SECTION 2.04: Permits for Significant Industrial Users

All Industrial Users proposing to connect to or discharge to the Sanitary Sewer System shall obtain a wastewater discharge permit before connecting to or discharge to the System. The wastewater discharge permit will define the allowable levels of pollutants discharged into the Authority's Sewer System. Article IX sets the requirements for these discharges.

SECTION 2.05: Building Sewer Construction Standards and Specifications

The following are the minimum standards and specifications for Building Sewers. These shall be followed in conjunction with the applicable Standard Details contained in Appendix E.

2.05.01 Building Sewer Pipe and Fittings

The following pipe and fittings are recommended for use:

A. PVC Schedule 40 Solid Wall Pipe and Fittings:

Polyvinyl chloride (PVC) pipe, Schedule 40, solid wall, used for gravity sewer construction, shall meet or exceed the requirements of ASTM D 1785. **Cellular Core pipe is NOT acceptable.** Joints shall be solvent welded in accordance with ASTM D 2564 and ASTM D 2855. Use of Schedule 80 and 120 is also approved when loading warrants.

The following pipe and fittings are an approved alternative to the recommended material above:

B. PVC SDR-35 Pipe and Fittings:

Polyvinyl chloride (PVC) pipe, used for gravity sewer construction, shall meet or exceed the requirements of ASTM D 3034 for 4-inch through 15-inch pipe. The PVC sewer pipe shall have a minimum standard dimension ratio (SDR) of 35 and the minimum pipe stiffness, as tested in accordance with ASTM D 2412, shall be 46 psi when measured under 5 percent deflection at 73 degrees Fahrenheit. Pipe and fittings shall be manufactured with integral wall bell and spigot gasket joints.

C. Ductile Iron Pipe and Fittings

Ductile Iron Pipe (DIP), minimum class 52, double cement lined and bituminous coated meeting ANSI A21.51 is acceptable.

Other proposed materials shall be submitted for approval to the Authority at time of application.

The pipes shall have permanently tight joints which shall prevent the admission of groundwater and shall be laid at a minimum grade of one quarter (1/4) inch per foot with the best possible alignment. To protect the pipes from frost or crushing from surface activity, a minimum of four (4) feet of cover must be provided. Under special conditions, a variance to pipe depth requirement may be granted by the Authority.

The pipe for the Building Sewer and Service Lateral shall have a minimum inside diameter of four (4) and six (6) inches respectively. No transitions from one pipe size to another or from one pipe material to another will be made unless manufactured adapters, designed specifically for that purpose and approved by the Authority, are used. Building Sewers serving more than a single EDU shall have a minimum diameter of 6 inches. All changes in direction must be made with pipe fittings. No fitting greater than forty-five (45) degrees will be permitted, except under certain conditions acceptable to the Authority.

For purposes of identification and early warning during trenching or other excavation, non-residential properties shall have continuous warning tapes in all trenches. Such tapes shall be optional for residential properties. Tapes shall be buried at a depth of six (6) to twelve (12) inches below finished grade. In pavement, tapes shall be buried six (6) inches below the top of the subgrade. The underground warning tape shall be a magnetic polyethylene tape, three (3) inches in width with a minimum lettering of one inch.

2.05.02 Main Trap and Air Intake Pipes

A trap and air intake pipe must be provided for each Building Sewer. The trap must be placed immediately outside the building wall and the air intake pipe must extend from the trap. The top of the air intake pipe shall extend a minimum of six (6) inches above the ground surface to prevent surface water from entering and shall be provided with a mushroom or other type cap sufficient to prevent the entrance of rainwater.

2.05.03 Observation Ports

An Observation Port shall be provided for each Building Sewer. The Observation Port shall be placed at the public or utility right-of-way/easement. It shall be constructed as per the detail utilizing a sweep tee (not a wye). Casting shall be Model #SC40 as manufactured by Drainage & Water Solutions, Inc. or equal installed on concrete footing as shown on detail.

2.05.04 Cleanouts

Unless otherwise authorized, clean-outs shall be provided in each Building Sewer at intervals that will permit complete rodding with a one-hundred (100) foot long auger or tape. Such intervals shall include the length of the Service Lateral and riser as

appropriate. Clean-outs will also be required within five (5) feet upstream of every change in direction greater than forty-five (45) degrees and immediately downstream of the trap. Clean-outs shall be constructed using a one piece combination wye and 45-degree bend and riser to the ground surface. All lateral riser components shall utilize solvent welded joints and assembled with the manufacturer's recommendations. The riser pipe shall be provided with a standard 4-inch screw-type ferrule and shall be watertight.

Cleanouts shall be protected at the ground level from incidental damage by a cleanout frame and cover. Frames and covers shall be gray iron castings designed for AASHTO HS-20 loadings. Cast the letters "S" or "SEWER" integrally in the center of the cover with raised letters. Model #SC40 as manufactured by Drainage & Water Solutions, Inc. or equal is required for improved surfaces. Part number M06-010 as manufactured by Jones Stephens Corp, is required of non-improved (grass) surfaces.

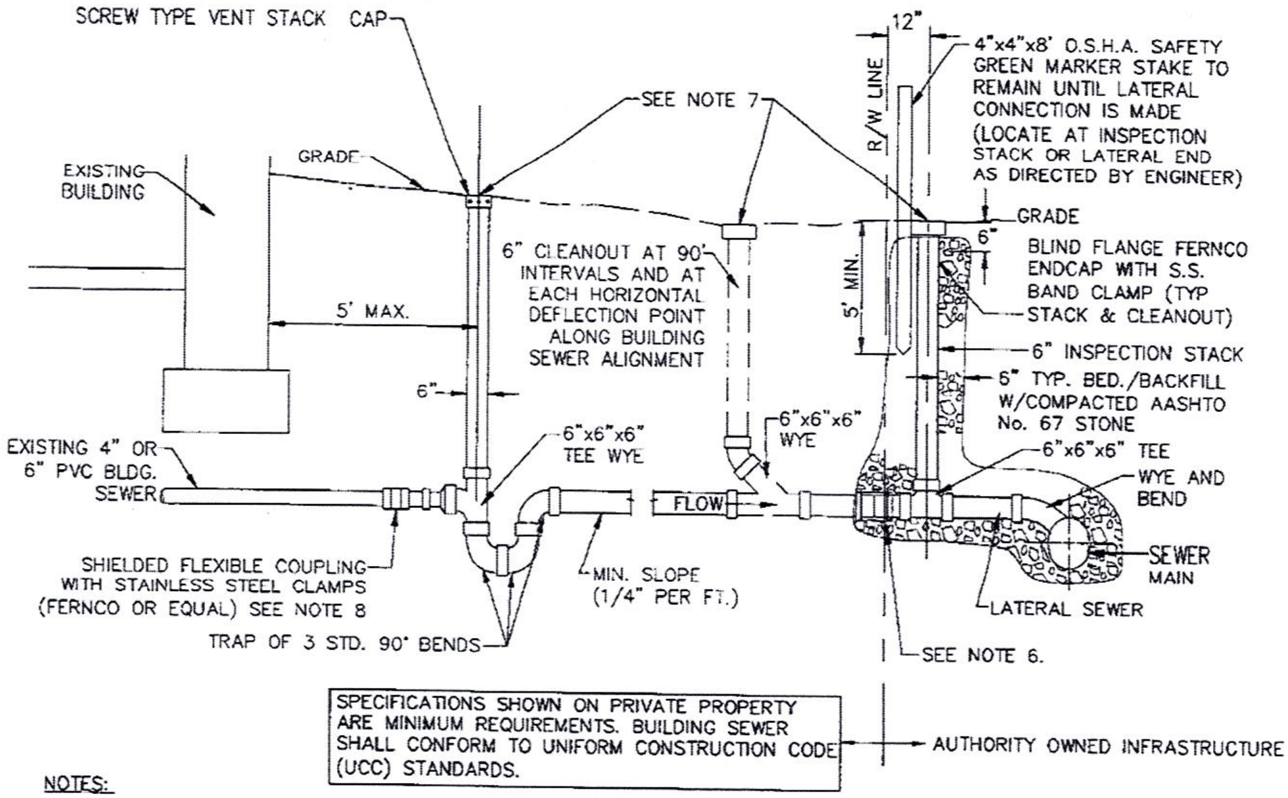
2.05.05 Grease Traps/Interceptors

Food preparation establishments shall install grease traps conforming to the Plumbing and Drainage Institute G-101 (PDI G101). The establishment's proposed grease trap and its installation details must be approved by the Authority before construction. The application for new installations must contain the size and type of the grease trap being proposed as well as a floor plan showing the location of the grease trap and all fixtures being connected to the trap, as well as discharge rates for each fixture.

The Authority reserves the right to require any establishment that generates greases or oils to install a large outdoor grease interceptor where the Authority deems it necessary due to the anticipated volume of grease and/oil generated. Such interceptors shall be designed in general conformance with PDI G-101, and shall provide a minimum detention time of 30 minutes with all fixtures discharging simultaneously. The interceptor shall be of the two-compartment type, have sampling ports as required by the Authority, and shall be water tested in accordance with testing procedures for sanitary sewer manholes.

The use of chemical or biological additives for the cleaning of grease traps or interceptors are prohibited.

Cleaning shall take place at intervals that permit the continued efficient use of the trap/interceptor and proof of cleaning shall be required to be submitted to the Authority on a quarterly basis. If cleaning reports indicate an excessive buildup of grease (greater than 20% of tank volume), the Authority shall require the owner to clean on a more frequent basis. If quarterly cleaning demonstrates very little grease accumulation, the Authority reserves the right to investigate if this it is due to the design of the trap/interceptor or if the wastewater simply does not contain much grease. Design, continued use and cleaning intervals could be re-examined at this



NOTES:

1. PVC LATERAL AND BUILDING SEWER PIPE AND FITTINGS MUST BE BEDDED AND SURROUNDED WITH FIRMLY PACKED AASHTO No. 67 ANGULAR STONE. THE BEDDING SHALL EXTEND 4" MIN. BELOW PIPE. THE USE OF 4" PIPE FROM THE INSPECTION STACK "IN" IS ACCEPTABLE. ALTERNATE MATERIALS MUST BE SUBMITTED TO THE AUTHORITY FOR APPROVAL PRIOR TO INSTALLATION.
2. BUILDING SEWER PIPE AND FITTINGS SHALL BE SCH 40 PVC; ALTERNATE MATERIALS SHALL BE SUBMITTED FOR APPFROVAL.
3. DO NOT DEFLECT PIPE TO ACHIEVE REQUIRED SLOPE, UTILIZE REQUIRED FITTINGS.
4. ALL BACKFILL MATERIAL AND BACKFILL INSTALLATION PROCEDURES FROM WYE CONNECTION TO INSPECTION STACK TO CONFORM TO TRENCH BACKFILL DETAIL.
5. LATERALS SHALL BE INSTALLED FROM LATERAL WYE FITTING TO INSPECTION STACK AT A MINIMUM GRADE OF 1/4" PER FT.
6. INSTALL SOLVENT WELD WATERTIGHT ENDCAP TO END OF 12" LONG STUB SECTION IF NO PRIVATE SEWER LATERAL EXISTS. IF PRIVATE SEWER LATERAL DOES EXIST, CONNECT TO NEW LATERAL AFTER APPROVAL FROM AUTHORITY.
7. SEE DETAIL DT-4 FOR CONSTRUCTION OF PROTECTIVE CASTING FOR VENT, CLEANOUT AND INSPECTION STACKS.
8. IF EXISTING BUILDING SEWER IS CLAY, CONNECTION SHALL BE MADE ON INSIDE OF FOUNDATION.
9. NON-RESIDENTIAL BUILDING SEWERS SHALL BE DESIGNED FOR AUTHORITY APPROVAL.

BUILDING SEWER & LATERAL DETAIL

NOT TO SCALE

HRG
Herbert, Rowland & Grubic, Inc
Engineering & Related Services
AN EMPLOYEE-OWNED COMPANY
200 West Kensinger Drive, Suite 400
Cranberry Township, PA 16066
(724) 779-4777
Fax (724) 779-4711
hrg@hrg-inc.com
www.hrg-inc.com

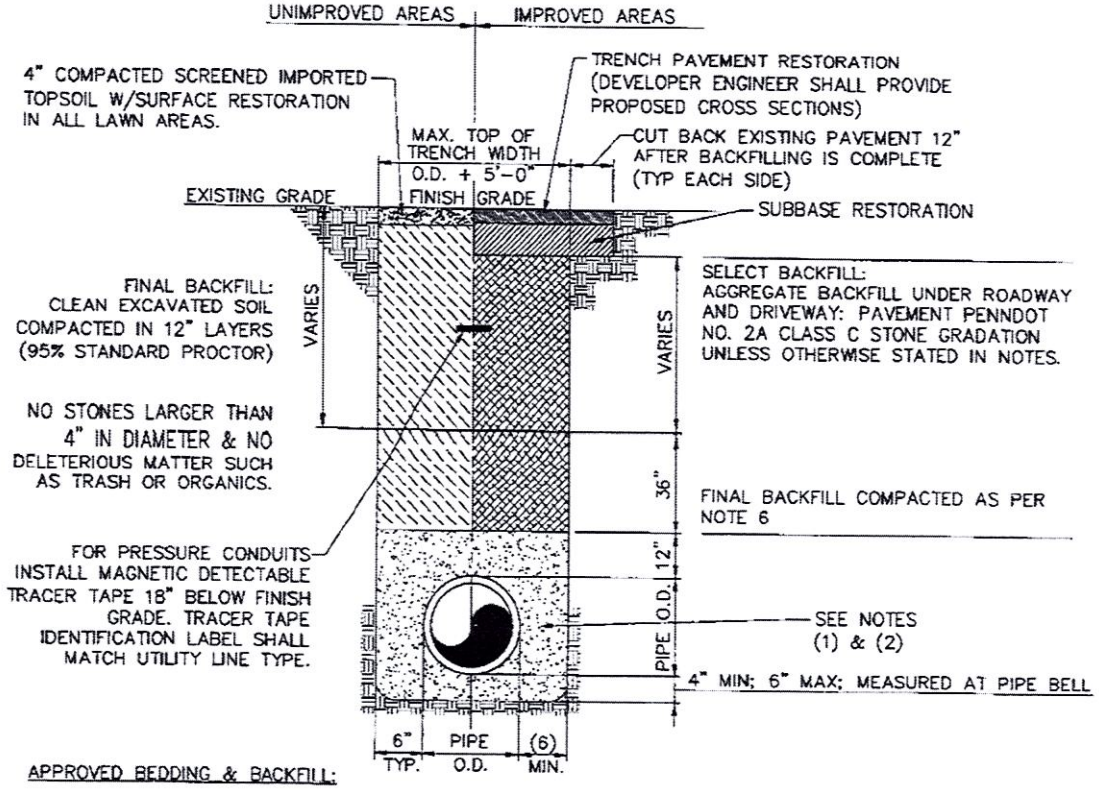
FAIRCHANCE - GEORGES JOINT MUNICIPAL SEWAGE AUTHORITY STANDARD DETAILS

PROJ. MGR. –	CEH
DESIGN–	CEH
CADD–	CRC
CHECKED–	
SCALE–	AS SHOWN
DATE–	FEB. 2016

DRAWING NO.

DT-1

PROJECT 004307.0000



APPROVED BEDDING & BACKFILL:

1. APPROVED BEDDING & BACKFILL: FLEXIBLE GRAVITY CONDUITS PVC & HDPE: PENNDOT TYPE 'C', AASHTO No. 57 OR 67 TO 12" ABOVE PIPE. PARTICLE SIZE SHALL BE SMALLER THAN RIBBED OPENING FOR RIBBED PVC OR HDPE USE EITHER AASHTO No.57 OR 67.
2. PRESSURE CONDUITS PVC (C-900), DIP: GRAVEL OR STONE (AASHTO No.67), SAND CLASS II OR III PENNDOT TYPE A – TO 12" ABOVE PIPE.
3. ALL PIPING: SLAG NOT PERMITTED. ALL BEDDING SHALL BE WELL COMPACTED.
4. ALL DIP TO BE ENCASED W/8 MIL POLYETHYLENE ENCASEMENT
5. 6" MIN SIDE BEDDING.
6. COMPACTED BACKFILL LAYERS SHALL CONFORM TO PENNDOT PUB 408. A MAXIMUM LIFT OF 8" IF VIBRATORY COMPACTED AND 4" MAXIMUM LIFT IF BY HAND OR MECHANICAL TAMPER.

TRENCH BACKFILL DETAIL

NOT TO SCALE

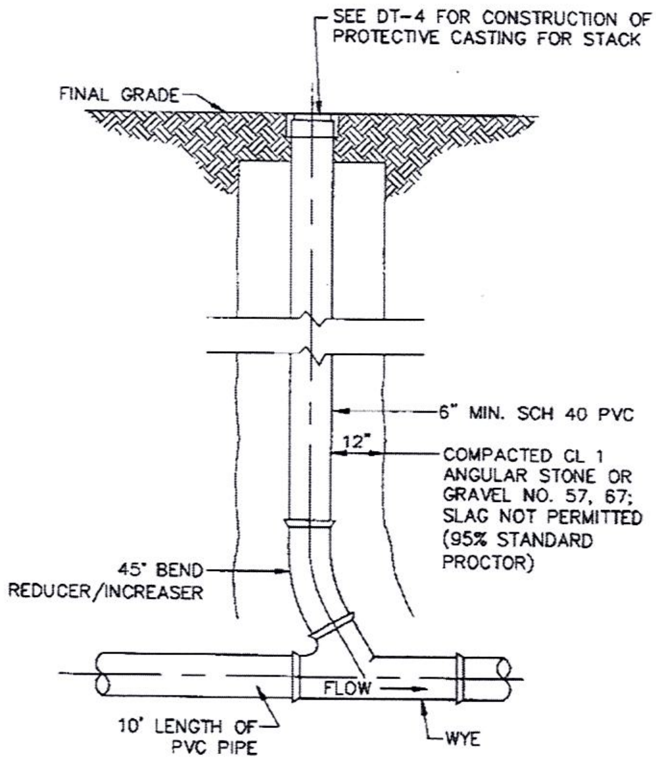
HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services
AN EMPLOYEE-OWNED COMPANY
200 West Kensinger Drive, Suite 400
Cranberry Township, PA 16066
(724) 779-4777
Fax: (724) 779-4711
hrg@hrg-inc.com
www.hrg-inc.com

FAIRCHANCE - GEORGES JOINT MUNICIPAL SEWAGE AUTHORITY
STANDARD DETAILS

PROJ. MGR. – CEH	
DESIGN– CEH	
CADD– DRC	
CHECKED–	
SCALE– AS SHOWN	
DATE– DEC. 2015	

DRAWING NO. **DT-2**

PROJECT 004307.0000



SANITARY CLEANOUT

NOT TO SCALE

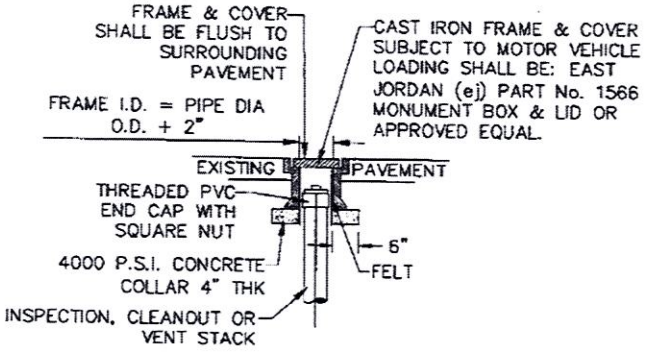
THE DETAILS ON THIS SHEET PRESENT THE MINIMUM REQUIREMENTS FOR THE CONSTRUCTION OF WASTEWATER COLLECTION FACILITIES WHICH ARE TO CONVEY WASTEWATER TO AND THROUGH THE FAIRCHANCE – GEORGES JOINT MUNICIPAL SEWAGE AUTHORITY'S COLLECTION, CONVEYANCE AND TREATMENT SYSTEM. THE SITE DEVELOPER'S DESIGN ENGINEER UTILIZING THESE DETAILS SHALL REVIEW THE DETAILS AND PRESENT ANY MODIFICATIONS NECESSITATED BY SITE CONDITIONS TO THE AUTHORITY FOR REVIEW. THE AUTHORITY NEITHER WARRANTS NOR GUARANTEES THAT THE DETAILS PRESENTED HEREIN ARE APPLICABLE TO ALL SITE CONDITIONS. THE USE OF THIS SHEET IN THE PROJECT'S CONSTRUCTION DOCUMENTS SHALL SIGNIFY THAT THE SITE DEVELOPER'S DESIGN ENGINEER HAS REVIEWED THE DETAILS AND FOUND THEM ACCEPTABLE FOR THE PROJECT.

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services
AN EMPLOYEE-OWNED COMPANY
200 West Kensinger Drive, Suite 400
Cranberry Township, PA 16066
(724) 779-4777
Fax (724) 779-4711
hrg@hrg-inc.com
www.hrg-inc.com

FAIRCHANCE - GEORGES JOINT
MUNICIPAL SEWAGE AUTHORITY
STANDARD DETAILS

PROJ. MGR. – CEH
DESIGN– CEH
CADD– CRC
CHECKED–
SCALE– AS SHOWN
DATE– FEB. 2016

DRAWING NO.
DT-3
PROJECT 004307.0000



VERTICAL STACK TOP INSTALLATION FOR ALL IMPROVED AREAS

NOT TO SCALE

NOTE:
IF SURFACE IS AGGREGATE, A 30" x 30" x 4" CONCRETE PAD SHALL BE INSTALLED SURROUNDING FRAME & COVER.

THE DETAILS ON THIS SHEET PRESENT THE MINIMUM REQUIREMENTS FOR THE CONSTRUCTION OF WASTEWATER COLLECTION FACILITIES WHICH ARE TO CONVEY WASTEWATER TO AND THROUGH THE FAIRCHANCE – GEORGES JOINT MUNICIPAL SEWAGE AUTHORITY'S COLLECTION, CONVEYANCE AND TREATMENT SYSTEM. THE SITE DEVELOPER'S DESIGN ENGINEER UTILIZING THESE DETAILS SHALL REVIEW THE DETAILS AND PRESENT ANY MODIFICATIONS NECESSITATED BY SITE CONDITIONS TO THE AUTHORITY FOR REVIEW. THE AUTHORITY NEITHER WARRANTS NOR GUARANTEES THAT THE DETAILS PRESENTED HEREIN ARE APPLICABLE TO ALL SITE CONDITIONS. THE USE OF THIS SHEET IN THE PROJECT'S CONSTRUCTION DOCUMENTS SHALL SIGNIFY THAT THE SITE DEVELOPER'S DESIGN ENGINEER HAS REVIEWED THE DETAILS AND FOUND THEM ACCEPTABLE FOR THE PROJECT.

File name: P:\004307\004307_0000\CAD\004307000_DT.dwg Layout: DT-4 Feb 03, 2016 - 4:39pm jkrisky

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services
AN EMPLOYEE-OWNED COMPANY
280 West Kensinger Drive, Suite 400
Cranberry Township, PA 16066
(724) 779-4777
Fax (724) 779-4911
hrg@hrg-inc.com
www.hrg-inc.com

FAIRCHANCE - GEORGES JOINT MUNICIPAL SEWAGE AUTHORITY
STANDARD DETAILS

PROJ. MGR. –	CEH
DESIGN–	CEH
CADD–	CRC
CHECKED–	
SCALE–	AS SHOWN
DATE–	FEB. 2016

DRAWING NO.
DT-4
PROJECT 004307.0000