and/or gravel surfaces, each side of the sidewalk at the drive opening, for forming. Saw cutting is incidental, unless otherwise specified.

2.17 Sidewalks in most cases will be constructed to meet existing driveway or drop curb surfaces. Where it is necessary to change the driveway to meet the new sidewalk, the Contractor will place 6" concrete, for existing concrete driveways, and will be paid for this work under line item for 6" Concrete Walk, per square footage as measured. Saw cutting and/or restoration are paid for by the appropriate pay items, or as described in these standards.

2.18 All bituminous asphalt that needs to be removed for form placement, is to be saw cut prior to removal, to minimize the area removed. Bituminous repairs will be made by the City, with the Contractor providing a list of all areas needing HMA bituminous asphalt repairs to the City.

2.19 Concrete driveways, which need to be brought to grade, will be paid for at the unit price per square yard for sand base below concrete. All driveways are to be 6" thick concrete unless directed otherwise by the City.

2.20 The cost for utility relocation and/or adjustments, required or the placement of the sidewalk or curbing as staked, shall be incidental to the cost of the sidewalk or curbing. The City will relocate City owned poles and utility boxes prior to construction – the Contractor is to coordinate the work for other utility relocations.

2.21 Unless otherwise directed by the City of Petoskey, all sidewalks shall be sloped toward the street, ¼" per foot.

2.22 Removal and/or replacement of bushes, fences, retaining walls, foundations, and miscellaneous items shall be coordinated with the property owner by the Contractor, and shall be incidental to the cost of the project.

2.23 All concrete sidewalks and curbs shall be poured from the street or parking lots. Concrete trucks will not be permitted on turf areas, or private driveways. Contactor shall provide proper barricades when closing off portions of streets or parking areas and shall be responsible for traffic control, if required. Contractor will also be required to notify residents to remove parked cars from driveways, if access to drive is going to be restricted.

2.24 Contractor will be responsible for calling Miss Dig 72 hours prior to the start of construction on this project to insure that all utilities are properly staked.

2.25 Care is to be taken with the Removal of Concrete Curb and Gutter, so as to minimize the pavement damage. All saw cutting is to be done prior to concrete removal. All curb and gutter is to be saw cut prior to removal, and this saw cutting will be incidental, unless otherwise noted. Any damage deemed by the City to be caused by negligence on the part of the Contractor, or his sub-contractor, will be replaced by the Contractor, to the satisfaction of the City, at no cost to the City.

2.26 All concrete curb and gutter will be installed to the City of Petoskey Construction Standards. All backfilling is to be completed by the Contractor, using good construction methods. After the Contractor places and compacts a minimum of 4" of clean topsoil, leaving the surface in a fine raked condition, the City of Petoskey will place the grass seed and mulch, unless otherwise directed.

2.27 The item “Removal and Disposal of Sod” will include, but is not limited to all labor and equipment necessary to complete the work. This item includes stripping of the sod in accordance with Supplemental Specification 2.14.

2.28 All handicap ramps will be paid for as 8” concrete sidewalk, and includes the placement of 8” thick concrete in the ramp area.

2.29 The item “6” Concrete Below Paver Bricks” includes the excavation for this work, along with all preparation, forming and pouring of this woven wire mesh reinforced concrete. As always, this item also includes the stripping of the concrete formwork, curing as directed and all clean-up and restoration as required. Paver bricks will be installed by others.

2.30 The item “2” 2NS Sand Below Paver Bricks” includes the placement and compaction of Contractor supplied 2NS sand on top of the 6” concrete base (See item 2.29). This work also includes all excavation and clean-up.

These unit prices are to include all removals, saw cutting and compacted sand base. The unit prices also include the forming, pouring, finishing, edging, curing and sealing, stripping the forms and clean-up and restoration of the site, along with all other good construction practices. The Contractor will supply and place all topsoil. Seed and mulch will be by others. Any areas damaged or disturbed outside the immediate vicinity of the concrete work, will be fully restored by the Contractor, at his expense.

# EXPANSION JOINT MATERIAL
# DATA AND SPECIFICATIONS

**Product Name:**
PROFLEX Vinyl Expansion Joints from Oscoda Plastics, Inc., or an approved equal.

**Product Description:**
PROFLEX Vinyl Expansion Joints are manufactured from 100% recycled vinyl with fabric strand reinforcement that are obtained from the automotive and roofing industries. PROFLEX is an extremely durable and flexible product that is easy to handle and will not rot or become brittle when exposed to the weather. Because of its flexibility it will not break, split or crack when exposed to the elements. PROFLEX is UV stable, does not use adhesive binders in the manufacturing process and can be stored outside.

**Specifications: (Stock Sizes)**
Thickness: ¼"
Width/5' Length: 3", 3 ½", 4", 6", 8"
Width/10' Length: 4", 6"

Thickness: ½"
Width/5': 2", 3 ½", 4" 6", 8"
Width/10': 3 ½", 4", 6"

**Packaging:**
10 strips to a bundle for all sizes except; ½" x 8" x 5' and all 10-foot lengths are packaged five strips to a bundle. Full pallet quantities are available. Contract your nearest distributor or manufacturer for more information or for ordering requirements for sizes not listed.

# CURB & GUTTER STANDARDS

See Details:

- No reinforcing
- Contraction joints every 20 feet (20')
- One-half inch (1/2") expansion material at spring points of intersecting street, at 200' maximum intervals and each side of catch basins. Expansion material will be "Pro Flex" vinyl expansion material as manufactured by Oscoda Plastics, Inc., or an approved equal.
- "Drop Curbs" (similar to MDOT Detail F/C-C) across drive openings and ramps (MDOT Drive Opening Detail "L" Modified – Non-Reinforced).
- Curb and gutter spot repairs over 30 feet in length shall have expansion joints at each end. The upper ½" of each joint shall be sealed with rubberized crack filler.
- Concrete mix to be 6-sack (4,000 psi in 28 days) Dolomite Aggregate.
- Concrete curing compound will be a clear, fugitive dye, cure and seal. Curing compounds that are "colored" or cure-out other than clear are not allowed.
- Adding water to the surface of concrete is not allowed. In lieu of water it is highly recommended that an evaporation reducer, like E-Con™ as manufactured by L & M Construction Chemicals, or an approved equal, be used and applied per manufacturer's recommendations.
- Air Entrainment – the amount of air entrained in the concrete is to be 6 ½%, +/- 1 ½%. Concrete will be rejected if the air is less than 5% or greater than 8%.
- Slump – without City approval for the use of concrete additives, (i.e. water reducers, plastisizers, etc.) no slumps are to exceed 3" for curbs; 4" for sidewalks.
- Temperature – no concrete will be accepted with a temperature less than 50 degrees Fahrenheit or greater than 90 degrees Fahrenheit.

# PROFLEX VINYL EXPANSION JOINT

No. EXPJ-555
Revision: 001

PRODUCT DATA SHEET

## DESCRIPTION

PROFLEX VINYL EXPANSION JOINT is manufactured from 100% recycled vinyl with fabric strand reinforcement that is obtained from the automotive and roofing industries.

PROFLEX is an extremely durable and flexible product that is easy to handle and will not rot or become brittle when exposed to the weather. Because of its flexibility, it will not break, split or crack when exposed to the elements. PROFLEX is UV stable, does not use adhesive binders in the manufacturing process, and can be stored outside.

## PROFLEX SPECIFICATIONS AND SIZE INFORMATION

½" PROFLEX meets the performance requirements of:

- ASTM D 1752, Section 5, Sub-paragraphs 5.1 – 5.4
- AASHTO M-153-98

## THICKNESS

- ¼"
- ½"

## STANDARD LENGTHS

- 10'
- 5'

## CUT TO SIZE

- 3"
- 3.5"
- 4"
- 6"
- 8"

## USE AND APPLICATIONS

PROFLEX Vinyl Expansion Joint is suitable for use with a wide variety of concrete construction projects. It is also ideal for many sizes of concrete slab work, as well as other flatwork applications. Because of its flexibility, PROFLEX can be used as a radius filler as well as a concrete form.

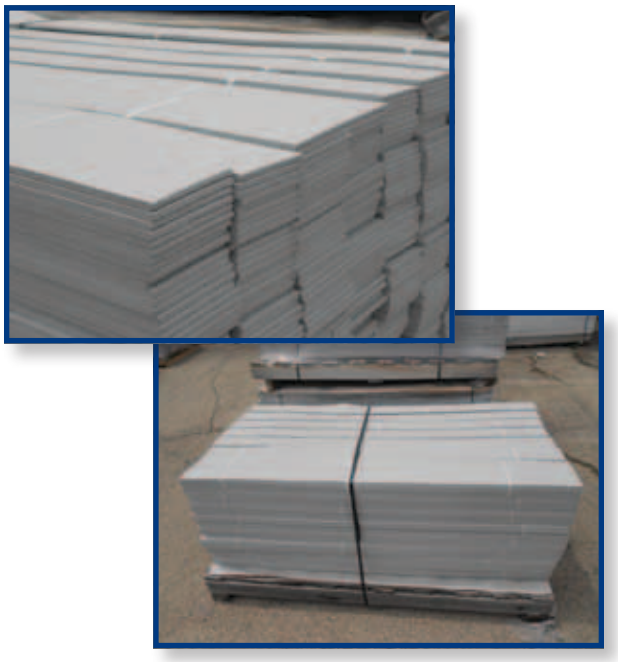
- Sidewalks
- Curbs
- Driveways
- Gutters
- Parking Lots
- Swimming Pools
- Sill plate in homes, garages, and industrial

## TECHNICAL SERVICE

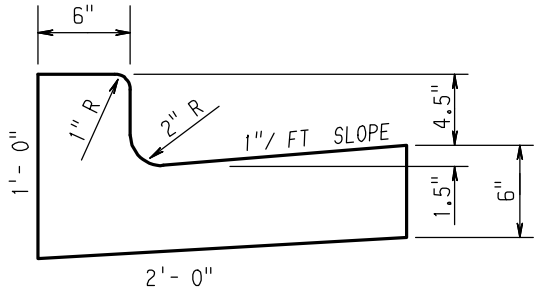
For conditions not specified, application procedures not noted, contact: Right Pointe Company (888) 755-5700

## LIMITED WARRANTY

Every reasonable effort is made to apply RIGHT POINTE COMPANY exacting standards both in the manufacture of our products and in the information which we issue concerning these products and their use. We warrant our products to be of good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement or refund, RIGHT POINTE COMPANY MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS, and RIGHT POINTE COMPANY shall have no other liability with respect thereto. Any claim regarding product defect must be received in writing within one (1) year from the date of shipment. No claim will be considered without such written notice or after the specified time interval. User shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the RIGHT POINTE COMPANY Technical Manager.

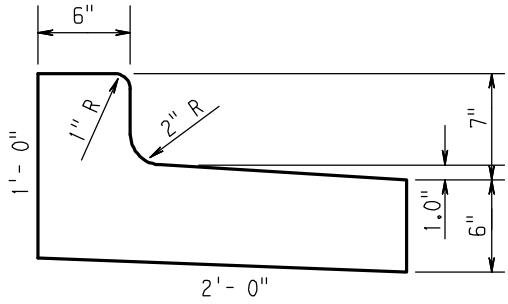


CITY of PETOSKEY



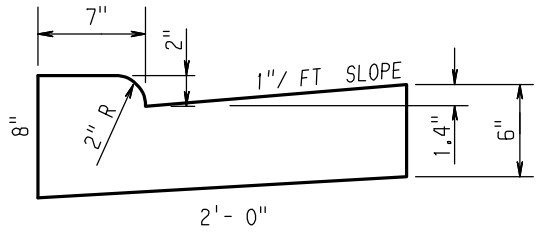

## CURB DETAIL-Regular

NO SCALE



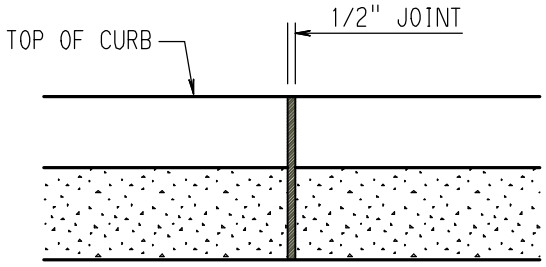

## CURB DETAIL-Pitch Out

NO SCALE




## CURB DETAIL-Drop

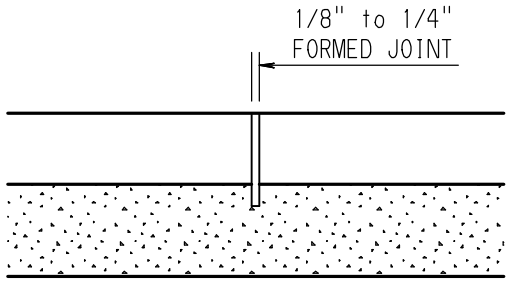
NO SCALE




SECTION

## EXPANSION JOINT

NO SCALE




SECTION

## CONTRACTION JOINT

NO SCALE

## NOTE:

PLACE VINYL JOINT FILLER LONGITUDINALLY BEHIND CURB AT ALL SIDEWALKS AND DRIVEWAY APPROACHES.

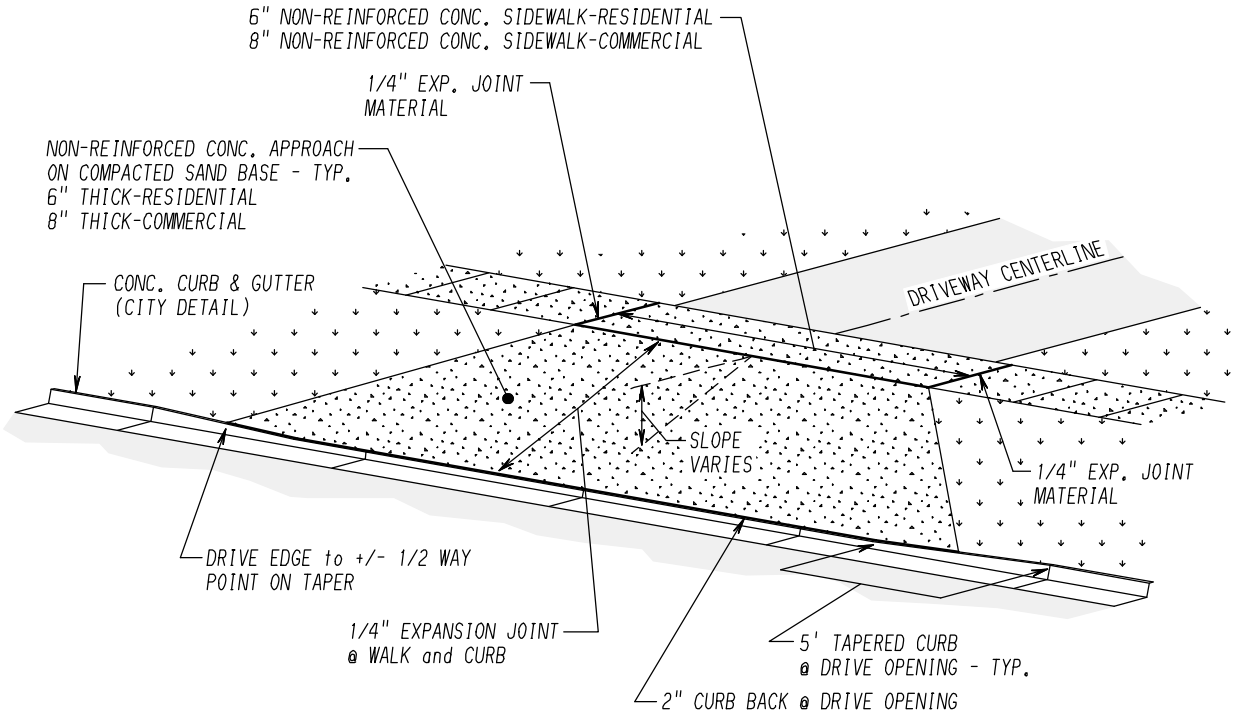
EXPANSION JOINT MATERIAL SHALL BE PROFLEX VINYL EXPANSION JOINTS FROM OSCODA PLASTICS INC., or APPROVED EQUIVALENT.

# CONCRETE CURB & GUTTER STANDARD DETAILS

NOT TO SCALE

CONC CURB & GUTTER DETAILS.gxd

CITY of PETOSKEY




RESIDENTIAL:
MAX. 16' WIDE* CURB OPENING, ONE CURB OPENING per PARCEL

COMMERCIAL:
MAX. 24' WIDE* CURB OPENING, ONE CURB OPENING per PARCEL

* CURB OPENINGS WIDER THAN LISTED ABOVE REQUIRE ZONING BOARD APPROVAL.

**NOTE:**

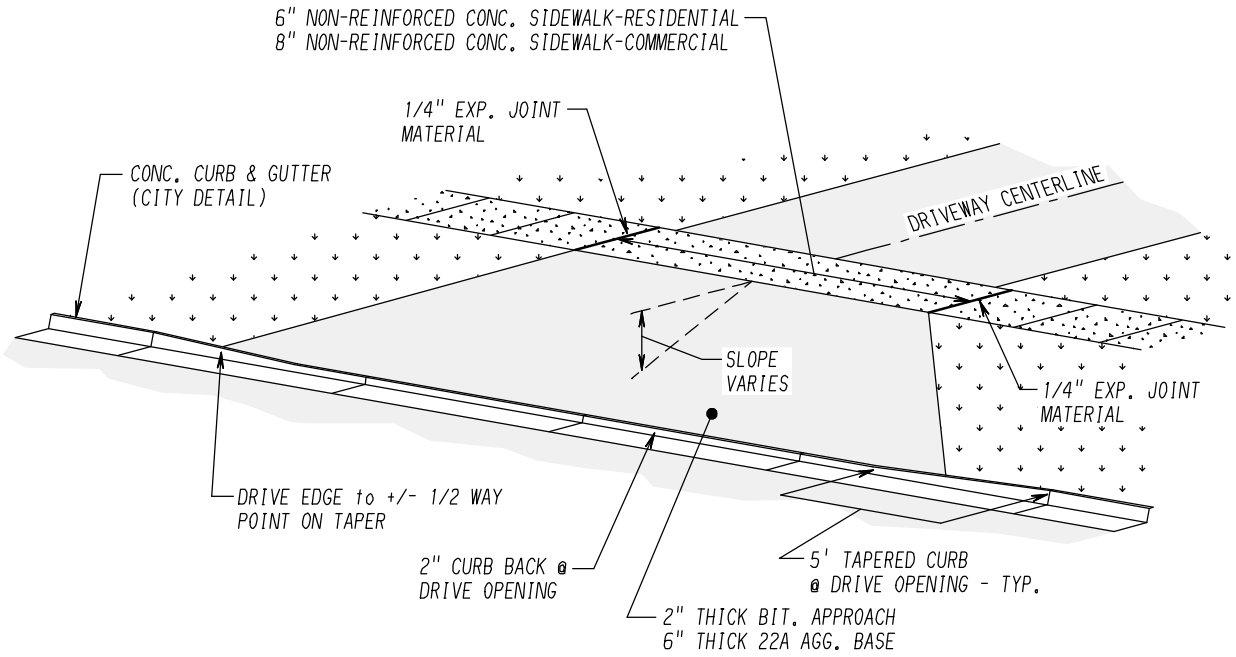
EXPANSION JOINT MATERIAL SHALL BE PROFLEX VINYL EXPANSION JOINTS FROM OSCODA PLASTICS INC., or APPROVED EQUIVALENT.

# CURB OPENING w/ CONCRETE DRIVEWAY APPROACH

NOT TO SCALE

CONC DRIVEWAY APPROACH DETAIL.gxd

CITY of PETOSKEY




RESIDENTIAL:
MAX. 16' WIDE* CURB OPENING, ONE CURB OPENING per PARCEL

COMMERCIAL:
MAX. 24' WIDE* CURB OPENING, ONE CURB OPENING per PARCEL

* CURB OPENINGS WIDER THAN LISTED ABOVE REQUIRE ZONING BOARD APPROVAL.

**NOTE:**

EXPANSION JOINT MATERIAL SHALL BE PROFLEX VINYL EXPANSION JOINTS FROM OSCODA PLASTICS INC., or APPROVED EQUIVALENT.

# CURB OPENING w/ BITUMINOUS DRIVEWAY APPROACH

NOT TO SCALE

BIT DRIVEWAY APPROACH DETAIL.gxd

EXHIBIT A

CITY OF PETOSKEY
ADDITIONAL SIDEWALK SPECIFICATIONS

I. Description:

This work shall consist of constructing Portland cement concrete sidewalk on a prepared base as shown on the plans or as authorized. Backfilling will be part of constructing sidewalk unless otherwise authorized.

II. Materials:

1. Cement – shall meet current standard specifications for air entrained Portland cement. – ASTM

2. Aggregate – shall be crushed dolomite, free of foreign materials, maximum size ¾".

3. Water – shall be clean and free from deleterious amounts of oils, acids, alkalis or organic materials.

III. Construction Methods:

1. Preparation of Base.

Excavation shall be made to the required depth and to a width that will permit the installation and bracing of the forms. The foundation shall be shaped and compacted to a firm even surface with a minimum thickness of 6". All soft and yielding material shall be removed and replaced with acceptable material.

2. Forms.

The forms shall be of wood or metal, straight and free from warp, and of sufficient strength to resist springing during the process of depositing concrete against them. The forms shall be the full depth of the concrete.

The side forms shall be firmly staked to the required line and grade and shall provide for a transverse slope of ¼ inch per foot toward the centerline of the highway, unless otherwise provided. When unit slab areas are to be poured, slab division forms shall be placed so that the slab division joints will be straight and continuous.

3. Concrete.

Shall meet current Michigan Department of Transportation Standard Specifications for a six sack mix. Re-tempering will not be permitted.

4. Construction.

   Minimum Thickness – 4" except 6" at residential driveways and 8" thick at commercial driveways.
   Slab size maximum 100 sq. ft. area.
   Residential walks minimum width 6 ft.
   Business District – walk shall extend from building line to curb unless otherwise directed by the City.
   Grades – as determined by the City or its Engineer.

5. Placing and Finishing Concrete.

   The base shall be moist and the concrete shall be deposited thereon to the depth specified on the plans or in the proposal. The concrete shall be thoroughly spaced along the faces of the forms and before finishing operations are started. The concrete shall be struck off to the required grade and cross section.

   The surface shall be floated just enough to produce a smooth surface free from irregularities. All edges and joints shall be rounded to a radius of ½ inch with an approved finishing tool. The surface shall then be broomed to slightly roughen the surface and remove the finishing tool marks.

   Integral color mixes, dyes, and stains will be permitted. Paint or other coloring material which alters the non-slip characteristics of the broom finish are prohibited.

6. Joints.

   Joints shall be constructed true to line with their faces perpendicular to the surface of the sidewalk and shall not vary more than ¼ inch from their designated position. Transverse joints shall be constructed at right angles to the centerline of the sidewalk and longitudinal joints shall be constructed parallel to the centerline, unless otherwise required. The concrete at the faces of all joints shall be thoroughly spaced or vibrated and compacted to fill all voids, and the surface shall be finished smooth and substantially true to grade.

   a. Transverse Expansion Joints. One-inch transverse expansion joints shall be placed through concrete sidewalk not in line with expansion joints in the abutting curb, gutter or combination curb and gutter. In case the sidewalk is not intended to abut such a structure, or in case the sidewalk is intended to about a structure having no expansion joints, expansion joints shall be placed through the sidewalk at uniform intervals of not more than 50 feet.

      Expansion joint filler shall extend to the full depth of the joint and the top shall be slightly below the finished surface of the sidewalk.

   b. Longitudinal Expansion Joints. ½ inch expansion joints shall be placed between the sidewalk and back of abutting parallel curb and gutter, and between the sidewalk and buildings or other rigid structures. When directed by the Engineer, the expansion joint between the sidewalks and buildings shall be placed one foot from the property line and parallel to it.

One-inch expansion joints shall be placed between sidewalk approaches and the back of the curb or gutter, or the edge of pavement.

Expansion joint filler shall extend to the full depth of the joint and the top shall be slightly below the finished surface of the sidewalk.

c. Contraction Joints. Sidewalk shall be divided into unit area of not more than 36 square feet. Insofar as feasible, the unit areas shall be square and of not less than 16 square feet. The unit areas shall be produced by cutting joints in the concrete, after floating, to a depth of not less than ¼ the thickness of the sidewalk. The cut joints shall be not less than 1/8 inch or more than ¼ inch in width and shall be finished smooth and substantially true to line.

7. Curing and Protection.

Concrete sidewalks shall be kept damp for three days. Contractor is responsible for protecting concrete sidewalk surfaces from drying, rain or other adverse weather. Barriers shall be erected to protect against foot traffic or vehicle traffic as directed.

8. Backfilling.

After the concrete has gained sufficient strength, the side forms shall be removed, and the spaces on both sides shall be backfilled with sound earth. The backfill shall be compacted and leveled to a grade one inch below the surface of the walk and left in a neat, workmanlike condition.

9. Air Entrainment.

The amount of air entrained in the concrete is to be 6 ½%, +/- 1 ½%. Concrete will be rejected if the air is less than 5% or greater than 8%.

10. Slump.

Without City approval for the use of concrete additives, (i.e. water reducers, plastisizers, etc.) no slumps are to exceed 3” for curbs; 4” for sidewalks.

11. Temperature.

No concrete will be accepted with a temperature less than 50 degrees Fahrenheit or greater than 90 degrees Fahrenheit.

# EXPANSION JOINT MATERIAL
# DATA AND SPECIFICATIONS

**Product Name:**
PROFLEX Vinyl Expansion Joints from Oscoda Plastics, Inc., or an approved equal.

**Product Description:**
PROFLEX Vinyl Expansion Joints are manufactured from 100% recycled vinyl with fabric strand reinforcement that are obtained from the automotive and roofing industries. PROFLEX is an extremely durable and flexible product that is easy to handle and will not rot or become brittle when exposed to the weather. Because of its flexibility it will not break, split or crack when exposed to the elements. PROFLEX is UV stable, does not use adhesive binders in the manufacturing process and can be stored outside.

**Specifications: (Stock Sizes)**
Thickness: ¼"
Width/5' Length: 3", 3 ½", 4", 6", 8"
Width/10' Length: 4", 6"

Thickness: ½"
Width/5': 2", 3 ½", 4" 6", 8"
Width/10': 3 ½", 4", 6"

**Packaging:**
10 strips to a bundle for all sizes except; ½" x 8" x 5' and all 10-foot lengths are packaged five strips to a bundle. Full pallet quantities are available. Contract your nearest distributor or manufacturer for more information or for ordering requirements for sizes not listed.

# PROFLEX VINYL EXPANSION JOINT

No. EXPJ-555
Revision: 001

PRODUCT DATA SHEET

## DESCRIPTION

PROFLEX VINYL EXPANSION JOINT is manufactured from 100% recycled vinyl with fabric strand reinforcement that is obtained from the automotive and roofing industries.

PROFLEX is an extremely durable and flexible product that is easy to handle and will not rot or become brittle when exposed to the weather. Because of its flexibility, it will not break, split or crack when exposed to the elements. PROFLEX is UV stable, does not use adhesive binders in the manufacturing process, and can be stored outside.

## PROFLEX SPECIFICATIONS AND SIZE INFORMATION

½" PROFLEX meets the performance requirements of:

- ASTM D 1752, Section 5, Sub-paragraphs 5.1 – 5.4
- AASHTO M-153-98

## THICKNESS

- ¼"
- ½"

## STANDARD LENGTHS

- 10'
- 5'

## CUT TO SIZE

- 3"
- 3.5"
- 4"
- 6"
- 8"

## USE AND APPLICATIONS

PROFLEX Vinyl Expansion Joint is suitable for use with a wide variety of concrete construction projects. It is also ideal for many sizes of concrete slab work, as well as other flatwork applications. Because of its flexibility, PROFLEX can be used as a radius filler as well as a concrete form.

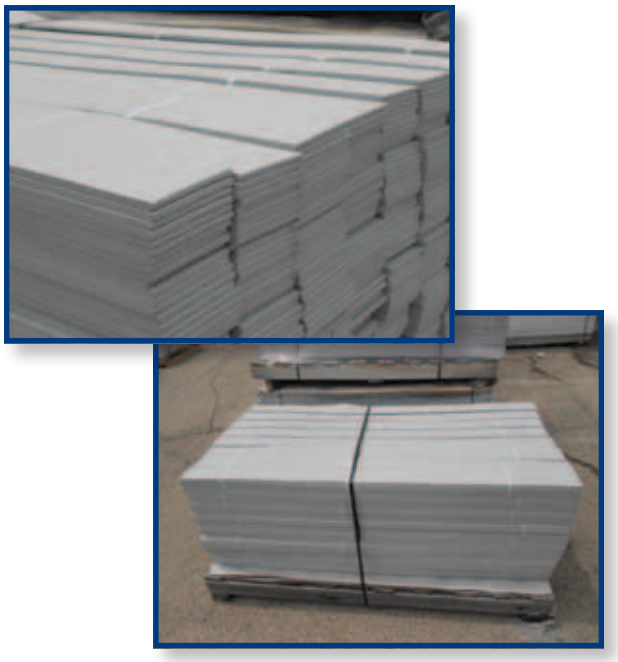
- Sidewalks
- Curbs
- Driveways
- Gutters
- Parking Lots
- Swimming Pools
- Sill plate in homes, garages, and industrial

## TECHNICAL SERVICE

For conditions not specified, application procedures not noted, contact: Right Pointe Company (888) 755-5700

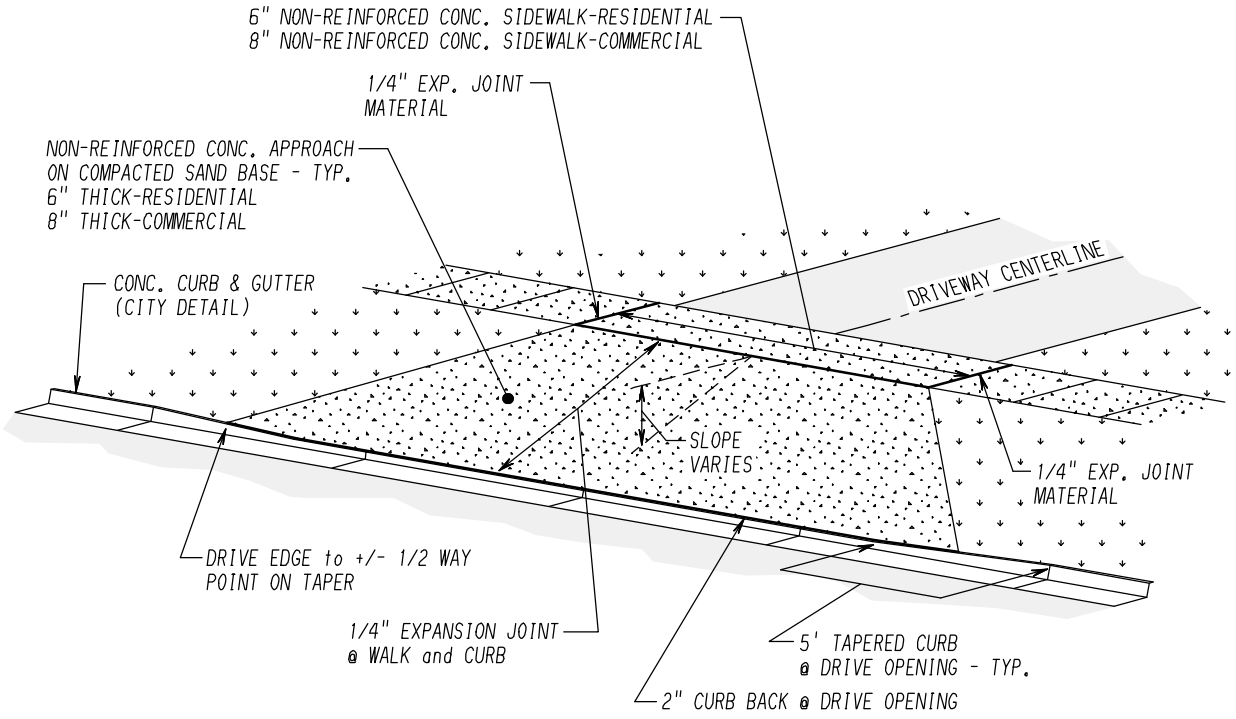
## LIMITED WARRANTY

Every reasonable effort is made to apply RIGHT POINTE COMPANY exacting standards both in the manufacture of our products and in the information which we issue concerning these products and their use. We warrant our products to be of good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement or refund, RIGHT POINTE COMPANY MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS, and RIGHT POINTE COMPANY shall have no other liability with respect thereto. Any claim regarding product defect must be received in writing within one (1) year from the date of shipment. No claim will be considered without such written notice or after the specified time interval. User shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the RIGHT POINTE COMPANY Technical Manager.



# CONCRETE AND ASPHALT DRIVEWAY STANDARDS

CITY of PETOSKEY




RESIDENTIAL:
MAX. 16' WIDE* CURB OPENING, ONE CURB OPENING per PARCEL

COMMERCIAL:
MAX. 24' WIDE* CURB OPENING, ONE CURB OPENING per PARCEL

* CURB OPENINGS WIDER THAN LISTED ABOVE REQUIRE ZONING BOARD APPROVAL.

**NOTE:**

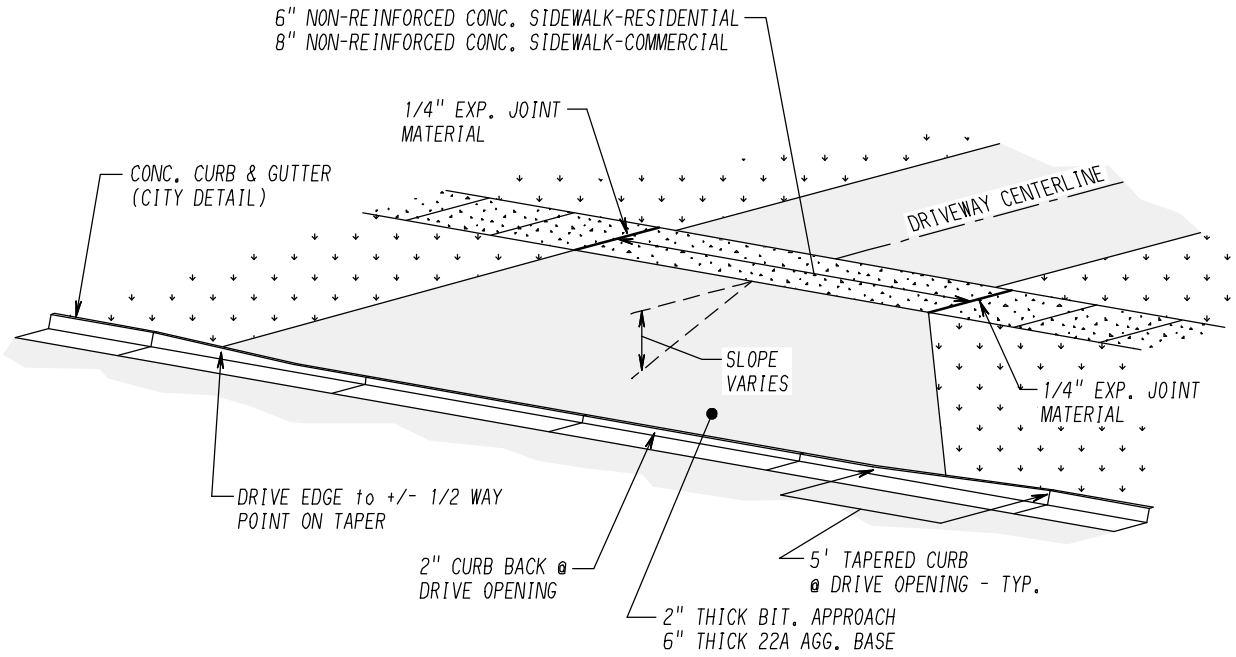
EXPANSION JOINT MATERIAL SHALL BE PROFLEX VINYL EXPANSION JOINTS FROM OSCODA PLASTICS INC., or APPROVED EQUIVALENT.

# CURB OPENING w/ CONCRETE DRIVEWAY APPROACH

NOT TO SCALE

CONC DRIVEWAY APPROACH DETAIL.gxd

CITY of PETOSKEY




RESIDENTIAL:
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COMMERCIAL:
MAX. 24' WIDE* CURB OPENING, ONE CURB OPENING per PARCEL

* CURB OPENINGS WIDER THAN LISTED ABOVE REQUIRE ZONING BOARD APPROVAL.

**NOTE:**

EXPANSION JOINT MATERIAL SHALL BE PROFLEX VINYL EXPANSION JOINTS FROM OSCODA PLASTICS INC., or APPROVED EQUIVALENT.

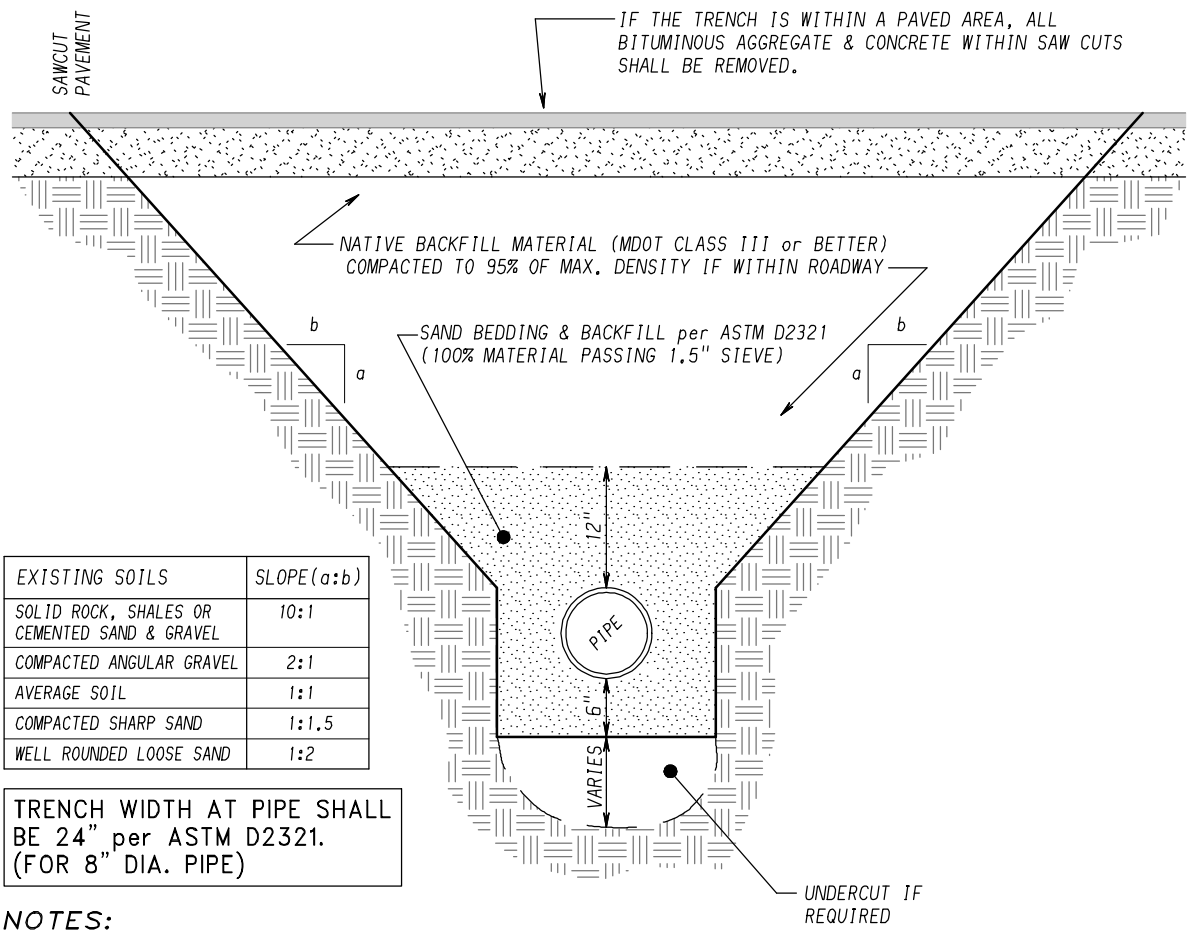
# CURB OPENING w/ BITUMINOUS DRIVEWAY APPROACH

NOT TO SCALE

BIT DRIVEWAY APPROACH DETAIL.gxd

# TRENCH DETAIL

CITY of PETOSKEY




| EXISTING SOILS | SLOPE(a:b) |
|---|---|
| SOLID ROCK, SHALES OR CEMENTED SAND & GRAVEL | 10:1 |
| COMPACTED ANGULAR GRAVEL | 2:1 |
| AVERAGE SOIL | 1:1 |
| COMPACTED SHARP SAND | 1:1.5 |
| WELL ROUNDED LOOSE SAND | 1:2 |

TRENCH WIDTH AT PIPE SHALL BE 24" per ASTM D2321. (FOR 8" DIA. PIPE)

NOTES:

CLAY, SILT, OR NON-HOMOGENEOUS SOILS REQUIRE SHORING OR BRACING. THE PRESENCE OF GROUNDWATER REQUIRES SPECIAL TREATMENT.

THE ANGLE OF THE TRENCH SLOPE IN THE CHART IS RECOMMENDED BY O.S.H.A.

# TRENCH DETAIL

NOT TO SCALE

TRENCH DETAIL.gxd

# PAVEMENT SECTIONS
# AND
# CROSS SECTION

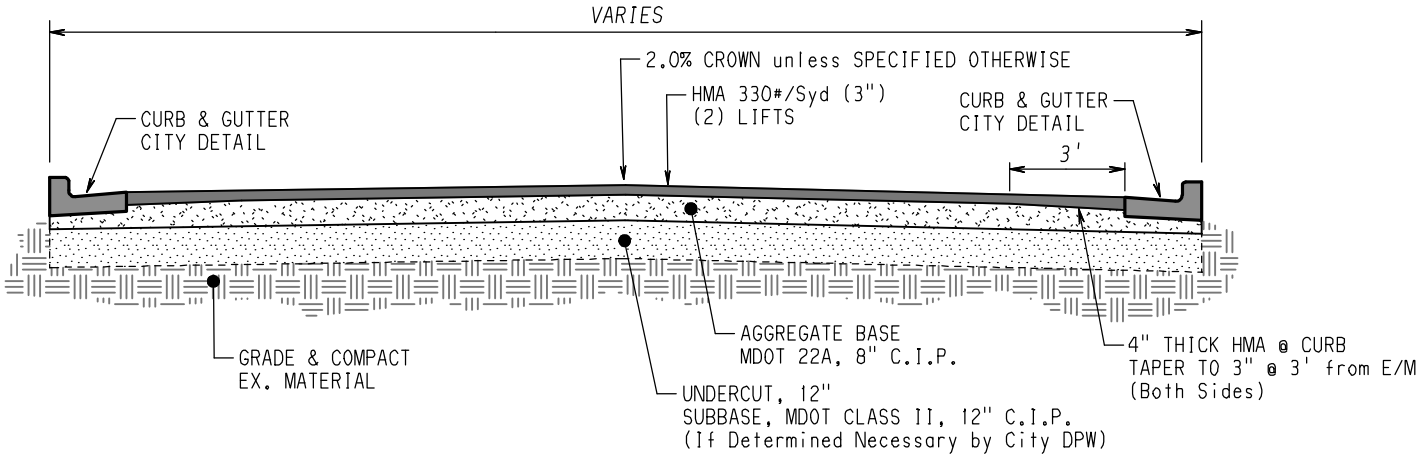
Pavement sections in the City of Petoskey vary, and must be addressed on a street by street basis.

The basic requirements for a typical street section includes:

- City Construction Standards Detail curb and gutter on both sides of the street;
- 12 inches of sand sub-base, extending below and beyond the curbs;
- 8 inches of 22A road gravel base, compacted to 98% of its maximum unit weight, extending below and beyond the curbs;
- 3 inches (330 lbs./syd.) of hot-mix asphalt paving, laid in two courses of 1 ½ inches (165 lbs./syd.);
- All other City Details and Construction Standards apply;
- If deemed necessary by the City of Petoskey, non-woven Geo-Textile Fabric will be placed between the sand sub base and the 22A gravel base.

**NOTE:** All bituminous paving shall be performed in accordance with MDOT specification for Hot Mix Asphalt Pavement and Surface Treatments, sections 501 & 502. The HMA design mix shall have an Asphalt performance Grade 58-34, and an asphalt cement content to meet 3% target air voids, by regression method. No RAP will be allowed in the mixture. The contractor shall submit a Job Mix Formula to the City for review a minimum of 7 days prior to HMA placement.
RECYCLED ASPHALT SHINGLES SHALL NOT BE ALLOWED IN THE PAVEMENT MIX.

CITY of PETOSKEY




**NOTE:**

All bituminous paving shall be performed in accordance with MDOT specification for Hot Mix Asphalt Pavements and Surface Treatments, sections 501 & 502. The HMA design mix shall have an Asphalt Performance Grade 58-34, and an asphalt cement content to meet 3% target air voids, by regression method. RAP used in the HMA shall be limited to a maximum of 17% RAP binder by weight of the total binder in the mixture. The contractor shall submit a Job Mix Formula to the City for review a minimum of 7 days prior to HMA placement.
RECYCLED ASPHALT SHINGLES SHALL NOT BE ALLOWED IN THE PAVEMENT MIX.

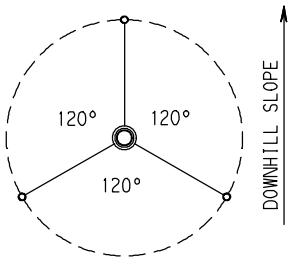
# STANDARD STREET CROSS-SECTION

NOT TO SCALE

STANDARD STREET CROSS-SECTION DETAIL.dgn

# TREE PLANTING

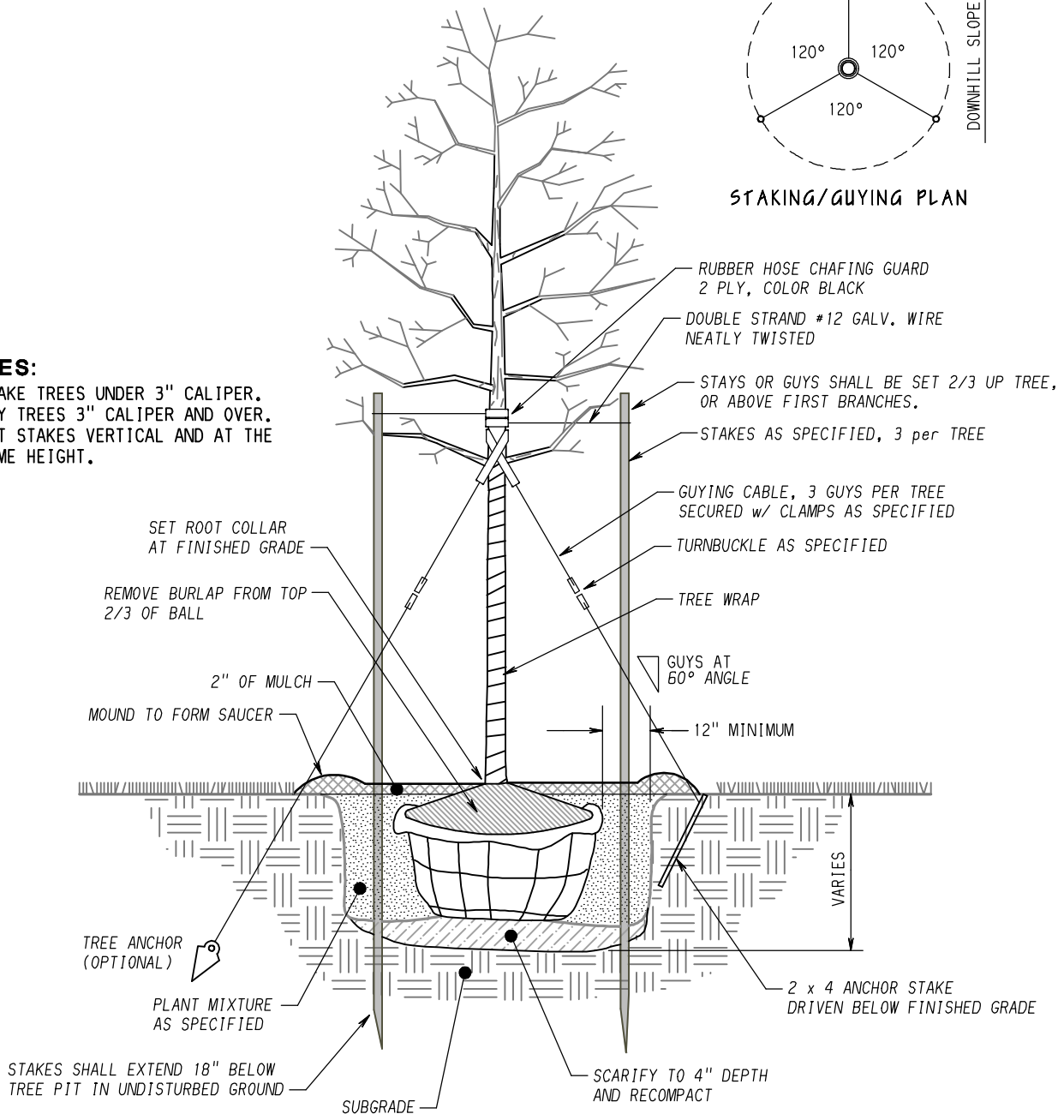
CITY of PETOSKEY




STAKING/GUYING PLAN

**NOTES:**

1. STAKE TREES UNDER 3" CALIPER.
2. GUY TREES 3" CALIPER AND OVER.
3. SET STAKES VERTICAL AND AT THE SAME HEIGHT.

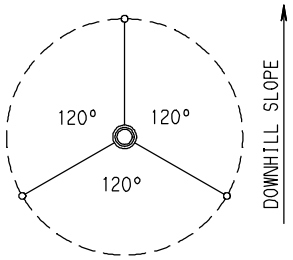



# TREE PLANTING DETAIL

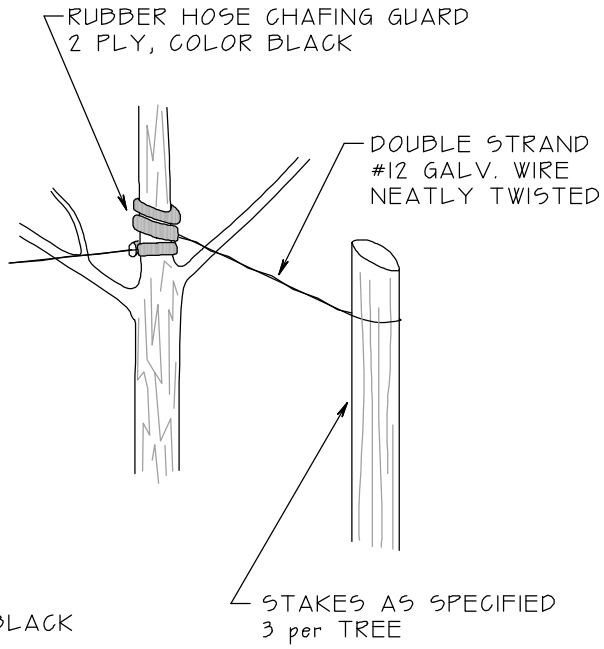
NOT TO SCALE

TREE PLANTING DETAIL.gxd

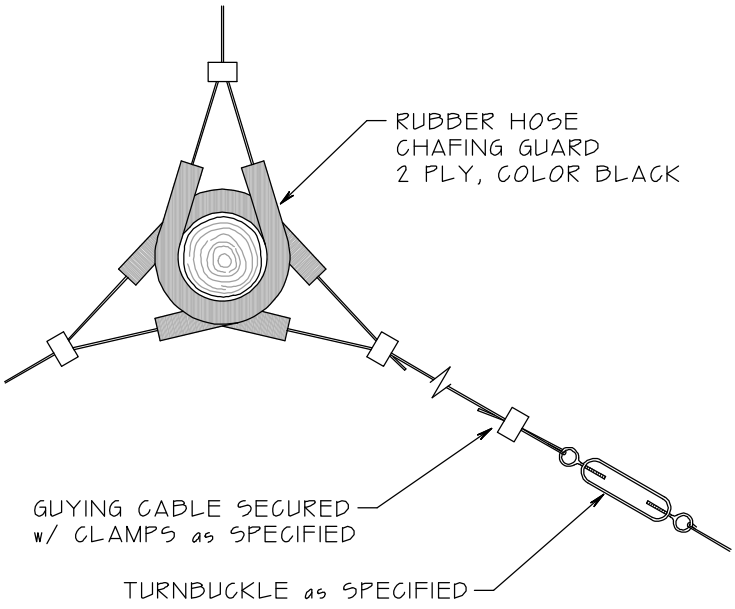
CITY of PETOSKEY




STAKING/GUYING PLAN




STAKING DETAIL



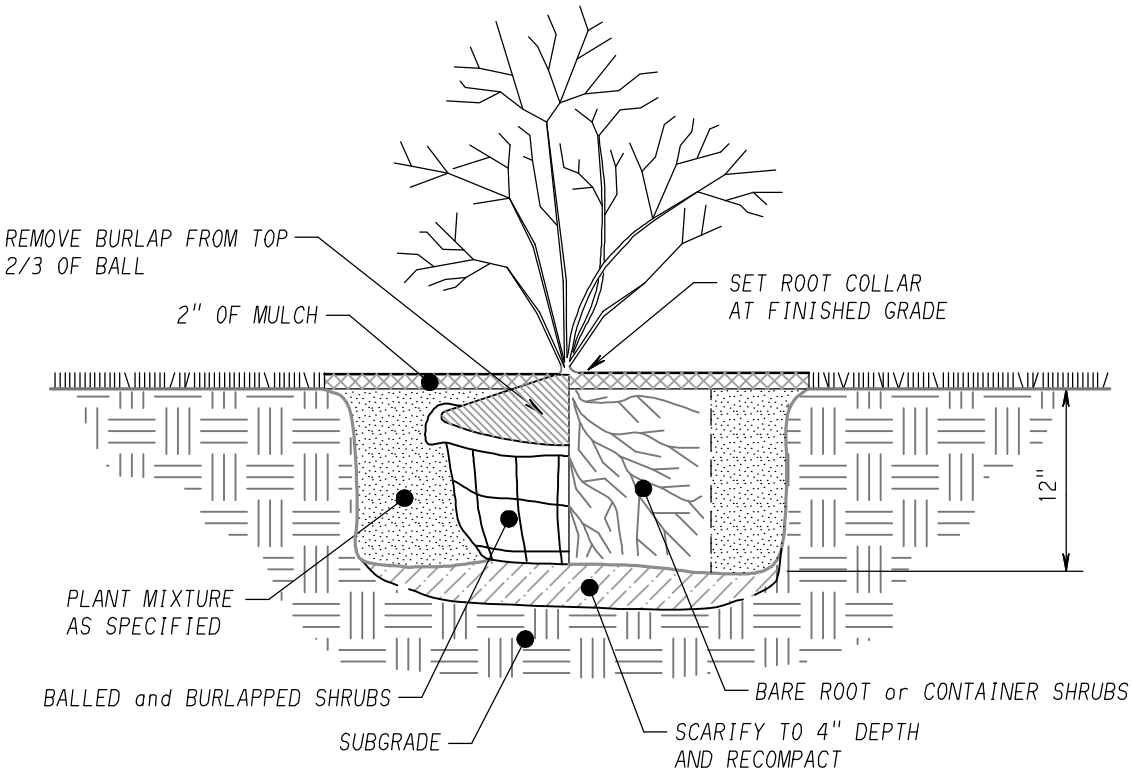

GUYING CABLE DETAIL

# TREE STAKING & GUYING

NOT TO SCALE

TREE STAKING AND GUYING.gxd

CITY of PETOSKEY




**NOTES:**

1. DO NOT PRUNE EVERGREENS EXCEPT TO REMOVE DEAD AND BROKEN BRANCHES.
2. THIN BRANCHES AND FOLIAGE (NOT ALL BRANCH TIPS) BY 1/3, RETAINING NORMAL PLANT SHAPE (EXCEPT EVERGREEN).
3. REMOVE BURLAP FROM THE TOP 2/3 OF BALL, OR WITH CONTAINER PLANTS REMOVE POTS AND SPLIT BALLS AS SPECIFIED.

# SHRUB PLANTING - BED

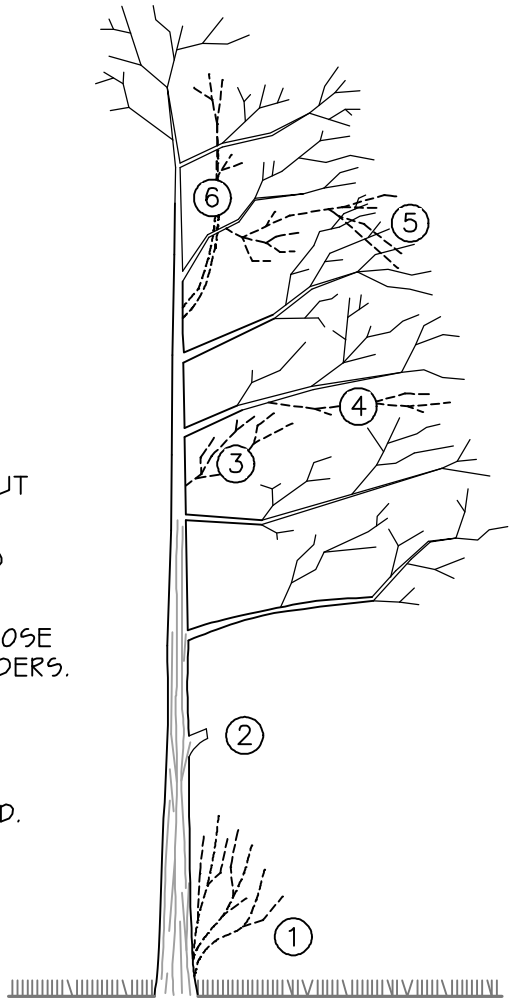
NOT TO SCALE

SHRUB PLANTING DETAIL.gxd

CITY of PETOSKEY

1. REMOVE SUCKER SHOOTS AT THE BASE OF THE TREE.
2. MAKE CLEAN CUTS ON OLD STUBS, IF PRESENT.
3. REMOVE ENTIRE SUPPLY OF TWIGS AND BUDS ON TRUNK.
4. REMOVE LOWER BRANCH WHERE AN OVERLYING BRANCH OCCUPIES ABOUT THE SAME AREA.
5. SHAPE TREE BY REMOVING INJURED AND MIS-SHAPEN BRANCHES.
6. REMOVE CROSS BRANCHES AND THOSE DEVELOPING INTO SECONDARY LEADERS.

NOTE:
BRANCHES IN DASHED LINES INDICATE THOSE TO BE REMOVED.

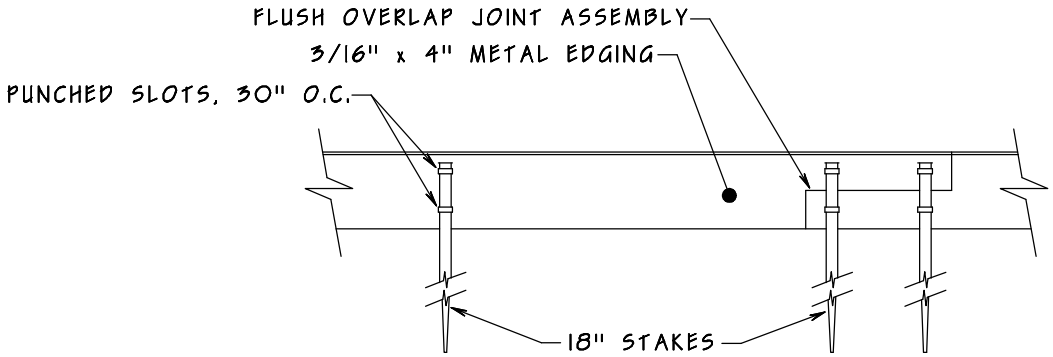



# TREE PRUNING

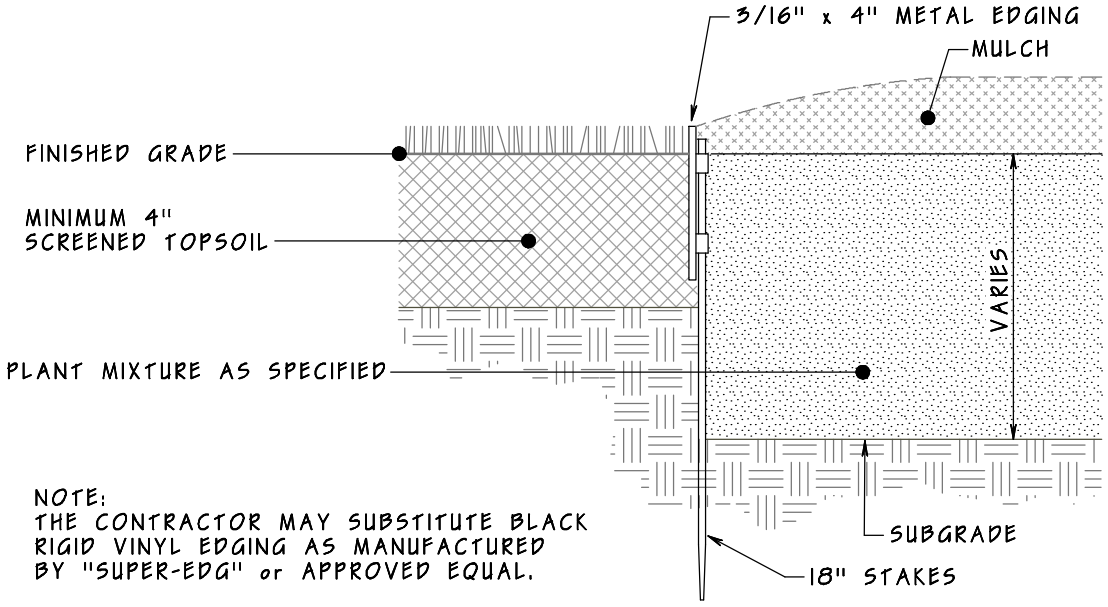
NOT TO SCALE

TREE PRUNING.gxd

CITY of PETOSKEY




ELEVATION




CROSS-SECTION

# LANDSCAPE EDGING

NOT TO SCALE

LANDSCAPE EDGING.gxd

# LAWN RESTORATION

# LAWN RESTORATION

All City projects, as well as all work on City land and in the street right-of-way, will comply with the following requirements unless directed otherwise by a specific project demand:

Finish Grading:

Sub Grade Preparation: Maintain rough grades in the areas to be top soiled in a uniform condition so as to prevent future depressions. Prior to placing topsoil, repair disturbances to previously graded areas; remove surplus sub grade material associated with any landscape construction. Scarify areas to a depth of 12 inches prior to topsoil placement. Scarifications to have a maximum 2-foot separation and be cut in two directions, one perpendicular to the other.

Placing Topsoil: Four inches (4”) of screened topsoil is to be uniformly distributed on lawn areas in quantity sufficient to provide full depth of soil after compaction and finish grading indicated on the drawings. Topsoil shall be spread, cultivated and lightly compacted to prevent future settlement, dragged and graded to finished grade.

Topsoil, when placed, shall be dry enough so as not to puddle or bond. Do not place topsoil when the sub grade is frozen, excessively wet, extremely dry or in a condition otherwise detrimental to proper grading or lawn operation.

Finished Grades: Finished grades shall slope to drain, be free of depressions or other irregularities after thorough settlement and compaction of soil, and shall be uniform in slope between grading controls and elevations indicated.

Finished grade for lawn areas shall meet existing grades at contract limits and be level with top of curbs and walk paving.

Lawn Installation:

Grade Preparation: Immediately before seeding scarify, loosen, float and drag topsoil as necessary to bring it to the proper condition. Remove foreign matter larger than one-quarter inch (1/4”) in diameter.

If the prepared grade is eroded or compacted by rainfall prior to fertilizing, rework the surface as specified.

Top Soil:

Topsoil shall be furnished as specified below:

A fertile, friable, sandy, loamy surface soil free of stones, stumps, root, trash, debris, and other materials deleterious to plant growth.

The pH range shall be 6.5 to 8.4. Topsoil that does not meet this pH range will be amended by the addition of pH adjusters approved by the RPR.

Nutrient data to be given in parts per million (ppm) parts dry soil.

Organic content shall not be less than three percent and not greater than eight percent determined by loss through ignition.

Gradation:

| Sieve Designation | Percent Passing |
|---|---|
| 1" screen | 100 |
| ¼" screen | 100 |
| No. 10 USS mesh sieve | 95-100 |
| No. 140 USS | 15-35 |

Seeding:

Roadside or Class A: Seed mixture per MDOT Table 917-1 of 2012 Standard Specification for Construction, shall be furnished and sown at a minimum rate of 3 pounds per 1,000 square feet by drilling, or covered lightly dragging the surface with a seed float or cultipacker. Roadside mixture shall be furnished unless Class A is noted on the drawings. All seed mix must be pre-approved by the City.

Seeded areas shall receive a proper mulch of chopped straw, chopped hay, jute, matting, woven kraft paper yarns or wood cellulous. An asphalt emulsion or latex based adhesive shall be applied to the mulch. All mulching shall be pre-approved by the City.

Hydro Seeding is an acceptable method of application of fertilizer, seed, mulch and mulch adhesive. The application rates and material requirements for hydro seeding shall be the same as for mechanical application.

Fertilizer:

Fertilizer shall be a complete fertilizer, part of the elements of which are derived from organic sources. The percentages by weight shall be 15-30-15 or as determined by soil tests.

Fertilizer shall be delivered in the manufacturer's original unopened containers bearing the manufacturer's guaranteed analysis. Store in a dry location.

Fertilizing uniformly distribute fertilizer by mechanical means at the rate determined by soil tests, or at a rate of 3 lbs. per 100 square feet.

Work fertilizer into the top 3 inches of soil. Cultivating equipment shall be set so that the fertilizer will not penetrate into the soil more than 3 inches. Do not apply fertilizer when there is a possibility of rain before lawn areas can be seeded or sodded.

Sodding:

Correct all inequalities and soft spots before the sod is laid. Lay sod solidly with joints staggered so that no voids occur between the strips. Weed roots, if any, must be removed before the sod is laid. Tamp or roll sod immediately after it is laid. The finished surface shall be true to grade and shall be smooth, even and equally firm at all points.

Keep sodded areas moist for the maintenance period. After the sod is installed, re-sod all areas which have browned out or fail to show a uniform stand of grass.

# BUILDING DEMOLITION

# BUILDING DEMOLITION

- All Building Demolition requires that the contractor provide the Department of Public Works a drawing, with witnesses showing the point where the water service(s) and sanitary sewer lateral(s) were abandoned.
- Water services are to be shut off and removed at the water main. The contactor is responsible for all repairs to the right-of-way, including paving, sidewalks, concrete curb and gutter, lawn restoration, etc.
- Sanitary sewer laterals are to be marked at the termination point with a 4" x 4" wolmanized timber. A 1/2" piece of rebar must also mark the end of the sewer lateral. The sewer lateral is also to be bulk headed with bricks and mortar (see "Bulk Head Detail" in the sewer details of these Construction Standards).
- Right-of- Way Permit Application is also required for this work.
- A Demolition Permit must be acquired from the Emmet County Building Department.