

RESOLUTION 2022-2

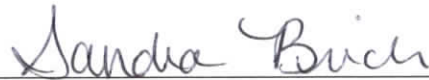
UTILITY DEVELOPMENT STANDARDS

WHEREAS, Town Council desires to have uniform utility standards for the Town of Fort Branch, Indiana;

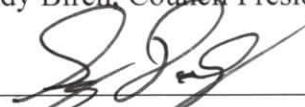
WHEREAS, Town Manager and operators have reviewed and approved the utility standards:

NOW THEREFORE LET IT BE ORDAINED THAT:

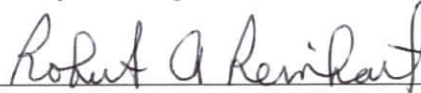
1. Town Council of the Town of Fort Branch, Indiana, hereby adopts and ratifies the Utility Development Standards attached hereto and incorporated herein marked Exhibit "A"



Sandy Birch, Council President

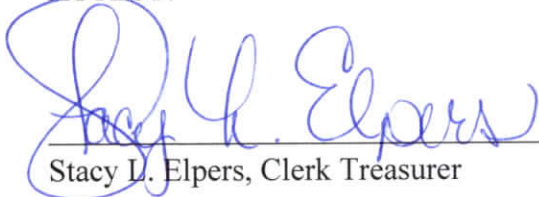


Scotty DeLong, Council Member



Bob Reinhart, Council Member

ATTEST:



Stacy L. Elpers, Clerk Treasurer



RESOLUTION 2022-2  
UTILITY DEVELOPMENT STANDARDS

**WHEREAS.** Town Council desires to have uniform utility standards for the Town of Fort Branch, Indiana;

**WHEREAS,** Town Superintendent's have reviewed and approved the utility standards:

NOW THEREFORE LET IT BE ORDAINED THAT:

1. Town Council of the Town of Fort Branch, Indiana, hereby adopts and ratifies the Utility Development Standards attached hereto and incorporated herein marked Exhibit "A".

TOWN COUNCIL OF FORT BRANCH, INDIANA

\_\_\_\_\_  
SANDY BIRCH

\_\_\_\_\_  
SCOTT DeLONG

\_\_\_\_\_  
BOB REINHART

(ATTEST)

\_\_\_\_\_  
STACY ELPERS, CLERK,

**Town of Fort Branch**  
**WATER, SANITARY SEWER, STORM AND STREET UTILITIES**  
**STANDARDS AND SPECIFICATIONS**

The Town of Fort Branch, Indiana  
801 E. Mulberry Street  
PO Box 40  
Fort Branch, Indiana 47648  
Phone & Fax: (812) 753-3824

TOWN COUNCIL  
Sandra Birch, President

CLERK-TREASURER  
Stacy Elpers

TOWN ATTORNEY  
Jim McDonald

TOWN MANAGER  
Randy Wheaton

TOWN ENGINEER  
Eric M. Smith, P.E.  
HWC Engineering

Adopted: XXXXXX

## **Chapter One: General Construction Specifications**

### **1.1. GENERAL INFORMATION**

The procedures included in this manual are intended to be a guide for property owners and developers preparing to construct/alter buildings or develop property within the Town of Fort Branch, or adjacent to public right-of-way or connect to public utilities. It is not intended to be a comprehensive list of all the requirements for development, but a summary of the steps to be taken to obtain approvals for building permits subdivision or development plans.

Please contact the Town of Fort Branch with any questions or suggestions regarding the information included in this manual:

CONTACT: Randy Wheaton, Town Manager

PHONE & FAX: (812) 753-3824

CELL: (812) 779-4992

LOCATION: Town Hall, 801 E. Mulberry St, PO Box 40, Fort Branch, IN 47648

OFFICE HOURS: 8:00 AM to 4:00 PM, Monday thru Friday

#### **1.1A Related Documents**

##### **A. Town of Fort Branch Subdivision Policy (Appendix I)**

All requirements of the current Subdivision Policy of the Town of Fort Branch as referenced in Ordinance 1991-1 or as updated/amended shall be in full effect and complimentary to these development standards. Any conflict between the two documents shall be resolved by the stricter of the two requirements. The current Subdivision Policy document is included here in as Appendix I.

##### **B. Utility Rate Ordinances**

The current rate ordinances for the Town's Water, Wastewater and Storm Water utilities are provided in Appendix J. All developers shall refer to each respective ordinance or future amendments or replacement ordinances for rates and charges for monthly usage fees, connection fees and other associated costs as applicable.

### **1.2. Permit Requirements**

Before any excavation or construction may take place within the public right-of-way (street, alley, tree-row, sidewalk, driveway approaches), an application must be made in writing to the Town of Fort Branch on the appropriate permitting form (see APPENDIX A.2 – RIGHT-OF-WAY USE/EXCAVATION PERMIT APPLICATION) in this manual.

Sketches of the proposed work shall be furnished with the application as needed. In the event of an emergency, notification will be given to the Town of Fort Branch at the time repair crews are dispatched. If work is required outside business hours, the Town of Fort Branch is to be contacted the following business day at 8:00 A.M. Permits must be kept on-site when right of way work is being performed. If permitting is not on site, work will be stopped and violators will be subject to fines and license suspension. Right-of-way permits will be open for a period of 90 days from the time of purchase. All right-of-way permits shall be activated within this 90-day period by contacting the Town of Fort Branch. Once the permit is activated, the permit owner will have a period of five (5) working days to excavate and restore area as specified. Extensions may be applied for by contacting the Town of Fort Branch. If a permit is not activated within 90 days after purchase, the permit is void. If a road closure is required a request for road closure shall be submitted on the appropriate permitting form (see APPENDIX B – APPLICATION TO CLOSE/OBSTRUCT ANY STREET/SIDEWALK) in writing to the Town of Fort Branch at least 10 days prior to the proposed closing date.

### **1.3. Demolition Permit Requirements**

If any wrecking or demolition work is to be done, a Demolition Permit (see APPENDIX F – DEMOLITION PERMIT) needs to be signed by the title holder of the property, and obtained by either the property owner, general contractor, or wrecking contractor.

### **1.4. Bond Requirements**

Each person or entity to perform work within a Town right-of-way must file a performance bond as follows:

- A. For an individual, partnership, association or corporation, other than a public utility, a cash bond in the amount of \$500 shall be deposited with the Clerk-Treasurer;
- B. For a public utility, a performance bond from a reputable bonding company in the amount of \$10,000 shall be supplied to the Clerk-Treasurer with the application, which shall be in full force and effect for 1 year and renewable annually;
- C. Any cash bond filed shall be returned to the applicant following reclamation of the street in compliance with these standards and to the satisfaction of the Street Department Supervisor. If reclamation is not so completed, the Clerk-Treasurer shall retain the cash bonds; and

- D. If a public utility which obtained a street cut permit does not perform proper reclamation of the street, the Town may seek relief from that utility's bonding company and perform the necessary repairs and reclamation itself.

Each person or entity applying to work within a Town right-of-way shall file with the Town of Fort Branch proof of liability insurance in the minimum amount of one million dollars (\$1,000,000) for bodily injury or death and one hundred thousand dollars (\$100,000) for property damage. Such insurance shall provide that the Town is additionally insured under its provisions. The Town may waive or alter the requirement at their discretion.

### **1.5. Right-of-way Work Completion**

Once right-of-way work is complete the permit holder shall be responsible for the work to meet or exceed the Town General Construction Specifications for a period of three years. If the work is found to be in noncompliance, the permit holder shall be contacted by the Town of Fort Branch and will be given a specified time limit to repair the defects; failure to comply will result in penalties as equal to repair the defects by others and possible denial of future permits to permit holder and/or contractor.

### **1.6. Time Restrictions on Work Hours**

Adjacent properties shall have access to the abutting street between the hours of 6:00 PM and 8:00 AM unless notice has been given to the property owner and occupant at least 5 days prior to work.

### **1.7. Traffic Control**

It is the sole responsibility of the contractor to make sure that barricades are placed at the excavation site when not in attendance or where the safety of the public is of concern while work is proceeding. Barricades shall meet the requirements of the latest version of the *Indiana Manual on Uniform Traffic Control Devices*. Contractor shall provide lighting of barricades on construction sites.

### **1.8. Street Repair/Street Patching**

#### **A. General**

Finished elevation of repair should provide a smooth driving surface matching the existing grades unless directed otherwise by the Town of Fort Branch. In general, the minimum size of street repair/patching will be a 4' X 4' section; smaller sections will

require the approval of the Town of Fort Branch. No more than 200 linear feet of trench top shall be open at one time.

## **B. Pavement Excavation**

All openings shall be saw-cut with straight, neat, vertical edges and square corners. Saw cuts shall be made to a minimum of 2" depth. The cut shall be completed with a mechanical hammer and chisel starting from the center of the cut. When cutting asphalt over brick or concrete the saw cut shall be the full depth of the asphalt.

Openings shall be made so that there is no section of adjacent existing pavement with a dimension of less than 24 inches unless authorized by the Town of Fort Branch. Patches shall have a minimum width of no less than the depth of excavation unless a trench box is utilized. Cuts in concrete streets shall be taken out to an adjacent joint. Any variation shall require approval from the Town of Fort Branch.

Methods used in removal of pavement material shall not cause damage to adjacent pavement.

Where existing pavement contains reinforcing steel, the steel shall not be cut with pneumatic hammers, but shall be cut by sawing or torching.

## **C. Backfilling**

Backfilling shall be done in accordance with the current Indiana Department of Transportation Standard Specifications. The excavation shall be filled with flowable mortar or "B" borrow to a depth no more than 8" below the top surface of existing pavement. The fill shall be free from large or frozen lumps, wood and other extraneous material. It shall consist of suitable sand, crushed stone, or other approved material (pea gravel is no longer an approved backfill material). The fill material shall be placed in layers not to exceed twelve (12) inches, loose measurement, and each layer compacted thoroughly by approved mechanical means. Each lift shall be compacted to at least ninety five percent (95%) of its maximum dry density.

## **D. Repair of Concrete Pavement**

Concrete finish shall be perpendicular to the centerline of the road, with a rough broom finish.

Depth required is equal to the existing depth of pavement or 8" poured monolithically, whichever is greater, over a minimum of 6" compacted aggregate #53 or #73 stone or flowable mortar.

If opening is to be more than 12 feet in length and no original joints are provided, then contraction joints must be constructed so that joint spacing is not greater than 12 feet.

Concrete streets will be doweled to existing concrete with 5/8" diameter x 11" steel stock with cut threads and expansion types sleeve. Anchor bolts shall be placed along all sides of the removed area and spaced 3 feet on center on traverse side and 5 feet on center on the longitudinal side with a minimum of 2 anchor bolts on each side.

#### **E. Repair of Brick Pavement**

Brick streets will be repaired and restored to original condition using brick for riding surface.

Brick shall be placed over minimum 8" concrete base, placed over the compacted granular fill; or brick shall be placed over flowable fill (with the depth of flowable fill equal to depth of excavation).

**Brick Removal:** All bricks may become property of The Town of Fort Branch at the direction of the Town of Fort Branch.

#### **F. Repair of Asphalt Pavement**

Asphalt Surfaces for Cuts 20' X 20' and over:

- i. Minimum thickness of 1.5" (9.5 mm) HMA surface or match greater existing pavement thickness and materials, placed and compacted in accordance with latest INDOT Standard Specifications.
- ii. 4.5" (minimum) (25 mm) HMA base or 6" class A concrete base required under asphalt surface.
- iii. Tack coat must be used between asphalt surface and concrete base, as well as the sides of existing pavement surrounding the cut.

Asphalt Surfaces for Cuts under 20' X 20':



- i. Use specifications for Repair of Concrete Pavement (Section 1.7-D). If street has been paved within the last three years, use specifications for Asphalt Surfaces for Cuts 20' X 20' and over (Section 1.7-F1).
- ii. Concrete pavement that has been overlaid with asphalt shall be considered as asphalt pavement for repair.

### **G. Repair of Aggregate Pavement**

Compacted aggregate #53 limestone shall be placed where existing alley roadbed is white rock or other stone material. The depth of the compacted material shall be minimum 6 inches.

### **H. Temporary Street Repair/Patch**

Between April 2 and October 31, street may be temporarily repaired with approval by the Street Department. Existing pavement shall be initially saw cut to a 5" minimum depth to obtain straight lines perpendicular from the curb edge and neat edge for paving. Edges of broken pavement shall be squared off and trimmed to neat straight lines. Temporary pavement material is to be 6-1/2" thick hot mix asphalt, placed in maximum 4" lifts to be compacted with a mechanical tamp. The use of steel street plates must be requested in written form and accompanied with a repair schedule.

Between November 1 and April 1, when permanent patch cannot be completed within 10 working days, if hot mix asphalt is not available, use of an INDOT approved "high performance cold patch" or equal may be used. Existing pavement shall be initially saw cut to a 5" minimum depth to obtain straight lines perpendicular from the curb edge and neat edge for paving. Edges of broken pavement shall be squared off and trimmed to neat straight lines. Temporary pavement material is to be 6-1/2" thick high performance cold patch mixture #1 or #2, placed in maximum 4" lifts to be compacted with a mechanical tamp. The use of steel street plate must be requested in written form and accompanied with a repair schedule. Final repair shall be made by removing the temporary patch and repairing as per material requirements. Final repairs shall be made by May 15.

## **1.9. Material Specifications**

### **A. Concrete Specifications**

Concrete used shall be 7 bag mix, class "C" with 5-8% entrained air and a slump no more than 4 inches. Concrete mix shall provide compressive strength of 4,000 PSI after

28 days. Concrete shall be placed with uniform depth. Concrete shall meet any and all applicable current INDOT specifications for placement of Portland Cement Concrete. As soon as newly placed concrete acquires an initial set, an approved method of curing shall be initiated which will not discolor or disfigure the pavement. Curing methods approved include white membrane as specified in INDOT sections. Concrete shall not be left exposed for more than thirty (30) minutes during the curing period. When white membrane curing is used, after the concrete has been finished, the entire surface of the concrete shall be cured by mechanically applying thereon a uniform coating of the curing compound. The compound shall be type 2, in accordance with AASHTO M-148 white pigmented compound. The compound shall be applied in a continuous uniform film by means of a spraying or distributing device no less than one gallon per 150 square feet of surface. Concrete shall be closed to traffic for a period of 48 hours when the temperature is above 50 degrees F and for a period of 72 hours when the temperature is below 50 degree F. Concrete placements at temperatures below 35 degrees F, will be permitted only at the approval of the Town. Transverse and longitudinal joints and outer edges of the pavement which are part of the replaced concrete shall be edged with an edging tool having a radius 1/4".

#### **B. Brick**

Contact the Town for information on brick paving material.

#### **C. Asphalt**

Asphalt material shall be hot mix asphalt in accordance with INDOT Specifications, Section 400 - asphalt pavements.

#### **D. Aggregate**

Compacted Aggregate #53 limestone shall be used in accordance with latest INDOT Specifications, Section 300 and 900.

### **1.10. Sidewalks, Curbing, Ramps, and Driveways**

#### **A. Sidewalks**

Sidewalks shall be placed so that the edge away from the street is on the street right-of-way line or shall be in alignment with existing adjacent sidewalk. Any variation from this guideline will require specific approval from the Town or his assigned agent. New sidewalks shall be five feet (5') wide, four inches (4") thick with medium broom finish. Concrete shall be well troweled to prevent spalling and other defects. Sidewalks shall

be installed with tooled construction joints, minimum, 1/3 depth of concrete, on 5' centers with an approved expansion joint to be installed every 50' and where new sidewalk abuts existing sidewalk, or other fixed objects, such as curbs, drainage structures, water meters, etc. Typical sidewalks are shown on Sheet 4 of Town of Fort Branch Typical Construction Guidelines and Details.

Sidewalks less than five feet (5') in width shall require approval of the Town. In no case may sidewalks placed within the public right-of-way have a width less than four feet (4'), in compliance with the Americans with Disabilities Act. In general, sidewalks to be replaced shall match the width of existing sidewalk. Sidewalks placed through driveway sections shall be 6" thick through the driveway section. Sidewalks placed adjacent to parking lots, or other large paved surfaces, shall have 6" curbing placed between the sidewalk and parking lot (except at entrances and exits) to prevent traffic flow onto the sidewalk and tree row areas. Sidewalks shall be replaced in whole sections. Under no circumstances will the replacement of a partial section be allowed.

## **B. Curbing**

New curbing will be monolithic combined curb and gutter as illustrated on Sheet 5 of Town of Fort Branch Typical Construction Guidelines and Details. Concrete shall have a light broom finish. When matching to existing, care must be taken to transition the last 2 linear feet of curbing to the existing conditions. Replacement of curb to connect to existing shall match existing type.

## **C. Curb Ramps**

Curb ramps will be installed per Indiana Department of Transportation Specifications at repair locations. Acceptable ramps are shown on Sheets 4 and 5 of Town of Fort Branch Typical Construction Guidelines and Details. Ramps should have a rough broom finish and remain unpainted. All curb ramps shall meet or exceed current ADA standards. INDOT curb ramps Type B, E, and F shall not be used on new construction unless field conditions warrant their use.

## **D. Driveway Approaches**

### **DI. Residential Driveways**

- i. Residential driveways shall be concrete, and shall have the matching type of existing curbing (if any) with a 10' minimum to 20' maximum width. Driveway aprons shall be doweled to existing curb with #5 rebar, spaced 18 Inches on

center, when driveway is not placed monolithically with curbing. See Town of Fort Branch Typical Construction Guidelines and Details for more information.

- ii. The portion in the right-of-way, including where it is part of the sidewalk, shall be a minimum of 6" thick.
- iii. In areas where no curbing exists along the street, no curbing shall be placed in the radii (or wings) of the driveway within the public right-of-way.

#### **D2. Commercial and Industrial Driveways**

- i. Commercial driveways shall be concrete; the width shall be 12' to 15' for one-way traffic and 24' to 30' for two-way traffic. The Town shall be provided with site plans showing elevations and water drainage for two hundred feet (200') in all directions. The site plans should also detail all existing intersections located within one hundred feet (100') of the proposed drives. Entrances will not be allowed within 40' of the intersection. Driveway aprons shall be doweled to existing curb with #5 rebar, spaced 18 inches on center, when driveway is not placed monolithically with curbing.
- ii. The portion of the driveway in the public right-of-way, including the sidewalk section shall be a minimum 6" thick.
- iii. In areas where no curbing exists along the street, no curbing shall be placed in the radii (or wings) of the driveway section in the public right-of-way. This rule does not apply when curbing is placed along the street as part of the commercial or industrial development. Typical driveway layouts are provided in the Town of Fort Branch Typical Construction Guidelines and Details

#### **E. Utility Strip/Tree Row**

If trees are present, tree rows should be restored with a minimum four inches (4") of topsoil matching adjacent elevations, and should have seed and straw or sod as specified. A right-of-way permit will be obtained for tree work (planting, pruning, removal) within the public right-of-way. Once the tree has been removed, the stump shall either be removed or be ground a minimum of eight inches (8") below the surface grade. The disturbed area is to be filled with suitable topsoil.

### **1.11. New Roadway Construction**

Streets that are constructed with the intent to be adopted as town streets will be constructed with sidewalks, curbs, and drainage as specified herein and in accordance with the Town Code. Contractor shall submit plans and specifications of new roadway with typical cross sections for permit approval to the Town. A licensed surveyor or engineer must certify all plans. Typical cross sections can be found in the Town of Fort Branch Typical Construction Guidelines and Details. The Town shall review the plans and, if acceptable, send a notice of plan approval to the contractor. A representative from the Town shall be present for a roll test of subgrade material and during placement of the pavement. A 48-hour notice for inspection is required. Once the roadway has been placed, the contractor shall make a written request to the Town of Fort Branch for acceptance. The Town shall perform a final inspection of the roadway and provide a written acceptance or rejection with comments on defects. Upon approval, roadway will be accepted with 3-year maintenance warranty, excluding minor defects.

## **Chapter Two: Drainage and Stormwater Control**

### **2.1. Overview**

#### **A. Purpose**

The purpose of this chapter is to ensure the proper design and construction of stormwater control devices, so as to minimize the impact of development on neighboring properties and public sewers, and to provide for the public health and safety. One property owner's right to develop his or her land does not supersede adjacent owners' rights to maintain their property in its current state. Stormwater shall be managed to prevent loss or damage of property due to increased storm water runoff from a proposed development. The scope of the design shall consider both property within the development and property adjacent to and downstream of the development.

#### **B. Use of Storm Sewers**

Only a portion of the Town of Fort Branch is currently served by dedicated storm sewers. In areas where storm sewer does exist, use of the storm sewer will be allowed by a direct connection of the proposed line into the existing system, provided there is adequate capacity. Connection to existing sewer will be by the standards set out for connection to storm sewers as stated in the Town of Fort Branch Typical Construction Guidelines and Details. In all other areas, stormwater control will be by a retention or detention system. Under no circumstances will sanitary sewers be utilized for additional collection of stormwater. All stormwater will be retained on site except where approved discharge points exist.

#### **C. Compliance with Town of Fort Branch Drainage**

“Development” shall be defined as any man-made change to improved or unimproved real estate a quarter-acre or larger, including, but not limited to:

- i. Construction, reconstruction, or placement of a building or any addition to an existing building that adds over 1/4 acre or more of impermeable surface (i.e.: rooftop, parking lot, driveway, etc.);
- ii. All subdivisions requiring approval under the current Town of Fort Branch Subdivision Policy;
- iii. Installing utilities, construction or reconstruction of roads, or similar projects;

- iv. Construction of flood control structures such as levees, dikes, dams, channel improvements, etc.;
- v. Mining, dredging, filling, grading, excavation;
- vi. Construction and/or reconstruction of bridges or culverts;
- vii. Any other activity that might change the direction, height, or velocity of flood or surface waters.

"Development" does not include activities such as the maintenance of existing buildings and facilities such as painting or re-roofing; resurfacing roads, or gardening, plowing, and similar agricultural practices. In addition, "Development" does not include the reconstruction or maintenance of regulated drains or replacement of existing stream crossings by the Town of Fort Branch.

## **2.2. Submittals**

Before any construction may commence on any property other than a single-family residence, the following must be submitted to the Town:

### **A. Areas impacting less than 1/4 acre:**

Developer shall submit to the Town a site plan showing pre-developed area versus post-developed area.

### **B. Areas impacting greater than 1/4 acre:**

If the development adds impermeable area greater than 1/4 acre (or any of the items listed in 2.1 Item C are met), the Developer shall submit the required information as documented herein to the Town.

### **C. Impact on Adjacent Properties**

All stormwater on or flowing from the site after development must be detained. Exceptions will only be considered when unusual circumstances require variance from these standards or where an approved discharge point exists. In these cases, sufficient evidence must be submitted to the Town, demonstrating that a discharge from the site is necessary, and that the discharge will not have a negative effect on adjacent property during or after any rainfall.

## 2.3. Stormwater Hydrology

Runoff quantities shall be computed for the area of the parcel under development plus the area of the watershed flowing into or through the parcel under development. The calculation shall be done based on pre-development conditions and again with the proposed post-development conditions. The quantity of runoff which is generated as the result of a given rainfall intensity shall be calculated as follows:

### A. Areas Up to and Including 5 Acres

For areas up to and including 5 acres, the Rational Method may be used to determine the peak discharge rate.

$$Q = CiA$$

Where:

$C$  = Runoff coefficient, representing the characteristics of the drainage area and defined as the ratio of runoff to rainfall

$i$  = Average intensity of rainfall for a duration equal to the time of concentration ( $t_c$ ) for a selected rainfall frequency.

$A$  = Tributary drainage area in acres

Tables 1 and 2 on pages 16 and 17 respectively provide runoff coefficient “ $C$ ” values for different types of surface and soil characteristics. The composite “ $C$ ” value used for a given drainage area with various surface types shall be the weighted average for the total area calculated from a breakdown of the individual areas having different surface types. Runoff coefficients and inlet times for different land use classifications are detailed in Table 3. Tables 1 through 3 are provided on pages 16-18.

The time of concentration ( $t_c$ ) shall be determined as outlined in the U.S. Department of Agriculture (USDA) - NRCS TR-55 Manual. In urban or developed areas, the methodology to be used shall be the sum of the inlet time and flow time in the stormwater facility from the most remote part of the drainage area to the point under consideration. The flow time in the storm sewers may be estimated by the distance in feet divided by velocity of flow in feet per second. The velocity shall be determined by the Manning's Equation. A minimum time-of-concentration of 5 minutes shall be used for all calculations. In cases where a time-of-concentration is assumed without supported calculations, 5 minutes - must be used as the design time-of-concentration.



## **B. Areas Over 5 Acres**

For areas greater than 5 acres, the runoff rate and contributing drainage areas shall be determined by a computer model that can generate hydrographs based on the NRCS TR-55 time of concentration and curve number calculation methodologies and the 24-hour Huff Rainfall Distributions. 24-hour Rainfall depths for various frequencies shall be taken from NOAA online Precipitation Frequency Data Server

[http://hdsc.nws.noaa.gov/hdsc/pfds/pfds\\_map\\_cont.html?bkmrk=in](http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=in). A variance may be requested for the submittal of non-computal bared drainage computations.

## **C. Areas Over One Square Mile**

For the design of any major conveyance system, defined as any drainage system carrying runoff from an area of one or more square miles, shall be designed in accordance with Indiana Department of Natural Resources standards.

Table 1

Urban Runoff Coefficients	
Type of Surface	Runoff Coefficient "C"
<b>Hard Surfaces</b>	
Asphalt	0.82
Concrete	0.85
Roof	0.85
Gravel/Stone	0.50
<b>Lawns (Sandy)</b>	
Flat (0-2% Slope)	0.07
Rolling (2-7% Slope)	0.12
Steep (Greater than 7% Slope)	0.17
<b>Lawns (Clay)</b>	
Flat (0-2% Slope)	0.16
Rolling (2-7% Slope)	0.21
Steep (Greater than 7% Slope)	0.30

Source: HEPICCC Stormwater Drainage Manual, July 1995

Table 2

<b>Rural Runoff Coefficients</b>	
<b>Type of Surface</b>	<b>Runoff Coefficient "C"</b>
<b>Woodland (Sandy)</b>	
Flat (0-5% Slope)	0.10
Rolling (5-10% Slope)	0.25
Steep (Greater than 10% Slope)	0.30
<b>Woodland (Clay)</b>	
Flat (0-5% Slope)	0.30
Rolling (5-10% Slope)	0.35
Steep (Greater than 10% Slope)	0.50
<b>Pasture (Sandy)</b>	
Flat (0-5% Slope)	0.10
Rolling (5-10% Slope)	0.16
Steep (Greater than 10% Slope)	0.22
<b>Pasture (Clay)</b>	
Flat (0-5% Slope)	0.30
Rolling (5-10% Slope)	0.36
Steep (Greater than 10% Slope)	0.42
<b>Cultivated (Sandy)</b>	
Flat (0-5% Slope)	0.30
Rolling (5-10% Slope)	0.40
Steep (Greater than 10% Slope)	0.52
<b>Cultivated (Clay)</b>	
Flat (0-5% Slope)	0.50
Rolling (5-10% Slope)	0.60
Steep (Greater than 10% Slope)	0.72

Source: HERPCC Stormwater Drainage Manual, July 1995

Table 3

<b>Runoff Coefficients “C” by Land Use and Typical Inlet Times</b>				
Land Use	Runoff Coefficients			Inlet Times (Minutes)
	Flat Slope:0-2%	Rolling Slope:2%-7%	Steep Slope:>7%	
Commercial	0.75	0.83	0.91	5
Commercial (neighborhood)	0.54	0.60	0.66	5-10
Industrial	0.63	0.70	0.77	
Garden Apartments	0.54	0.60	0.66	
Churches	0.54	0.60	0.66	
Schools	0.31	0.35	0.39	10-15
Semi Detached Residential	0.45	0.50	0.55	
Detached Residential	0.40	0.45	0.50	
Quarter Acre Lots	0.36	0.40	0.44	
Half Acre Lots	0.31	0.35	0.39	
Parkland	0.18	0.20	0.22	To be Computed

Source: HERPICC Stormwater Drainage Manual, July 1995

## **2.4. Storm Sewer Design**

All storm sewers, whether private or public, and whether constructed on private or public property shall conform to the design standards and other requirements contained herein.

### **A. Design Storm Frequencies**

All storm sewers, inlets, catch basins and street gutters shall accommodate a minimum peak runoff from the 10-year storm event. For Rational Method analysis, the duration shall be equal to the time of concentration for the drainage area. In computer based analysis, the duration is as noted in the applicable methodology associated with the computer program.

Culverts shall be capable of accommodating peak runoff from the 50-year frequency storm of critical duration when crossing under a road which is part of the INDOT Urban or Rural Functional Classification System or is classified as primary arterial, arterial, and/or collectors by the Town of Fort Branch or provides the only access to and from any portion of any commercial or residential developments.

For portions of the system considered minor drainage systems, the allowable spread of water on Collector Streets is limited to maintaining two clear 10-foot moving lanes of traffic. One lane is to be maintained on Local Roads, while other access lanes (such as a subdivision cul-de-sac) can have a water spread equal to one-half of their total width. An emergency overflow path from sag inlets to an overflow channel or basin shall be provided at sag inlets so that the maximum depth of water that might be ponded in the street sag shall not exceed 7 inches.

### **B. Minimum size for Storm Sewers**

The minimum pipe size for all storm sewers shall be twelve (12) inches inside diameter. When the minimum 12-inch diameter pipe will not limit the rate of release to the required amount, the rate of release for detention storage shall be controlled by an orifice plate or other device.

### **C. Pipe Cover and Grade**

Sewer grade shall be such that, in general, a minimum of 2.0 feet of cover is maintained over the top of the pipe. If the pipe is to be placed under pavement, then the minimum pipe cover shall be 2.5 feet from top of pavement to top of pipe. Pipe cover less than the minimum may be allowed per manufacturer's specifications or recommendations, and used only with prior written approval from the Town.

Uniform slopes shall be maintained between inlets, manholes and inlets to manholes. Final grade shall be set with full consideration of the capacity required, sedimentation problems, and other design parameters. Minimum and maximum allowable slopes shall be those capable of producing velocities of between 2.5 and 10 feet per second, respectively, when the sewer is flowing full.

#### **D. Storm Structures**

The horizontal alignment of the sewer pipe shall be straight between manholes, inlets, and similar structures.

Manholes shall be installed to provide access to continuous underground storm sewers for the purpose of inspection and maintenance. Manholes shall be provided at locations where two or more storm sewers converge, at pipe size changes, at changes in horizontal alignment, and where a change in storm sewer profile grade occurs. The maximum distance between storm sewer manholes shall be as shown in the below table.

Size of Pipe	Max. Distance
12 in. thru 48 in.	400 ft
48 inches and larger	600 ft

Inlets, or other collecting drainage structures, shall be designed and utilized to collect surface water through grated openings and convey it into storm sewers, channels or culverts.

The inlet grate opening provided shall be adequate to pass the design 10-year flow with 50% of the sag inlet areas clogged. An overload channel from sag inlets to the overflow channel or basin shall be provided at sag inlets so that the maximum depth of water that is ponded in the street sag shall not exceed 7 inches.

Inlet design and spacing shall be in accordance with the INDOT Design Manual, or other approved procedures.

### **2.5. Stormwater Detention Design**

The following shall govern the design of any improvement with respect to the detention of stormwater runoff. Basins shall be constructed to temporarily detain the stormwater runoff that exceeds the maximum peak release rate authorized by these Standards. The required volume of storage provided in these basins, together with such storage as may be authorized in other on-site facilities, shall be sufficient to control excess runoff from the 10-year or 100-year storm as explained below. Also, basins shall be constructed to provide adequate capacity to allow for a water quality collection volume as described in IDEM's *Indiana Storm Water Quality Manual*.

#### **A. Management of Off-Site Runoff**

Runoff from all upstream tributary areas (off-site land areas) may be bypassed around the detention/retention facility without attenuation. Such runoff may also be routed through the detention/retention facility

#### **B. Release Rates**

A proposed development may release up to the 2-year predevelopment flows for the 10-year post development storm. Also, a development may release up to the 10-year predevelopment conditions for the 100-year storm event. Modeling or justification for these allowable releases and proposed detention volumes must be provided to the Town for review.

#### **C. General Detention Basin Design Requirements**

- i. The detention facility shall be designed in such a manner that a minimum of 90% of the maximum volume of water stored and subsequently released at the design release rate shall not result in a storage duration in excess of 48 hours from the start of the storm unless additional storms occur within the period. In other words, the design shall ensure that a minimum 90% of the original detention capacity is restored within 48 hours from the start of the design 100-year storm.
- ii. The 100-year elevation of stormwater detention facilities shall be separated by not less than 25 feet from any building or structure to be occupied. The Lowest Adjacent Grade (including walkout basement floor elevation) for all residential, commercial, or industrial buildings shall be set a minimum of 2 feet above the 100-year pond elevation or 2 feet above the emergency overflow weir elevation, whichever is higher. In addition to the Lowest Adjacent Grade requirements, any basement floor must be at least a foot above the normal water level of any wet-bottom pond or the local groundwater table, whichever is higher, to avoid the overuse of sump pumps and frequent flooding of the basement.

- iii. No detention facility or other water storage area, permanent or temporary, shall be constructed under or within twenty (20) feet of any pole or high voltage electric line. Likewise, poles or high voltage electric lines shall not be placed within twenty (20) feet of any detention facility or other water storage area.
- iv. All stormwater detention facilities shall be separated from any road right of- way by no less than 50 feet, measured from the top of bank or the 100- year pool if no defined top of bank is present, using the most restrictive right-of-way possible. Use of guard rails, berms, or other structural measures may be considered in lieu of the above-noted setbacks. All detention or retention facilities must be located within a designated easement.
- v. Slopes no steeper than 3 horizontal to 1 vertical (3:1) for safety, erosion control, stability, and ease of maintenance shall be permitted. Longitudinal slopes of 2% must be maintained along the basin bottom unless underdrains are provided, in which case a minimum 1% longitudinal slope may be used. A maintenance strip providing a maximum slope of 10% must be provided to allow access to the bottom of the detention/retention facility. Pertaining to a dry detention facility, if ponding water depth shall exceed 4 feet, a 5 foot bench shall be used to provide a grade break for safety in the pond embankment.
- vi. Safety screens having a maximum opening of four (4) to six (6) inches shall be provided for any pipe or opening end sections 12-inch in diameter or larger.
- vii. Prior to final acceptance, danger signs shall be mounted at appropriate locations to warn of deep water, possible flood conditions during storm periods, and other dangers that exist. The locations of the noted danger signs shall be shown on the plans.
- viii. Use of fences around all detention ponds is strongly encouraged to assure safety. Unless specifically required by the Town, the decision to use fencing around detention ponds are left to the owner or the developer. Recommendations contained within this document do not relieve the applicant and owner/developer from the responsibility of taking all necessary steps to ensure public safety with regards to such facilities.
- ix. Outlet control structures shall be designed to operate as simply as possible and shall require little or no maintenance and/or attention for proper operation. For maintenance purposes, the outlet from the pond shall be a minimum of 0.5 foot above the normal water level of the receiving water body. Outlets shall limit



discharges into existing or planned downstream channels or conduits so as not to exceed the predetermined maximum authorized peak flow rate.

- x. Emergency overflow facilities such as a weir or spillway shall be provided for the release of exceptional storm runoff or in emergency conditions should the normal discharge devices become totally or partially inoperative. The overflow facility shall be of such design that its operation is automatic and does not require manual attention.

Emergency overflow facilities shall be designed to handle one and one quarter (1.25) times the peak discharged runoff resulting from the 100-year design storm event from the entire contributing watershed draining to the detention/retention facility, assuming post-development conditions on-site and existing conditions off-site. Weir design should assume all outlet structures are clogged. The top of pond should be established at a minimum of 1 foot above the maximum water surface elevation required for emergency overflows to pass through the proposed emergency overflow facility.

- xi. Grass or other suitable vegetative cover shall be provided along the banks of the detention storage basin. Vegetative cover around detention facilities should be maintained as appropriate.
- xii. Debris and trash removal and other necessary maintenance shall be performed on a regular basis to assure continued operation in conformance to design.
- xiii. No residential lots or any part thereof, shall be used for any part of a detention basin or for the storage of water, either temporary or permanent.

#### **D. Parking Lot Storage**

Paved parking lots may be designed to provide temporary detention storage of stormwater on all or a portion of their surfaces. Outlets for parking lot storage of stormwater will be designed so as to empty the stored waters slowly. Depths of storage shall be limited to a maximum depth of twelve (12) inches. Ponding should in general, be confined to those positions of the parking lots farthest from the area served.

#### **E. Detention Facilities in Floodplains**

Placement of detention ponds within the 100-year floodplain is not appropriate. In rare cases when the Town of Fort Branch may allow a detention storage to be provided within a 100-year floodplain, only the net increase in storage volume above that which naturally existed on the floodplain shall be credited to the development. In order to be

hydraulically effective, the outfall elevations, including any open spillways, should be at or above the 100-year floodplain elevation and, unless the detention pond storage is provided entirely above the 100-year flood elevation, any pipe outlets must be equipped with a backflow prevention device. A detention pond constructed within the 100-year floodplain and utilizing a backflow prevention device will eliminate the floodplain storage that existed on the detention pond site, and will therefore require compensatory floodplain storage. The detention analysis for a detention pond in the floodplain must consider appropriate tailwater impacts and the effect of any backflow prevention device.

## **Chapter Three: New Sanitary Sewer and Potable Water Extension Construction Specifications**

### **3.1. Water Supply**

The purpose of this chapter is to ensure the proper design and construction of sanitary sewer and potable systems and to provide for the public health and safety. These specifications serve as a guide for developers and are not intended to address every possible situation. Developers who intend to use alternative specifications and procedures are required to have such approved by the Town before construction may begin. The Town understands that unique situations may require variances from these specifications and procedures and will provide the necessary guidance and assistance in the best interests of construction and design integrity, public health and public safety.

### **3.2. Permit and Bond Requirements**

Refer to Sections 1.2 and 1.3 in these specifications for permitting and bonding requirements if working within the public right of way.

### **3.3. General New Construction**

- A. The developer/owner shall check for the availability of sewer and water service in the proposed construction area and receive permission from the Town to utilize a portion of the capacity of the system and construct utility extensions.
- B. A written agreement shall be entered into between the developer and the Town of Fort Branch through its Water Department and Sewer Department. This agreement shall define the contract terms for the construction of sanitary sewers and water service within the service areas of Fort Branch. This agreement shall be obtained before any construction begins.
- C. The developer shall furnish the Town with preliminary design plans for review and approval at least thirty (30) days before the proposed starting date of the actual construction and within ninety (90) days of signing a written agreement to construct new sanitary sewers and water mains.
- D. The plans and design shall conform to all applicable State and Town specifications regarding design and construction of such systems.
- E. The plans shall be stamped and signed by an Indiana licensed professional engineer. In addition, an Indiana licensed surveyor may approve gravity only type sanitary sewer systems.

- F. All plans shall include, but not be limited to, the following:
- i. Cover page showing the location, project name, designer, owner, and other pertinent information about the project overview
  - ii. Plan design
  - iii. Profile design
  - iv. Construction details
  - v. Lift station details if applicable
  - vi. Proposed lateral and service locations (8.5" x 11" sheet in table format)
  - vii. All necessary easements, right-of-ways, and lot numbers for plan design
  - viii. All pages shall be 24" x 36"
  - ix. All drawings shall not be less than 1" = 50' scale
- G. Preliminary plans should be computer generated original drawings, but may be blueprint copies.
- H. Final as-built plan sets shall include 3 copies.
- I. The developer shall ensure all necessary easements are obtained, properly recorded, and on file with the Gibson County, Indiana Recorder's office. All easements shall be for the use and benefit of the Town of Fort Branch. Such easements shall be shown on all final as-built plan drawings.
- J. After the preliminary plans have been reviewed and approved by the Town, construction may begin. The Town shall be given at least three (3) days notice to schedule necessary construction inspection. Work shall not commence without proper notice. Any work that has been accomplished without inspection and covered may be regarded as unacceptable.
- K. Any actual construction changes to the proposed design must first be approved by the Town. Such changes must be noted upon the construction drawings. All final field measurements shall be noted on the construction plans for "as-built" information.

- L. All sanitary sewer service taps (laterals) shall be carefully measured in reference to the center of iron manhole castings and recorded in table form. These measurements shall be submitted to the Town along with all final as-built drawings. Linear distances shall be measured from the downstream manhole. In addition baseline (lateral length) measurements shall be included.
- M. All water service lines shall be carefully measured in reference to the center of valves or other monuments and recorded in table form. These measurements shall be submitted to the Town along with all final as-built drawings.
- N. The following performance tests are required for sanitary sewer collection systems by the contractor/developer and shall be witnessed by a representative of the Town:
  - i. Air pressure tests
  - ii. Mandrel alignment tests
  - iii. Lift station pump capacity test
    - a. Force main pipe hydrostatic test
    - b. Light test (unless installed using a laser level)
    - c. Manhole Vacuum Test
- O. The following performance tests are required for water distribution systems by the contractor/developer and shall be witnessed by a representative of the Town
  - i. Hydrostatic pressure/leak test (in accordance with AWWA C-600)
  - ii. Disinfection test- two successive tests 24 hours apart (following chlorination in accordance with AWWA C-651)
- P. The following performance tests may be conducted by a representative of the Town:
  - i. Visual manhole inspection
  - ii. Video camera inspection
  - iii. Any other quality control inspection during or after construction

Q. The acceptance of the sewer and water systems and extensions by the Town of Fort Branch will be based upon the following criteria:

- i. The owner/developer must fulfill the conditions set forth by the Agreement signed with the Water Department and Sewer Department and any IDEM permit requirement.
- ii. The system shall be required to pass all tests and inspections required by the Town.
- iii. As-Built plans and lateral information must be submitted to the Town prior to acceptance.

### **3.4. Materials Acceptable for Construction of Gravity Sanitary Sewers**

The following materials are minimum requirements for use during the construction of public sanitary sewer systems in the Town of Fort Branch Service Area. Material requirements shall not be limited to these standards. All materials used shall conform to but not be limited to ASTM, ANSI, IDEM standards for testing and construction of gravity sanitary sewers in Indiana. Refer to Section 3.7 for materials not specified as follows:

#### **Pipe: Polyvinylchloride (PVC)**

- A. All PVC pipe 4" through 15" in diameter shall conform to ASTM D1784, "Rigid Poly (Vinyl Chloride) and Chlorinated Poly (Vinyl Chloride) Compounds" and either ASTM D3033, "Type PSP Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings", or ASTM D3034, "Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings." PVC sewer pipe shall be SDR 35 with cell classification of 12454-B or 12454-C.
- B. All PVC pipe 18" through 48" in diameter shall conform to ASTM F 794, "Poly (Vinyl Chloride) (PVC) Ribbed Gravity Sewer Pipe and Fittings based on Controlled Inside Diameter", ASTM F 1803, "Poly Vinyl Chloride (PVC) Closed Pipe and Fittings Based on Controlled Inside Diameter, or F949 Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a smooth interior and fitting, or with integral bell and elastomeric seal joints. Products shall be by Vylon (Lawson Sessions); Ultra Rib and Ultra Corr (Uponor ETI); A-2000 (Contech)
- C. All pipe joints shall be of the bell and spigot type with elastomeric seals and conform to the requirements of ASTM D-3212. Gaskets shall be factory installed. Gasket material shall conform to the requirements of ASTM F-477. Minimum pipe stiffness shall be 46

psi when tested in accordance with ASTM D-2412. No visual cracking or splitting of the waterway wall shall be evidenced when tested in accordance with ASTM D-2444 with a 30 lb. Weight, Type B, flat plat holder B to a level of 220-ft. lbs. There shall be no sign of flaking or disintegration when in immersed anhydrous acetone for 20 minutes as described in ASTM D-2152. There shall be no evidence of cracking or splitting when pipe is flattened between parallel plates in a suitable press until the inside diameter is reduced by 60% of its original dimension. Each pipe shall be identified with the name of the manufacturer, nominal size, cell classification, ASTM designation F-794, Uni-Bell Plastic Pipe Association designation Uni-B-9, the pipe stiffness designation "PS-46 psi" and manufacturer's date code.

- D. All PVC pipe may also be in accordance with ASTM Spec. F-679, Type PS-46 and meeting performance requirements of ASTM D3034.

**Pipe joints:** All PVC pipe joints shall be push-on type with an elastomeric ring gasket conforming to the requirements of ASTM D3212, "Joints for Drain and Sewer Plastic Pipes using Flexible Elastomeric Seals." Solvent weld joints shall not be used unless otherwise shown on the drawings.

**Manholes:** Pre-Cast reinforced manholes including bases, risers/barrels, cones and flat slabs constructed of Class A concrete. Manhole steps shall be provided. Manholes shall be a minimum of 48" diameter for pipe up to 24". For larger pipes, the minimum diameter shall be 60".

**Monolithic (Cast-in-Place) manholes** designed by a registered Professional Engineer. Manhole steps shall be provided. Designed sizes shall conform to those for Pre-Cast manholes.

**Castings:** The standard type of frame and cover used shall be Neenah Foundry Company R-1772-C with concealed pick hole or equal. The watertight type of frame and cover used shall be Neenah Foundry Company R-1916-F1 with concealed pick hole or equal. The cover shall be labeled "Sanitary Sewer". Variations and larger sizes must be approved by the Town.

**Riser Rings:** Pre-Cast adjusting rings ranging from 2" to 12" shall be used for the accomplishment of adjustments in casting elevation.

### **3.5. Force Main Sewer Minimum Design Requirements**

The following materials are minimum requirements for use during the construction of public sanitary sewer systems in the Town of Fort Branch Service Area. Material requirements

shall not be limited to these standards. All materials used shall conform to but not be limited to ASTM, ANSI, IDEM standards for testing and construction of force main sanitary sewers in Indiana. Refer to Section 3.7 for materials not specified as follows.

**Pipe:** PVC that conforms to ASTM D-2241. Joints shall be bell end or push-on type Ductile Iron Pipe that conforms to ANSI A21.51 and AWWA C-151 with mechanical, slip or flanged joints.

**Pumps:** Pumps shall be manufactured by the following or an approved equivalent:

Submersible - Flygt, Hydro-Matic, ABS, or Myers

Grinder - Flygt, E/One, Barnes, or Myers

The pump manufacturer shall warrant the pumps for a period of one year. The contractor, through the manufacturer, shall provide one set of spare parts including an impeller, upper and lower seal assembly, upper and lower bearing assembly, wear rings and two sets each of O-rings and gaskets.

**Station:** All components of the lift station that are exposed to weather shall be constructed of material that is resistant to corrosion and will not require surface protection throughout the expected life of the lift station. In general, these materials are stainless steel, aluminum, fiberglass reinforced polyester and ultraviolet stabilized PVC.

**Exception:** Lifting Chains - Stainless Steel only

Guide Rails - Stainless Steel or Fiberglass

Guide Rail Hangers - Aluminum or Stainless Steel

The availability of all spare parts shall be within a one hundred (100) mile radius of the Town of Fort Branch.

**Controls:** All pump stations shall have a duplex automatic pump control panel in NEMA 4X enclosure for outdoor mounting.

The controls shall allow automatic and manual operation of all pumps simultaneously or independently.

There shall be both audio and visual high water alarms for the pump station with silencing controls located in the NEMA 4X enclosure. In addition, all pump stations shall incorporate the use of radio telemetry warning systems for operating failure. Such systems shall be electronically compatible with those used by the Fort Branch Waste Water Treatment Plant. Contact the Town for this information.



Sealed float type mercury switches shall be supplied to control pump operations and alarm signals.

**Valves:** All types of operational valves used shall meet the requirements of design, material and workmanship for AWWA C500 latest edition. An emergency bypass valve shall be placed in the valve pit.

### **3.6. Consideration of Alternative Materials**

If an owner/developer wishes to utilize pipe or construction materials not specified within this document, he or she must submit written notification of such intentions along with all pertinent specifications showing that the material in question meets all of the strength and quality requirements of those materials specified. This information shall be reviewed by the Town and accepted or rejected based upon the information and data submitted. If the material request is denied, the Town may request consideration of other acceptable materials for construction use.

### **3.7. Increasing the Flow of Existing Sewer Systems**

In all cases of increasing the flow of existing sewer systems, the owner/developer shall submit the expected flow increase data and obtain written permission from the Town to cause such an increase. This requirement shall allow the Town to examine the existing system and determine if any overloading or surcharging will result from such additions.

### **3.8. Prohibited Uses of Sewer Systems**

In no circumstance shall storm water or any other form of natural water runoff be allowed to enter the Fort Branch sanitary sewer system. Crawl space drains, footing drains, gutter downspouts, sump pumps, and basement floor drains may not be connected to sanitary sewer.

Additional information has been provided for storm water management in Chapter 2. In addition, the discharge of hazardous materials or potentially damaging substances into the sanitary sewer system is strictly prohibited. These substances may require onsite pretreatment by the owner before such discharge will be allowed into the sanitary sewer system. Rules and regulations set forth by the Indiana Department of Environmental Management and the Town of Fort Branch Sewer Use Ordinance shall be used to determine if any discharge is hazardous or otherwise damaging to the integrity of the sewer system operated by the Town of Fort Branch. Please contact the Town for any concerns regarding hazardous material discharge.

### **3.9. Abandoning Existing Sewer Systems**

Existing sewer systems currently owned and maintained by the Town of Fort Branch may be abandoned only by a special written request to the Fort Branch Sewer Department and the Fort Branch Town. Such requests will only be granted to property owners adjacent to such sewers when it can be shown that the existing sewer provides service to only those requesting abandonment. Those proposing abandonment shall agree to accept said abandoned sewer and therefore supervise and maintain all applicable sewer lines and appurtenances.

### **3.10. Work In Highway, Railroad or Utility Right-of-Ways**

The contractor shall obtain and prepare all necessary permits from highway, railroad and utility authorities for proposed construction and operations relative to the scope of the work. The contractor shall comply with all codes and regulations of the agencies involved when working on their property. Required permits, codes, repair specifications and regulations regarding work within the right-of-way boundaries of the Town of Fort Branch are described in Chapter 1 of these specifications.

### **3.11. Multi-Phase Subdivisions**

When sanitary sewers or water mains are constructed in coordination with the development of multiphase subdivisions, separate Agreements with the Water Department and Sewer Department for the construction of sanitary sewers and water mains in each phase shall be created and executed according the provisions in the agreement. Additionally, all construction plans and documentation shall be created independently for each phase.

### **3.12. Typical Detail Drawings**

Typical detail drawings can be found in the Town of Fort Branch, Indiana Typical Construction Guidelines and Details.

## **Chapter Four: Residential/Commercial Sewer System Connections**

### **4.1 Overview**

The purpose of this chapter is to ensure the proper design and construction of sanitary sewer connections and to provide for the public health and safety. These specifications serve as a guide for contractors and homeowners and are not intended to address every possible situation. Contractors and homeowners who intend to use alternative specifications and procedures are required to have such approved by the Town before construction may begin. The Town understands that unique situations may require variances from these specifications and procedures and will provide the necessary guidance and assistance in the best interests of construction and design integrity, public health and public safety.

### **4.2 Permitting and Bond Requirements**

Refer to Sections 1.2 and 1.3 in these specifications for permitting and bonding requirements if working within the public right of way.

### **4.3 New Lateral Connections**

If a residential/business connection is made to a public sewer owned and maintained by the Town of Fort Branch, the property owner shall be required to sign and purchase a *"Sewer/Water System Connection Application"* (see APPENDIX C) at the Town Water Department (Town Hall). The Sewer Department has established tap fees for residential/business occupancies. Fees associated with connection are listed in APPENDIX C. In addition, the property owner shall be required to purchase and provide a \$500.00 *"Sewer Tap Construction Permit"* available from the Sewer Department. This permit shall remain on-site at all times until the inspection of the connection is complete. If the construction requires work within the public right-of-way, a right-of-way construction permit must be obtained by the Town, Indiana Department of Transportation, or the Gibson County Highway Department depending on the work location. This permit shall remain on-site until the public right-of-way has been restored according to the required specifications of the controlling agency. All construction shall require inspection before backfilling. The Town Wastewater Department will provide inspection for all connections. Inspections are scheduled by contacting the Town Hall at (812) 753-3824. All inspections should be scheduled with a minimum of twenty four (24) hours notice.

#### 4.4 Workmanship for Installation

- A. All new sewer laterals shall be constructed using Polyvinylchloride (PVC) pipe.
- B. Sanitary sewer laterals for house connections shall be 4" or 6" diameter. Four inch (4") pipes will be allowed to exit a structure for a maximum of thirty-six inches (36").
- C. The pipe strength/diameter ratio shall not be less than SDR 35 and shall conform in all respects to the dimensional requirements of ASTM D-3033 or D-3034.
- D. Joints to be gasketed bell and spigot type with the bell made integral.
- E. Extra strength vitrified clay pipe will only be allowed to repair existing clay laterals and may not be used for any new construction. It shall meet the requirements of ASTM designation C700.
- F. All plastic shall be installed closely following the guidelines of ASTM D-2321, "Standard Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe".
- G. The building sewer shall be constructed at no less than the minimum uniform grade for the size of pipe used (**1/8" fall/foot minimum for six (6) inch pipes**) and installed in a straight line. Any change in slope or direction shall be accomplished with the proper angled pipe joints (22.5°, 45° elbows).
- H. No building sewer lateral shall be laid parallel within three feet (3') of any bearing wall. The minimum depth of the pipe at any point shall not be less than eighteen inches (18"). A thirty inch (30") depth is recommended for protection against freezing conditions.
- I. At least one six inch (6") cleanout riser shall be installed for each six inch (6") building sewer lateral. This cleanout shall be accessible from the outside of the building. No portion of the lateral shall exceed one hundred feet (100') without additional cleanouts. A cleanout must also be installed whenever the lateral makes necessary 90-degree angle directional changes. This cleanout must be installed immediately before or after the 90-degree angle fitting. All cleanouts shall remain accessible from ground level.
- J. The building sewer shall be placed in firm soil. The trench floor shall be shaped to support the lower quadrant of the barrel of the pipe.

- K. All pipe joints shall be made tight and waterproof through the use of O-ring sealed pipe and glue.
- L. Unstable trench bottoms must be stabilized before laying pipe. A sufficient depth of unstable soil shall be removed and replaced with a bedding of processed stone, sand or gravel and properly graded. The depth of the processed material depends upon the severity of trench bottom soil conditions. If the foundation soil contains significantly large particles in proportion to the size of the pipe, a bedding of acceptable material shall be provided above the trench floor.
- M. Pipe shall be laid in the uphill direction with the bell end of the pipe upgrade. Efforts shall be made to allow the lettering printed on the pipe wall to face up to allow the inspector visibility for inspection.
- N. Number 10 tracer wire shall be installed above all pipe lines except straight runs between manholes or other structures.
- O. The trench should be backfilled manually to the top of the pipe directly after being passed by the inspector. This will allow the pipe to retain a proper alignment. Manual compaction is recommended for the full length of the pipe barrel. Caution shall be taken to prevent bedding material from being forced under the pipe thus causing vertical displacement and slope change.
- P. Developers shall install a separate lateral for separate buildings.
- Q. When a structure is too low to permit gravity flow to a public sewer line, wastewater must be lifted and transported by a private forced sewer main system. Guidelines for a private force main system are given in the following section.
- R. All connections shall be made at existing lateral stubs provided. *Fernco* or *Mission* type adapters shall be utilized to connect existing plumbing. If a lateral does not currently exist, the owner may be required to expose the sewer main line and make an appropriate connection in the right-of-way. An approved saddle connection for the type of main pipe is required for this installation. The owner may also connect at a nearby manhole if main line connections are not feasible. All manhole connections shall require an approved drop section inside the manhole. All manhole connection requests must be examined and approved in writing by the Town or his/her designee.

- S. The Town and/or Wastewater Staff will provide the owner/contractor with all available lateral location information. It shall be noted that certain older addresses have vague or no information at all. Every effort will be made to provide the most accurate information possible.
- T. Lateral clean-out caps, openings and piping shall be installed within the private property boundaries. Clean-outs are not allowed within the right-of-way limits unless authorized by the Town.

#### **4.5 Private Single Structure Force Main System Requirements**

Small diameter pressure sewer systems incorporating the use of individual home grinder pump units will be allowed in areas where the surrounding terrain and elevations do not allow the use of conventional gravity systems. The maintenance of the grinder pump system and the building force main to the point of connection at the public sewer shall be the responsibility of the home owner. The Town of Fort Branch shall only be responsible for the publicly owned main. Such grinder pump systems can be obtained in this area. In most cases, pump suppliers should be able to help the owner specify a system appropriate for each case. In addition, private grinder pump stations should be installed using the following recommended specifications as general guidelines. If the owner wishes to use other standards, the Town must be contacted for review of such apparatus standards and specifications prior to installation.

- A. Unit may be a simplex pumping station (one pump)
- B. Unit shall have a fiberglass (or polymer) twenty-four inch (24") diameter basin at least seventy-two inches (72") in height
- C. The inlet of the station shall not be less than forty-eight inches (48") to protect from freezing
- D. The outlet of the station shall not be less than forty-eight inches (48") to protect from freezing
- E. The basin shall have a removable top for component access
- F. The pump shall have a minimum rating of 2 HP, capable of at least 25 GPM
- G. All discharge piping shall be Schedule 80 PVC - two inches (2") as a minimum
- H. A ball type shutoff valve shall be provided for the discharge piping

- I. All guides, pump rails, and hold-downs shall be structural plastic
- J. A check valve shall be installed on the discharge side of the pump
- K. Anti-siphon valves shall be installed for systems with negative discharge slope
- L. A sealed control pad having an audio/visual high water alarm shall control the system
- M. The entire unit shall be mounted upon a six inch (6") minimum concrete slab three feet (3') in diameter

#### **4.6 Sewer Lateral Replacement**

If a property owner replaces any aging or damaged existing sewer lateral, all requirements for new lateral installation shall apply regarding materials, workmanship, inspection and work permits. Owners will not be required to purchase a "Sewer Tap Agreement" if a current agreement and/or billing account exists, but shall be required to purchase a \$10 "*Sewer Tap Construction Permit*" as well as all necessary right-of-way construction permits by the governing agency (Town, County, State Highway) where the work will occur.

#### **4.7 Septic System Abandonment after New Public Sewer Connection**

Owners of structures that use septic systems and make connection to public sewers are required to properly abandon said septic systems. All septic tanks and holding structures shall comply with requirements established by the Gibson County Health Department Regulations.

#### **4.8 Town Inspection of New/Replacement Laterals**

All lateral construction shall be inspected by a representative of the Town before such work is backfilled. For each inspection, the Sewer Tap Construction Permit (or photocopy) shall be provided on-site for the inspector. The inspector will conduct the inspection following the guidelines set forth by Section 4.3. This will ensure that the owner has received quality construction and the connection will not interfere with the normal operation of the public sewer system. Upon completion, the connection will receive either a pass or fail report. The inspector will provide the results of the inspection in writing to the owner or to the contractor who shall provide such results to the property owner. A minimum of twenty four (24) hours notice shall be required under most circumstances. Requests for immediate

inspections will only be granted if the Town inspector has adequate time available without delaying other scheduled inspections.

#### **4.9 Lateral Cap Abandonment (Cap-off)**

When it has been determined that a lateral will no longer be used by a property owner, the lateral shall be taken out of service. The cap-off process shall ensure that the lateral will remain in working order and can be located for any future use. All laterals shall be saw-cut at or very near the property line. Plastic pipe shall be capped using a cap-end sized for the specific pipe. The cap shall be glued securely into place. Clay pipe shall be plugged using mortar. The mortar shall extend at least twelve inches (12”) into the pipe. In addition, care shall be taken to prevent the mortar from falling into the pipe before curing has occurred. Four (4) hours notice shall be given to the Town for all cap-off inspection scheduling. No work shall be concealed prior to inspection. When a lateral is taken out of service due to demolition, the permit issued for building demolition shall be provided to the inspector and recorded. When a lateral is taken out of service for reasons other than demolition, a Sewer Inspection Permit shall be purchased from the Sewer Department for the amount of \$10.00. This permit must remain on-site at all times during the process and provided to the Town Manager.

#### **4.10 Determination of Provided Lateral Locations**

Information regarding the location and depth of laterals for individual properties shall be provided by the Town. The Town will make every effort to provide the most accurate information available. In some cases, such information may be vague, incomplete or non-existent due to older records, which may not contain detailed information.

#### **4.11 Laterals Requiring Work within Public Right-of-Ways**

All construction work and restoration relative to sanitary sewer connection within the public right-of-way shall conform to the standards set forth in Chapter 1.



**LIST OF APPENDICES**

Appendix A.1	Improvement Location Permit Application
Appendix A.2	Right-Of-Way Use/Excavation Permit Application
Appendix B	Application to Close/Obstruct Any Street/Sidewalk
Appendix C	New Customer – Application for Water and Sewer by Property Owner/Tenant/Contract Purchaser
Appendix D	Sewer Connection and Consent to Annexation Agreement
Appendix E	Water Connection and Consent to Annexation Agreement
Appendix F	Demolition Permit
Appendix G	Notice of Violation
Appendix H	As-Built Specifications
Appendix I	Town of Fort Branch Subdivision Policy
Appendix J	Town of Fort Branch Schedule of Rates

**APPENDIX A.1**  
**IMPROVEMENT LOCATION PERMIT APPLICATION**

Town of Fort Branch  
801 E. Mulberry St  
Fort Branch, IN 46748  
Phone & Fax 812-753-3824

PERMIT NO: \_\_\_\_\_

Date: \_\_\_\_\_

Applicant: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Address: \_\_\_\_\_

Owner: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Address: \_\_\_\_\_

Detailed Description of Planned Construction Improvement:

\_\_\_\_\_

Detailed Location of Improvement: \_\_\_\_\_

Size of Improvements: width \_\_\_\_\_ length \_\_\_\_\_ height \_\_\_\_\_ Total Sq. Ft. \_\_\_\_\_

Size of Lot: \_\_\_\_\_ Parcel No: \_\_\_\_\_ Key No: \_\_\_\_\_

Town Existing? How many sewer taps are needed? Water Meter Size:  
Sewer: \_\_\_\_\_

Septic: Existing? \_\_\_\_\_ Date of Septic Permit Approval (GC Health Dept.) \_\_\_\_\_

Electrical Service Provider: \_\_\_\_\_

Estimated Cost of Construction: \$ \_\_\_\_\_ Estimated Completion Date: \_\_\_\_\_

The applicant certifies to the correctness of the site plan, dimensions presented and the dimensions of the proposed structure(s) or improvement(s). Occupancy and/or use of the project is PROHIBITED until a Certificate of Occupancy is issued by the Town.

THIS PERMIT IS CONDITIONAL UPON COMPLIANCE WITH ANY RESTRICTIVE COVENANTS ASSOCIATED WITH THE PROPERTY.

**\*\*AN APPLICATION WILL NOT BE REVIEWED UNLESS ALL REQUIRED DOCUMENTS ARE SUBMITTED IN FULL\*\***

ALL ENGINEERING COSTS INCURRED BY THE TOWN OF FORT BRANCH WILL BE THE RESPONSIBILITY OF THE DEVELOPER

Signature of Applicant: \_\_\_\_\_

**FOR OFFICE USE ONLY**

Date Received: \_\_\_\_\_ Zoning District: \_\_\_\_\_

Notes: \_\_\_\_\_

Permit Fees: \$ \_\_\_\_\_ Electrical Service Fees: \$ \_\_\_\_\_

Sewer Tap Fees: \$ \_\_\_\_\_ Total Cost: \$ \_\_\_\_\_

Signature of Inspector: \_\_\_\_\_

Signature of Zoning Board Approval (If necessary): \_\_\_\_\_

Is development in the floodplain? \_\_\_\_\_ Yes \_\_\_\_\_ No

Signature of Floodplain Administrator: \_\_\_\_\_

**APPENDIX A.2**  
**RIGHT-OF-WAY USE/EXCAVATION PERMIT APPLICATION**  
**TOWN OF FORT BRANCH, IN 47648**  
**PHONE & FAX: (812) 753-3824**

1. Name/Address of Applicant: \_\_\_\_\_
  2. Telephone/Fax/E-mail Address: \_\_\_\_\_
  3. Address of Proposed Work: \_\_\_\_\_
  4. Reason for Work: \_\_\_\_\_
  5. Is Excavation (Removal of Surface and Subsurface Materials) Required: Yes No (circle)
    - a. If yes, Please Explain: \_\_\_\_\_
  6. Size of Street Cut and Excavation (Length, Width, & Depth): \_\_\_\_\_
  7. Name/Address/Telephone Number of Person or Firm Performing the Cut and Excavation: \_\_\_\_\_
    - a. Name and Title of Representative in Charge of Work: \_\_\_\_\_
  8. Date of Commencement of Work: \_\_\_\_\_
  9. Anticipated Date of Completion of Work: \_\_\_\_\_
  10. Name/Address/Telephone Number of Person or Firm Performing Street Reclamation: \_\_\_\_\_
    - a. Name and Title of Representative in Charge of Work: \_\_\_\_\_
    - b. Describe Method of Reclamation: \_\_\_\_\_
  11. \$25.00 Permit Fee Submitted: Yes No (circle)
  12. Plat Map or Scaled Drawing Submitted: Yes No (circle)
  13. Cash Bond: Yes No (circle)
  14. Performance Bond: Yes No (circle)
  15. Applicant is:
    - a. Individual \_\_\_\_\_
    - b. Firm \_\_\_\_\_
    - c. Public Utility \_\_\_\_\_
  16. Applicant, by signing below, in consideration for the issuance of a street cut permit, agrees to hold harmless and indemnify the Town of Fort Branch, its officers, employees, agents and representative against any and all damages and claim for damages which may be asserted against said Town, etc. by reason of or arising out of the street cut or excavation and any work done as a result thereof for which a permit has been issued.
- Applicant Signature: \_\_\_\_\_
- Approved By: \_\_\_\_\_
- Permit Number: \_\_\_\_\_ Date Issued: \_\_\_\_\_
- Permit Denied: \_\_\_\_\_ Reason: \_\_\_\_\_

- The permit holder shall be responsible for a period of three years from the date of completion for maintaining the area in the public right-of-way.
- Right-of-way permits will be open for a period of 90 days. Permits shall be activated within 90 day period by contacting the Clerk-Treasurer's Office. Once activated permittee will have a period of five working days to excavate and restore the area to the Town's Construction Standards.
- If a road closure is necessary, a written request shall be submitted to the Board of Public Works at least 10 days prior to the proposed closing date.
- Traffic control is the contractor's responsibility. Barricades, signals, and flagmen, conforming to the Indiana State Manual on Uniform Traffic Control Devices are to be provided by the contractor.
- The contractor is responsible for notifying all utilities for underground installation locations.

**APPENDIX B**  
**APPLICATION TO CLOSE/OBSTRUCT ANY STREET/SIDEWALK**  
**TOWN OF FORT BRANCH, IN 47648**  
**PHONE & FAX: (812) 753-3824**

1. Permit Number: \_\_\_\_\_
2. Date of Obstruction: \_\_\_\_\_
3. Company/Corporation/Organization: \_\_\_\_\_
4. D/B/A: \_\_\_\_\_
5. Owner/Manager: \_\_\_\_\_
6. Address of Applicant: \_\_\_\_\_
7. Telephone/Fax/E-mail Address: \_\_\_\_\_
8. Purpose of Closure: \_\_\_\_\_
9. Description of Obstructed Area: \_\_\_\_\_

Applicant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_  
*Clerk-Treasurer Signature*

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_  
*Police Chief Signature*

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_  
*Fire Chief Signature*

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_  
*Town Council President Signature*

1-copy Applicant    1-copy Clerk-Treasurer    1-copy Police Chief    1-copy Fire Chief    1-copy Council

**APPENDIX C**

801 E. Mulberry St.  
PO Box 40  
Ft. Branch, IN 47648

Town of  
**FORT BRANCH**  
Municipal Water Utility/Sanitation Department

Phone 812.753.3824  
Fax 812.753.3824

<b>New Customer — APPLICATION FOR WATER AND SEWER BY Property Owner/Tenant/Contract Purchaser</b>		BOOK#: _____ SEQ #: _____
Application Date:	Previous Cust. Acct. # & Last Name: New Account Number:	<input type="checkbox"/> Buying/Own <input type="checkbox"/> Land Contract <input type="checkbox"/> Renting
Service Address:		Date Service to Begin:
<b>I. LANDLORD INFORMATION (If Renting Property)</b>		
Landlord Name:		Phone #:
Landlord Mailing Address:		
<b>II. OWNER/RENTER/CONTRACT PURCHASER INFORMATION:</b>		
APPLICANT:	CO-APPLICANT:	
PHOTO ID:	PHOTO ID:	
EMPLOYER:	EMPLOYER:	
EMPLOYER ADDRESS:	EMPLOYER ADDRESS:	
EMPLOYER ADDRESS:	YOUR TELEPHONE #:	
MAILING ADDRESS: (If different from service address)		
YOUR TELEPHONE #:	EMAIL:	
PREVIOUS ADDRESS:		
NEAREST RELATIVE: (Name, Address, & Phone)		
<p align="center"><b>By completing and signing this form for utility services, the property owner/renter/contract purchaser agrees to the following:</b></p> <ol style="list-style-type: none"> <li>1. To be responsible and pay for all utilities consumed on the above mentioned premises.</li> <li>2. The meter furnished by the Town of Fort Branch is, and shall remain the property of the Town of Fort Branch. The employees of the Town of Fort Branch shall have access to the meter at all times to: read, repair, lock off, seal or remove the same.</li> <li>3. The Employees of the Town of Fort Branch shall have access to the meter, pipes, wires and conduits at all times in order to ascertain that the service supplied is passing through the meter and is properly registering the same, and to stop the supply of service for non-payment of bills, without notice, when past due. Or for any other lawful cause or purpose which the Town of Fort Branch may deem sufficient. The town employees are hereby authorized to enter the premises of the applicant, at all times, for any such lawful cause or purpose, such as disconnecting or adjusting the meter, removing the meter, with connections, or any other property belonging to the Town of Fort Branch.</li> <li>4. Nothing contained herein shall mean, or be construed to mean, that the Town of Fort Branch shall be required to inspect or examine, or in any way shall be responsible for the condition of the pipes, wires or conduits on the Applicant (s) premises.</li> <li>5. This contract is not revocable by the above named applicant (s). Water service will only be shut off or terminated upon non-payment of bill or vacancy. All services provided shall be pursuant to the ordinances of the Town of Fort Branch.</li> <li>6. All customers must pay a <b>\$200.00</b> consumer deposit before services will be turned on.</li> <li>7. I have received a copy of the rules and regulations. _____ (Please Initial)</li> </ol>		
APPLICANT SIGNATURE:		DATE:
CO-APPLICANT SIGNATURE:		DATE:

**APPENDIX C****ACCOUNT INFORMATION DISCLOSURE**

I \_\_\_\_\_, give permission to the following person(s) that they may obtain information regarding my Water and/or Sewer account on my behalf.

1.) \_\_\_\_\_ 2.) \_\_\_\_\_  
(PRINTED NAME) (PRINTED NAME)

Signed by: \_\_\_\_\_ Date: \_\_\_\_\_  
(PROPERTY OWNER)

METER #: \_\_\_\_\_ EID#: \_\_\_\_\_ DATE INSTALLED: \_\_\_\_\_

LAST READING: \_\_\_\_\_

LONGITUDE: \_\_\_\_\_ LATITUDE: \_\_\_\_\_

**FOR OFFICE USE ONLY:****CHECK OFF WHEN COMPLETED**

- ☐ FILL OUT NEW CUSTOMER SHEET
- ☐ ASSIGN ACCOUNT NUMBER
- ☐ SCAN ID
- ☐ ADD INFORMATION INTO COMPUTER
- ☐ PRINT RECEIPT IN FUND
- ☐ MAKE WORK ORDER IN UTILITY
- ☐ ADD TO GTD WTR DEP WORKSHEET
- ☐ ADD CUSTOMER TO DATABASE
- ☐ SCAN & ATTACH IN UTILITY ALL CUST. INFO.
- ☐

DEPOSIT INFO DATE: \_\_\_\_\_

☐ WATER ☐ SEWER ☐ STORM WATER

GWD: \_\_\_\_\_

WATER  
TAP IN FEE: \_\_\_\_\_

SEWER  
TAP IN FEE: \_\_\_\_\_

TOTAL: \_\_\_\_\_

☐ CASH ☐ CHECK ☐ NO  
☐ CREDIT CARD

RECEIPT#: \_\_\_\_\_

RECEIPT DATE: \_\_\_\_\_ EMPLOYEE INITIALS & DATE: \_\_\_\_\_

**APPENDIX D**  
**SEWER CONNECTION AND CONSENT TO ANNEXATION AGREEMENT**  
**TOWN OF FORT BRANCH, IN 47648**  
**PHONE & FAX: (812) 753-3824**

This Agreement is made and entered into by and between the Town of Fort Branch Wastewater Treatment Department through the Board of Public Works and Safety (the Town), and \_\_\_\_\_ (Owner), owner of the premises known as \_\_\_\_\_, Gibson County, Indiana (Property), more particularly described in Attachment A, which is attached hereto and made a part hereof.

WHEREAS, the Town owns and operates a sanitary sewer, and Owner owns land and improvements on such land which adjoins or abuts the land through which passes the above sanitary sewer;

WHEREAS, the land owned by Owner is outside the incorporated area of the Town of Fort Branch; and,

NOW THEREFORE, for the mutual covenants and considerations set out herein, the parties agree as follows:

1. That this Agreement shall be in full force and effect from the date of execution set forth below;
2. That the Owner, after connection shall be permitted to discharge into the Town's sanitary sewer only such effluent as is permissible under the rules, regulations, and ordinances of the Town of Fort Branch, and the laws of the state of Indiana and federal government, as may be applicable.
3. That Owner shall be liable for the construction and maintenance of any sewer connecting to the Town's sanitary sewer which serves land owned by Owner and that Owner shall construct Owner's sewer in accordance with the stipulations prescribed by the Town, including but not limited to size of pipe, type of connection, clean out openings, inspection of connection before backfilling, and resurfacing of area used for laying of sewer.
4. That Town will receive and treat all effluent discharged by owner into said sewer owned by the Town.
5. That this agreement shall run with the real estate, shall be recorded in the office of the county recorder, shall be binding upon Owner, his/her personal representatives, heirs, devisees, grantees, successors, and assigns.
6. That Owner agrees that should the Property (see Attachment A) be annexed into the Town, that Owner will not remonstrate or in any way contest such annexation.
7. That the Owner shall pay the Town's current, established connection fee, at the rate established for the size of pipe used by the Owner in the Town's connection fee ordinance, prior to connecting to the Town's sanitary sewer, and shall thereafter pay any established monthly treatment fees.
8. That Owner shall not permit any other person or persons, corporation, partnership or owner to connect to the sewer owned and constructed under the terms of this Agreement or to discharge effluent into such sewer owned by Owner; it is further mutually agreed and understood by the parties that this agreement shall permit the discharge by Owner into the sewer owned by the Town of domestic sewerage only, unless approved by Town. It is mutually agreed and understood by the parties hereto that this agreement is for the purpose of servicing a one family dwelling, which dwelling shall be inhabited by only one family. It is further understood and agreed that, should this section of this agreement not be kept by Owner, the Town may, at its option, cease receiving effluent from said sewer of owner without notice.

9. That, upon the Property being annexed into the Town of Fort Branch, this agreement shall automatically terminate.

Executed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Town of Fort Branch Town Council	Owner
_____ President of Council	_____
_____ Member	_____
_____ Member	
STATE OF INDIANA            ) ) SS: COUNTY OF GIBSON         )	

Before me, the undersigned Notary Public, in and for said County and State, personally appeared \_\_\_\_\_ who acknowledged the execution of the foregoing Sewer Connection and Consent to Annexation Agreement as his/her voluntary act and deed for the purposes therein expressed.

Sworn before me this _____ day of _____, _____.	_____ Notary Public Gibson County
My commission expires:  _____	



**APPENDIX E**  
**WATER CONNECTION AND CONSENT TO ANNEXATION AGREEMENT**  
**TOWN OF FORT BRANCH, IN 47648**  
**PHONE & FAX: (812) 753-3824**

This Agreement is made and entered into by and between the Town of Fort Branch Water Department through the Board of Public Works and Safety (the Town), and \_\_\_\_\_ (Owner), owner of the premises known as \_\_\_\_\_, Gibson County, Indiana (Property), more particularly described in Attachment A, which is attached hereto and made a part hereof.

WHEREAS, the Town owns and operates a water transmission main, and Owner owns land and improvements on such land which adjoins or abuts the land through which passes the above water main;

WHEREAS, the land owned by Owner is outside the incorporated area of the Town of Fort Branch; and,

NOW THEREFORE, for the mutual covenants and considerations set out herein, the parties agree as follows:

1. That this Agreement shall be in full force and effect from the date of execution set forth below;
2. That the Owner, after connection shall be permitted to receive water service from the Town of Fort Branch only such as is permissible under the rules, regulations, and ordinances of the Town of Fort Branch, and the laws of the state of Indiana and federal government, as may be applicable.
3. That Owner shall be liable for the construction and maintenance of any water connecting to the Town's water main which serves land owned by Owner and that Owner shall construct Owner's water line in accordance with the stipulations prescribed by the Town, including but not limited to size of pipe, type of connection, inspection of connection before backfilling, and resurfacing of area used for laying of water line.
4. That this agreement shall run with the real estate, shall be recorded in the office of the county recorder, shall be binding upon Owner, his/her personal representatives, heirs, devisees, grantees, successors, and assigns.
5. That Owner agrees that should the Property (see Attachment A) be annexed into the Town, that Owner will not remonstrate or in any way contest such annexation.
6. That the Owner shall pay the Town's current, established connection fee, at the rate established for the size of pipe used by the Owner in the Town's connection fee ordinance, prior to connecting to the Town's water main, and shall thereafter pay any established monthly fees.
7. That Owner shall not permit any other person or persons, corporation, partnership or owner to connect to the water main owned and constructed under the terms of this Agreement. It is mutually agreed and understood by the parties hereto that this agreement is for the purpose of servicing a one family dwelling, which dwelling shall be inhabited by only one family. It is further understood and agreed that, should this section of this agreement not be kept by Owner, the Town may, at its option, cease providing water service to owner without notice.
8. That, upon the Property being annexed into the Town of Fort Branch, this agreement shall automatically terminate.

Executed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Town of Fort Branch  
Town Council

Owner

\_\_\_\_\_  
President of Council

\_\_\_\_\_

\_\_\_\_\_  
Member

\_\_\_\_\_

\_\_\_\_\_  
Member

STATE OF INDIANA            )  
  ) SS:  
COUNTY OF GIBSON         )

Before me, the undersigned Notary Public, in and for said County and State, personally appeared \_\_\_\_\_ who acknowledged the execution of the foregoing Water Connection and Consent to Annexation Agreement as his/her voluntary act and deed for the purposes therein expressed.

Sworn before me this \_\_\_\_\_  
day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary Public  
Gibson County

My commission expires:

\_\_\_\_\_

**APPENDIX F**  
**DEMOLITION PERMIT**

(submit with completed IDEM Notification of Demolition and Renovation Operations form)

TOWN OF FORT BRANCH, IN 47648

PHONE & FAX: (812) 753-3824

1. Address of Demolition Work: \_\_\_\_\_
2. Name/Address of Applicant: \_\_\_\_\_
3. Telephone/Fax/E-mail Address: \_\_\_\_\_
4. Category of Demolition: \_\_\_\_\_ Demolition \_\_\_\_\_ Removal/Relocation
5. Address of Proposed Relocation: \_\_\_\_\_
6. Height of Structure: \_\_\_\_\_ No. of Stories: \_\_\_\_\_
7. Ground Floor Area: \_\_\_\_\_
8. Type of Structure:
  - a. Accessory: \_\_\_\_\_
  - b. Addition: \_\_\_\_\_
  - c. Addition to Accessory Structure: \_\_\_\_\_
  - d. Addition to Principal Structure: \_\_\_\_\_
  - e. Principal: \_\_\_\_\_
  - f. Specialized/Unique: \_\_\_\_\_
9. Type of Wall Bearing Construction:
  - a. Concrete: \_\_\_\_\_
  - b. Engineered: \_\_\_\_\_
  - c. Post and Beam: \_\_\_\_\_
  - d. Masonry: \_\_\_\_\_
  - e. Steel: \_\_\_\_\_
  - f. Wood Frame: \_\_\_\_\_
10. Existing Use of Structure:
  - a. Multi-Family: \_\_\_\_\_ Number of Units: \_\_\_\_\_
  - b. Non-Residential: \_\_\_\_\_
  - c. 1 Family Dwelling: \_\_\_\_\_
  - d. 2 Family Dwelling: \_\_\_\_\_
11. If removing a residential detached garage, will the slab remain to be used for parking: Yes No (circle)
12. Utility Disconnect Letters:
  - a. Water Department: \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ n/a
  - b. Wastewater Department: \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ n/a
  - c. Electric Company: \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ n/a
  - d. Gas Company: \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ n/a
  - e. Telephone Company: \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ n/a
13. Applicant, by signing below, in consideration for the issuance of a street cut permit, agrees to hold harmless and indemnify the Town of Fort Branch, its officers, employees, agents and representative against any and all damages and claim for damages which may be asserted against said Town, etc. by reason of or arising out demolition or wrecking or any work done as a result thereof for which a permit has been issued.

**Record Titleholder Authorization Statement:**

The undersigned hereby state under the penalties for perjury that they are the titleholder of the herein-described premises located at \_\_\_\_\_ and have appointed \_\_\_\_\_ (our) agent and that they are authorized to raze the structure described herein. This statement is made to induce the Code & Zoning Enforcement Administrator to issue a Demolition Permit.

\_\_\_\_\_  
Titleholders Signature

**Form 5.4 - VOID****SANITARY SEWER FEE SCHEDULE**

Sanitary Tap Inspection:      \$10

**Sanitary Tap Fees:**

For connection to a sanitary sewer, such owner shall pay to the Town of Fort Branch, a connection charge in accordance of the following schedule:

**Existing Residences** – For each existing single-family residential connection the base fee of five hundred dollars (\$500.00), payable in equal quarterly installments over a maximum period five (5) years. A charge equal to ten percent (10%) of delinquent quarterly fees will be assessed on payments made after the due date of said payments. The unpaid balance shall be immediately due and payable upon conveyance of said property.

**New Residences** – For each new single-family residential connection the base fee of five hundred dollars (\$500.00) payable at the time construction.

**Multiple Family Residences** – Multiple family residential connection fees shall be the base fee multiplied by 0.65 multiplied by the number of units, i.e. duplex connection fee ( $500 \times 0.65 \times 2 = \$650$ ).

**Commercial/Industrial** – All other structures not covered in the above should be based on the following connection fee schedule:

Domestic Water Meter Size (inches)	Connection Fee
5/8	Base fee
3/4	1.5 times base fee
1	2.5 times base fee
1-1/2	6 times base fee
2	10 times base fee
3	23 times base fee
4	41 times base fee
6	case by case

Note: If an additional or larger meter is installed for an existing non-single family residential customer, a connection fee shall be assessed based on the following formula = Additional flow generated by the customer divided by flow generated by average single family residential customer multiplied by the base fee.

**APPENDIX G**  
**NOTICE OF VIOLATION**  
TOWN OF FORT BRANCH, IN 47648  
PHONE & FAX: (812) 753-3824

On the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the right-of-way work performed by you or your representative at \_\_\_\_\_, Fort Branch, Indiana was inspected by this office and was found to be in non-compliance with the Standards and Specifications set by the Board of Public Works.

Permit Number: \_\_\_\_\_

Comments on Violation: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Upon completion of the work it shall be the duty and responsibility of the permittee to fill, replace, and repair such openings in the streets that the permittee has opened according to plans and specifications of the Town of Fort Branch. The permittee shall be responsible for maintaining the cut to adhere to all applicable standards for a period of three (3) years from the date of the inspection and approval by the Town of Fort Branch.

**You are hereby notified that you have ten days from the date of this notice to bring the right-of-way into compliance with the Standards and Specifications of the Town of Fort Branch.**

Failure to comply to with the provisions of this notice will result in further legal action pursuant to Municipal Code and fines imposed. Additionally, the Municipal Code may give the Town the option to fix the violation and recover costs from the permittee.

Dated this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
Fort Branch Town Manager  
or representative

## **APPENDIX H**

### **AS-BUILT SPECIFICATIONS**

The Town of Fort Branch accepts only hard copy as-built records. As-builts shall specify what horizontal and vertical datums are being used. Copies must be signed and sealed by the registered professional engineer or land surveyor who prepared the drawings. A cover letter must be submitted and a statement must be made that the plans being submitted are the final as-built plans for the project, and a statement shall be made that installation has been done in reasonable compliance with the original design plans with respect to horizontal locations and grades and any deviations of locations, grade, or material used.

#### **Streets**

As-built street plans shall indicate all *grades, low and high points, percentage of grade, any deviation of alignment, and grades and dimensions on accel and decel lanes if applicable.*

#### **Grading or Development**

As-built grades shall be shown in all *major drainage swales; pad grades; paved swales, at 50' intervals; lakes or ponds; locations of sidewalk ramps; and street grades.* Street grades shall be shown with centerline and curb. Street grades shall be shown at a maximum of 50 ft. spacing. Street grades shall clearly identify all sag and crest points.

#### **Sanitary Sewers**

As-built sanitary sewer system plans shall indicate the offset of sanitary sewers from the centerline of lots and *shall include, but not be limited to length of sewer, invert elevation, rim elevation, percentage of grade, manhole location, sewer material and joints used.* An as-built profile drawing must also be provided for all sanitary sewer systems.

Locations shall be shown on the plans with an accuracy of  $\pm$  one (1) foot. In addition, the location of all building service leads must be indicated with distance from the upstream manhole. The length of the lead and any riser information must also be indicated.

As-built sanitary sewer plans shall list the as-built quantities and the type, brand name and lengths of pipe used.

#### **Detention System**

As-built plans of the retention system must include as-built grade contours, with adequate spot elevations to substantiate these contours. The high water and freeboard elevation and contour lines must be clearly indicated. The side slopes of the pond also must be clearly indicated. Also, as-built volumetric calculations must be shown to verify that this system was built as designed and approved by the Town of Fort Branch.

**Storm Sewer**

As-built storm system plans *shall include, but not be limited to length of sewer, invert elevation, rim elevation, percentage of grade, manhole location, sewer material and joints used*. An as-built profile drawing must also be provided for all public storm sewer systems and private systems on sites larger than one acre.

Locations of all pipes and structures shall be shown on the plans with an accuracy of  $\pm$  one (1) foot.

As-built storm sewer plans shall list the as-built quantities and the type, brand name and lengths of pipe used.

**Water Systems**

As-built water system plans shall indicate the offset of water mains from property lines and *shall locate gate valve wells, hydrants and all water system appurtenances from the nearest property corner*. An as-built profile drawing must also be provided for all watermains 16" in diameter or larger. Locations shall be shown on the plans with an accuracy of  $\pm$  one (1) foot. Locations shall be shown on the plans with an accuracy of  $\pm$  one (1) foot.

As-built water system plans shall list the as-built quantities and the type, brand name and lengths of pipe used. Hydrants, gate valves, etc., shall also be listed showing their type, brand name, and quantity. The location, size, manufacturer and model number of every restrained joint shall be noted.

## APPENDIX I

ORDINANCE 1991-1

### TOWN OF FORT BRANCH SUBDIVISION POLICY

WHEREAS, the Council of the Town of Fort Branch, Indiana, desires to have consistent policy regarding the development of new residential real estate subdivision either within the corporate limits of the Town of Fort Branch or adjoining the corporate limits of the Town.

#### WITNESSETH:

It shall be the policy of the Council of the Town of Fort Branch that any residential real estate subdivider who desires to lay out and develop new residential real estate subdivisions within the corporate limits of the Town of Fort Branch, or who desires to create a new residential real estate subdivision adjoining the corporate limits of the Town of Fort Branch and connect said subdivision to the Fort Branch water or sewer systems, the subdivider must enter into a contract with the Town of Fort Branch, which agreement shall include the following provisions:

1. Water Lines. All of the water lines in the subdivision which will connect to the existing town water system shall be 6" in diameter. Six-inch shut-off valves shall be provided by the subdivider at locations specified by the Town.
2. Sanitary Sewer Lines. The subdivider shall be responsible for laying the sanitary sewer lines in the subdivision and the sewer lines shall be a minimum of 8" in diameter.
3. Fire Hydrants. The subdivider shall provide 6" fire hydrants in the subdivision at locations determined by the Town.
4. Storm Sewers. At all street intersections in the subdivision, the subdivider shall place concrete storm sewers 12" or larger in diameter as specified by the Town.
5. Streets. Each street in the subdivision shall have a right-of-way of 50 ft. in width, having 25 ft. on either side of the center line of each street. The surface of the street must be a minimum of 22 ft. in width. The rock base for the street is to be at least 8 inches of #53 rock, which is to be compacted in two 4 inch lifts. The subdivider shall also pave all of the streets of the subdivision according to the current specifications of the Indiana State Highway Commission within one (1) year after the rock is completed. The pavement of the street shall be done in the same fashion and using the same materials as the Town utilizes in paving streets within the corporate limits of the Town. The Town shall have the right to inspect and approve the rock base and the pavement of the subdivision streets before.



accepting the streets within the street system of the Town.

6. Lot Setback Requirements. The subdivider shall place restrictions on all of the lots of the subdivision regarding minimum front, rear, and side yard setback requirements for all buildings. The front yard setback requirement shall be a minimum of 25 ft. from the street right-of-way. The side and back yard setback requirements shall be a minimum of 10 ft. from the boundary lines.

7. Mobile Homes. The subdivider shall place a restriction on all of the lots in subdivision prohibiting the placement of mobile or manufactured houses on the lots.

8. Street Signs and Street Lights. The subdivider shall be responsible for the placement of all street signs in the subdivision where appropriate. The Town Council of Fort Branch shall instruct the subdivider on the type of signs and the placement of the signs in the subdivision. The payment for these signs and the cost of installation of the signs shall be solely the responsibility of the subdivider. The subdivider shall also be responsible for the installation of and payment for all street lights in the subdivision. The Town Council of Fort Branch shall instruct the subdivider on the type of street lights and the placement of the street lights in the subdivision.

9. Further Considerations. The subdivision policy set forth herein is not meant to be a complete list of the provisions the Town may require of the subdivider. Additional requirements may be made on the subdivider by the Town. The Town Council may also modify or delete certain of the provisions set forth in this policy, but the Town Council will do so only if there is a compelling reason for such modification or deletion.

PASSED AND ADOPTED BY THE COUNCIL OF THE TOWN OF FORT BRANCH, INDIANA  
this 1<sup>st</sup> day of May, 1991.

COUNCIL OF THE TOWN OF FORT BRANCH

Ronald W. Robinson  
President

Donald J. Gries  
Member

\_\_\_\_\_  
Member

ATTEST: Juanita A. Dunkel  
Juanita A. Dunkel, Clerk Treasurer

**APPENDIX J**

**ORDINANCE NO. 2019-3**

**AN ORDINANCE OF THE TOWN OF FORT BRANCH, INDIANA, INDIANA  
SCHEDULE OF RATES**

**BE IT ORDAINED BY THE COUNCIL OF THE TOWN OF FORT BRANCH, INDIANA  
AS FOLLOWS:**

**Section 1: Water Rates.**

**(A) Metered Water Rates:**

For the use of and services rendered by the Water Works system of the Town based on use of water supplied by said Water Works system, effective January 1, 2019, the following rates shall apply:

<b>(a) <u>Metered rates per month</u></b>	<b><u>Rates per 1,000 gallons</u></b>
First 3,000 gallons	\$8.28
Next 2,000 gallons	\$7.30
Next 1,500 gallons	\$6.23
Next 3,500 gallons	\$5.49
Next 6,500 gallons	\$4.62
Next 15,000 gallons	\$3.82
Next 35,000 gallons	\$3.07
Over 66,500 gallons	\$2.61

(b) For the use of and service rendered by the Water Works system of the Town based on the use of water supplied by said Water Works system, effective January 1, 2019, the minimum charge per month shall be as follows:

<u>METER SIZE</u>	<u>Minimum Monthly Usage</u>	<u>Minimum Charge Per Month</u>
5/8 inch	3,000	\$24.84
3/4 inch	4,500	35.79
1 inch	7,500	54.28
1 ¼ inch	12,000	77.24
1 ½ inch	15,000	91.10
2 inch	24,000	126.68
3 inch	45,000	196.78
4 inch	75,000	284.97
6 inch	150,000	480.72
8 inch	240,000	715.62

For the use of and services rendered by the Water Works system of the Town based on use of water supplied by said Water Works system, effective January 1, 2020, the following rates shall apply:

(a)	<u>Metered rates per month</u>	<u>Rates per 1,000 gallons</u>
First	3,000 gallons	\$8.64
Next	2,000 gallons	\$7.62
Next	1,500 gallons	\$6.50
Next	3,500 gallons	\$5.73
Next	6,500 gallons	\$4.82
Next	15,000 gallons	\$3.99
Next	35,000 gallons	\$3.21
Over	66,500 gallons	\$2.72

(b) For the use of and service rendered by the Water Works system of the Town based on the use of water supplied by said Water Works system, effective January 1, 2020, the minimum charge per month shall be as follows:

<u>METER SIZE</u>	<u>Minimum Monthly Usage</u>	<u>Minimum Charge Per Month</u>
5/8 inch	3,000	\$25.92
3/4 inch	4,500	37.35

1 inch	7,500	56.64
1 ¼ inch	12,000	80.61
1 ½ inch	15,000	95.07
2 inch	24,000	132.22
3 inch	45,000	205.48
4 inch	75,000	297.62
6 inch	150,000	501.62
8 inch	240,000	746.42

For the use of and services rendered by the Water Works system of the Town based on use of water supplied by said Water Works system, effective January 1, 2021, the following rates shall apply:

(c)	<u>Metered rates per month</u>	<u>Rates per 1,000 gallons</u>
	First 3,000 gallons	\$8.81
	Next 2,000 gallons	\$7.77
	Next 1,500 gallons	\$6.63
	Next 3,500 gallons	\$5.84
	Next 6,500 gallons	\$4.92
	Next 15,000 gallons	\$4.07
	Next 35,000 gallons	\$3.27
	Over 66,500 gallons	\$2.77

- (d) For the use of and service rendered by the Water Works system of the Town based on the use of water supplied by said Water Works system, effective January 1, 2021, the minimum charge per month shall be as follows:

<u>METER SIZE</u>	<u>Minimum Monthly Usage</u>	<u>Minimum Charge Per Month</u>
5/8 inch	3,000	\$26.43
3/4 inch	4,500	38.09
1 inch	7,500	57.76
1 ¼ inch	12,000	82.20
1 ½ inch	15,000	96.96
2 inch	24,000	134.86
3 inch	45,000	209.53
4 inch	75,000	303.38
6 inch	150,000	511.13
8 inch	240,000	760.43

For the use of and services rendered by the Water Works system of the Town based on use of water supplied by said Water Works system, effective January 1, 2022, the following rates shall apply:

(e) <u>Metered rates per month</u>		<u>Rates per 1,000 gallons</u>
First	3,000 gallons	\$8.99
Next	2,000 gallons	\$7.93
Next	1,500 gallons	\$6.76
Next	3,500 gallons	\$5.96
Next	6,500 gallons	\$5.02
Next	15,000 gallons	\$4.15
Next	35,000 gallons	\$3.34
Over	66,500 gallons	\$2.83

- (f) For the use of and service rendered by the Water Works system of the Town based on the use of water supplied by said Water Works system, effective January 1, 2022, the minimum charge per month shall be as follows:

<u>METER SIZE</u>	<u>Minimum Monthly Usage</u>	<u>Minimum Charge Per Month</u>
5/8 inch	3,000	\$26.97
3/4 inch	4,500	38.87
1 inch	7,500	58.93
1 ¼ inch	12,000	83.87
1 ½ inch	15,000	98.93
2 inch	24,000	137.59
3 inch	45,000	213.80
4 inch	75,000	309.67
6 inch	150,000	521.92
8 inch	240,000	776.62

For the use of and services rendered by the Water Works system of the Town based on use of water supplied by said Water Works system, effective January 1, 2023, the following rates shall apply:

(g) <u>Metered rates per month</u>		<u>Rates per 1,000 gallons</u>
First	3,000 gallons	\$9.17
Next	2,000 gallons	\$8.09
Next	1,500 gallons	\$6.90
Next	3,500 gallons	\$6.08
Next	6,500 gallons	\$5.12
Next	15,000 gallons	\$4.23
Next	35,000 gallons	\$3.41

Over 66,500 gallons \$2.89

- (h) For the use of and service rendered by the Water Works system of the Town based on the use of water supplied by said Water Works system, effective January 1, 2023, the minimum charge per month shall be as follows:

<u>METER SIZE</u>	<u>Minimum Monthly Usage</u>	<u>Minimum Charge Per Month</u>
5/8 inch	3,000	\$27.51
3/4 inch	4,500	39.65
1 inch	7,500	60.12
1 ¼ inch	12,000	85.56
1 ½ inch	15,000	100.92
2 inch	24,000	140.33
3 inch	45,000	218.09
4 inch	75,000	315.97
6 inch	150,000	532.72
8 inch	240,000	792.82

(B) Hydrant Rental. For the use and service of hydrant rental of the Town on per annum charges.

January 1, 2019	\$54.00;
January 1, 2020	\$56.00
January 1, 2021	\$57.00
January 1, 2022	\$58.00
January 1, 2023 and thereafter	\$59.00

(C) Private Fire Connection – per connection. For the use and service of private fire connections of the Town on per connection per annum charges.

Effective January 1, 2019	
1 inch connection	\$1.50
1 ¼ inch connection	2.34
1 ½ inch connection	3.38
2 inch connection	6.00
3 inch connection	13.50
4 inch connection	24.00
6 inch connection	54.00
8 inch connection	96.00

**Effective January 1, 2020 and thereafter**

1 inch connection	\$1.56
1 ¼ inch connection	2.43
1 ½ inch connection	3.50
2 inch connection	6.22
3 inch connection	14.00
4 inch connection	24.89
6 inch connection	56.00
8 inch connection	99.56

**Effective January 1, 2021 and thereafter**

1 inch connection	\$1.59
1 ¼ inch connection	2.48
1 ½ inch connection	3.57
2 inch connection	6.34
3 inch connection	14.28
4 inch connection	25.39
6 inch connection	57.12
8 inch connection	101.55

**Effective January 1, 2022 and thereafter**

1 inch connection	\$1.62
1 ¼ inch connection	2.53
1 ½ inch connection	3.64
2 inch connection	6.47
3 inch connection	14.57
4 inch connection	25.90
6 inch connection	58.26
8 inch connection	103.58

**Effective January 1, 2023 and thereafter**

1 inch connection	\$1.65
1 ¼ inch connection	2.58
1 ½ inch connection	3.71
2 inch connection	6.60

3 inch connection	14.86
4 inch connection	26.42
6 inch connection	59.43
8 inch connection	105.65

(D) Tap-Fees The tap-in fee for all water service shall be One Thousand Dollars (\$1,000.00).

(E) Late Payment Charges. All bills are due and payable by the last day of the month at the Fort Branch Town Hall to avoid disconnection of the water service. All bills from water service not paid by the 15<sup>th</sup> of the month as stated on said billing card shall be subject to a late charge of 10% of the first \$3.00 and 3% of the balance in excess of \$3.00. This penalty has been pre-calculated by the computer and is shown on the billing card.

(F) Deposits. Deposits required of all new customers shall be \$200.00 per customer.

(G) Reconnect Charge. When the service is turned off for non-payment of bill, or whenever for any reason beyond the control of the waterworks a reestablishment of service is required by any on customer, a charge of \$50.00 will be made by the waterworks to cover the cost of discontinuance and reestablishment of service. The charge, together with any arrears due to the waterworks, shall be paid by the customer before service will be reestablished.

(H) Bad Check Charge. A charge of \$25.00 will be made to any customer who pays his bill by check which is returned to the utility because of insufficient funds.

Incorporating any and all language of Ordinance 2018-1.

## Section 2: Sewage Rates:

(A) The sewage rates and charges shall be based on the quantity of water used on or in the property or premises subject to such rates and charges, as the same is measured by the water meter there in use, plus a base charge based on the size of the water meter installed, except as herein otherwise provided. For the purpose of billing and collecting the charges for sewage service, the water meters shall be read monthly and the users shall be billed monthly (or period equaling a month). The water usage schedule on which the amount of the rates and charges shall be determined is as follows:

(1) Treatment rates per 1,000 gallons of usage per month.

On and after January 1, 2019

The treatment rate per 1,000 gallons of usage per month for users inside the corporate limits of the town is \$10.37.

The treatment rate per 1,000 gallons of usage per month for users outside the corporate



limits of the town is \$11.12.

On and after January 1, 2020

The treatment rate per 1,000 gallons of usage per month for users inside the corporate limits of the town is \$10.59.

The treatment rate per 1,000 gallons of usage per month for users outside the corporate limits of the town is \$11.35.

On and after January 1, 2021

The treatment rate per 1,000 gallons of usage per month for users inside the corporate limits of the town is \$10.80.

The treatment rate per 1,000 gallons of usage per month for users outside the corporate limits of the town is \$11.58.

On and after January 1, 2022

The treatment rate per 1,000 gallons of usage per month for users inside the corporate limits of the town is \$11.02.

The treatment rate per 1,000 gallons of usage per month for users outside the corporate limits of the town is \$11.81.

On and after January 1, 2023

The treatment rate per 1,000 gallons of usage per month for users inside the corporate limits of the town is \$11.24.

The treatment rate per 1,000 gallons of usage per month for users outside the corporate limits of the town is \$12.05.

(2) The base rate shall be as follows:

On and after January 1, 2019

**MONTHLY BASE RATE**

	Users Inside the Corporate limits of the Town of <u>Fort Branch, Indiana</u>	Users Outside the Corporate limits of the Town of <u>Fort Branch, Indiana</u>
<b><u>METER SIZE</u></b>		
5/8 – 3/4 inch	\$21.58	\$23.25
1 inch	46.77	50.87
1 ¼ inch	71.76	78.26
1 ½ inch	100.34	109.53
2 inch	172.04	189.00
3 inch	389.38	426.95
4 inch	673.83	738.90
6 inch	1,526.51	1,674.65

On and after January 1, 2020

**MONTHLY BASE RATE**

	Users Inside the Corporate limits of the Town of <u>Fort Branch, Indiana</u>	Users Outside the Corporate limits of the Town of <u>Fort Branch, Indiana</u>
<b><u>METER SIZE</u></b>		
5/8 – 3/4 inch	\$22.03	\$23.74
1 inch	47.75	51.94
1 ¼ inch	73.27	79.90
1 ½ inch	102.45	111.83
2 inch	175.65	192.97
3 inch	397.56	435.92
4 inch	687.98	754.42
6 inch	1,558.57	1,709.82

On and after January 1, 2021

**MONTHLY BASE RATE**

	Users Inside the Corporate limits of the Town of <u>Fort Branch, Indiana</u>	Users Outside the Corporate limits of the Town of <u>Fort Branch, Indiana</u>
<b><u>METER SIZE</u></b>		
5/8 – 3/4 inch	\$22.47	\$24.21
1 inch	48.71	52.98
1 ¼ inch	74.74	81.50
1 ½ inch	104.50	114.07
2 inch	179.16	196.83
3 inch	405.51	444.64
4 inch	701.74	769.51
6 inch	1,589.74	1,744.02

On and after January 1, 2022

**MONTHLY BASE RATE**

	Users Inside the Corporate limits of the Town of <u>Fort Branch, Indiana</u>	Users Outside the Corporate limits of the Town of <u>Fort Branch, Indiana</u>
<b><u>METER SIZE</u></b>		
5/8 – 3/4 inch	\$22.92	\$24.69
1 inch	49.68	54.04
1 ¼ inch	76.23	83.13
1 ½ inch	106.59	116.35
2 inch	182.74	200.77
3 inch	413.62	453.53
4 inch	715.77	784.90
6 inch	1,621.53	1,778.90

On and after January 1, 2023

**MONTHLY BASE RATE**

Users Inside the Corporate limits of the Town of <u>Fort Branch, Indiana</u>	Users Outside the Corporate limits of the Town of <u>Fort Branch, Indiana</u>
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**METER SIZE**

5/8 – 3/4 inch	\$23.38	\$25.18
1 inch	50.67	55.12
1 ¼ inch	77.75	84.79
1 ½ inch	108.72	118.68
2 inch	186.39	204.79
3 inch	421.89	462.60
4 inch	730.09	800.60
6 inch	1,653.96	1,814.48

(B) (1) For uses of the sewage works that are unmetered water users or accurate meter readings are not available, the monthly charge shall be determined as an average of single-family dwelling units, except as herein provided. Sewage service bills shall be rendered once each month (or period equaling a month). The schedule on which the rates and charges shall be determined is as follows:

On and after January 1, 2019

Inside Town (assumes 4,515 gallons used per month)	\$68.40
Outside Town (assumes 4,515 gallons used per month)	73.46

On and after January 1, 2020

Inside Town (assumes 4,515 gallons used per month)	\$69.84
Outside Town (assumes 4,515 gallons used per month)	74.99

On and after January 1, 2021

Inside Town (assumes 4,515 gallons used per month)	\$71.23
Outside Town (assumes 4,515 gallons used per month)	76.49

On and after January 1, 2022

Inside Town (assumes 4,515 gallons used per month)	\$72.68
Outside Town (assumes 4,515 gallons used per month)	78.01

On and after January 1, 2023

Inside Town (assumes 4,515 gallons used per month)	\$74.13
Outside Town (assumes 4,515 gallons used per month)	79.59

(2) Unmetered non-residential single-family dwelling units shall be charged a rate to be determined by the town on an individual basis by applying the above metered rates to estimated usage and meter size.

(C) The service rendered to the town shall be subject to the same rates and charges

provided in this section, or to charges and rates established in harmony therewith.

(D) In order to recover the cost of monitoring industrial wastes the town shall charge the user the actual cost of monitoring but not less than \$25.00 per sampling event. This charge will be reviewed on the same basis as all other rates and charges.

(E) In the event two (2) or more dwelling units such as mobile homes, apartments or housekeeping rooms discharging laundry sewage or other liquids into the district's sanitary sewer system, either directly or indirectly, then each unit shall be assessed the normal residential user rate beginning on the 1<sup>st</sup> day of May, 2016.

Incorporating any and all language of Ordinance 2016-7.

**Section 3: Connection Fees.** For the use and service of connection fees for Water and Sewer of the Town per connection.

The connection fee for connecting to the Town's Water System shall be as follows:

<b>A. Residential Use:</b>		
Homes (Single-Family)		\$ 800.00
Homes (Duplex)		1,600.00
Apartments (per apartment unit)		800.00
Trailer Parks (per trailer)		800.00
<b>B. Institutional/Commercial/Industrial</b>		
Minimum for average usage not to exceed		
6,000 gallons per month		\$ 800.00

If average usage is over 6,000 gallons per month, a higher fee shall be charged based on \$800.00 per single family equivalent. Single family equivalent shall be defined as 6,000 gallons per month. The initial connection fee shall be based on estimated usage. The fee shall be adjusted after one year to reflect actual average usage. The formula for computing the connection fee for usage of more than 6,000 gallons per month is as follows: average monthly usage divided by 6,000 multiplied by \$800.00.

The connection fee for connecting to the Town's Sewer System shall be as follows:

<b>A. Residential Use:</b>		
Homes (Single-Family)		\$2,000.00
Homes (Duplex)		4,000.00
Apartments (per apartment unit)		2,000.00
Trailer Parks (per trailer)		2,000.00
<b>B. Institutional/Commercial/Industrial</b>		
Minimum for average usage not to exceed		
6,000 gallons per month		\$2,000.00

If average usage is over 6,000 gallons per month, a higher fee shall be charged based on \$2,000.00 per single family equivalent. The initial connection fee shall be based on estimated usage. The fee shall be adjusted after one year to reflect actual average usage. The formula for computing the connection fee for usage of more than 6,000 gallons per month is as follows: average monthly usage divided by 6,000 multiplied by \$2,000.00.

Incorporating Ordinance 1996-5 as written.

Required Notice Pursuant to IC 8-1.5-3-8.1

Following the adoption of the Ordinance, the users of the water and sewer utility located outside the corporate boundaries may be entitled to petition the commission under section 8.3 of this chapter to review and adjust rates and charges imposed on users if a petition under section 8.2 of this chapter or under IC 36-9-23-26.1 with respect to the same rate ordinance has not been filed.

Section 4: Inconsistent Ordinances. The provisions of all ordinances inconsistent with this ordinance be and hereby are repealed.

PASSED AND ADOPTED by the Council of the Town of Fort Branch, Indiana this 18<sup>th</sup> day of September, 2019.

TOWN COUNCIL OF FORT BRANCH, INDIANA

  
ADAM BLEDSOE, PRESIDENT

  
SCOTT MICHAEL, COUNCILMAN

  
TOM HAUSCHILD, COUNCILMAN

ATTEST

(SEAL)

  
STACY RUPERS, CLERK TREASURER



**ORDINANCE NO. 2018- 2**

**AN ORDINANCE OF THE TOWN OF FORT BRANCH, INDIANA, INTRODUCING  
RATES AND CHARGES FOR THE SEWAGE WORKS OF THE TOWN**

**BE IT ORDAINED BY THE COUNCIL OF THE TOWN OF FORT BRANCH,  
INDIANA AS FOLLOWS:**

**ARTICLE I**

(A) (1) Treatment Rate - per 1,000 gallons of usage per month as is  
measured by the water meter there in use. according to the  
following schedule:

On and after April 1, 2018

	<u>Rate</u>
Inside Town	\$10.16
Outside Town	\$10.89

On and after January 1, 2019

	<u>Rate</u>
Inside Town	\$10.37
Outside Town	\$11.12

On and after January 1, 2020

	<u>Rate</u>
Inside Town	\$10.59
Outside Town	\$11.35

2) **Monthly Base Rate - The base rate shall be as follows:**

**Meter Size                      Inside Town                      Outside Town**

**On and after April 1, 2018**

5/8 - 3/4 inch	\$21.14	\$22.77
1 inch	45.81	49.82
1 1/4 inch	70.28	76.65
1 1/2 inch	98.28	107.28
2 inch	168.50	185.11
3 inch	381.37	418.17
4 inch	659.97	723.70
6 inch	1,495.11	1,640.21

**On and after January 1, 2019**

5/8 - 3/4 inch	\$21.58	\$23.25
1 inch	46.77	50.87
1 1/4 inch	71.76	78.26
1 1/2 inch	100.34	109.53
2 inch	172.04	189.00
3 inch	389.38	426.95
4 inch	673.83	738.90
6 inch	1,526.51	1,674.65

**On and after January 1, 2020**

5/8 - 3/4 inch	\$22.03	\$23.74
1 inch	47.75	51.94
1 1/4 inch	73.27	79.90
1 1/2 inch	102.45	111.83
2 inch	175.65	192.97
3 inch	397.56	435.92
4 inch	687.98	754.42
6 inch	1,558.57	1,709.82

**(B) (1) Unmetered Water Users:**

**Rate**

**On and after April 1, 2018**

**Inside Town (assumes 4,515 gallons**



used per month)	\$67.01
Outside Town (assumes 4,515 gallons used per month)	\$71.94

On and after January 1, 2019	<u>Rate</u>
Inside Town (assumes 4,515 gallons used per month)	\$68.40
Outside Town (assumes 4,515 gallons used per month)	\$73.46

On and after January 1, 2020	<u>Rate</u>
Inside Town (assumes 4,515 gallons used per month)	\$69.84
Outside Town (assumes 4,515 gallons used per month)	\$74.99



Required Notice Pursuant to IC 8-1.5-3-8.1

Following the adoption of the Ordinance, the users of the sewage works located outside the corporate boundaries may be entitled to petition the commission under section 8.3 of this chapter to review and adjust rates and charges imposed on the users if a petition under section 8.2 of this chapter or under IC 36-9-23-26.1 with respect to the same rate ordinance has not been filed.

**PASSED AND ADOPTED by the Council of the Town of Fort Branch, Indiana this 21<sup>st</sup> day of March, 2018.**

**TOWN COUNCIL OF FORT BRANCH, INDIANA**

  
ADAM BLEDSOE, PRESIDENT

  
SCOTT MICHAEL, COUNCILMAN

  
TOM HAUSCHILD, COUNCILMAN



ATTEST (SEAL)  
  
STACY EUPERS, CLERK TREASURER

**ORDINANCE NO. 2016- 10****AMENDING AND MODIFYING ORDINANCE NO. 2015-2  
AN ORDINANCE APPROVING STORM WATER FEES  
ADOPTED BY THE STORM WATER MANAGEMENT DEPARTMENT**

WHEREAS, the Fort Branch Storm Water Management Department after published notice and hearing with the approval of the Town Council adopted by the following storm water fees to be assessed on each owner of the following property within the corporate limits of the Town of Fort Branch, Indiana:

Single Family Residential:	\$3.00 per month
Multi-Family Residential:	\$3.00 per month
Commercial	\$3.00 per month
Vacant Lots	\$3.00 per month

NOW THEREFORE BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF FORT BRANCH, INDIANA, AS FOLLOWS:

Section 1: The Town Council hereby approves the storm water fees adopted by the Fort Branch Storm Water Management Department to be assessed on each owner of the following property within the corporate limits of the Town of Fort Branch, Indiana:

Single Family Residential:	\$3.00 per month
Multi-Family Residential:	\$3.00 per month
Commercial	\$3.00 per month
Vacant Lots	\$3.00 per month

Section 2: The storm water fees shall be effective beginning April 1, 2015 and shall be billed monthly on the utility bills for all Town utility customers. The fees shall be billed annually for all persons subject to the fee but are not Town utility users. Late payment penalty shall apply.

Section 3: If the owner fails to pay the amounts as prescribed above within thirty (30) days after receipt of statement, a certified copy of the amount of storm water fee plus administration fee of Twenty-Five Dollars (\$25.00) shall be filed with the office of the Gibson County Auditor. The Auditor shall place the total amount certified on the tax duplicate for the property affected, and the total amount, including any accrued interest, shall be collected as delinquent taxes and shall be disbursed to the storm water fund of the Town of Fort Branch, Indiana.

PASSED AND ADOPTED by the Council of the Town of Fort Branch Indiana, this 21<sup>st</sup> day of September, 2016.

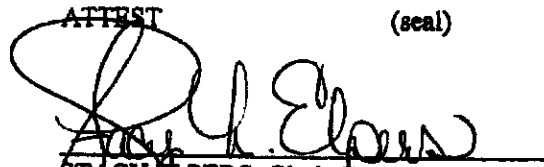
COUNCIL OF THE TOWN OF  
FORT BRANCH, INDIANA

  
ADAM BLEDSOE, President

  
SCOTT MICHAEL, Member

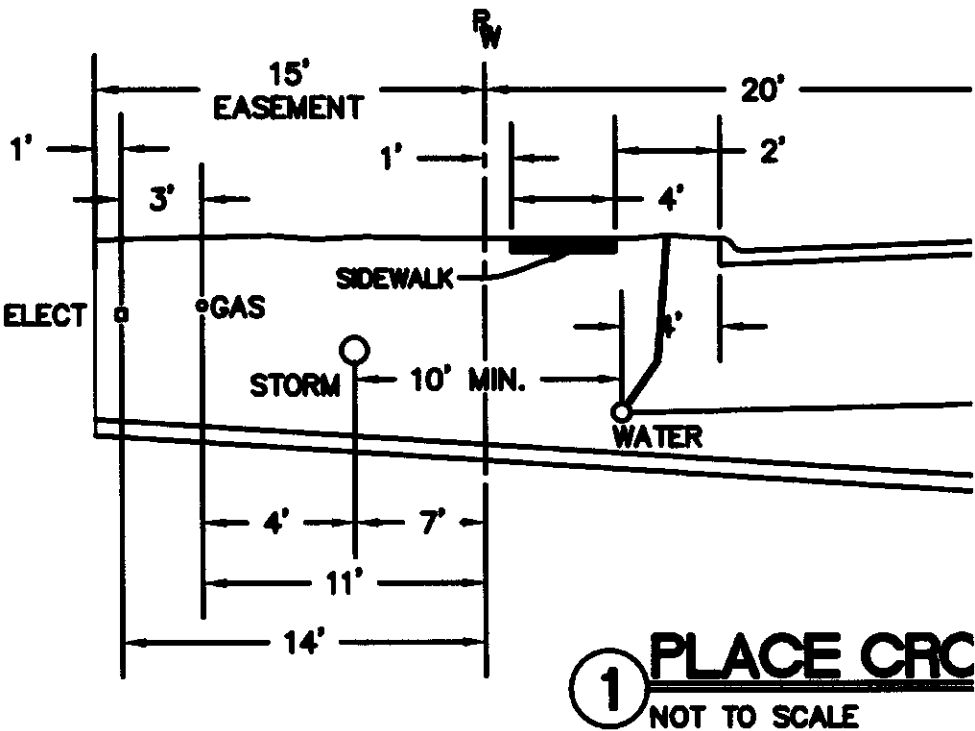
  
TOM HAUSCHILD, Member

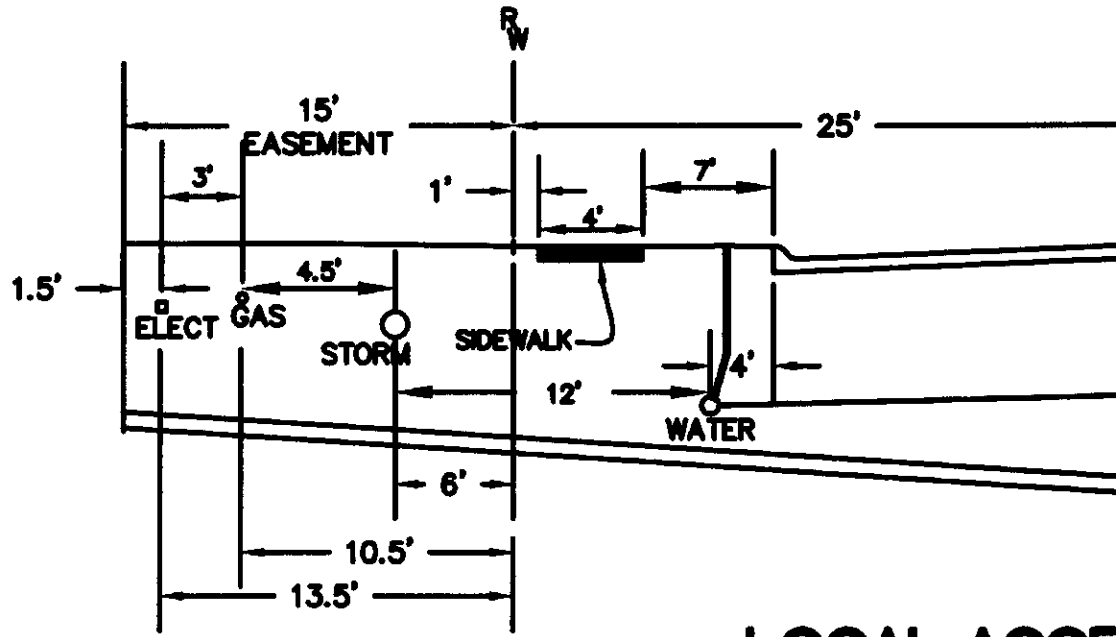


ATTEST (seal)  
  
STACY ELPERS, Clerk-Treasurer

TYPICAL



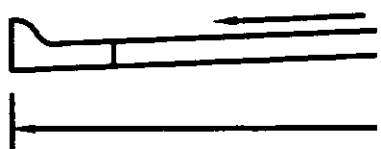




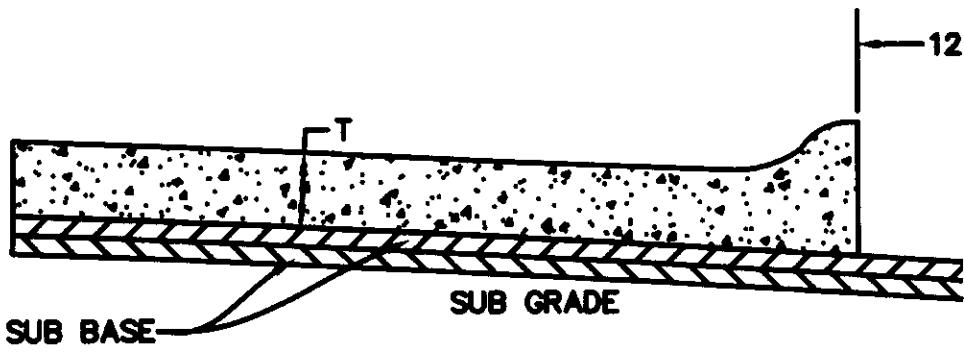
**2 LOCAL ACCE**  
NOT TO SCALE



3% TYPICAL, 2% MIN



**1** STANDARD  
NOT TO SCALE



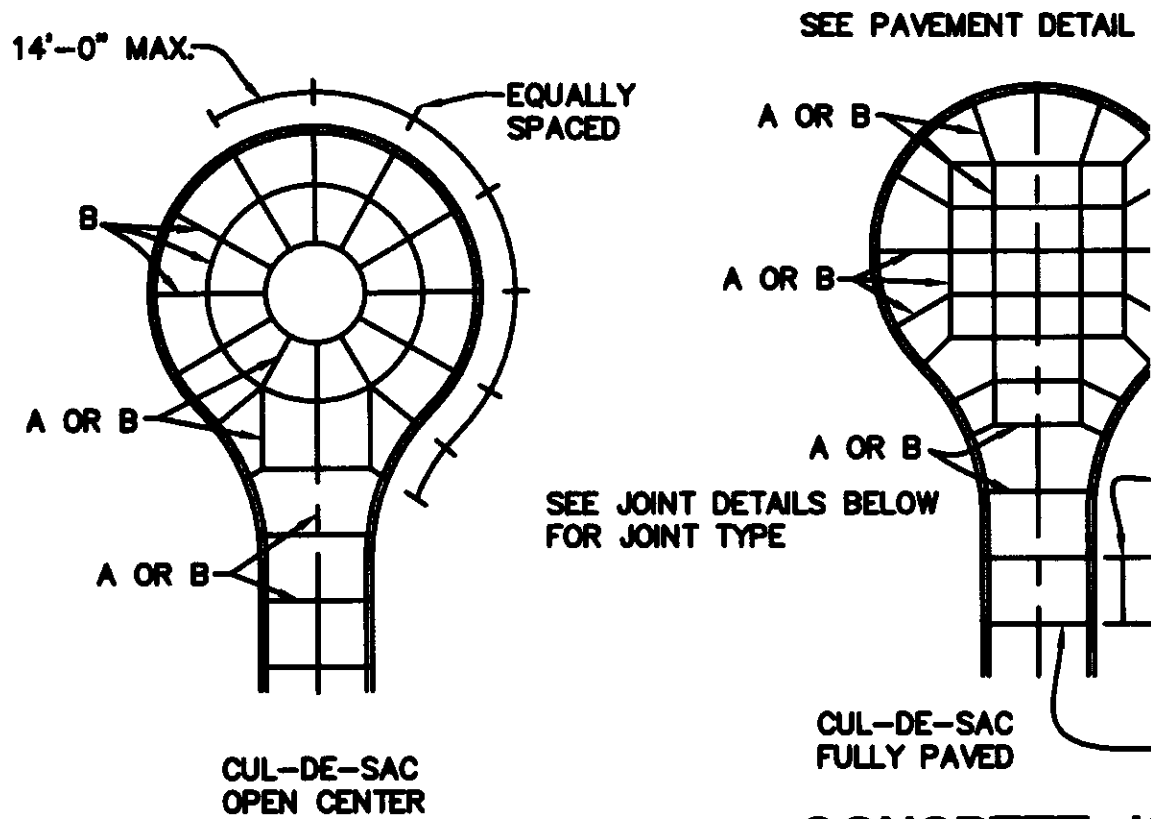
**CONCRETE RIGID PAVEMENT SECTION**  
NOT TO SCALE

CLASS OF STREET <sup>(1)</sup>	CURB <sup>(2)</sup>	SUB GRADE THICKNESS	CONCRETE

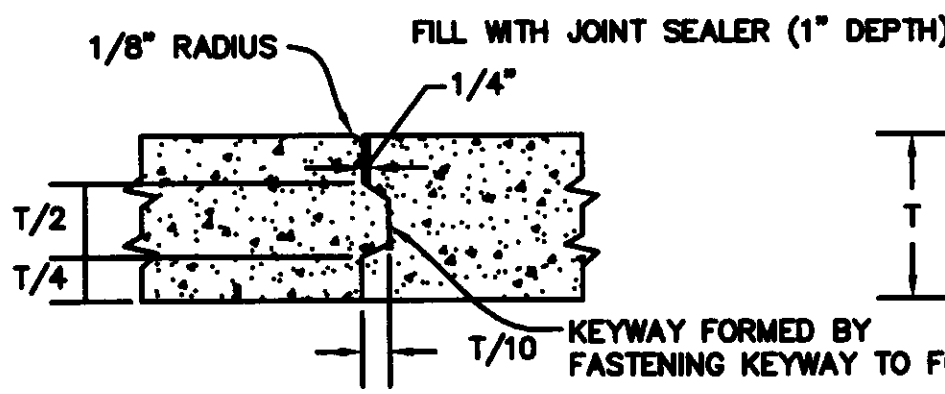
			<b>ON BACKSIDE</b>
<b>COLLECTOR</b>	<b>SEE DETAILS 1 AND 2 ON SHEET 5 OF 12</b>	<b>6"</b>	<b>6"</b>
<b>LOCAL AND PLACE</b>	<b>SEE DETAILS 1 AND 2 ON SHEET 5 OF 12</b>	<b>6"</b>	<b>6"</b>

<b>ITEM</b>	<b>MATERIAL TYPE</b>	<b>SPECIFICA</b>
<b>SUB GRADE</b>	<b>EARTH</b>	
<b>SUB BASE</b>		
<b>CURB</b>	<b>COMBINED CURB AND GUTTER</b>	<b>605.04-</b>
<b>BASE (AGGREGATE)</b>	<b>COMPACTED AGGREGATE</b>	
<b>BASE (ASPHALT)</b>	<b>ASPHALTIC CONCRETE</b>	
<b>INTERMEDIATE</b>	<b>ASPHALTIC CONCRETE</b>	<b>40</b>
<b>SURFACE</b>	<b>ASPHALTIC CONCRETE</b>	<b>40</b>
<b>PRIME COAT</b>	<b>MC-70, AE-P</b>	
<b>TACK COAT</b>	<b>AE-T</b>	
<b>PAVEMENT (CONCRETE)</b>	<b>PORTLAND CEMENT CONCRETE</b>	<b>30</b>
<b>SIDEWALKS, RAMPS, ETC.</b>	<b>PORTLAND CEMENT CONCRETE</b>	
<b>JOINT SEALANT</b>	<b>SEALANT</b>	

## **2** **TYPICAL PAVEMENT SECTIONS AND** **NOT TO SCALE**

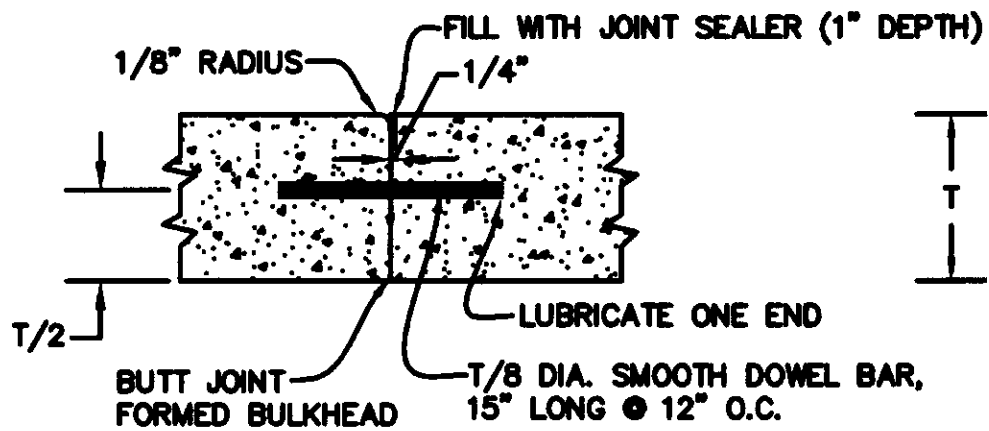


**1 CONCRETE J**  
NOT TO SCALE



**TYPE A**

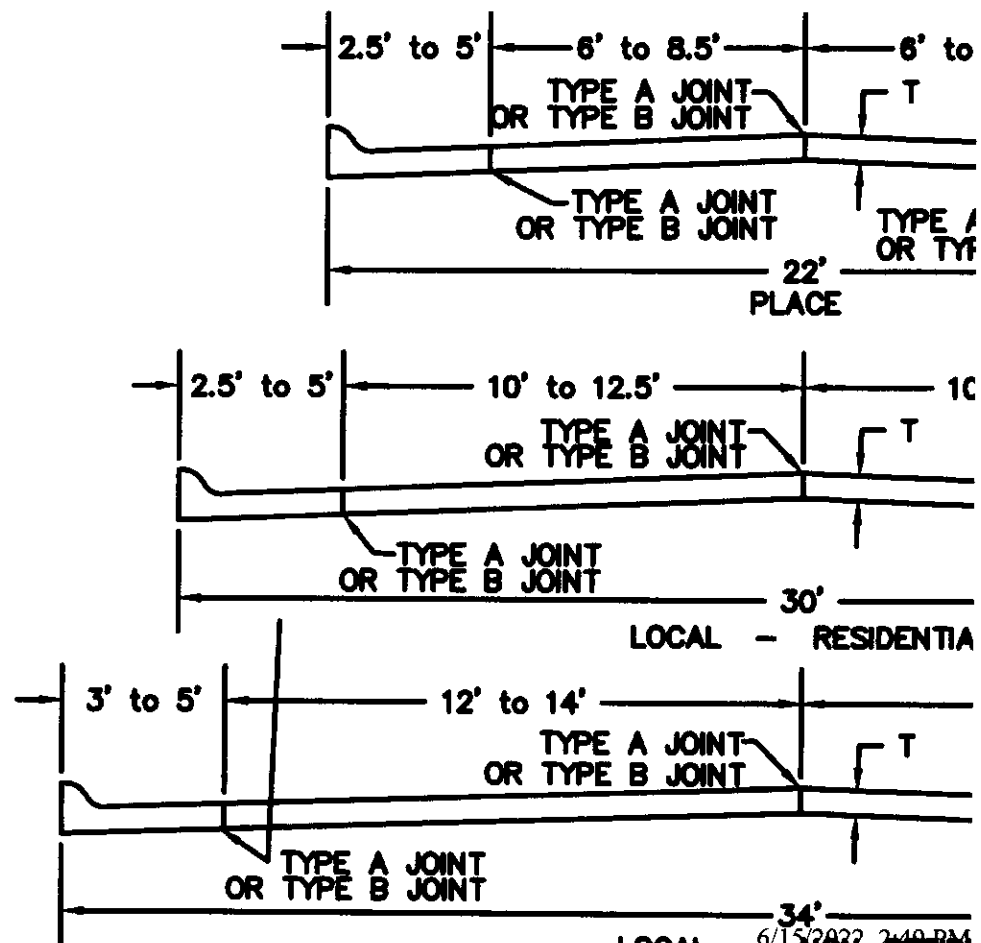
**LONGITUDINAL CONSTRUCTION JOINT**

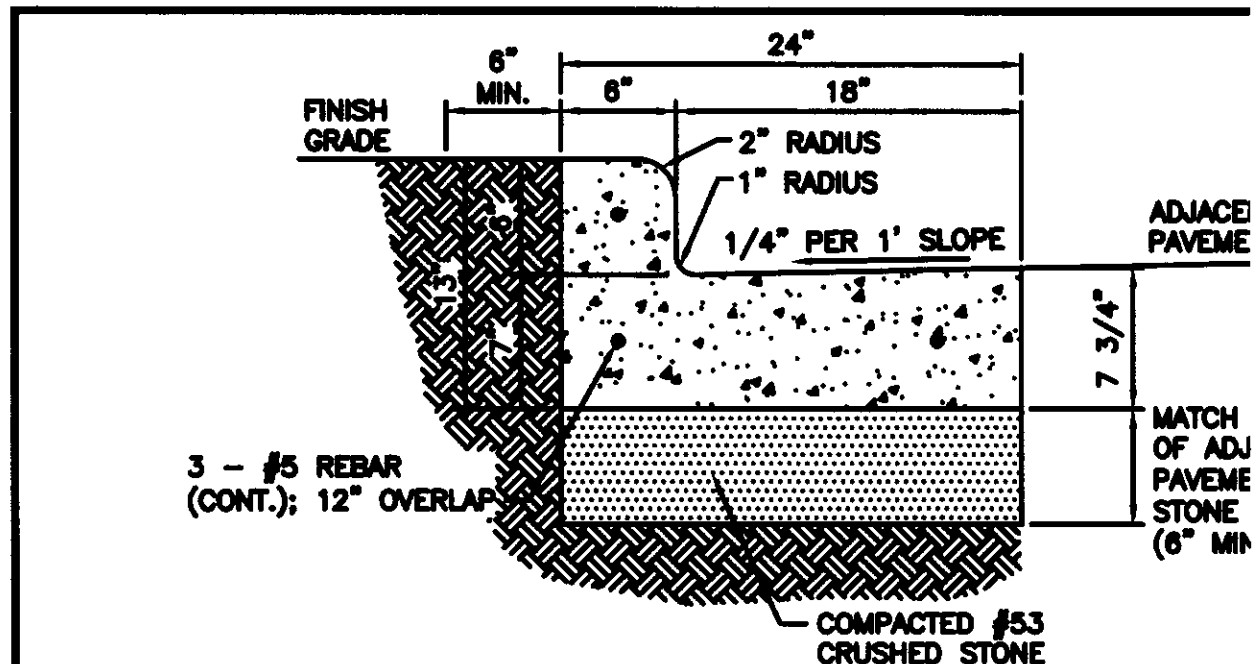


**TYPE C**  
**TRANSVERSE CONSTRUCTION JOINT**

NOTE:  
JOINT SEALING COMPOUND TO BE SEALTIGHT  
HOT-APPLIED, SINGLE COMPONENT, POLYMER  
(3405), OR APPROVED EQUAL.

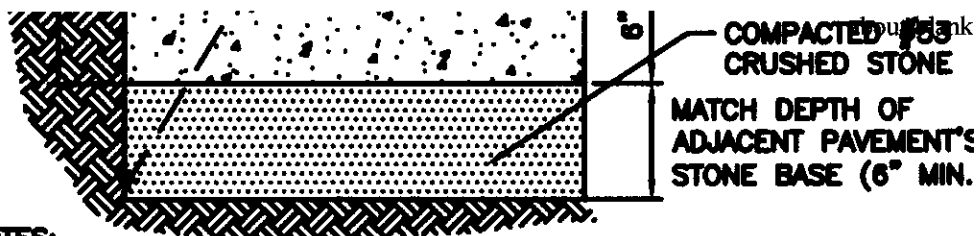
**2 NEW CONSTRUCTION - CONCRETE**  
NOT TO SCALE





1. INSTALL PER LATEST EDITION OF INDOT SPECIFICATIONS, AT TIME OF CONSTRUCTION.
2. EXPANSION JOINTS SHALL BE PLACED AT THE ENDS OF ALL RETURNS AN INTERVALS OF 500 FEET FOR SLIP CURBS AND AT INTERVALS OF 40 FEET FOR HAND-FORMED CURBS. EXPANSION JOINTS SHOULD ALSO BE PLACED AT PC'S, PT'S INTERSECTIONS AND AT THE END AND/OR BEGINNING OF A DRIVE. CONTROL JOINTS SHALL BE PLACED EVERY 10' O.C.

Diagram illustrating the geometry of a curb and base. The curb height is 18". The top width of the curb is 24". The base width is 6". The curb face has a radius of 18" R. The base has a radius of 18" R. The diagram is labeled "NOT TO SCALE", "FINISH GRADE", and "ADJACENT PAVEMENT".

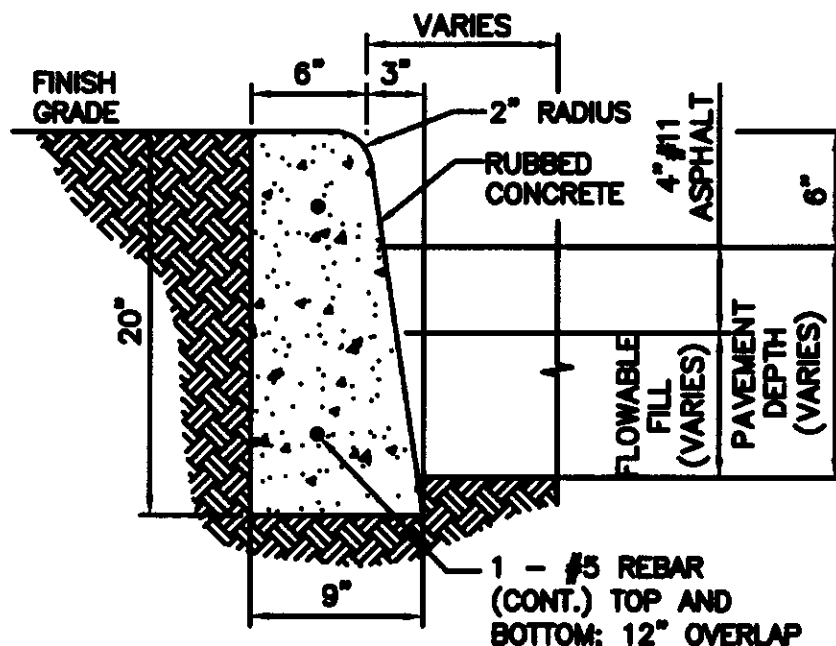


**GENERAL NOTES:**

1. INSTALL PER LATEST EDITION OF INDOT SPECIFICATIONS, AT TIME OF CONSTRUCTION.
2. EXPANSION JOINTS SHALL BE PLACED AT THE ENDS OF ALL RETURNS AND AT INTERVALS OF 500 FEET FOR SLIP CURBS AND OF INTERVALS OF 40 FEET FOR HAND-FORMED CURBS. EXPANSION JOINTS SHOULD ALSO BE PLACED AT ALL PC's, PT's INTERSECTIONS AND AT THE END AND/OR BEGINNING OF A DAYS POUR. JOINTS SHALL BE PLACED EVERY 20 FEET.

## 2 NEW ROLLED CURB DETAIL

NOT TO SCALE



**GENERAL NOTES:**

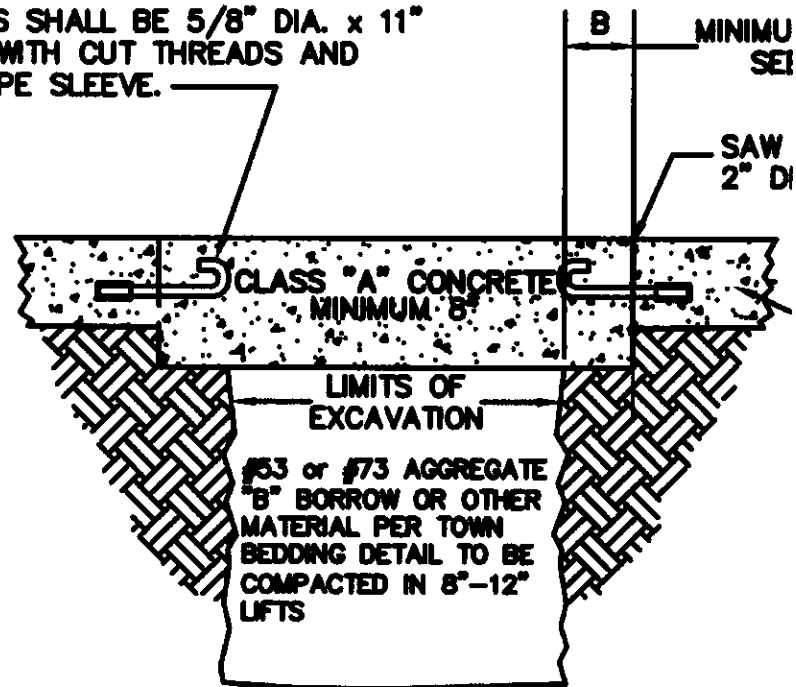
1. INSTALL PER LATEST ADDITION OF INDOT SPECIFICATIONS, AT TIME OF CONSTRUCTION.
2. EXPANSION JOINTS SHALL BE PLACED AT THE ENDS OF ALL RETURNS AN INTERVALS OF 500 FEET FOR SLIP CURBS AND AT INTERVALS OF 40 FEE HAND-FORMED CURBS. EXPANSION JOINTS SHOULD ALSO BE PLACED AT PC's, PT's INTERSECTIONS AND AT THE END AND/OR BEGINNING OF A DA POUR. CONTROL JOINTS SHALL BE PLACED EVERY 10 FEET.

## 3 NEW STRAIGHT CURB DETAIL

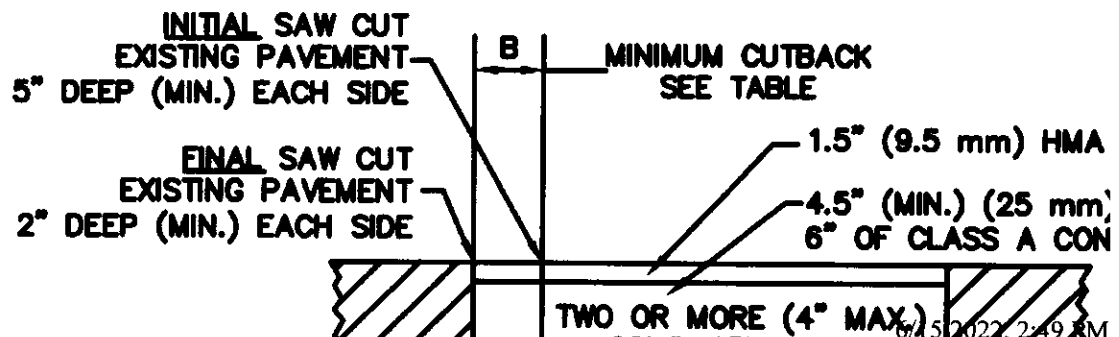
NOT TO SCALE



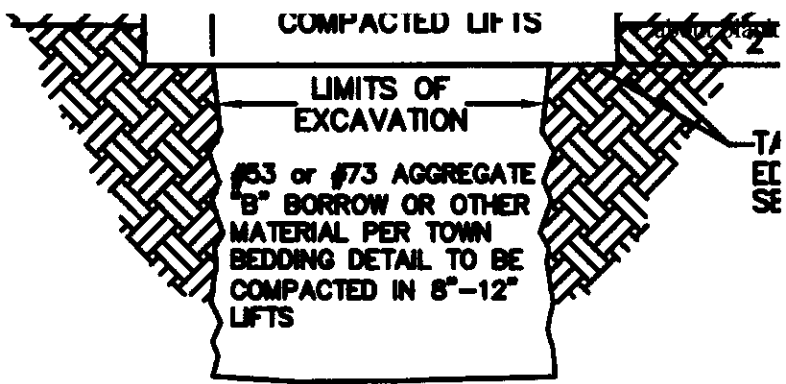
ANCHOR BOLTS SHALL BE 5/8" DIA. x 11"  
STEEL STOCK WITH CUT THREADS AND  
EXPANSION TYPE SLEEVE.



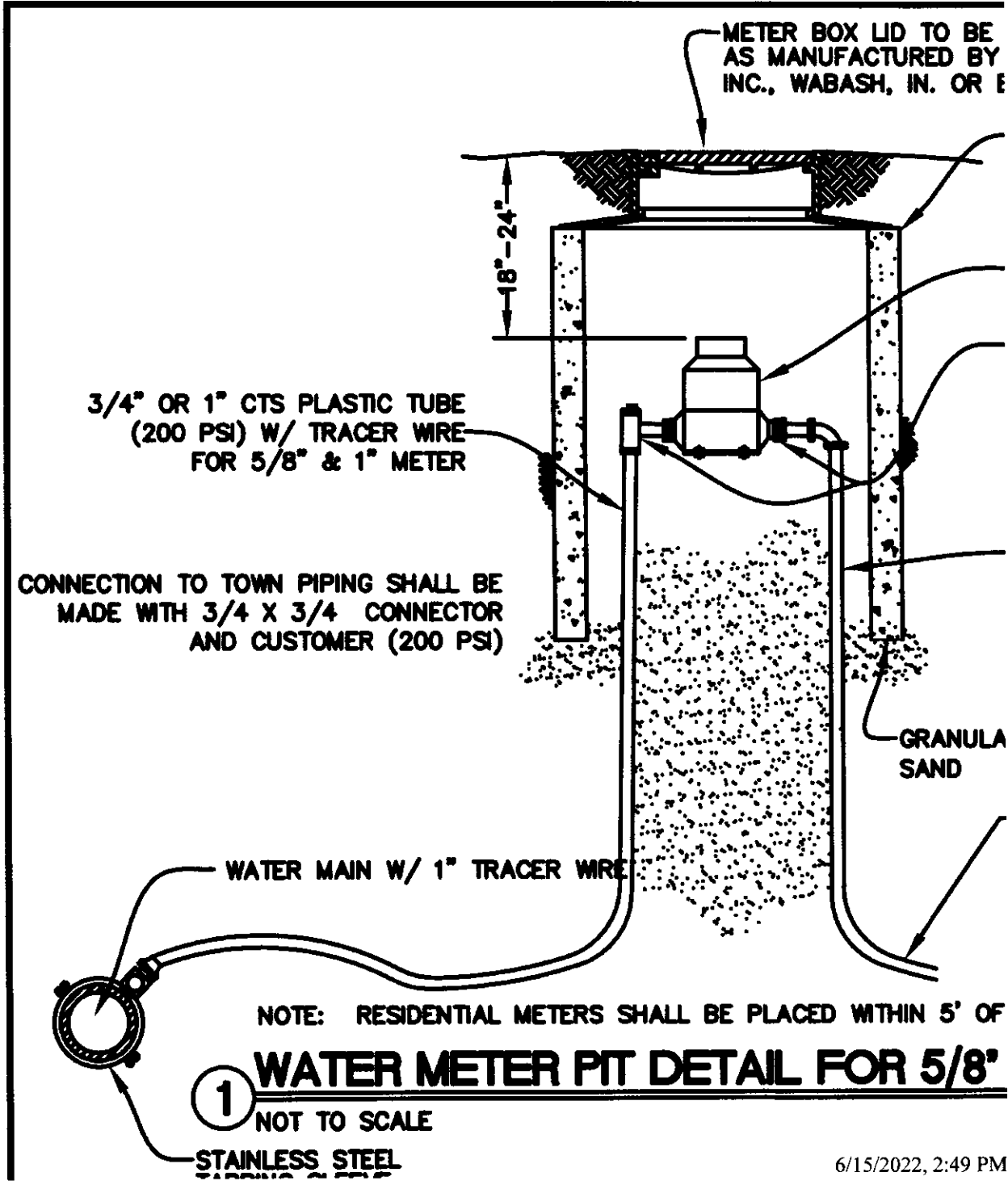
### CONCRETE PAVEMENT REPAIR



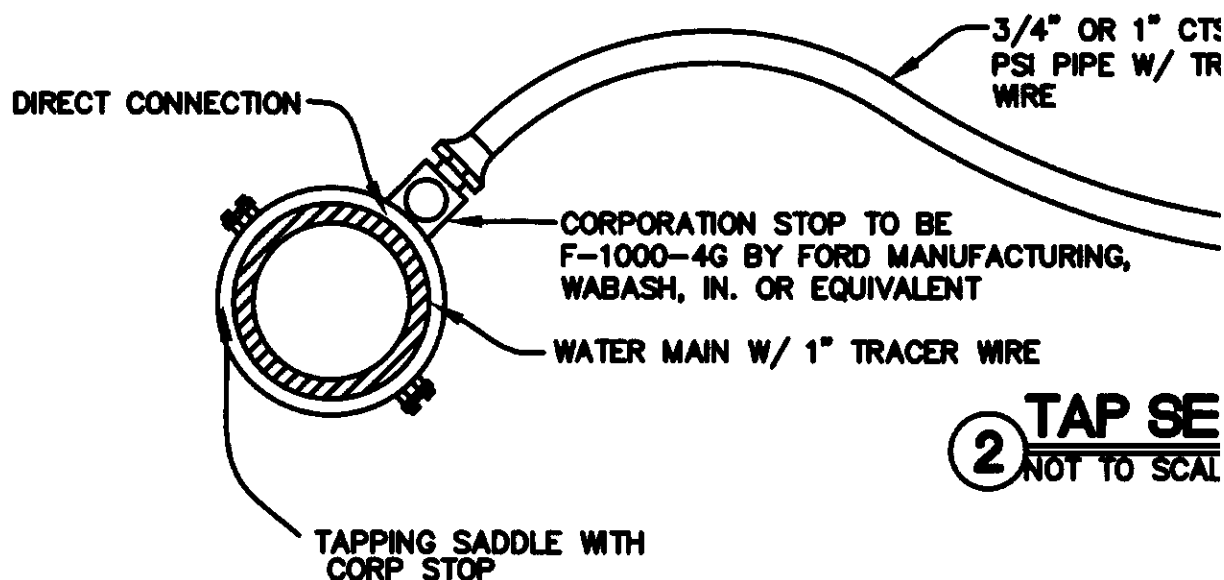




**ASPHALT PAVEMENT REPAIR**



SLOPE 3"

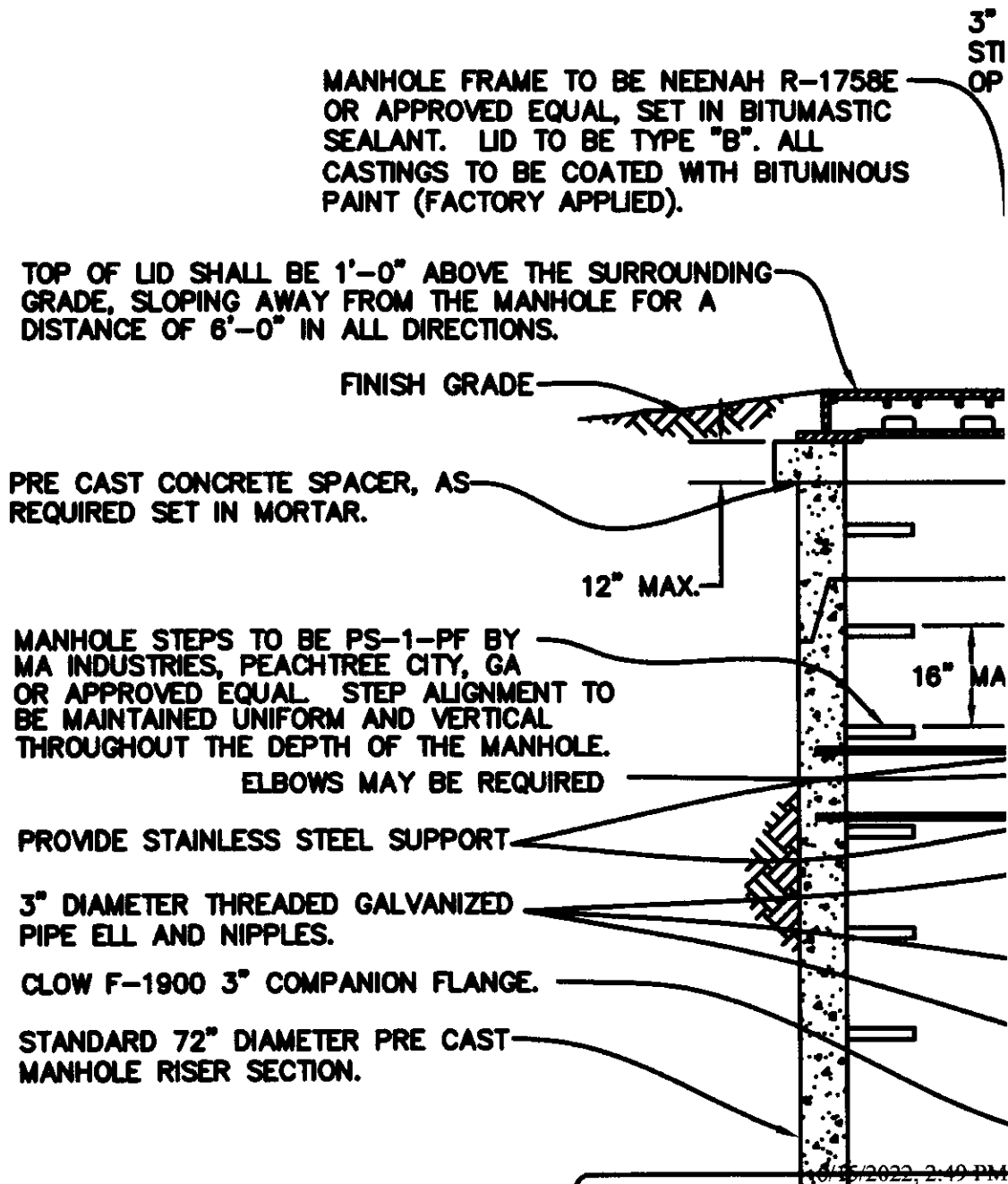


## WATER MAIN NOTES

1. ALL WATER MAINS SHALL BE CEMENT LINED DUCTILE IRON (D.I.) OR PV (PRESSURE CLASS 200 MIN., SLIP JOINT PIPE CONFORMING TO AWWA C C-111, C-150 AND C-151 AS APPLICABLE AND NSF-61.
2. PIPE SHALL MEET THE REQUIREMENTS OF ASTM D2241-96b, POLYVINYL CHLORIDE PRESSURE-RATED PIPE (SDR21) AND BASED ON OUTSIDE DIMENSIONS.  
ALL PIPE SHALL BE SUITABLE FOR USE AS PRESSURE CONDUIT. PROVIS MUST BE MADE FOR EXPANSION AND CONTRACTION AT EACH JOINT WIT ELASTOMERIC RING. THE BELL SHALL CONSIST OF AN INTEGRAL WALL S WITH A SOLID CROSS SECTION ELASTOMERIC RING, WHICH MEETS THE REQUIREMENTS OF ASTM F-477. THE BELL SECTION SHALL BE DESIGNE

BE AT LEAST AS HYDROSTATICALLY STRONG AS THE PIPE WALL AND MEET THE REQUIREMENTS OF AWWA C900 AND C905. EACH STANDARD AND RANDOM LENGTH OF PIPE SHALL BE TESTED TO TIMES THE RATED PRESSURE OF THE PIPE FOR A MINIMUM OF 5 SECONDS. THE INTEGRAL BELL SHALL BE TESTED WITH THE PIPE.

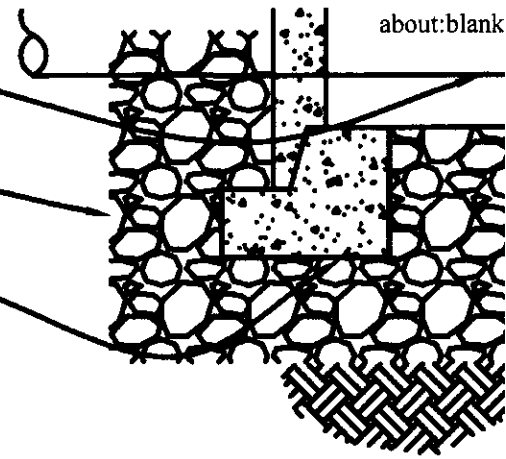
3. ALL FITTINGS TO BE DUCTILE IRON (D.I.) WITH MECHANICAL JOINTS (M.J) CONFORMING TO AWWA C-110, C-111, C-153 AND NSF-61.
4. ALL WATER SERVICE LINES SHALL BE 3/4" (MINIMUM) OR 1" DIAMETER TUBING TERMINATING WITH A CURB STOP. SERVICE LINE LOCATIONS SHALL BE MARKED BY STAMPING OR SAW CUTTING A "W" IN THE CURB. THE CURB STOP/WATER SERVICE SHOULD BE LOCATED ON P/L OR WITHIN 5'
5. THE MANUFACTURER'S ALLOWABLE PIPE DEFLECTION SHALL BE USED TO MAINTAIN THE VERTICAL AND HORIZONTAL ROUTE UNLESS OTHER FITTING



M.J. DUCTILE IRON TEE  
WITH 6" BRANCH.

#2 CRUSHED STONE OR  
GRAVEL.

PRE CAST MANHOLE BASE WITH  
36" HOLE IN CENTER.



# 1 WATERMAIN A

NOT TO SCALE

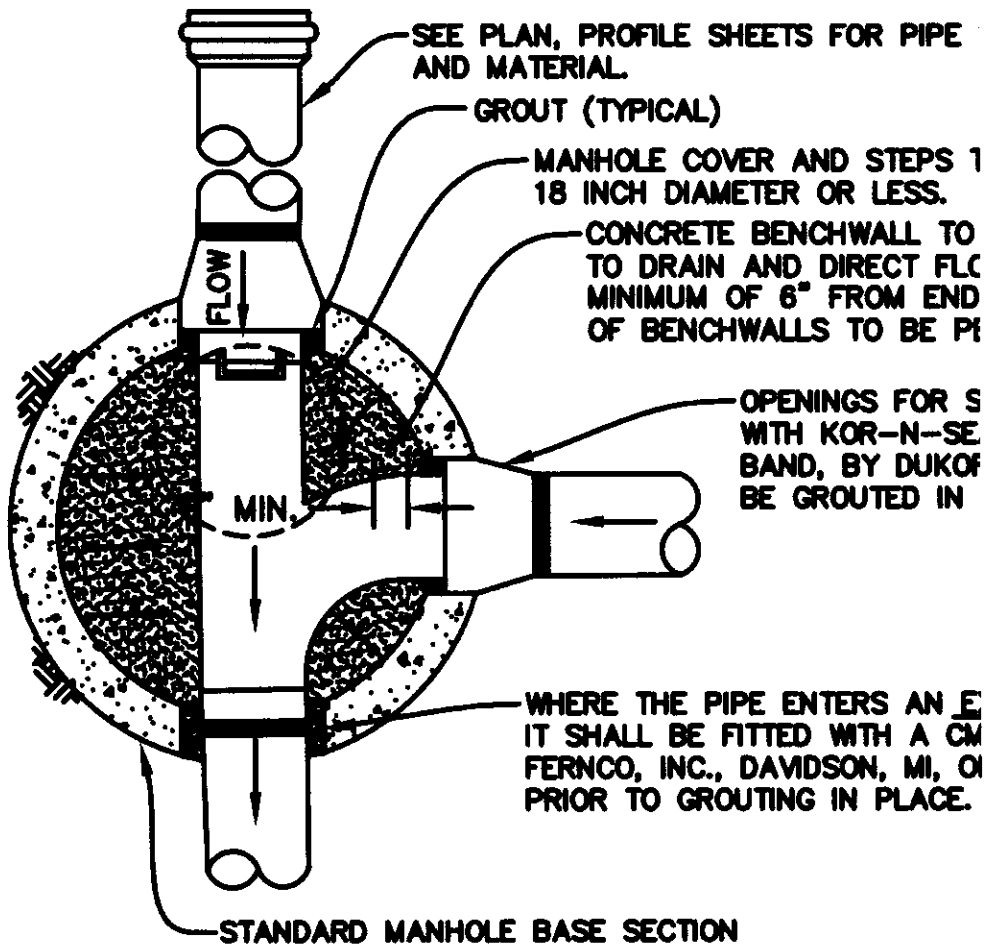
TOP OF VALVE BOX TO BE 3" ABO  
GRADE EXCEPT IN TRAVELED WAYS.  
AWAY FROM THE BOX FOR A DISTA  
IN ALL DIRECTIONS.

VALVE KEY EXTENSION REQUIRED TO 1  
18" OF FINAL GRADE WHEN WATER MA  
OR MORE FEET DEEP MEASURED FROM  
INVERT OF THE WATER MAIN TO FINAL  
GRADE.

RISERS IN EXCESS OF 4 FT. SHALL  
PIECE 6" D.I. PIPE WITH BELL TO RI  
CAST IRON VALVE BOX BASE SERIES  
TYLER PIPE. RISER TO BE WITHIN  
FINAL GRADE, AND FITTED WITH VAL  
TYPE ADJUSTABLE RISER AND LID SE  
BY TYLER PIPE. PROVIDE POSI-CAP  
ALIGNER UNDER OPERATING NUT.

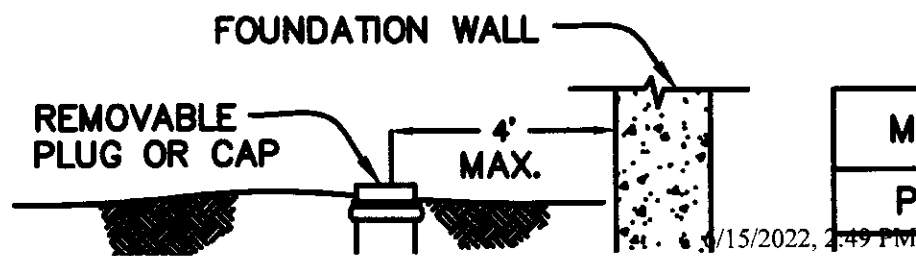
about:blank  
M.J.  
FIT  
GLA

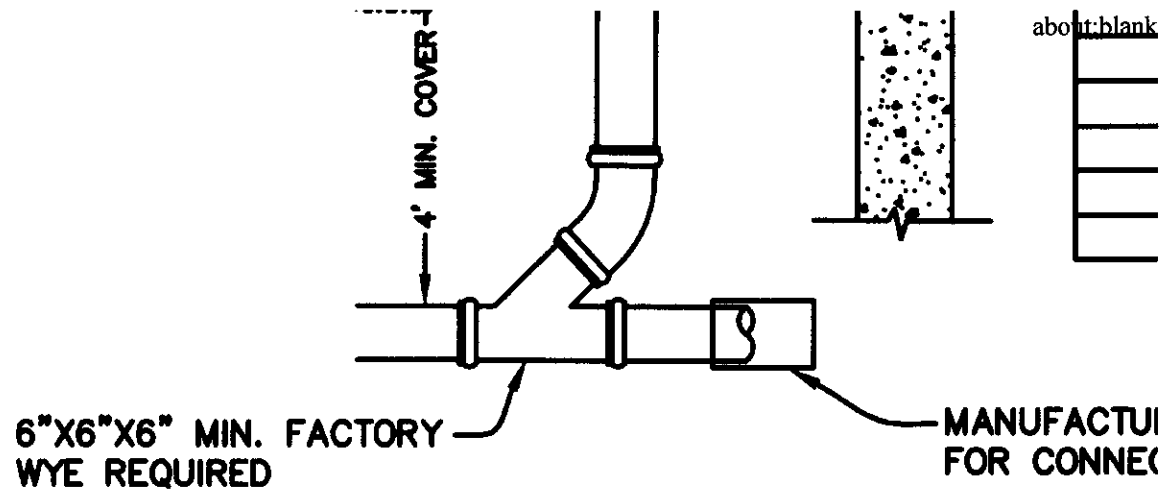
NOTE: FIRE HYDRANTS USED AS



# 1 STANDARD SANITARY MANHOLE PLAN

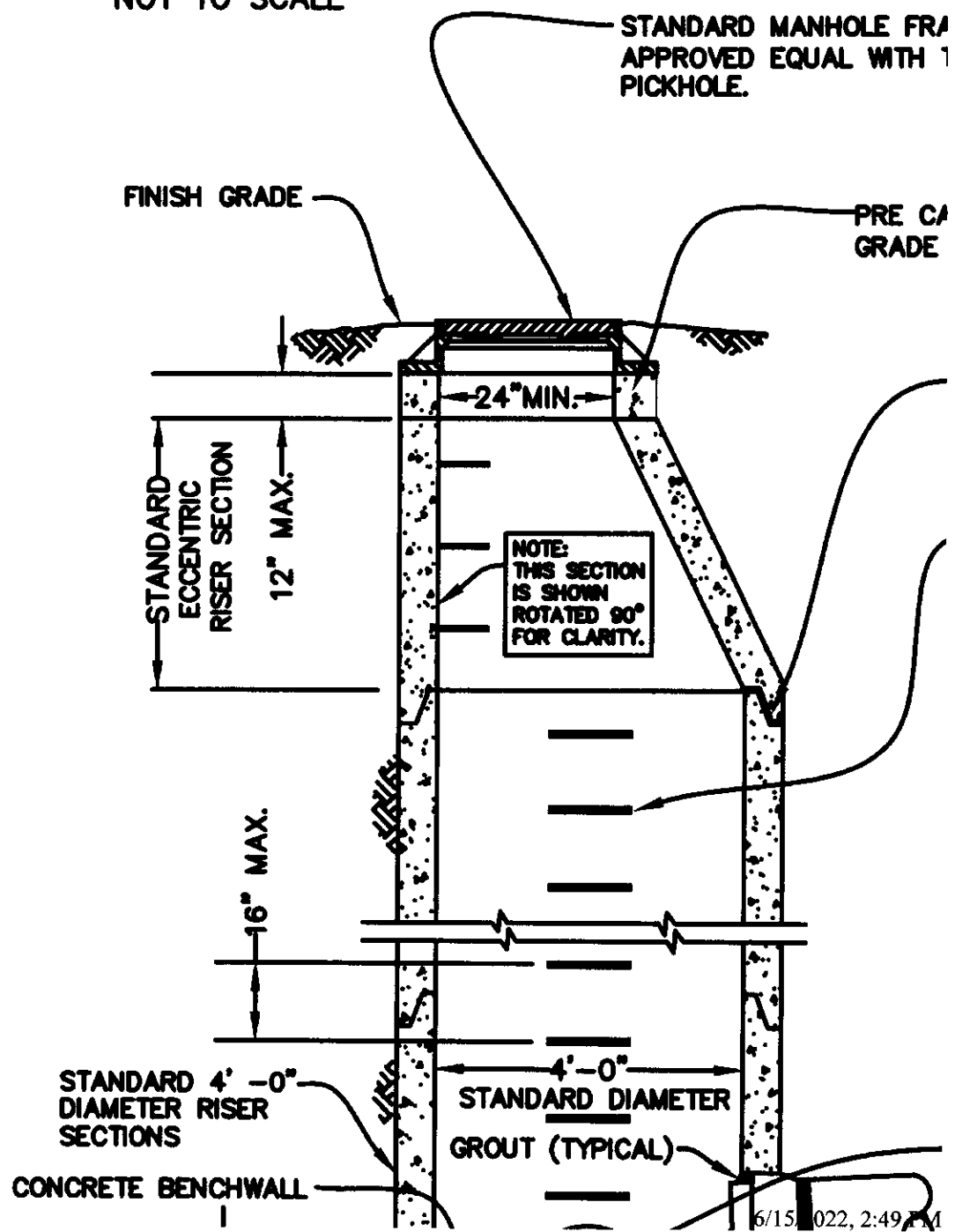
NOT TO SCALE

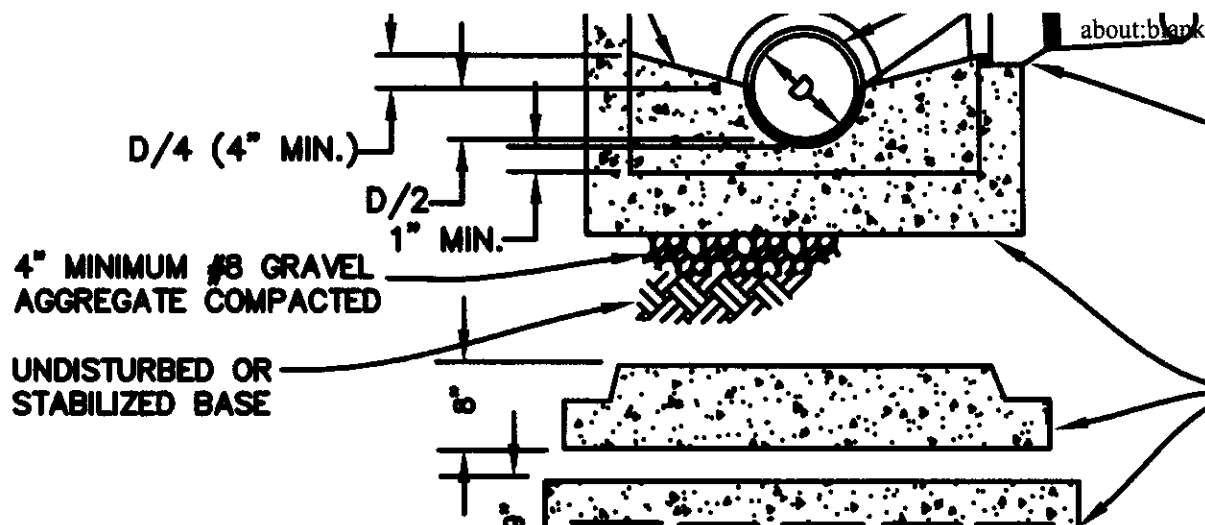




## 2 CLEAN-OUT DETAIL

NOT TO SCALE





TOP OF LID SHALL BE 1'-0" ABOVE THE SURROUNDING GRADE, SLOPING AWAY FROM THE MANHOLE FOR A DISTANCE OF 6'-0" IN ALL DIRECTIONS.

FINISH GRADE

12" MAX.

PRE CAST CONCRETE SPACER, AS REQUIRED SET IN MORTAR.

MANHOLE STEPS TO BE PS-1-PF BY MA INDUSTRIES, PEACHTREE CITY, GA, OR APPROVED EQUAL. STEP ALIGNMENT TO BE MAINTAINED UNIFORM AND VERTICAL THROUGHOUT THE DEPTH OF THE MANHOLE.

16" MAX.

2" BALL VALVE

STANDARD 48" DIAMETER MANHOLE RISER SECTION. SEE SANITARY MANHOLE DETAIL FOR ADDITIONAL DETAILS AND REQUIREMENTS.

M.J. DUCTILE IRON TEE WITH 6" BRANCH.

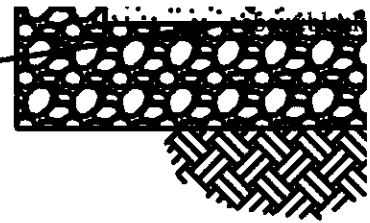
#2 CRUSHED STONE OR

6/15/2020, 2:49 PM

GRAVEL

PRE CAST MANHOLE BASE WITH  
36" HOLE IN CENTER.

NOTE: PRE CAST CONCRETE MANHOLES  
SHALL CONFORM TO ASTM C-478.

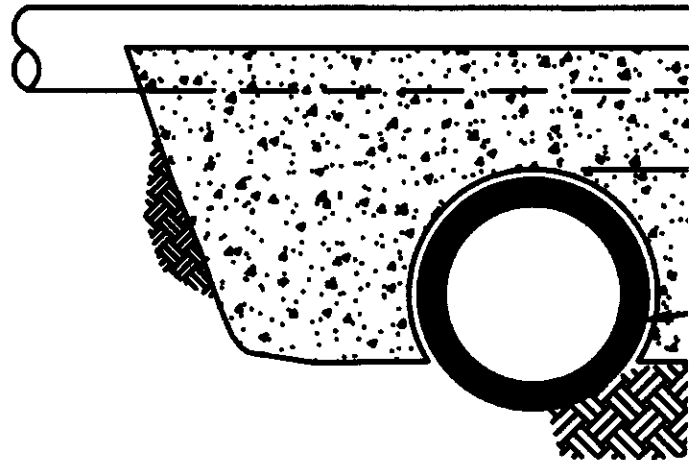


SHAPE GROUT TO DIRECT  
TOWARD STEPS - 4% SL

## 1 SEWAGE FORCE MAIN /

NOT TO SCALE (Force mains 4" to 12")

WA

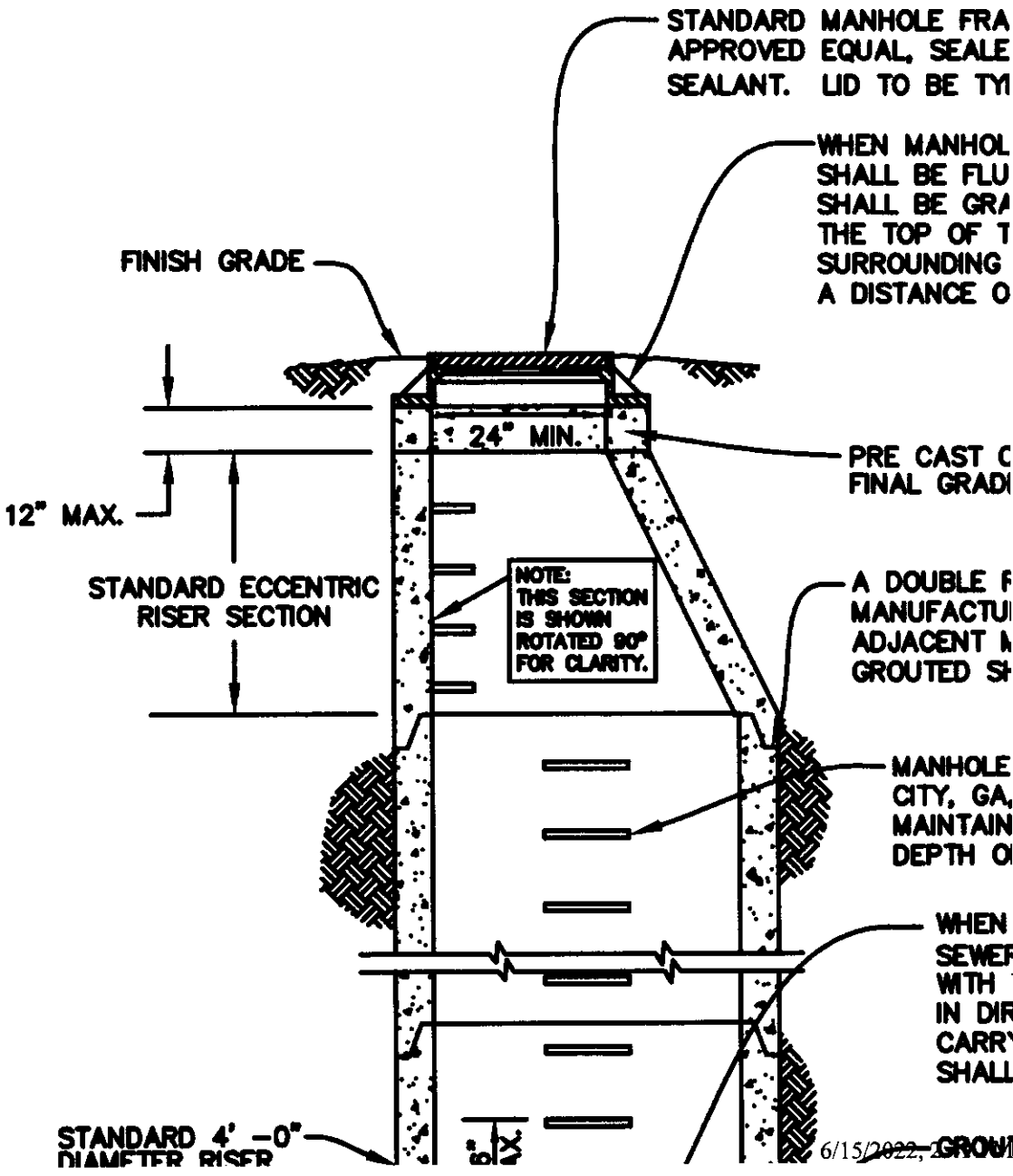
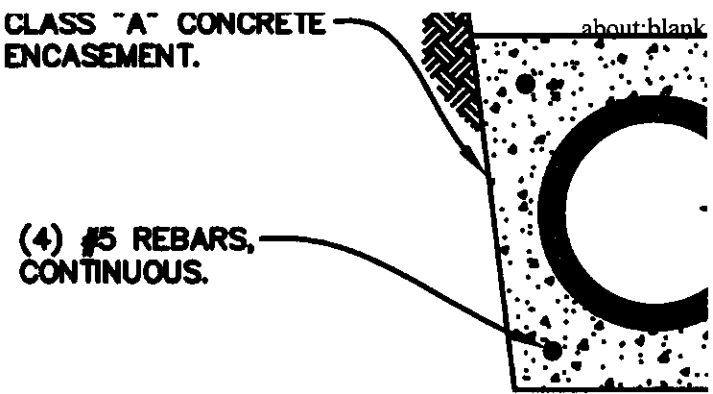


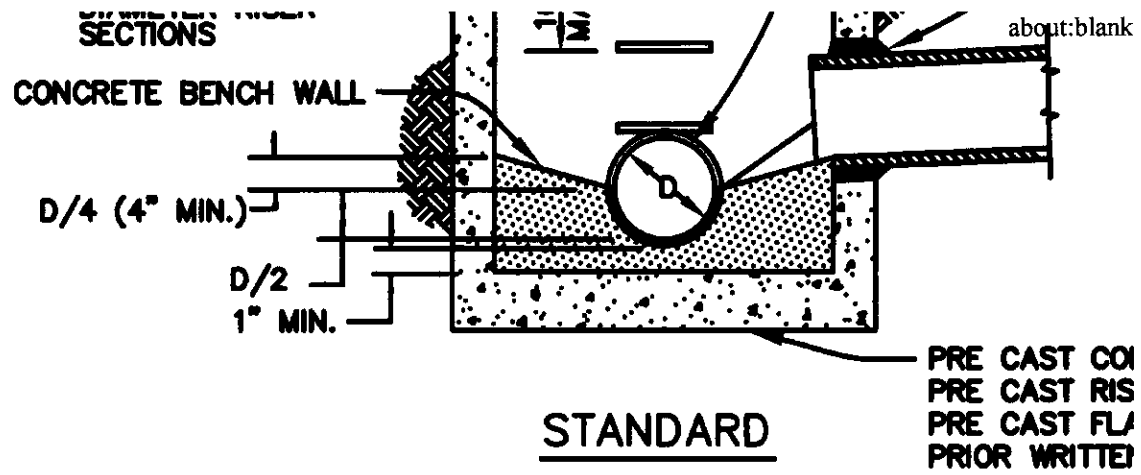
NOTE: THIS DETAIL TO  
MAIN, SEWER OR  
OF ANOTHER PIPE

## 2 PIPE CROSSING

NOT TO SCALE







MANHOLE SELECTION TABLE			
TYPE	PIPE DIAMETER D	RISER DIAMETER A	MAXIMUM FOR I
STANDARD	UP TO 24"	48"	
H	24"–36"	--	
J	24"–36"	60"	
K	36"–48"	72"	
L	48"–54"	96"	
M	54"–72"	102"	
N	72"–84"	108"	

