The Code of The

Borough of Franklin Park

Appendices A through L

THE CODE OF THE BOROUGH OF FRANKLIN PARK

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APPENDIX A

STORM SEWER CONSTRUCTION

A. Sewer Construction

1. Installation of Sewers

a. In general, the installation of sewers shall start at the lower end of the line and proceed upstream. From the point of beginning above specified, the laying of pipe shall proceed in an orderly manner. Pipe shall be so laid that their spigot ends point in the direction of flow.

b. Before any pipe is installed in trenches, it shall be inspected for damage and the inside of the pipe shall be swabbed to remove loose dirt and foreign objects. No damaged pipe will be permitted to be installed.

c. All pipe shall be installed to the lines and grades shown on the approved drawings. No pipes shall be constructed in trenches in which water flows or is pooled and, all pipes shall be carefully handled in the ditch to keep the jointing ends and materials free from dirt during installation. During shut down periods and at the end of each day, all open ends of pipes shall be suitably plugged to prevent the inflow of dirt and foreign objects.

d. Alignment. Storm sewers shall be straight (both vertically and horizontally) between manholes insofar as possible. Where long radius curves are necessary to conform to street layout, the radius of curvature shall conform to the manufacturer's recommendations, but in no case shall be less than 100 feet. Where curved pipe is installed, each joint shall be sealed with concrete which is allowed to harden before backfilling.

e. Crossings. Crossings with underground utilities except at intersections shall be avoided. Crossings, if necessary, should be at an angle greater than 45 degrees. For horizontal and vertical separation requirements regarding water lines, refer to the PA DEP Wastewater Facilities Manual, latest edition.

The sewer and/or utility must be structurally reinforced if insufficient vertical clearance is available. Standard allowable clearance without reinforcing between storm and sanitary sewers is 24 inches. Reinforcing shall consist of a concrete cradle (Detail FP-11) beneath the upper pipe.

2. Inspection of Sewers

a. All sewers shall be visually inspected by the Borough for alignment, leakage, cracks, and all other requirements as specified herein before backfill operators being. Any pipe backfilled before this inspection is completed by the Borough will not be accepted. The developer shall, at is own expense, uncover such as directed by the Borough in order that the property inspection can be performed.

b. The developer shall at all times during construction keep the proposed sewers free and clear of all foreign material. If, in the opinion of the Borough, any of the sewer lines constructed under this Contract need to be cleaned or flushed during construction, the developer shall be required to do so.

3. Final Acceptance Test

The Borough may conduct a final acceptance test of all sewers, at the expense of the developer, by televising the interior of all lines. Any defects discovered by this final testing shall be repaired promptly by the developer.

4. Record Drawings

a. The developer is responsible for maintaining record drawings. It shall not be considered as the responsibility of the Borough.

b. The developer shall keep one up-to-date record copy of all drawings for all deviations or modifications in location or elevation of any underground installation from that shown on the approved plans. Record drawings shall consist of reproducible marked 50 scale plan/profile drawings. These shall be available to the Borough at any time upon request and shall be delivered to the Borough upon completion of the project.

c. The record drawings shall include, but not be limited to, the following: location of all underground pipes, manholes, and catch basins, as constructed.

d. Record drawings kept by the developer are considered as part of the work such that final approval by the Borough is contingent upon receipt of the record drawings.

5. Open Excavation for Pipelines

a. Unless otherwise required by any applicable state, local or federal regulations, all sewers shall be laid in open trench. The developer shall take all necessary precautions during the excavation operations to protect any existing underground or above ground utilities or structures which may be affected by the work.

b. The depth of trenches shall be such that the location of the proposed pipes will conform with the lines and grades shown on the plans. The shape of all trenches above and within the pipe zone, the construction methods employed, the general protection requirements, the general excavation requirements, the general trenching requirements, and the minimum regulations for trench shoring, shall conform with the regulations set forth

by the Occupational Safety and Health Administrator (OSHA), as amended. No trenching excavation work shall be performed which is not in accordance with those regulations.

c. In excavation for all sewers, where made in open cut and where space permits, the banks of the trench from the ground surface to a depth not closer than 1 foot above the top of the pipe may be excavated to non-vertical and non-parallel planes. In no case shall the side walls of the trench in the pipe zone, defined as all that trench area below a point 12" above the top of the pipe in its installed position, be permitted to be other than vertical and parallel planes equidistant from the pipe centerline. The horizontal distance between the vertical planes shall be no greater than the outside diameter of the pipe plus 24" nor less than the outside diameter of the pipe plus 12". The developer is cautioned that if the pipe zone trench widths are exceeded, and if the Borough determines that such excessive widths will result in structural loadings for which the pipe is not designed he shall be required to install the pipe in concrete cradle. No sewer line or appurtenances shall be installed in fill areas without approval by the Borough.

d. The developer shall shape trenches which are located adjacent to existing above ground or underground structures and/or facilities or in other confined areas, so that such structures and facilities are properly protected against damage for disturbance from settlement or displacement.

e. Adequate sheeting, shoring and/or bracing shall be installed and maintained to provide such protection and the developer shall be responsible for all damages resulting to such proposed and existing structures, pipe lines, and/or facilities as the result of his failure to use and maintain adequate trench wall supports, as well as a result of any other construction activities. The bottoms of all trenches shall be excavated to a depth of 0.5 feet below the bottom of the proposed lines to accommodate the bedding hereinafter specified.

f. Where excavation is to be made along public roads or traveled ways, the developer shall familiarize himself with the requirements of the governing body having jurisdiction over said property and shall pattern his operations accordingly. In the event the governing body has no requirements, the developer shall limit his trench excavation to the limits set hereinafter and shall restore all paved areas as hereinafter described. The operation shall be scheduled so that one lane of traffic is always open unless the developer is specifically permitted to do otherwise by both the public authority having jurisdiction over the roadway and the Borough.

g. Where muck, quicksand, soft clay, swampy or other material is encountered in the trench bottom, and is unsuitable for pipe foundation subgrade or backfill, such material shall be removed. The trench shall

then be backfilled to grade with acceptable material, mechanically compacted in successive layers of not greater than 4".

h. Excavation for manholes or similar structures may be performed with non-vertical banks except in paved areas and traveled ways, or where such excavation will undermine adjacent facilities or structures, or where such excavation will violate private property outside the right-of-way established for this work. In paved areas and traveled ways, the developer shall limit the area of his excavation so that the length and width are a maximum of 4 feet greater than the greatest length and width of the structure involved.

6. Dewatering

The developer shall provide and maintain in operation suitable and adequate pumping and/or well point equipment for completely dewatering any and all trench excavations in such a manner as to permit the successful installation of the proposed improvements.

7. Dust Control

a. The developer shall furnish and apply a commercial grade of calcium chloride and/or water for laying dust caused from excavation or grading operations during construction. Method and rates of application shall be approved by the Borough. The developer shall also flush streets and highways and mechanically, manually, or otherwise continually maintain those traveled roadways where dust, mud, frozen material, debris, unstabilized fills, stockpiles, or other results of construction of the project are hazardous to traffic both during and after working hours.

b. Open trenches located along or across traveled ways shall be made safe for vehicular traffic as soon as possible.

8. Backfill for Pipelines

a. No frozen or excessively wet or otherwise unsuitable material and no rocks or boulders larger than 8" in size will be permitted to be used as trench backfill. Suitable or selected backfill material shall be kept separate from the unsuitable types. If the developer allows suitable material which he has excavated from the trench to become frozen or excessively wet or mixed with unsuitable material, it shall not be used as backfill material and the developer will be required to bring in material from an outside source.

b. The developer shall schedule excavation and backfill operations so that no more than 100 feet of trench remains open at one time. All such open

trench, all piles of deposited materials, and all freshly backfilled or uncompacted trench areas, shall be adequately barricaded and posted with suitable battery-operated warning lights and signs provided in accordance with local or state governmental requirements, or in the absence of same, to the satisfaction of the Borough.

9. Pipe Bedding and Pipe Zone Backfill Material

a. All proposed pipelines shall be supported on a material such as AASHTO No. 61 or No. 67 or similar material approved by the Borough. The material shall be placed to a minimum depth of 0.5 feet below the bottom of the pipe and installed to the springline of the pipe for the full width of the trench. For all types of pipe, said material shall further be required to be placed in the entire pipe zone, defined as all that portion of the trench between the trench bottom and an elevation one (1) foot above the top of the pipe in its installed position. The bedding and backfill material shall then be choked as required by the Borough with approved material in sufficient quantities to prevent migration of the surrounding soils into the bedding and backfill.. The material shall be placed in the pipe zone in such a manner as to not disturb, displace, or otherwise misalign the installed pipelines.

b. For ferrous metal pipelines or casings, cinders shall not be used as backfill material in the pipe zone and where such pipelines are carried through cinders, the developer shall supply a clay encasement for the entire pipe zone, plus 5" minimum below the invert of the pipe.

10. Backfill Material Above the Pipe Zone

In general, the material excavated during trenching and other construction operations shall be used as backfill between the top of the pipe zone and the bottom of the road subbases or topsoil or other improved surface treatments. Said material shall be used for the full depth of trench to the finished ground surface where the ground is unimproved. Where open-cut trenches are located in roadways, streets, berms, and traveled ways, the entire depth within the backfilled area shall be 2A material. Where open cut trenches are located in lawns, along stream banks, or in areas where the ground surface has been improved, the entire depth within the backfilled area or along the restored stream bank shall be thoroughly compacted in layers. In the event that the developer desires to employ the use of special vibratory and/or heavy-duty machinery for that purpose, such methods will be approved by the Borough, subject to demonstration by the developer that satisfactory end results can be attained. Flooding of trenches will similarly be considered. In any event, restoration of trench settlements occurring within two years after completion of the work shall be the responsibility of the developer at no extra cost to the Borough. Particular care shall be exercised by the developer in backfilling trenches located along or crossing streets, street

berms, roadways, parking areas, and other traveled ways, such that the resumption of normal traffic patterns will occur reasonably soon after the pipe in those areas has been installed.

11. Surface Restoration

a. All paving removed, damaged, or destroyed during construction of this work shall be restored in accordance with the following methods and as shown in the standard details:

(1) Asphalt Pavement Replacement – All bituminous surface paving shall be restored by neatly and uniformly cutting the edges along the excavated areas and by placing a base course, binder course, and surface course over the trench fill area all in accordance with the Franklin Park Borough Standards and with the requirements of the Pennsylvania Department of Highways, Publication 408, of the date last published.

(2) Other Street Surfaces, Parking Areas, Driveways, Etc. – The surface of those streets which are gravel, dirt, cinder, slag, etc., shall be restored by stabilizing the entire width of the traveled way by discing, by hauling in a 4" after compaction thickness of material similar to that existing on the street surface and by making two applications of a suitable good grade of asphaltic oil. The street surface shall be rolled and a second stabilization and oil application shall be made during the course of construction at a time to be selected by the Borough. Where settlements occur additional street surface or berm material shall be placed and the affected area shall be restabilized, rolled and oiled.

(3) Unimproved Shoulder and Berm Surfaces – All shoulder and berm surfaces shall be restored in accordance with PennDOT specifications. The top 18" of backfill must be made with PennDOT No. 2A aggregate or other approved material mechanically compacted in 4" layers. Where required, the shoulders and berms shall be graded and oiled by approved methods.

b. All paved surfaces shall be restored to a condition equal to or greater than that which existed prior to construction.

c. Where settlements occur within two years after completion of the work, the developer shall be responsible for rectifying the condition as directed and at no cost to the Borough.

d. All work conducted on state highways and/or local roads and the use of same for the transportation of equipment and materials to and from the site of the work by the developer, shall comply with the rules and regulations and/or ordinances of the governing agency.

e. The developer shall maintain close communications with appropriate PennDOT and local personnel to assure that they are advised of scheduling, progress, and status of construction work in and along the state and local highways.

f. In lawns, gardens, parks and in other improved areas (except for streets, roadways, berms and traveled ways), the top of the backfill material shall be placed to an elevation approximately 6" below the finished ground surface. If a sufficient amount of suitable topsoil is not salvaged during excavation to provide a 6" layer, then additional commercial topsoil shall be obtained by the developer at no cost to the Borough. Topsoil shall then be placed and lightly rolled in the top 6" of all excavated areas and other places where construction equipment and activities incur damage to ground surfaces.

g. After the topsoil has been spread, all lawns shall be restored by properly rolling, tilling, and hand raking the area disturbed by construction. The area shall then receive an application of ground limestone according to test or at the rate of 150 lb/1000 sq. ft. and a 0-20-20 or equivalent fertilizer at the rate of 25 lb/1000 sq. ft. Work in the limestone and fertilizer to a depth of 4" prior to seeding. Said area shall then be completely covered with peat moss, mushroom manure, or other approved mulch materials. After the seed bed has been suitably prepared, the developer shall sow one of the following grass seed mixtures:

88% Kentucky-31 Tall Fescue 3-5 lb/1000 sq. ft.
12% Redtop

OR

38% Kentucky-31 Tall Fescue 3-5 lb/1000 sq. ft.
50% Creeping Red Fescue
12% Redtop

OR

75% Kentucky-31 Tall Fescue 3-5 lb/1000 sq. ft.
25% Birdsfoot Trefoil

h. Trenches, which are located in areas not specified in these Specifications or noted on the drawings to be seeded or sodded, or in which surface

settlement is not important shall be filled above the pipe zone with a compactable material containing rocks or boulders no larger than 8" in maximum dimension. Mechanical tamping will not be required in this instance. However, the developer shall place the materials in layers no greater than 12" and shall tamp as required to assure than no excessive voids are present in the backfill. Backfill shall be carried in this manner to grade. The developer shall then add backfill neatly rounded over the trench to a sufficient height to allow for settlement to grade after consolidation. Future settlements within a period of one year shall be immediately rectified by adding material to bring the surface to a little above grade.

i. The developer shall make up all deficiency in backfill material and shall dispose of all excess material at his own expense.

12. Jacking

Where jacking is employed, a minimum 1/2" thick steel shield at least 24" long shall be required to extend beyond the forward end of the liner plate or conduit being jacked. The outside diameter of this shield shall not exceed the outside diameter of the pipe by more than 1". Excavation ahead of the conduit shall not be permitted to progress beyond the end of the shield being used.

13. Boring

a. Where the boring method is used, it shall be mandatory to conduct said operation from the high end of the pipe. The pipe shall at all times follow immediately behind the boring auger at a distance no greater than 2 feet. The method of augering the entire hole and then pushing the pipe through will not be permitted. The pipe shall conform to the paragraph under the heading of "Steel Casing Pipe", in Appendix A.A.16.

b. All voids between casing pipe and undisturbed earth and the space between the casing pipe and the carrier pipe shall be filled with an approved material and by an approved method. The ends of the casing pipe shall be sealed by an approved method.

c. All sheeting, shoring and bracing required for the construction of portals and access shafts to the bore pits shall be furnished and installed by the developer and shall conform to the requirements set forth previously herein. All work relative to the installation of liners and sewers by means of boring shall be performed in accordance with the regulations set forth by the Safety and Health Regulations for Construction by the U.S. Department of Labor.

14. Sheeting, Shoring and Bracing

Shoring, sheeting and bracing shall be adequate to withstand all loads superimposed thereon and shall be furnished where necessary to protect existing or proposed structures, pipelines or other facilities. Shoring, sheeting, anchor bracing shall be installed where necessary to prevent injury to personnel working in the excavation. All trenching and other excavations which present a hazard to personnel working in the excavated areas because of depth of trench embankments, stockpiling of excavated materials along the top of the trench or adjacent traffic shall be shored, sheeted or braced. All shoring, sheeting and bracing, where necessary, shall be designed and installed by the developer for the materials and depths encountered. The developer shall be fully responsible for the adequacy of the system to withstand all loads imposed thereon, and shall save harmless the Borough from any and all personal or property damages resulting from his failure to properly install and maintain sufficient sheeting, shoring and bracing. The developer shall be fully responsible and liable for any improper or premature removal of sheeting, shoring or bracing and any and all personal or property damages resulting therefrom.

15. Concrete Cradle and/or Encasement, and Concrete Anchors

a. Concrete cradle and/or encasement is required to be furnished and installed at the locations shown on the plans and/or profiles, in accordance with Standard Drawing No. FP-11; at all drop connections, and, under all sewer pipe within the excavated areas around manholes and other structures wherein the specified trench widths are exceeded. Concrete anchors shall be installed and constructed in accordance with Standard Drawing No. FP-30. Said cradle, encasement and anchor material shall consist of concrete as described in the Cast-in-Place Concrete in Appendix A.A.17. Care shall be exercised in placing encasement or cradle to provide adequate anchorage for the sewer pipes in order to preclude floatation and/or displacement of the pipe.

b. The developer shall provide and install all reinforcing steel that may be required or as shown on the drawings to assure adequate strength for the structures.

16. Steel Casing Pipe

a. Steel casing pipe shall be new casing, shall be visibly sound and round, and shall be suitable for the service intended. It shall be welded steel pipe, manufactured and tested in accordance with ASTM A-53, Grade B, with a minimum yield strength of 35,000 psi. Minimum casing wall thicknesses shall be as follows:

Diameter	Wall Thickness
8" through 14"	0.251"
16" and 18"	0.313"
20" and 24"	0.407"
26" through 30"	0.469"
32" through 36"	0.532"

b. Prior to delivery of pipe to the job site, the manufacturer shall submit to the Borough, six (6) copies of certification that all pipe has been manufactured, inspected, and tested according to these specifications and meets all requirements thereof, and all pipe delivered shall be so marked.

c. All pipe shall be transported, unloaded, handled, and installed in strict accordance with the recommendations of the manufacturer.

17. Cast-in-Place Concrete

a. Materials

The component materials of the concrete shall meet the following requirements:

(1) Portland Cement shall conform to the Standard Specifications for Portland Cement of the American Society for Testing Materials Serial Designation C-150, Type I or Type II.

(2) An air-entraining admixture shall be added to all concrete (precast and poured-in-place). Admixture shall be added to the concrete to produce a 5% air content. Air content shall not vary more than 1% from the specified amount. All admixtures shall be added to the concrete in strict accordance with the recommendation of the manufacturer. Before other additional admixtures are incorporated into the concrete an approval by the Borough's Representative is required.

(3) Water used in mixing and curing concrete shall be fresh, clean and free from injurious amounts of sewage, oil, acid, alkali, organic matter or other deleterious substances. Water shall be approved for human consumption.

(4) Concrete aggregate shall conform to the "Specifications for Concrete Aggregate", ASTM Designation C-33.

b. Storage of Materials

Cement and aggregates shall be stored in such a manner as to prevent deterioration or contamination with foreign matter. Fine and coarse

aggregate shall be stored separately and in such a manner as to avoid segregation. Cement which has become caked, partially set or otherwise deteriorated, or any material which has become damaged or contaminated, shall be rejected for use.

c. Mixing Concrete

Delivery tickets shall be prepared for each load of ready-mixed concrete delivered. The drivers of the trucks shall deliver the ticket to the Borough site at the time of delivery. The tickets shall contain the following information:

(1) Number of yards delivered on this truck,
(2) Quantities of materials in the batch,
(3) The time at which the truck left the batching plant,
(4) The time at which the cement was added,
(5) The outdoor temperature in the shade,
(6) The numerical sequence of the delivery,
(7) Date.

d. Placing Concrete

Placing of the concrete shall be done in accordance with ACI Standard 304, Recommended Practice for Measuring, Mixing and Placing Concrete.

e. Placing Concrete in Cold Weather

Concrete shall be placed in cold weather in accordance with "Recommended Practice for Cold Weather Concreting", (ACI 306).

f. Replacement or Repair Defective Irregular Concrete Surfaces

If, after stripping of forms, any concrete is found to be not formed as shown on the drawings, or is out of alignment or level, or shows a defective surface, it shall be considered as not conforming with the intent of these Specifications and shall be removed and replaced by the developer at his expense unless the Borough grants permission to patch the defective area.

g. Concrete Finish

All concrete surfaces shall be finished by experienced finishers as specified as soon after placing the concrete as conditions will permit. The placing of concrete and the removal of forms shall be scheduled so that finishing the surfaces can be completed before the concrete reaches a final hard set. No cement plaster or cement brush coats will be acceptable.

h. Curing

Protection against loss of moisture from the surface of the concrete shall be accomplished by keeping the surface continuously wet. One of the following methods shall be used:

(1) Surface remaining in contact with the form.
(2) The covering with burlap or cotton mats kept continuously wet and covered with polyethylene plastic.
(3) Continuous sprinkling of the exposed surface.

B. Storm Sewer Materials of Construction

1. Reinforced Concrete Storm Sewer Pipe

a. All proposed reinforced concrete culvert pipe shall conform with ASTM Designation C-76. The pipe shall have a minimum wall thickness equal to or greater than "Wall B" as defined by these specifications and shall be strength class as specified herein. For sizes less than 48" in diameter, the pipe shall be furnished in 8 foot minimum pipe lengths.

b. Where the trench depth required a higher class of pipe be installed, the higher class of pipe shall be installed for the entire lengths between manholes. The maximum trench depths (ground surface to pipe invert) by size and class of pipe is as follows:

Maximum Trench Depth

	Maximum Trench Depth		
Pipe Size/Class	III	IV	V
15	10`	17	42
18	11	19	50
21	13	21	59
24	14	23	63
27	14	24	62
30	15	25	64
36	17	27	62
42	18	29	62

No elliptically reinforced pipe shall be furnished.

c. All concrete used in the manufacture of Class III and Class IV pipe shall have a minimum compressive strength of 4000 psi and a minimum compressive strength of 6000 psi for all Class V pipe. The strength of the concrete shall be determined from cores drilled form the barrel of the pipe.

At least one such core shall be taken from each day's run or from each 100 lengths of pipe, whichever yields the greatest number of cores. The taking and testing of cores shall be in accordance with ASTM Specification C-76.

d. Absorption tests shall be conducted in accordance with ASTM C-16. At least one such test shall be made from each day's run or from each 100 lengths of pipe made.

e. No pipe shall be removed from the manufacturer's yard until the above specified core and absorption tests indicate that the pipe represented by such tests meets the requirements above set forth.

f. In addition to the foregoing tests, three-edge bearing tests shall be performed on one length of pipe for each 200 pipe or less of each class and size of pipe furnished as soon as possible after the afore-specified core and absorption tests indicate that such pipe is ready for shipment, the corresponding test specimens shall be tested by the three-edge bearing method to demonstrate that the pipe has a "D-Load" equal to or greater than that specified for the particular class of pipe in ASTM C-76. Such tests shall be conducted in accordance with those specifications. Failure of the test specimens to meet such strength requirements shall be cause of rejection of all pipe represented by such specimens even though such pipe may have been moved to the job site.

g. Prior to delivery to the job site, the manufacturer shall supply to the Borough for each shipment of pipe, six (6) copies of certification that all pipe and materials were manufactured, inspected and tested according to these specifications and meets all requirements thereof and all pipe delivered shall be so marked. Six (6) copies of all test reports shall also be submitted to the Borough.

h. All pipes shall be transported, unloaded, handled, and installed in strict accordance with the recommendations of the manufacturer.

i. All reinforced concrete sewer pipe shall have bell and spigot ends. The pipe ends shall be formed by machined castings of heavy design to insure accuracy and roundness. Both pipe ends shall be concentric with the base of the pipe. They shall be true and free from spoils or other defects.

j. All concrete pipe shall have either one or two circular cages of reinforcement of the area and placement called for in ASTM Specification C-76 for "Wall B" pipe. Pipe with elliptical reinforcement will not be accepted.

2. Large Diameter PVC Pipe

a. This specification designates general requirements for unplasticized polyvinyl chloride (PVC) Plastic (Spiral Wound) Gravity Sewer Pipe with integral wall bell and spigot joints for the storm sewers. This section will also allow for the use of ADS polyethylene (N12 smooth interior) or an approved equivalent.

(1) The pipe and fittings shall be made of PVC plastic having a minimum cell classification of 12454C or 13364C as defined in ASTM D-1784.

(2) All pipe shall be Series 46 as defined in ASTM 794. Provisions must be made for contraction and expansion at each joint with a rubber ring. The bell shall consist of an integral wall section. The solid cross-section rubber ring shall be factory assembled in either the bell or spigot. Sizes and dimensions shall be as specified in ASTM F-794. Standard laying lengths shall be 13 feet plus or minus 1".

(3) Integral Bell Gasketed Joint – The joint shall be designed so that when assembled, the gasket (which is attached to either the bell or spigot) will be compressed radially on the pipe spigot or in the bell to form a watertight seal. All rubber sealing gaskets shall meet standards as specified in ASTM F-477. The joint shall be designed to avoid displacement off the gasket when installed in accordance with the manufacturer's recommendation. The assembly of joints shall be in accordance with the manufacturer's recommendations.

(4) The impact resistance of the pipe shall be determined in accordance with ASTM Test Method D-2444, using the 30 lb. (15 Kg.) Tap B and flat plate holder B. Ten specimens shall be tested. The specimens should be oriented so that one of the ribs receives the strike essentially centered on the Tub Face. Failure in the test specimens shall be any shattering or any crack or split extending through the main wall of the pipe that was cheated by the impact and that can be seen by the naked eye. Nine out of ten specimens passing constitute an acceptable product. The impact strength shall not be less than 220 ft. lbs.

(5) All fittings and accessories shall be as manufactured and furnished by the pipe supplier or approved equal and have bell and/or spigot configurations compatible with that of the pipe. Fabricated fittings with solvent cemented components shall be made in accordance with ASTM Practice D-2855 and taking cognizance of ASTM Practice F-402.

b. Testing

The following tests shall be performed by the pipe manufacturer, and certified copies of the test results shall be delivered to the Borough prior to pipe installation:

(1) Two sections of pipe shall be assembled in accordance with the manufacturer's recommendation. Joint shall be tested in accordance with ASTM D-3212 "Joints for Drain and Sewer Plastic Pipe Using Flexible Elastomeric Seals". All PVC large diameter pipe joints to withstand pipe reduction in internal diameter up to 7-1/2% without any evidence of leakage. Pipe shall be designed to pass all tests described herein at 73°F (±3°F).

(2) Three specimens of pipe, each a minimum of 6 in. (150 mm) long will be flattened between parallel plates in a suitable press until the distance between the plates is 40% of the outside diameter of the pipe. The rate of loading shall be uniform and such that the compression is completed within 2 to 5 minutes. The specimen shall pass if no splitting, cracking, or breaking is observed under normal light with the unaided eye. Small tears initiated at tee cut end of the rib shall not constitute failure.

(3) Inside Diameter – The average diameter shall be determined using an internal micrometer or telescoping gage accurate to ±0.001 in. (±0.02mm). Take sufficient readings, a minimum of 4, to ensure that the maximum and minimum have been determined. Calculate the average diameter as the arithmetic mean of the diameters measured.

(4) Wall Thickness – The wall thickness of the waterway in the gaps between ribs shall be measured in accordance with ASTM Method D-2212. Make sufficient readings, a minimum of eight, to ensure that the minimum thickness has been determined.

(5) The pipe stiffness shall equal or exceed 46 psi, for Series 46 when tested in accordance with ASTM Test Method D-2412. Certified copies of all tests specified herein shall be submitted to the Borough before such pipe materials are delivered to the job for installation.

c. Installation

Storage and handling of pipe material, foundation preparation, bedding, haunching, initial backfill, laying and joining pipe and fittings and general installation of PVC pipe and fittings shall be in accordance with ASTM D-2321, latest designation, or with "Uni-Bell Plastic Pipe Association, Recommended Practice for the Installation of PVC Sewer Pipe, UNI-B-5",

latest designation, and with the manufacturer's installation recommendations.

In addition, metallic identification strips will be installed approximately two feet above the crown of newly laid pipe.

3. Manholes

a. All manholes shall consist of either pre-cast concrete base section manholes or poured-in-place concrete base section manholes.

b. All pre-cast concrete base section manholes shall conform to the details shown on page FP-18.

c. All poured-in-place concrete base section manholes shall conform to the details shown on pages FP-17 and FP-19 through FP-22.

d. Precast Concrete Base Sections

The precast concrete base slab and precast concrete base riser sections shall be poured monolithically with the base riser section having a minimum height of 2' above the top of the base slab and the base slab extending a minimum of 6" beyond the outside diameter of the precast base riser section. The base slab section shall be installed on a 12" thick (minimum) subbase of No. 51 or No. 61 compacted crushed stone. Prior to installing the subbase stone, the excavated subbase area below the manhole shall be thoroughly, and evenly compacted prior to placement of the stone.

A Borough approved flexible manhole sleeve shall be installed in the precast base or riser section by the manhole manufacturer for a watertight installation. The flexible watertight sleeve shall be set a minimum of 4" above the manhole floor. The influent and effluent flexible sleeves shall be set at elevations which will maintain a minimum uniform grade through the manhole equal to the grade of the sewers upstream or downstream of the respective manholes. Elevations and grades are to be set in the field by the Developer in accordance with the approved construction plans. Manholes shall not be ordered by the Developer from the manufacturer, until complete field layout of the proposed pipe line is established, and staked in accordance with the approved construction plans. This field layout will establish the proper horizontal and vertical alignments on influent and effluent lines of the manholes. No manholes shall be delivered to the site unless and until receipt by the Borough's Representative of certification that the manhole base slab is monolithically poured with the vertical base riser section, that the required and specified air entrained concrete is being used, and that all manhole sections and

materials meet the appropriate specifications. All manholes shall be installed in accordance with the details outlined herein and as may be directed in the field by the Borough's Representative. All manholes are subject to final field acceptance by the Borough's Representative.

e. Cast-in-Place Concrete Base Sections

The cast-in-place concrete base sections shall be as detailed on the respective drawings including reinforcement.

f. General Requirements for all Manholes

(1) Joints at the bottom of the pre-cast manhole barrel where connection is made with the precast or cast-in-place concrete base shall be made to produce a watertight installation. The joints in the precast concrete manhole barrels (and between all precast concrete grade rings) shall be filled with two (2) rings of a 1 inch diameter approved flexible butyl rubber manhole joint sealant.

(2) The Developer shall carefully form all channels in manhole bottoms such that the least amount of turbulence will be caused in the sewage flow. All channels shall be steel trowel finished.

(3) Frames and covers for all standard manholes shall be fabricated of cast iron or cast steel and be of uniform quality, free iron blowholes, porosity, hard spots, blisters, shrinkage distortion or other defects. They shall be smooth and well cleaned by shotblasting. Materials used in the manufacture of castings shall conform to ASTM A48 of latest revision, Class 30 or better. All castings shall be manufactured true to pattern and component parts shall fit together in a satisfactory manner. All frames and covers shall have machined bearing surfaces to prevent rocking and rattling. All frames and covers shall receive a factory painting of a manufacturer recommended black asphaltum or bitumastic coating which shall be smooth and tough with no tendency to scale or chip off. The standard manhole frame and cover shall conform to the details as shown on Standard Drawings FP-12 and FP-13 for a 27 in. frame size. The final setting of manhole castings shall be such that they conform with final design elevations and shall be set to exclude surface water. Where manholes are located along creeks or low areas subject to flooding and in areas where they are subject to being covered, the top elevation shall be set above ground and landscaped as indicated on the approved construction drawing and/or as directed by the Borough's Representative. On each manhole two (2) rings of a 1/2 in. diameter approved flexible butyl rubber joint sealant shall be installed between the bottom of the frame and the top of the concrete of the manhole. Two 3/4 in. anchor

bolts shall be provided for all frames. All outer covers shall be furnished with the lettering "F.P. Storm".

(4) Ladder bars, furnished for manholes and concrete chambers, shall be designed in accordance with the latest requirements of ASTM-C-470 and shall generally conform to the configuration and dimensions indicated on Standard Drawing FP-14 and FP-23. Ladder bars to be embedded in concrete structures shall be cast-in-place at the time of pour.

Ladder bars shall be fabricated a minimum 3/8 in. round (minimum) steel step encapsulated with polymer polypropylene plastic. The steps shall be capable of withstanding the design loading required in ASTM C-478 specifications at a temperature of 0° F (zero degrees Fahrenheit) with no structural failure.

(5) Wherever sewers enter manholes such that the influent invert of the sewer is above, but less than 2 in. above, the manhole bottom, a channeled concrete fillet shall be constructed to prevent the flow from splashing into the manhole. The channeled concrete fillet shall be steel trowel finished.

(6) If manhole cone sections, precast base sections, flat top sections, and barrel sections have two lifting holes per section for handling and installation purposes, the holes shall be sealed and made completely watertight.

(7) All of the above manhole sections shall be handled according to manufacturer's recommendations so as to avoid chipping, cracking, or breaking. Any section damaged in transporting, handling, or installation shall be replaced by the Developer.

(8) Each manhole section supplied shall be plainly marked on the inside of the manhole section to indicate the date of manufacture and the name and/or trademark of the manufacturer.

(9) Prior to delivery to the job site, the manufacturer shall submit to the Borough's Representative six (6) copies of certifications that state all manhole sections and material were manufactured, inspected and tested in accordance with these specifications and meet all of the requirements hereof.

(10) Prior to delivery to the job site, shop drawing details of all manhole appurtenances shall be submitted to the Borough's Representative for approval including frame and cover, steps, joint sealant, barrel and cone sections, and precast base sections.

(11) All concrete utilized for manholes (precast and poured-in-place) shall be in conformance with the concrete section of these specifications, including air entrainment requirements.

g. In areas where acid mine drainage or natural soil acidity present a potential for corrosion of subsurface facilities, ADS plastic manholes or an approved equivalent may be permitted to be used under the strict direction of the Borough Engineer.

4. Catch Basins and Laterals

a. All catch basins shall be new, heavy duty rated, and shall be constructed in accordance with Standard Drawing FP-15. The storm inlet shall have a cast iron frame and a ductile iron, malleable cast iron or structural grade steel grating. Catch basins installed as gutter inlets along street curbs shall be PennDOT Type "C" precast concrete inlet top units. Off-street catch basins shall be PennDOT Type "S" precast concrete inlet top units. All precast concrete inlet top units, frames and gratings shall be manufactured or constructed in accordance with PennDOT Publication No. 408 and PennDOT Standards for Road Construction.

b. All catch basins shall be "bicycle safe". Contact surfaces of gratings and frames shall be machined so that gratings rest securely in the frames. Frames and grates shall have factory coat of a manufacturer recommended protective paint or coating which shall be smooth and tough, with no tendency to scale or chip off.

c. All sewers between the catch basin and the new storm sewer shall be minimum 15" diameter PVC, HDPE or approved.

d. Where the catch basin lateral is to connect to a manhole constructed in accordance with the standard details, it may enter through the precast concrete barrel. In this case, no more than two 15" connections shall enter at the same elevation. If there are more than two connections at a single manhole, their inverts shall all be at least 12" apart, vertically.

e. Where the catch basin lateral is to connect to a precast concrete manhole barrel, the holes to be cut in the manhole barrel shall be no larger than necessary to permit the entry of the pipe and to allow for a mortar space around the outside of the connection. The mortar space shall be not less than 3/4" nor more than 1-1/2". Prior to cutting, the outline of the proper size hole shall be marked on the outside of the barrel to be cut.

f. After the hole has been cut, the pipe shall be inserted in the hole in such a manner that the mortar space around the pipe is approximately equal for its entire circumference. This space shall then be packed with mortar

containing a non-shrinking additive approved by the Borough. The consistency and proportioning of this mortar shall follow the recommendations of the manufacturer of the non-shrinking additive. A mortar fillet shall be trowelled around the exterior of the junction. The interior shall be finished smooth and flush with the barrel surfaces. Adequate concrete piers and/or beams shall be installed at all connections of the proposed pipes, as well as at all manholes and other structures previously described.

g. All ends of the catch basin laterals shall be cut and shaped by methods approved by the Borough so that they will be flush with the interior of the main sewer or manhole and catch basins into which they are inserted. All catch basin laterals shall be encased at the catch basin and at the manhole or main sewer in accordance with the "Concrete Cradle and Encasement Specification".

h. Where the catch basin lateral is to connect directly to another sewer, a wye branch connection shall be used and installed by the developer.

i. Wherever possible, storm inlets shall be recessed into the sidewalk in an effort to minimize the potential for causing conditions which may be hazardous to traffic.

5. Riprap

Unless special conditions warrant the use of different sized material, riprap shall consist of well graded stone where at least 50% have a minimum size of 6" x 12" x 12" and a maximum dimension of 18". The remaining 50% shall be smaller sized stone. Riprap material shall not be subject to slaking, solubility or rapid weathering and shall be of a tough and durable quality. Riprap shall be dumped to provide a 2"0" minimum layer of stone.

IMPORTANT NOTICE

In the past on many occasions, the ditch was not ready, aggregate was not on hand, or a representative of the builder, sewer installer, developer, etc., was not present, which resulted in unnecessary delay of the Borough personnel and equipment.

In the event all conditions as stipulated have not been complied with, the tap WILL NOT BE MADE. This will result in an additional charge of $50.00 over and above the original tapping machine charge (to be paid in advance), and the service call MUST BE RESCHEDULED.

These instructions are for the guidance of the sewer installers or the developers. If they are not followed, or are ignored, the responsibilities will be upon the installer or the developer.

APPENDIX B

CONCRETE CURB CONSTRUCTION

Concrete Curb Construction

A. All methods and materials of construction shall conform to Publication 408, Commonwealth of Pennsylvania, Department of Transportation's Specifications of latest revision, except where the following specifications supersede it.

B. Work shall consist of construction a reinforced concrete curb in accordance with the lines, grades and dimensions as shown on the approved plans and on the competent survey to establish offset control points at Twenty-five (25) foot intervals. The Contractor shall perform all excavation, and preparation of foundation and shall furnish and install forms, concrete, joint material, bar dowels, reinforcing bars, and other miscellaneous material and equipment required to finish the work.

C. Excavations and fills shall be made to the required depth, and the material upon which the curb is to be constructed shall be compacted to a fine even surface. Tree roots shall be cut and trimmed as required to accommodate the curb construction.

D. Curbs shall be constructed in strict accordance with the details indicated on the typical drawings FP-6 through FP-9. The Contractor is cautioned that line and grade will be established from approved subdivision plans. Should construction operations indicate the apparent need or desirability of making field adjustments and departures, these conditions shall be reported to the Borough Engineer for prompt evaluations.

E. Where required, nonmountable curbs shall be installed in accordance with the Highway Act of 1973 concerning curb cuts and depressions for easier access by the handicapped.

F. Install underdrains under the concrete curb as shown on the typical curb drawings on page FP-8.

G. All curbs shall be placed on an unchoked stone base of minimum eight (8) inch thickness above underdrain using ASSHTO #3 aggregate as shown on the typical drawings.

H. Underdrain piping shall be four (4) inch perforated PVC SDR 35. Outlet all drains to catch basins. Weep holes will not be required where four inch PVC underdrains are installed.

I. Form for the curb shall be of metal, except on curves and short tangent sections, where wood may be used when approved by the Borough Engineer. All forms shall be thoroughly cleaned of all foreign material and must be coated with an approved material before concrete is placed against them.

Material which will adhere to or discolor the concrete will not be used. Broken or warped forms shall not be used.

J. Contraction joints shall be spaced uniform lengths or sections of six feet (6' – 0") maximum, except where shorter sections are necessary for closures or curves, but no section shall be less than four (4) feet. Contraction joints may be either hand-formed or sawed joints. They shall be 3/16 inch wide and two (2) inches deep. Sawing joints shall be done as soon as practical after the concrete has set sufficiently to preclude raveling during the sawing and before any shrinkage cracking occurs in the concrete. The saw cut depth may be decreased at the edge adjacent to the pavement to obtain a maximum depth that will avoid damage to the pavement.
Expansion joints shall have tooled edges. The ¼ inch premolded expansion joint material shall be cut to conform to the cross-sectional area and be placed at structures at the end of a day's work, or at sections of twenty-four feet (24' 0") maximum, except where shorter sections are necessary for closures or curves.

K. Concrete shall be Class A concrete 4000 PSI with 5% air entrainment.

L. Dowel bars shall be ASTM A-615 – 60 nondeformed bars.
Reinforcing bars shall be deformed bars rolled form ASTM A-615 grade 60 steel.

M. The top of concrete curbs shall receive a steel trowel finish as directed by the owner's Representative and edged on all sides. The curbing shall be covered and protected as follows:

1. Begin curing as soon as the concrete has been placed and is sufficiently hardened. Cure concrete, either by membrane curing or by water curing. Minimum curing time is seven (7) days except for high early strength concrete: minimum cure time is three (3) days. If , at any time during the curing period, the curing temperature falls below 35 F, the work will be considered unsatisfactory and will be rejected. A temperature of the air immediately adjacent to the concrete will be considered as the curing temperature of the concrete.

2. For surfaces cured by the membrane method, finish prior to application of the curing compound. During the finishing period, and until forms are removed, protect the concrete by the water method of curing.

3. Apply the compound in two coats, by spraying, to provide a continuous, uniform membrane. For each coat, apply at least one gallon of compound per three hundred (300) square feet of concrete. Do not apply membrane curing compound to construction – joint surfaces or exposed steel during application of curing compounds. These areas shall be water cured.

4. Water curing shall be accomplished by using a fog spray, perforated pipe or hose watering system to keep curing covers on the concrete and to keep forms saturated during the curing period.

5. Use covers of either white polyethylene sheeting, burlap-backed or a double thickness of burlap. Without marring the finished surface, place and secure the presaturated covers.

6. Before Borough acceptance, any irregularities found on the finished curbs (such as cracks, chips, missing pieces, etc.) shall be replaced or repaired by the developer using only approved methods of construction and materials.

N. The forms shall not be removed until twelve (12) hours after concrete has been placed. Any irregular surface shall be corrected by rubbing a Carborundum stone only after the full curing period has elapsed. All joints in curb shall be open from top to bottom immediately after the forms are removed.

O. Slip-Form: Use design mixture for automatic machine placement. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing.

1. Compact subbase and prepare subgrade of sufficient width to prevent displacement of slip-form paving machine during operations as specified in Penn DOT Publication 408, latest edition.

2. When automatic machine placement is used, determine design mixtures and obtain laboratory test results that meet or exceed requirements as specified in Penn DOT Publication 408, latest edition.

P. It shall be the contractor's responsibility to maintain existing facilities and structures to remain.

1. The contractor shall take appropriate precautions to preserve and protect existing facilities and structures.

2. If an existing facility or structure is damaged during construction, the contractor shall repair or replace said facility or structure per the Borough's discretion.

APPENDIX C

CONCRETE SIDEWALK CONSTRUCTION

Concrete Sidewalks

A. All methods and materials of construction shall conform to Publication 408, Commonwealth of Pennsylvania, Department of Transportation's Specifications of latest revision, except where the following specification supersedes it.

B. Work shall consist of constructing a reinforced concrete sidewalk in accordance with the typical sidewalk section drawing shown on page FP-5 in Appendix F.

C. Excavations and fills shall be made to the required depth, and the materials upon which the sidewalk is to be constructed shall be compacted for a firm even surface.

D. All sidewalks shall have a stone base of four (4) inch minimum thickness. The stone base shall consist of a course aggregate AASHTO #8, Type C.

E. Forms for the sidewalk may be wood or metal. All forms shall be thoroughly cleaned of all foreign material and must be coated with an approved material before concrete is placed against them. Material which will adhere to or discolor the concrete will not be used. Broken or warped forms shall not be used.

F. Pedestrian curbcut ramps shall be constructed at all intersections in accordance with the drawing on page FP-43. This drawing depicts the general situation encountered most often in the Borough. In other situations, the design of curbcut ramps shall be in accordance with the latest ADA Publication Guidelines.

G. Before Borough acceptance, any irregularities found on the finished sidewalks (such as cracks, missing pieces, etc.) shall be replaced or repaired by the developer using only approved methods of construction and material.

H. Begin curing as soon as the concrete has been placed and is sufficiently hardened. Cure concrete, either by membrane curing or by water curing. Minimum curing time is seven (7) days except for high early strength concrete: minimum cure time is three (3) days. If, at any time during the curing period, the curing temperature falls below 35° F, the work will be considered unsatisfactory and will be rejected. The temperature of the air immediately adjacent to the concrete will be considered as the curing temperature of the concrete.

I. For surfaces cured by the membrane method, finish prior to application of the curing compound.

J. Apply the compound in two coats, by spraying, to provide a continuous, uniform membrane. For each coat, apply at least one gallon of compound per 300 feet of concrete. Do not apply membrane curing compound to construction joint surfaces or exposed steel during application of curing compounds. These areas shall be water cured.

K. Water curing shall be accomplished by using a fog-spray, perforated prior or hose watering system to keep curing covers on the concrete and to keep forms saturated during the curing period.

L. Use covers of either white polyethylene sheeting, burlap-backed, or a double thickness of burlap without marring the finished surface.

Rainwater Conductors Through Curbs

A. The Contractor shall install rainwater conductor sleeves, couplings and piping through curbs and beneath sidewalks at locations as directed by the Borough Engineer.

B. Rainwater conductor sleeves and piping shall be three (3) inch ABS-DWV plastic pipe and couplings.

Existing Facilities and Structures

A. It shall be the contractor's responsibility to maintain existing facilities and structures.

1. The contractor shall take appropriate precautions to preserve and protect existing facilities and structures.

2. If an existing facility or structure is damaged during construction, the contractor shall repair or replace said facility or structure per the Borough's discretion.

P\009\9797\CODE BFP\APPENDIX C

APPENDIX D

ASPHALT ROAD CONSTRUCTION

A. Asphalt Road

1. General

a. All methods and materials of construction shall conform to Publication 408, Commonwealth of Pennsylvania, Department of Transportation's Specification of latest revision, except where the following specifications supersede.

b. Franklin Park Borough roads have been designed using a CBR (California Bearing Ration) number of not less than five (5) for the earth under the subgrade. If the CBR number is less than five (5) the Developer's Engineer shall submit to the Borough a special road design that will correct the deficiency.

c. No work may be started without approved subdivision plans nor without the Borough's knowledge or approval. When allowed to proceed the Developer shall (before the actual work begins) give the Borough at least five (5) working days notice before each phase of work can be started. This prior notice will give the Borough time to inspect the site and/or previous phase of work for completeness, suitability, quality of materials, and quality of workmanship. Before proceeding with the next phase of work the Developer, at his own expense, shall correct any and all deficiencies. The Developer pays all costs of any testing deemed necessary by the Borough. All testing and submission of samples shall be done in advance to avoid delays in construction. The Developer and/or the Contractor shall assist the Borough in checking or testing all work.

d. For roadways, the phases of work shall consist of but not limited to clearing and grubbing, earth work, preparation of the subgrade, installation of the stone subbase, and installation of the bituminous surfaces.

e. Work shall consist of constructing a paved roadway in accordance with the Franklin Park Borough's typical roadway section drawings, as specified or required.

2. Line and Grade

a. Line and grade shall be as shown on the approved subdivision plans.

b. The entire roadway section will be required to be staked out by the Developer before road construction commences. It is not the intention to unnecessarily delay construction of any roads, and it shall, therefore, be the Developer's responsibility to cooperate with the Borough Engineer and schedule the stake out in advance of the desired time of

commencement of construction so that those activities can be properly accomplished.

c. For purposes of performing the necessary survey work relative to placing offset stakes and preparing grade sheets, the Developer shall employ a competent survey crew. The survey crew shall determine the location of all important points of the road centerline such as P.I., P.C., and P.T. as well as the slope stakes in the field. The survey crew shall set an offset line of stakes every twenty five (25) feet and determine the elevations of said stakes as well as the centerline elevations of the existing ground every twenty five (25) feet along the proposed roadway. Using these elevations, the survey crew shall prepare a grade sheet and deliver said grade sheet to the Borough Engineer for approval and a copy to the developer for road installation purposes. The Developer shall furnish record drawings on completion of the project.

3. Clearing and Grubbing

a. Complete clearing and grubbing before starting any grading operations. Remove and stockpile the topsoil at a suitable site. Remove and dispose of any waste material in a suitable manner.

b. Within the areas of excavation and subgrade clear the ground of organic matter. Remove stumps and roots to a depth of at lease two (2) feet below subgrade or slope surfaces.

c. Within embankment areas five (5) feet or more in depth, cut trees and stumps to within six (6) inches of the ground surface. Where these embankment slopes will be one (1) foot or less in depth, cut trees or stumps flush with the ground surface.

d. Within embankment areas less then five (5) feet in depth, remove organic matter and topsoil to a depth of eight (8) inches below the existing ground and backfill with suitable material to twenty (20) feet beyond the pavement edges. Beyond twenty (20) feet of the pavement edges and within the embankment area, cut trees and stumps flush with the ground surface. Remove remaining topsoil over eight (8) inches in depth, when directed.

4. Excavation

a. No drilling or blasting of roads shall be permitted.

b. During construction, keep the excavation graded to drain.

c. Grade slopes as required by the grading ordinance or as required by the type of material encountered in order to obtain satisfactory stability. Remove slide material and bench, as required. Trim slopes to the line and rates of slope indicated on the approved plans or as required by the grading ordinance.

d. Dispose of unsuitable and surplus material in suitable waste areas.

5. Embankments

a. The Developer shall have a registered Soils Engineer monitor all embankments. Monitoring work by the Soils Engineer shall include, but not be limited to, soils testing, design corrective measures and/or procedures to eliminate any unstable soil conditions, supervise the construction of embankment, and submit reports to the Borough as required.

b. Materials and construction shall follow Penn DOT Publication 408, latest edition.

6. Geotextile

a. The Borough Engineer and/or the Developer's Soil Engineer may require the use of geotextile. Only approved geotextile fabrics shall be used under the subgrade. Follow the manufacturer's recommendation for methods of installation and use.

b. Geotextile will be rejected at the time of installation if they have defects, are deteriorated, or are damaged. No traffic or construction equipment will be permitted on the fabric.

c. For bedding, use any open-graded stone meeting the requirements of Type C or better aggregate, except that No. 2A or No. 10 coarse aggregate will not be permitted.

d. Use steel securing pins, eighteen (18) inches long x 3/16 inches in diameter, pointed at one end, and with a 1-1/2 inch washer head at the other end. If permitted, alternate securing devices may be used.

e. Use cover material, as specified or indicated.

f. Remove and replace fabric areas damaged during construction. Lap or sew replaced fabric, as specified for the class of fabric used. Overlap adjacent rolls a minimum of three (3) feet and secure as required.

g. Cover the fabric with the covering material as soon as possible, so the fabric is not exposed for more than two (2) weeks. Prevent slippage of the cover material on the fabric.

h. Do not drop rocks, two (2) feet or larger in dimension, directly on the fabric from a height greater than one (1) foot. Do not allow the rock placement procedure to puncture of damage the fabric. A minimum six (6) inch layer of bedding stone and a greater drop-height combination may be used if the combination produces the placement, thickness, gradation and fabric integrity requirements, and if permitted.

7. Subgrade

a. Prepare the roadbed to the established subgrade elevation and compact to specified density requirements, using approved equipment. The Developer shall provide a competent survey crew to establish offset control points at twenty five (25) foot intervals. On curbed streets the established curbs shall be the control points for the road work.

b. Minimum thickness of the compacted subgrade shall be twelve (12) inches in excavations and thirty six (36) inches in embankments.

c. The subgrade shall be compacted to not less than 100% of the determined dry-weight density. Dry-weight density for material in place in the field will be determined, in accordance with Pennsylvania Testing Method No. 106, Method "B". In-place density or compaction will be determined in accordance with Pennsylvania Testing Method No. 112 or 402. When material is too coarse to use these methods, compaction will be determined based on non-movement of material under compaction equipment specified in the embankment.

d. At the time of compaction, maintain the subgrade material's moisture content not more than two (2) percent points above optimum moisture for that material. However, on subgrades displaying pronounced elasticity or deformation under rollings maintain a moisture content not greater than optimum at the time of compaction or at the time of placing the overlaying construction. When the specified stability cannot be obtained, excavate material in the area to a depth that, when replaced and recompacted at a moisture content not exceeding optimum, the subgrade will have required stability.

e. The completed subgrade shall be maintained and protected in advance of the succeeding construction phase. Prior to placement of the pavement structure the Borough Engineer shall inspect the subgrade. Any irregularities, damaged or unsatisfactory areas, shall be promptly and satisfactorily reshaped and recompacted, or removed and replaced.

f. Correct all surface irregularities exceeding 1/2" by loosening the surface and removing or adding material as required. Compact the corrected area and surrounding surface by rolling.

A. Base Course

1. Crushed Aggregate Base Course

a. Crushed aggregate base course of stone or slag shall be placed on the subgrade at depths shown on the Borough's Paving Sections.

b. All course aggregates shall conform to PennDOT's Publication 408. In general, the fine material shall be Type A, AASHTO #10 and the course material shall be Type A, AASHTO #1.

c. Line and grade should already be established with subgrade. The completed crushed aggregate base course shall maintain the required crown or super elevation as established by the subgrade.

d. Use a mechanical spreader where practical and all rolling and compacting should be done with a vibratory compaction equipment.

e. If subgrade or subbase material become mixed with the base course, remove the mixture: reshape and recompact the subgrade and/or subbase; reconstruct the unsatisfactory base course area.

f. Spread an initial layer of fine material uniformly over the subgrade, as a bed and filler: spread to a depth of two (2) inches on subgrade.

g. Do not place this initial layer of fine material on wet, frozen or unsuitable subgrade or subbase.

h. Spread the course material uniformly on the initial layer of fine material to full width. In areas inaccessible to spreading equipment, spread material directly from trucks, if permitted. Remove segregated material more than the distance completed in an average day's work ahead of choking and compacting. Test material for surface irregularities and correct prior to rolling.

i. On normal crown section, begin rolling at the sides and progress to the center. On super elevated curves, begin on the low side and progress to the high side. Roll parallel with the roadway centerline, uniformly lap each preceding track, cover the entire surface with the rear wheels, and continue until the material does not creep or wave ahead of the roller wheels. This rolling and compacting method shall be employed for all course and fine materials.

j. After thoroughly compacting the coarse material, spread the fine material (in an amount equal to about one-half of that required to fill the voids in the course material) uniformly over the surface with spreading equipment, to assure filling voids. In areas inaccessible to equipment, spreading with a square edged shovel may be allowed; spread in a sweeping motion alternately in opposite directions, until the voids are filled. Do not end dump the material directly on the surface of the coarse material. Immediately following the spreading, sweep and roll the material until remaining voids in the coarse material are filled and the base course is thoroughly compacted and set. Use brooms attached to the roller and hand brooms. Loosen and scatter excess finer formed in piles or cakes upon the surface. Spread and vibrate the remaining fines in one or more applications to satisfactorily fill the voids; however, do not cause flotation of the coarse aggregate. Use manual methods to fill areas not completely filled by vibration.

k. Spread and roll the material in sections of not less than 150 feet nor more than 1,000 feet in length, unless otherwise directed by the Borough Engineer.

l. Roll and compact the fines into the course material in the same manner as described earlier.

m. Test for and correct all surface irregularities exceeding ½ inch by loosening the surface and removing or adding material as required. Compact the corrected area and surrounding surface by rolling.

n. The Borough Engineer will measure the depth of the base course. The initial bed and filler layer of fine material is considered part of the base course for determining the final compacted depth Cut or dig one test hole to the full depth of the completed base course, where directed, for each 3,000 square yards or less.

o. Remove and replace any area in which the depth is deficient by ½ inch or more. Additional test holes may be required, if directed, to determine the limits of replacement areas.

p. After the depth has been measured, backfill test holes with acceptable material and compact.

q. The Contractor shall perform all testing under the direction and supervision of the Borough Engineer.

r. Allow only necessary local traffic and essential construction equipment on the base course, unless otherwise directed. Repair or replace marred, distorted, or otherwise damaged pavement.

B. Bituminous Surfaces

Follow PennDOT Publication 408, latest edition for preparation, installation and finishing of all flexible surfaces.

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APPENDIX E

EROSION and SEDIMENTATION CONTROL GUIDELINES

A. Criteria for Erosion and Sedimentation Control Measures.

1. Erosion control measures shall follow PA Code, Title 25, Chapter 102 Erosion and Sediment Control as well as the Erosion and Sediment Pollution Control Program Manual, latest edition as published by the Department of Environmental Protection.

2. Evidence of approval of any permits or reviews from the DEP or Conservation District that are associated or required due to the proposed development site or subdivision shall be provided to the Borough prior to plan approval.

P\009\9797\CODE BFP\APPENDIX E rev

APPENDIX F

CONSTRUCTION DETAILS

APPENDIX F

CONSTRUCTION DETAILS

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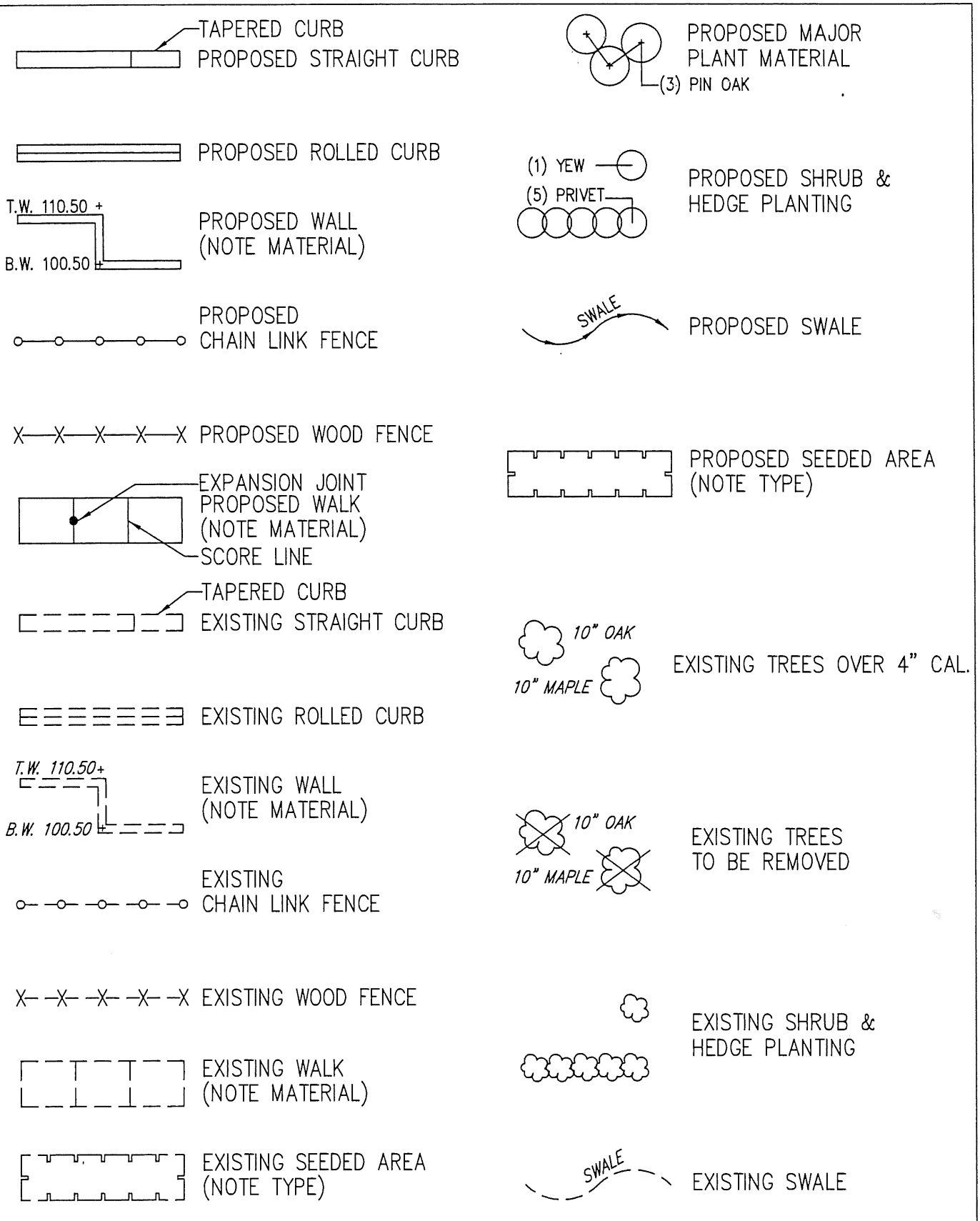


SITE PLAN
SITE CONSTRUCTION LEGEND
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-1

S:\Sen\P\009\9797\dwg\FRANKLIN PARK STANDARD DETAILS.dwg 10/10/2011 12:02:12 PM EDT

SAN	PROPOSED SANITARY SEWER
SS	PROPOSED STORM SEWER
W	PROPOSED WATER LINE
G	PROPOSED GAS LINE
E	PROPOSED ELECTRIC LINE
T	PROPOSED TELEPHONE LINE
GRATE EL. 1000.00 INV.EL. 997.00	PROPOSED INLET
TOP EL. 1000.00 INV.EL. 991.50	PROPOSED MANHOLE
	PROPOSED VALVES
SAN	EXISTING SANITARY SEWER
SS	EXISTING STORM SEWER
W WV	EXISTING WATER LINE & VALVE
G GV	EXISTING GAS LINE & VALVE
E	EXISTING ELECTRIC LINE
T	EXISTING TELEPHONE LINE
INLET	EXISTING INLET
M.H.	EXISTING MANHOLE

SITE PLAN
SITE UTILITY LEGEND
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-2

SYMBOLS

—— – ——	CENTER LINE
——– – –——–	PROPERTY LINE
——– – – –——–	STREET RIGHT OF WAY
BUILDING SETBACK	ZONING SETBACK (IDENTIFY)
— —100— —	EXISTING CONTOUR
——100——	PROPOSED CONTOUR
– – – – – –	INDICATES EXISTING CONDITIONS
+ 100.50	SPOT ELEVATION

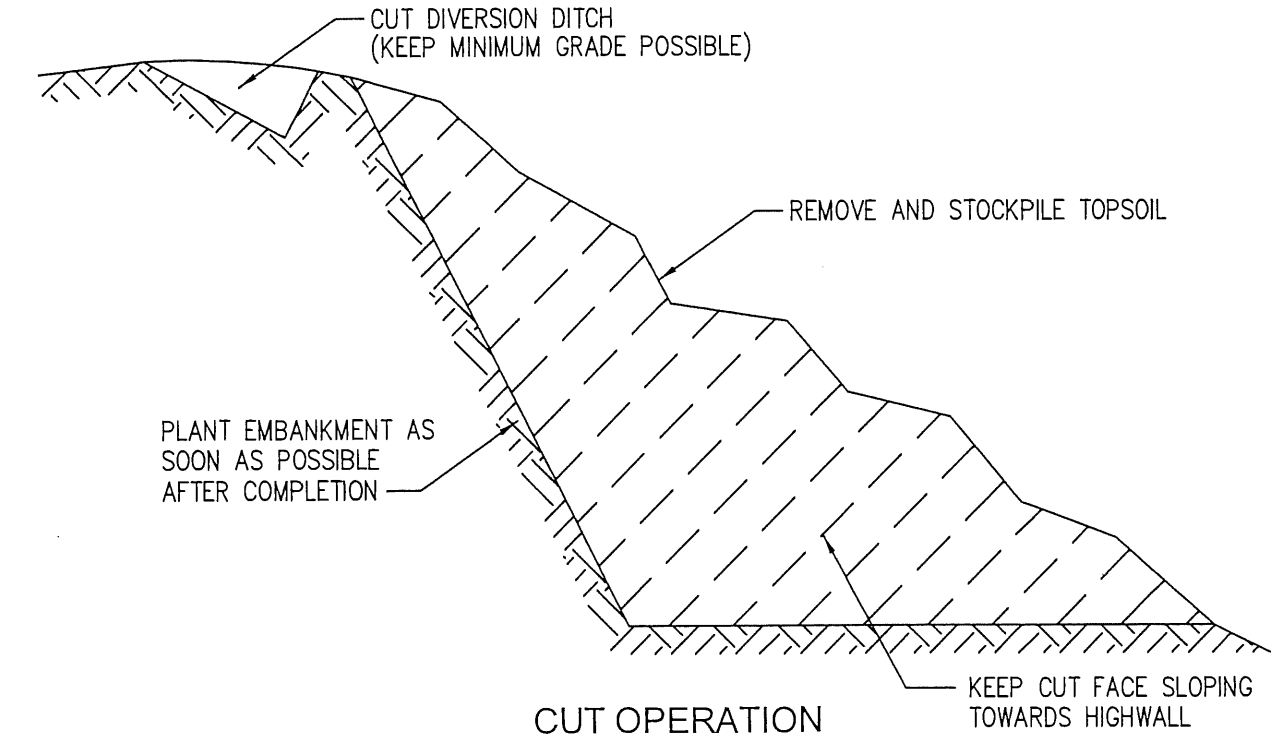
ABBREVIATIONS

B.C.	BOTTOM OF CURB
B.S.	BOTTOM OF SLOPE
B.W.	BOTTOM OF WALL
C.B.	CATCH BASIN
C.I.P.	CAST IRON PIPE
C.L.F.	CHAIN LINK FENCE
C.M.P.	CORRUGATED METAL PIPE
C.P.P.	CORRUGATED PLASTIC PIPE
C.O.	CLEAN OUT
FT./FT.	FOOT PER FOOT
H	HANDICAPPED PARKING
H.P.	HIGH POINT
INL. EL.	INLET ELEVATION
INV. EL.	INVERT ELEVATION
L.P.	LOW POINT
N.I.C.	NOT IN CONTRACT
M.H.	MANHOLE
P.C.	POINT OF CURVATURE
P.V.C.	POINT OF VERTICAL CURVE
(PVC)	POLYVINYL CHLORIDE
R=100'	RADIUS
R.C.P.	REINFORCED CONCRETE PIPE
R/W	RIGHT–OF WAY
S.I.	STORM INLET
T.C.	TOP OF CURB
T.S.	TOP OF SLOPE
T.W.	TOP OF WALL
V.C.	VERTICAL CURVE
V.C.P.	VITRIFIED CLAY PIPE

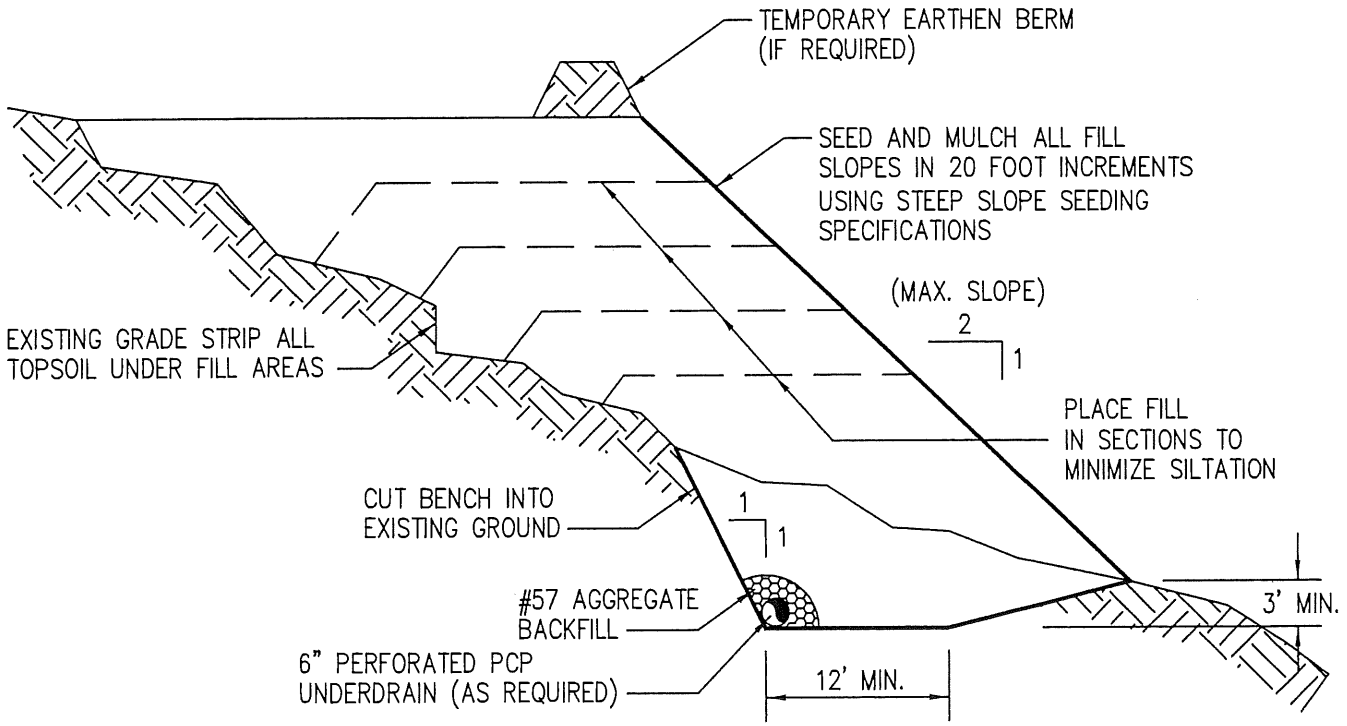
SITE PLAN
SYMBOLS AND ABBREVIATIONS
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364–4115 FAX (412) 366–4406

DETAIL No. FP-3



CUT OPERATION



FILL OPERATION

NOTE:
THE TOP AND BOTTOM EDGE OF ANY PROPOSED SLOPE MUST BE SET BACK A MINIMUM OF FIVE FEET FROM AN ADJACENT PROPERTY LINE OR STREET RIGHT-OF-WAY LINE.

STANDARD DETAIL
TYPICAL METHOD FOR CUT OR FILL OPERATION
FRANKLIN PARK BOROUGH

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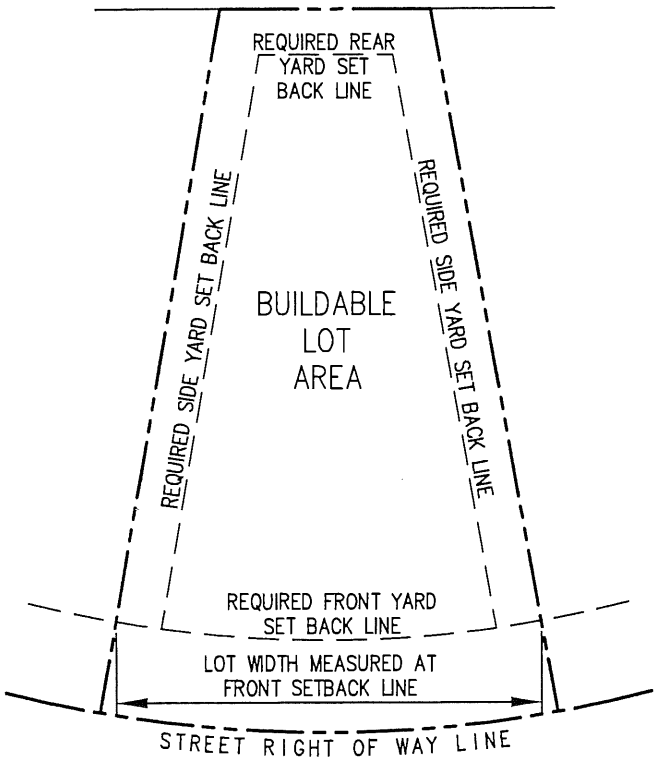
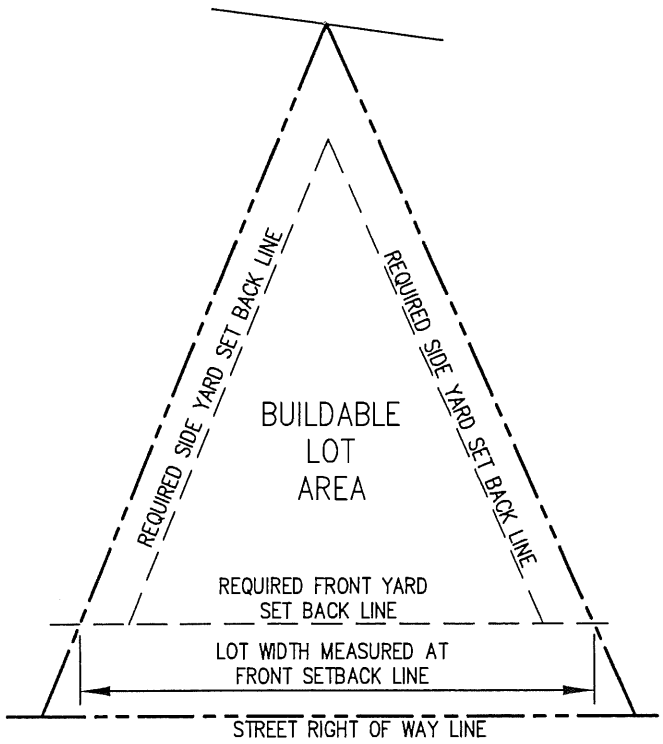
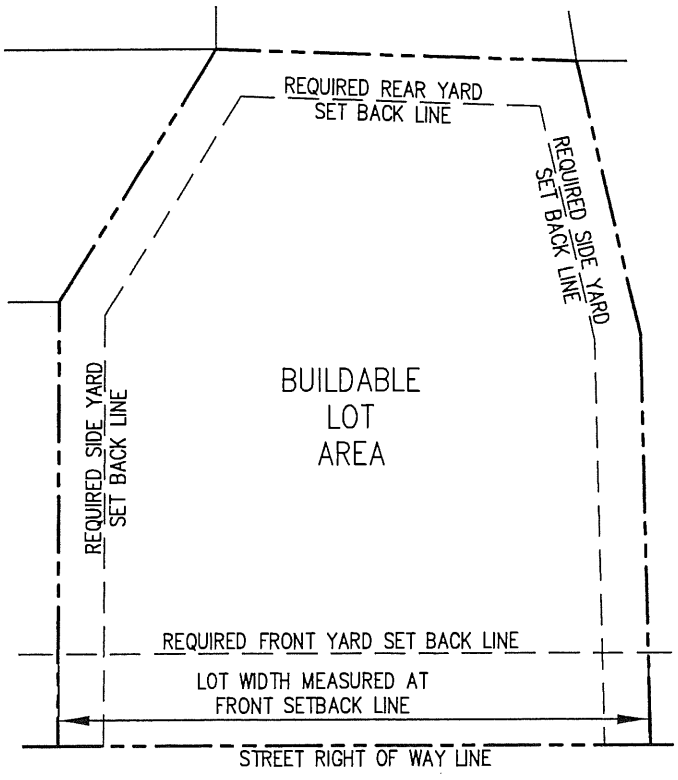
DETAIL No. FP-4



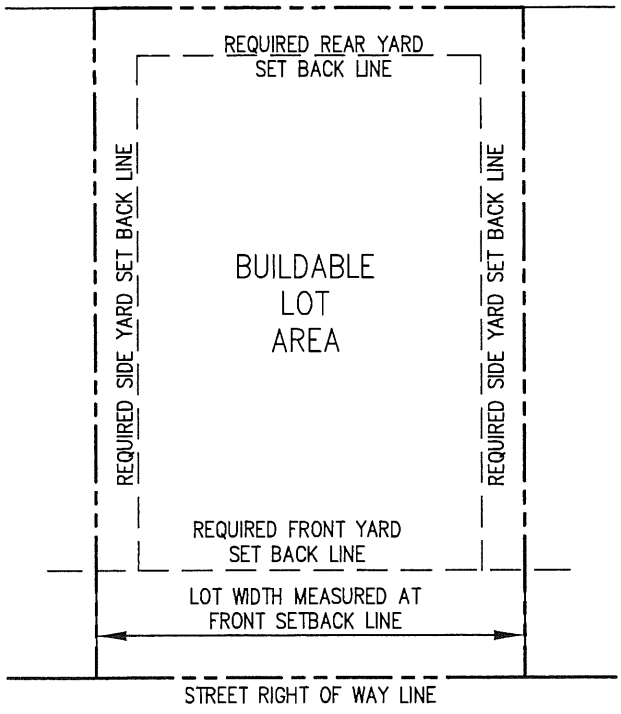
LOT ON CURVED STREET



TRIANGULAR LOT



IRREGULAR LOT



RECTANGULAR LOT

BUILDING LOT SET BACK REQUIREMENTS FRANKLIN PARK BOROUGH

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DETAIL No. FP-5

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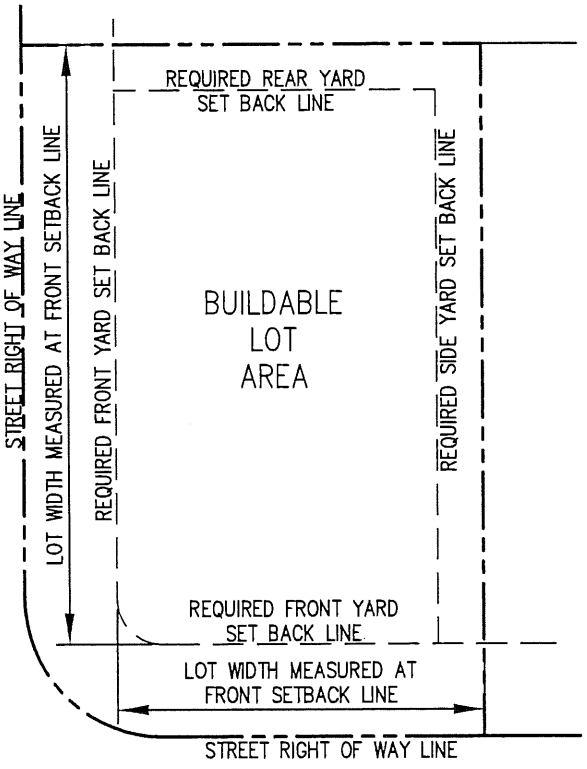
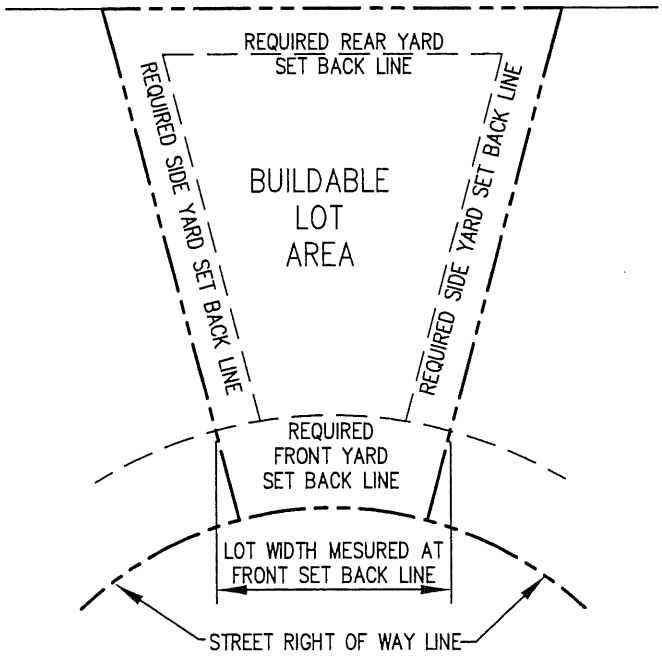
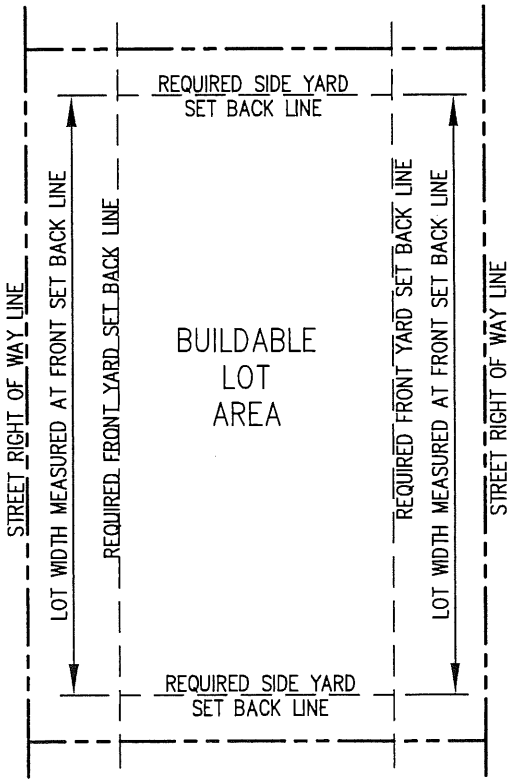


CORNER LOT



CUL-DE-SAC LOT



THROUGH LOT

BUILDING LOT SET BACK REQUIREMENTS FRANKLIN PARK BOROUGH

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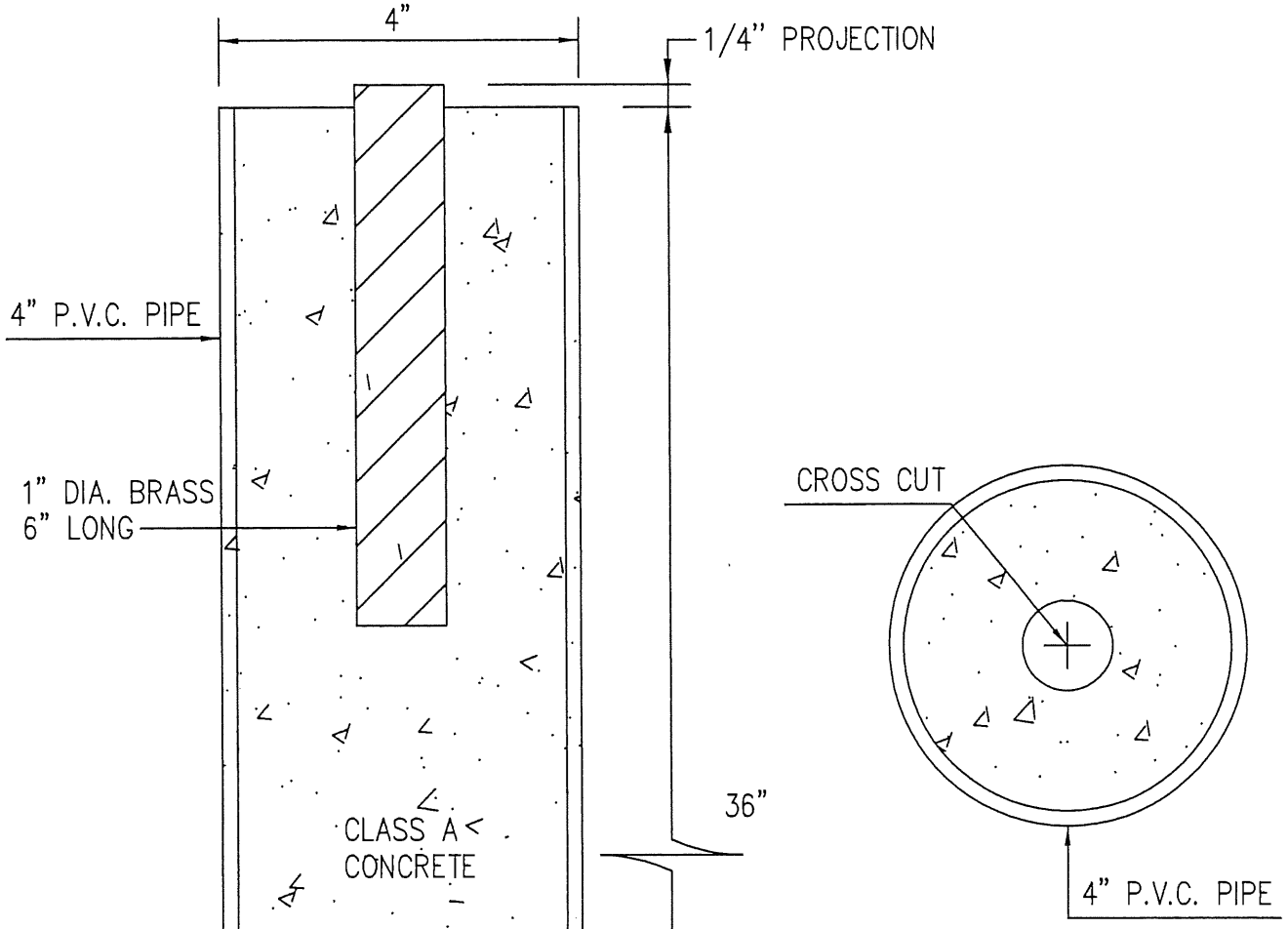
DETAIL No. FP-6



STANDARD DETAIL
CONCRETE SURVEY MONUMENT
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
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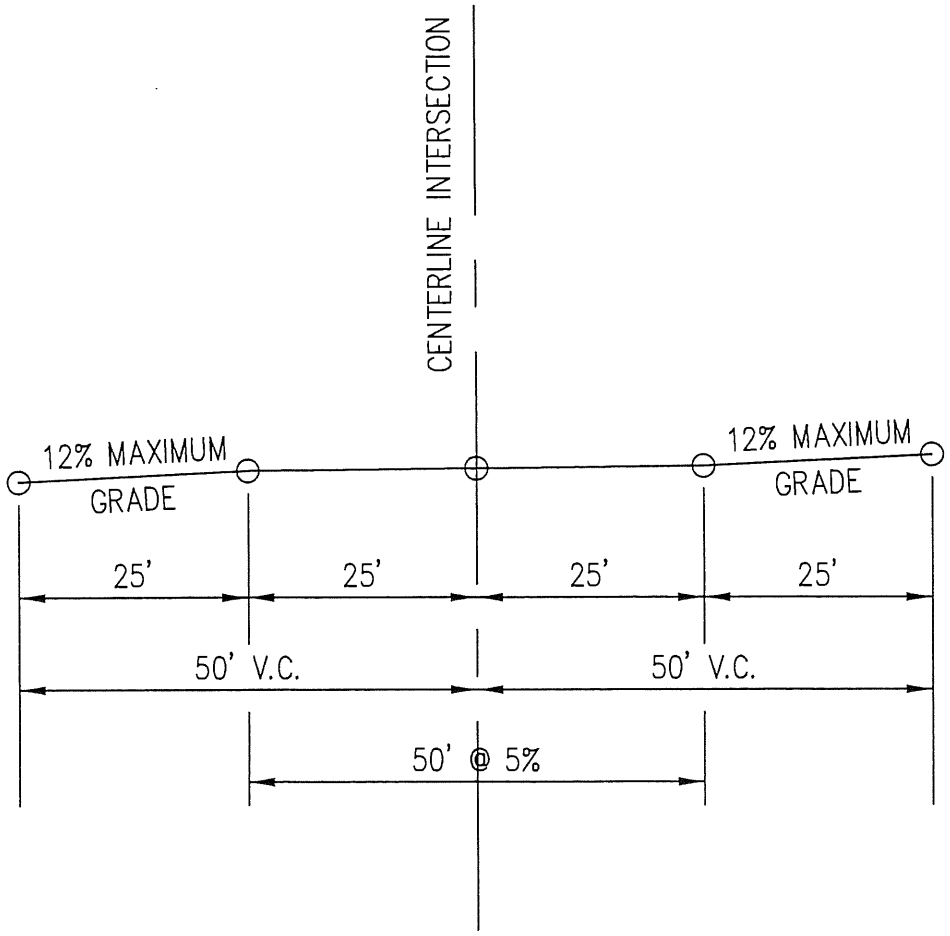
DETAIL No. FP-7



STANDARD DETAIL
VERTICAL CURVES AT INTERSECTIONS
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
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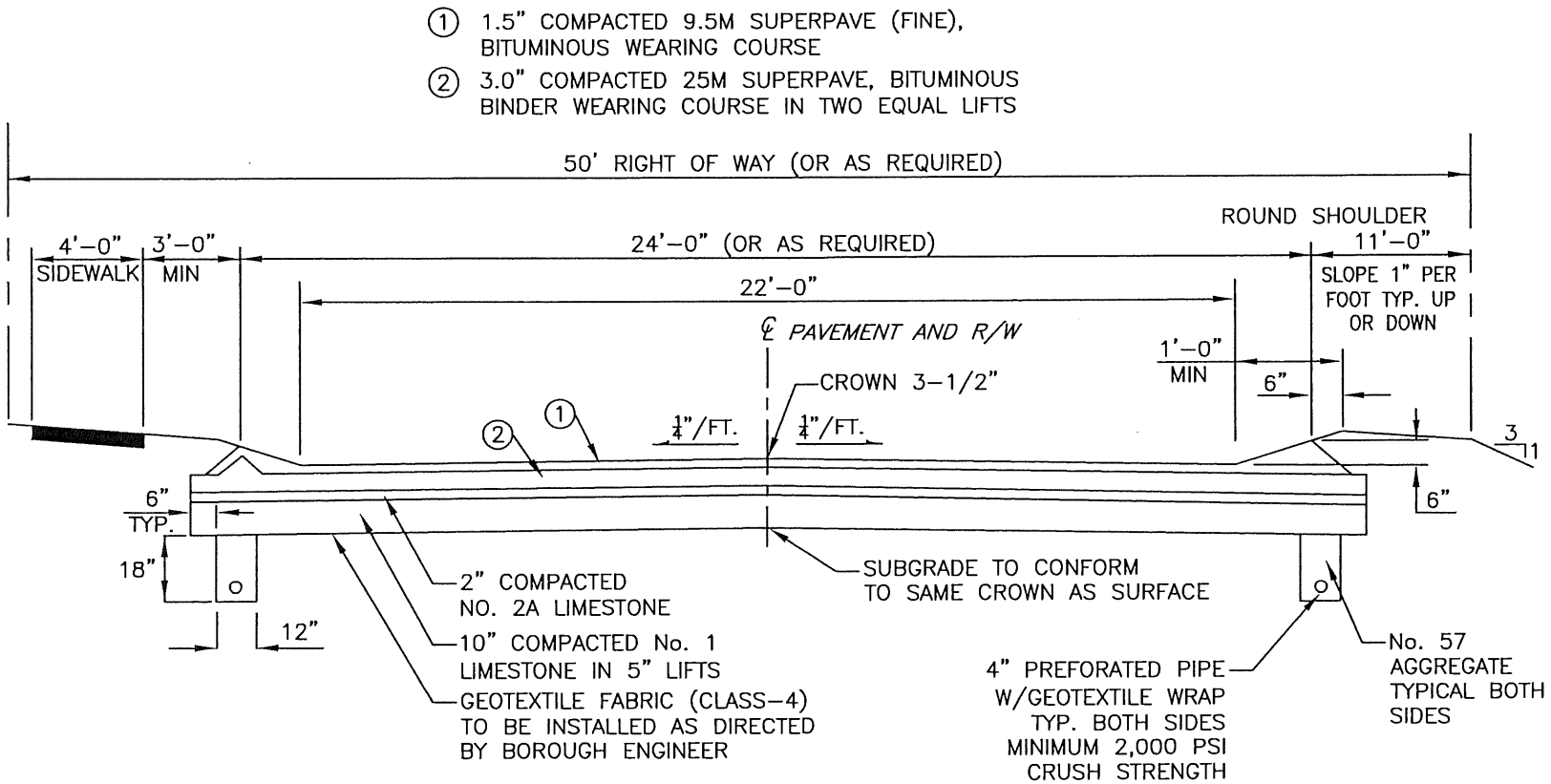
DETAIL No. FP-8

STANDARD DETAIL
TYPICAL MINOR STREET PAVING SECTION (BITUMINOUS WEDGE CURB)
FRANKLIN PARK BOROUGH



NOTE: CURB PART OF PAVING OPERATION.
WEDGE CURB TO BE CONSTRUCTED OF 25mm BINDER.

NOTES:

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO PENNSYLVANIA DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS, PUBLICATION 408, CURRENT EDITION.
2. PLACE GEOTEXTILE FABRIC (CLASS-4) ON ENTIRE STREET IF SUBGRADE IS CLAY.
3. PRIOR TO BOROUGH ACCEPTANCE OF STREET, MILL 1.5", BROOM CLEAN, APPLY TACK COAT, AND PLACE 1.5" COMPACTED SUPERPAVE 9.5 MM (FINE).

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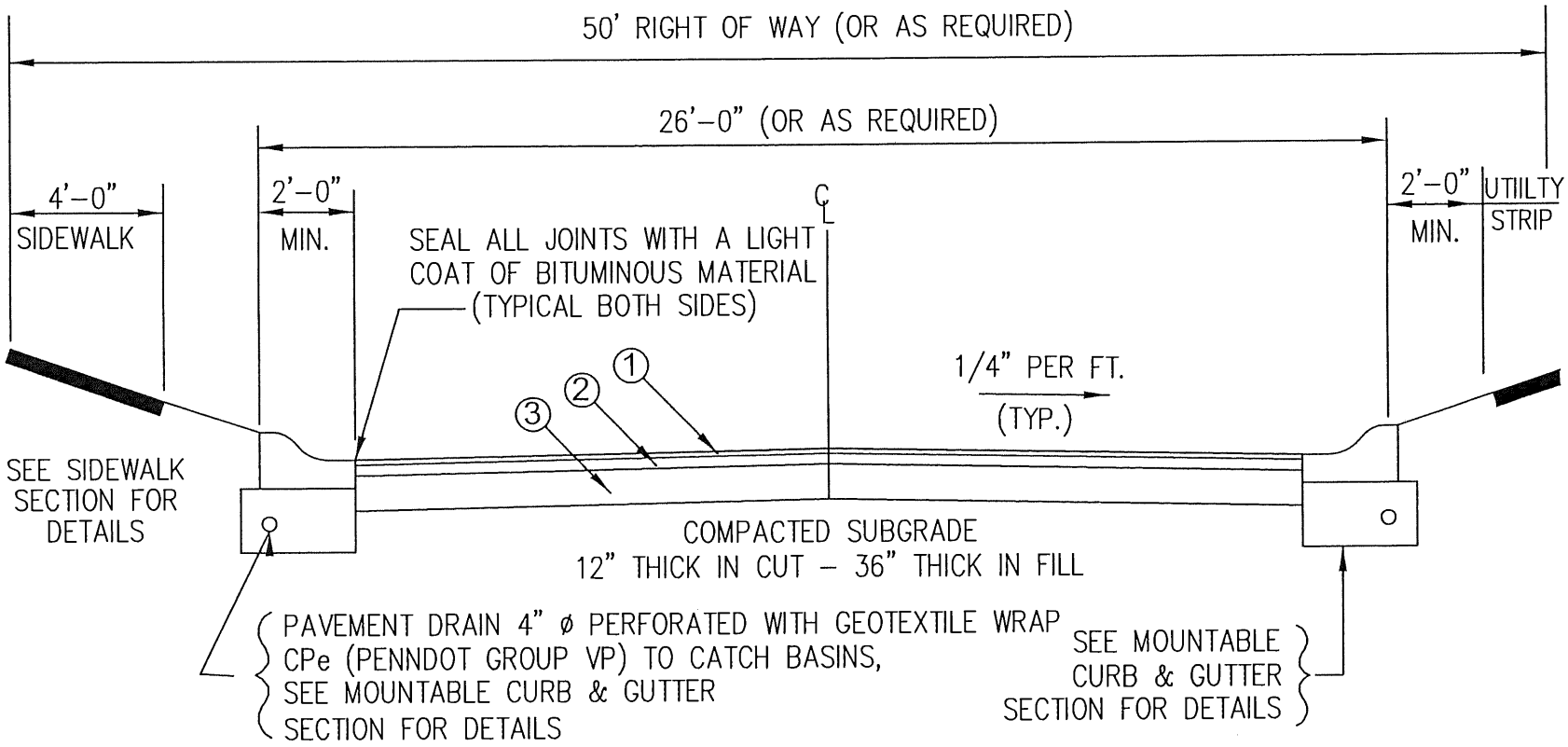
DETAIL No. FP-9

STANDARD DETAIL TYPICAL
MINOR STREET PAVING SECTION (CONCRETE CURB & GUTTER)
FRANKLIN PARK BOROUGH

① SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L

② SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 3.0" DEPTH

③ 12" COMPACTED AGGREGATE BASE COURSE, PENNDOT TYPE A, BOTTOM LAYER 10" OF AASHTO #1, LIMESTONE IN 5" LIFTS TOP LAYER 2" OF 2A LIMESTONE



TYP BOTH SIDES. MINIMUM 2000 PSI CRUSH STRENGTH. AS DIRECTED BY ENGINEER.

DETAIL No. FP-10

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STANDARD DETAIL
TYPICAL COLLECTOR STREET PAVING SECTION
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
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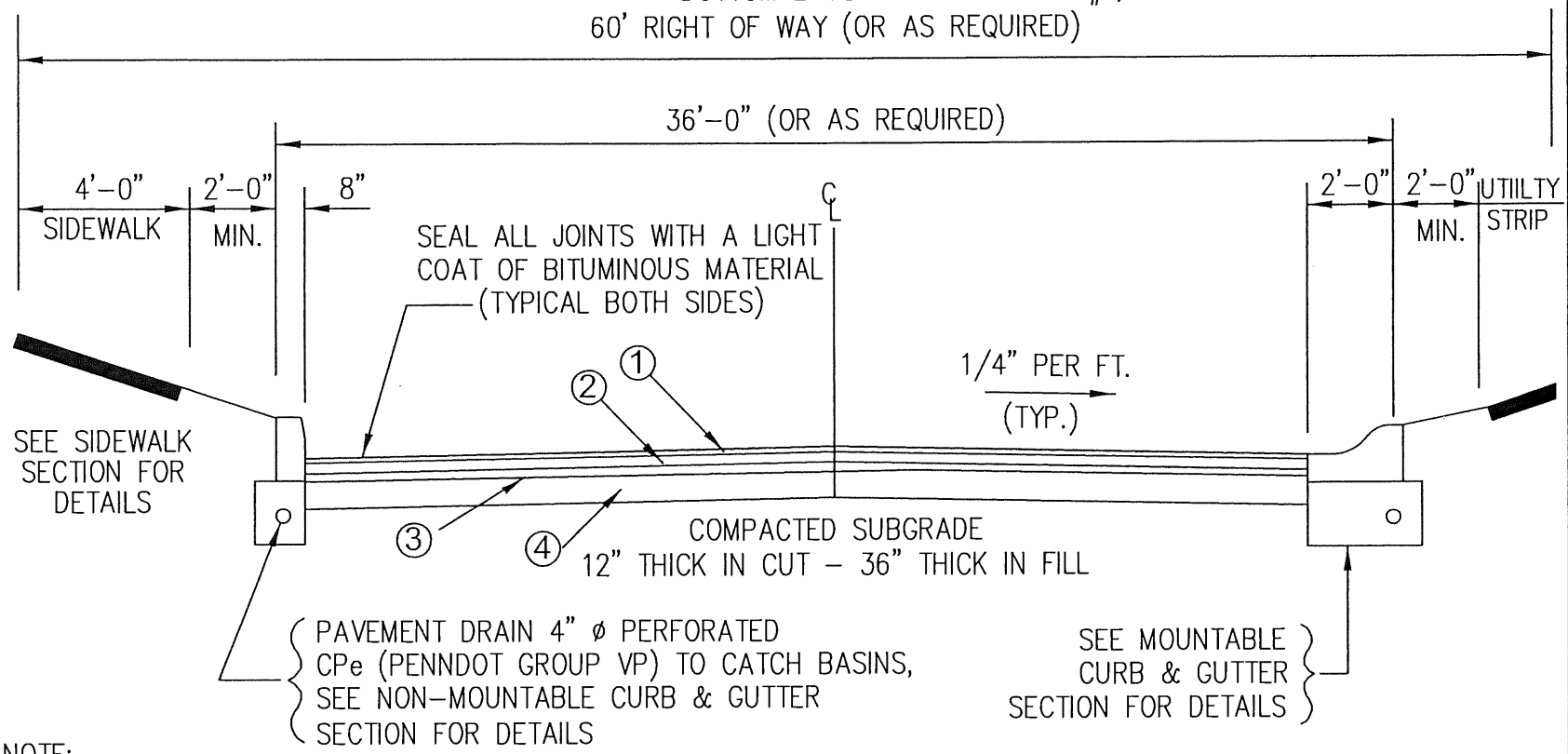
DETAIL No. FP-11

① SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1.5" DEPTH, SRL-H

② SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 3.0" DEPTH

③ 2'' COMPACTED NO. 2A LIMESTONE

④ 10" COMPACTED AGGREGATE BASE COURSE, PENNDOT TYPE A, BOTTOM LAYER 6" OF AASHTO #1, TOP LAYER 2" OF 2A STONE



NOTE:
SLOPE TERMINAL ENDS OF CURBS 45° TO MEET EXISTING GRADES

STANDARD DETAIL
ASPHALT WEDGE CURB & PAVEMENT DETAIL
FRANKLIN PARK BOROUGH

DETAIL No. FP-12

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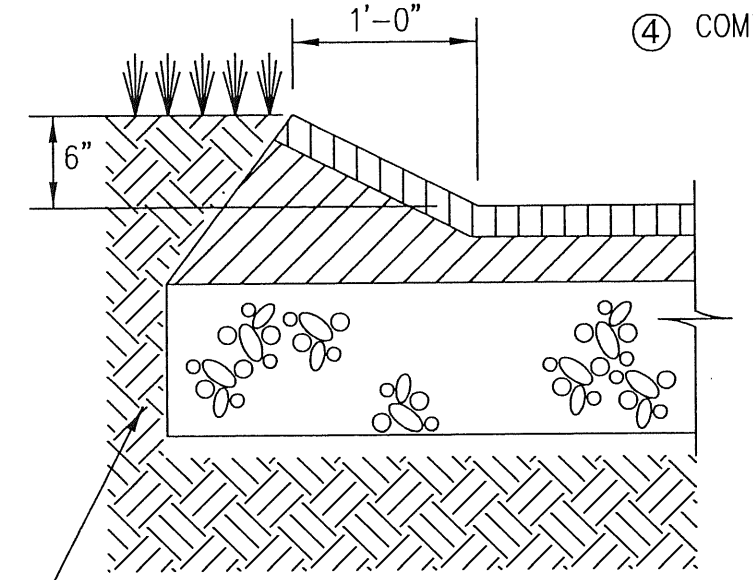
① SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1.5" DEPTH, SRL-H

② SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, < 0.3 MILLION ESALS, 25.0 MM MIX, 4.5" DEPTH

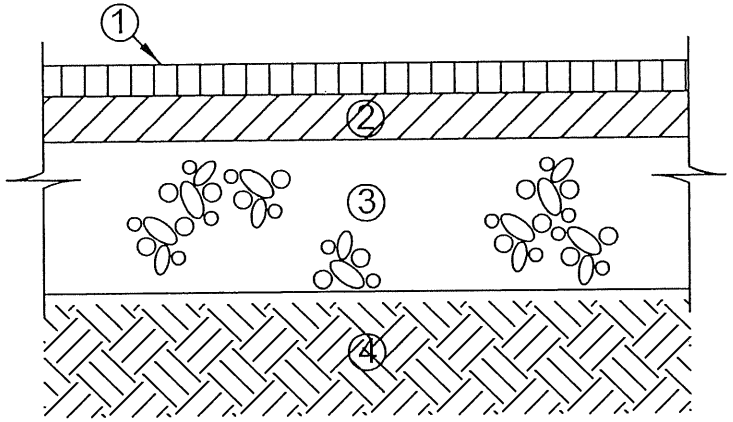
③ 12" COMPACTED AGGREGATE BASE COURSE, PENNDOT TYPE A (AASHTO No. 1 NO SLAG) 10" OF 1-2 LIFTS

④ COMPACTED SUBGRADE 2" OF 2A TO CHECK TOP



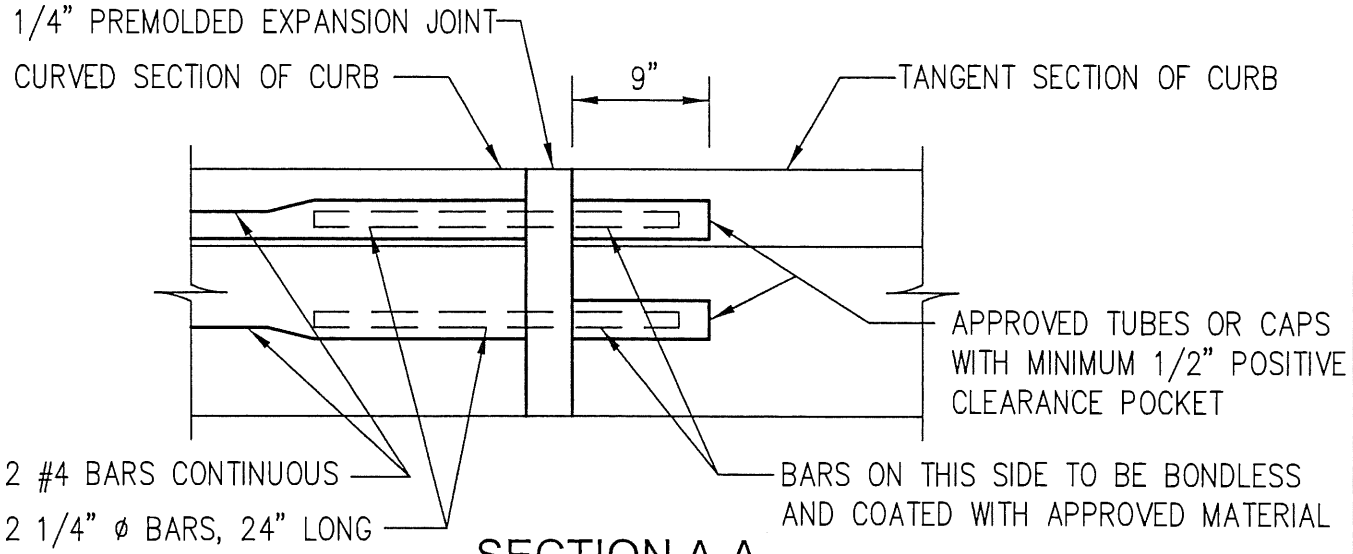
EXTEND SUBBASE 6" BEYOND BACK OF CURB. SLOPE BINDER ON 1 TO 1 SLOPE.

ASPHALT WEDGE CURB DETAIL

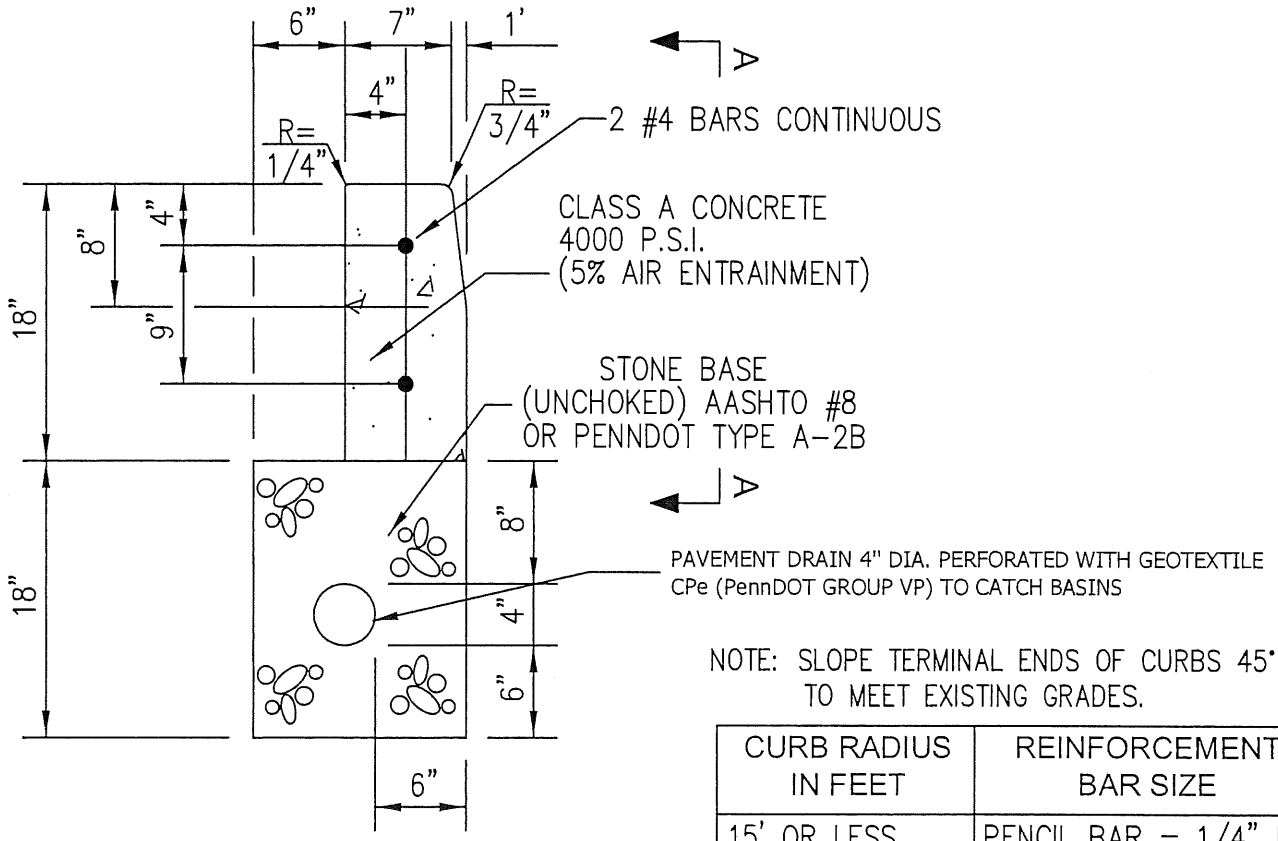


ASPHALT PAVEMENT DETAIL

EXPANSION JOINTS LOCATED ON 24'-0" CENTERS MAXIMUM.



SECTION A-A



NOTE: SLOPE TERMINAL ENDS OF CURBS 45° TO MEET EXISTING GRADES.

CURB RADIUS IN FEET	REINFORCEMENT BAR SIZE
15' OR LESS	PENCIL BAR = 1/4" DIA.
15' TO 30'	#3 BAR = 3/8" DIA.
30' TO 70' OR GREATER	#4 BAR = 1/2" DIA.

TYPICAL SECTION

STANDARD DETAIL
NON MOUNTABLE CONCRETE CURB
FRANKLIN PARK BOROUGH

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DETAIL No. FP-13

STANDARD DETAIL
CONCRETE CURB DETAIL
FRANKLIN PARK BOROUGH

DETAIL No. FP-14

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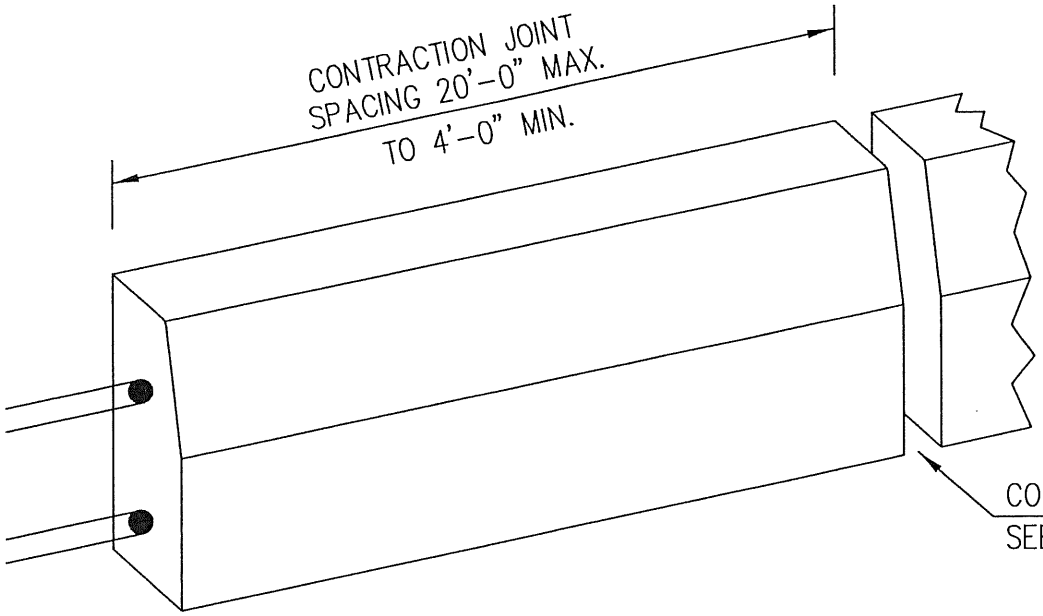
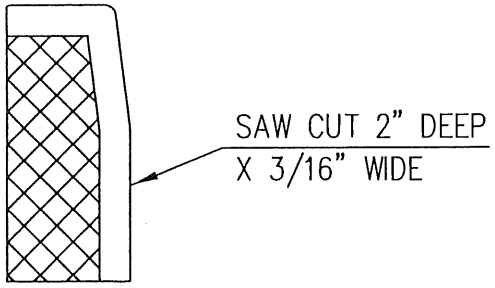
NOTE:

1. CONSTRUCT CURBING IN ACCORDANCE WITH PENNDOT SPECIFICATIONS PUBLICATION 408 AND ROADWAY CONSTRUCTION DRAWINGS (RC-64M)

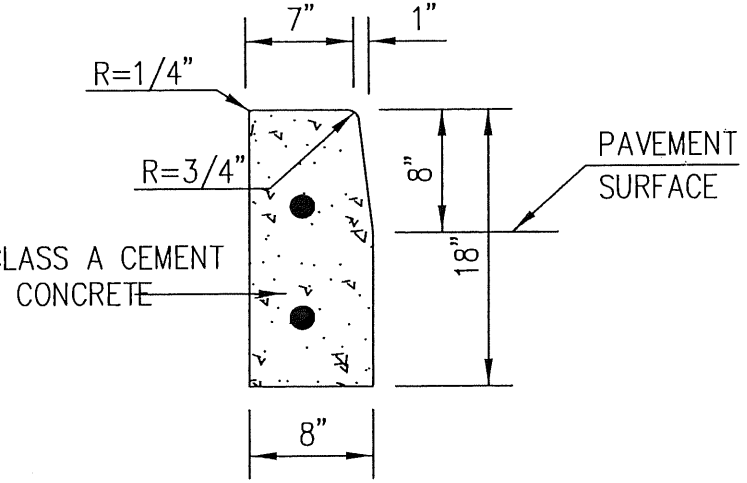


FP-6 CALLS FOR "R" BAR

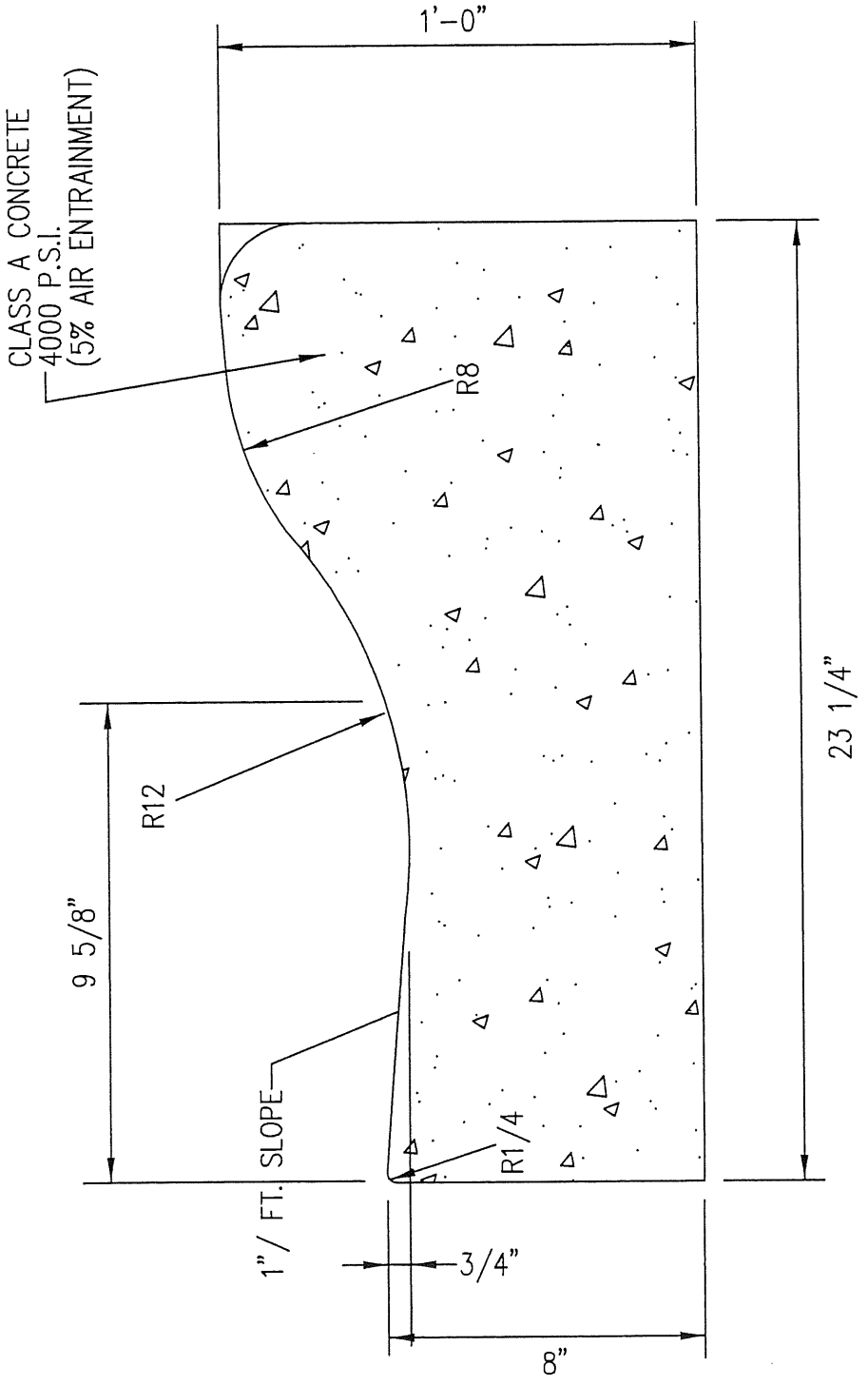
CONCRETE CURB DETAIL



CONTRACTION JOINT DETAIL



CROSS SECTION



STANDARD DETAIL
MOUNTABLE ROLLED CONCRETE CURB & GUTTER
FRANKLIN PARK BOROUGH

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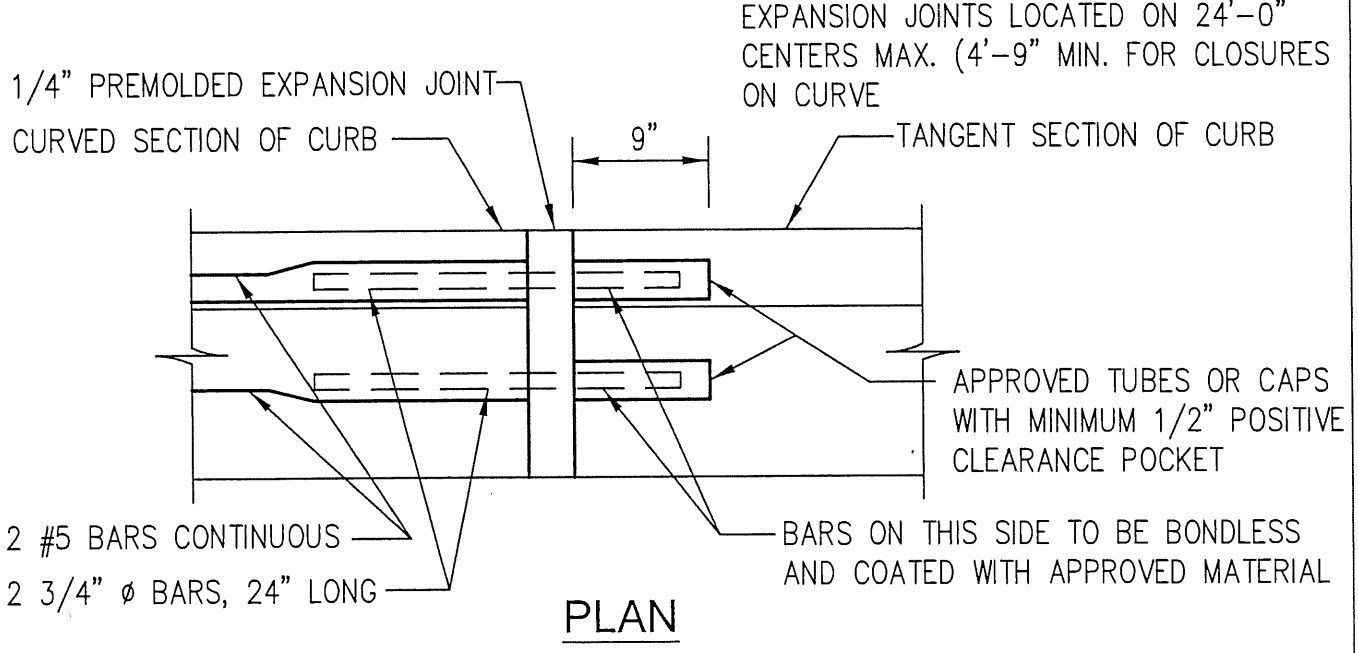
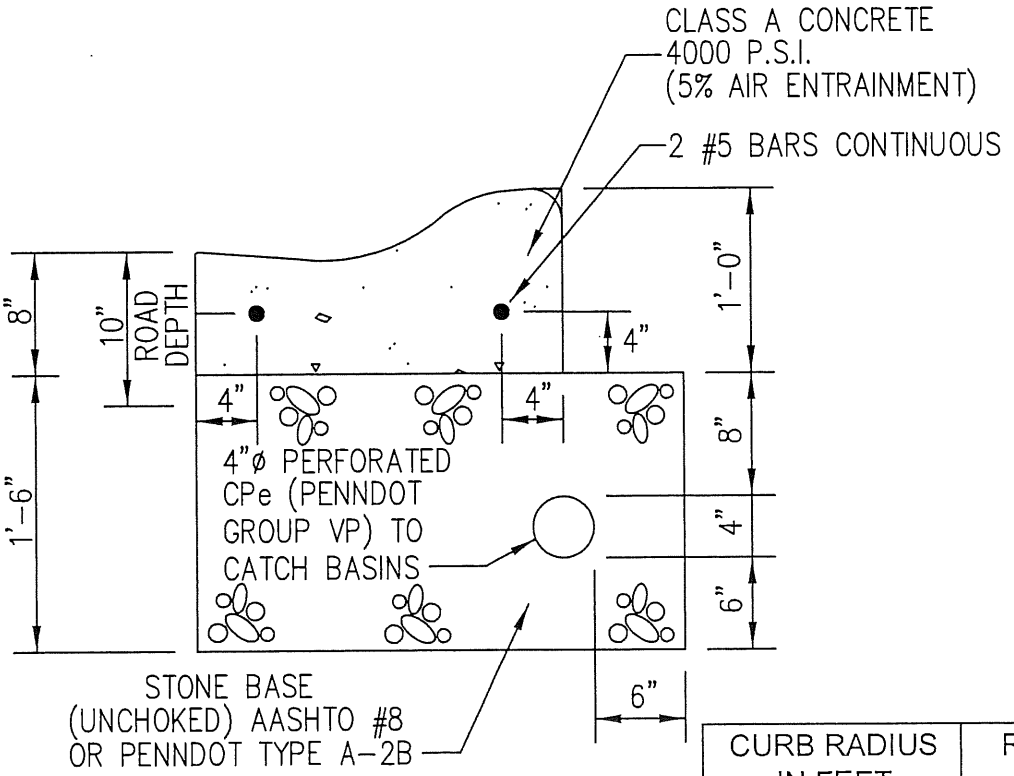
DETAIL No. FP-15



PLAN



TYPICAL SECTION

CURB RADIUS IN FEET	REINFORCEMENT BAR SIZE
15' OR LESS	PENCIL BAR = 1/4" DIA.
15' TO 30'	#3 BAR = 3/8" DIA.
30' TO 70'	#4 BAR = 1/2" DIA.
70' OR GREATER	#5 BAR = 5/8" DIA.

STANDARD DETAIL
MOUNTABLE ROLLED CONCRETE CURB & GUTTER
FRANKLIN PARK BOROUGH

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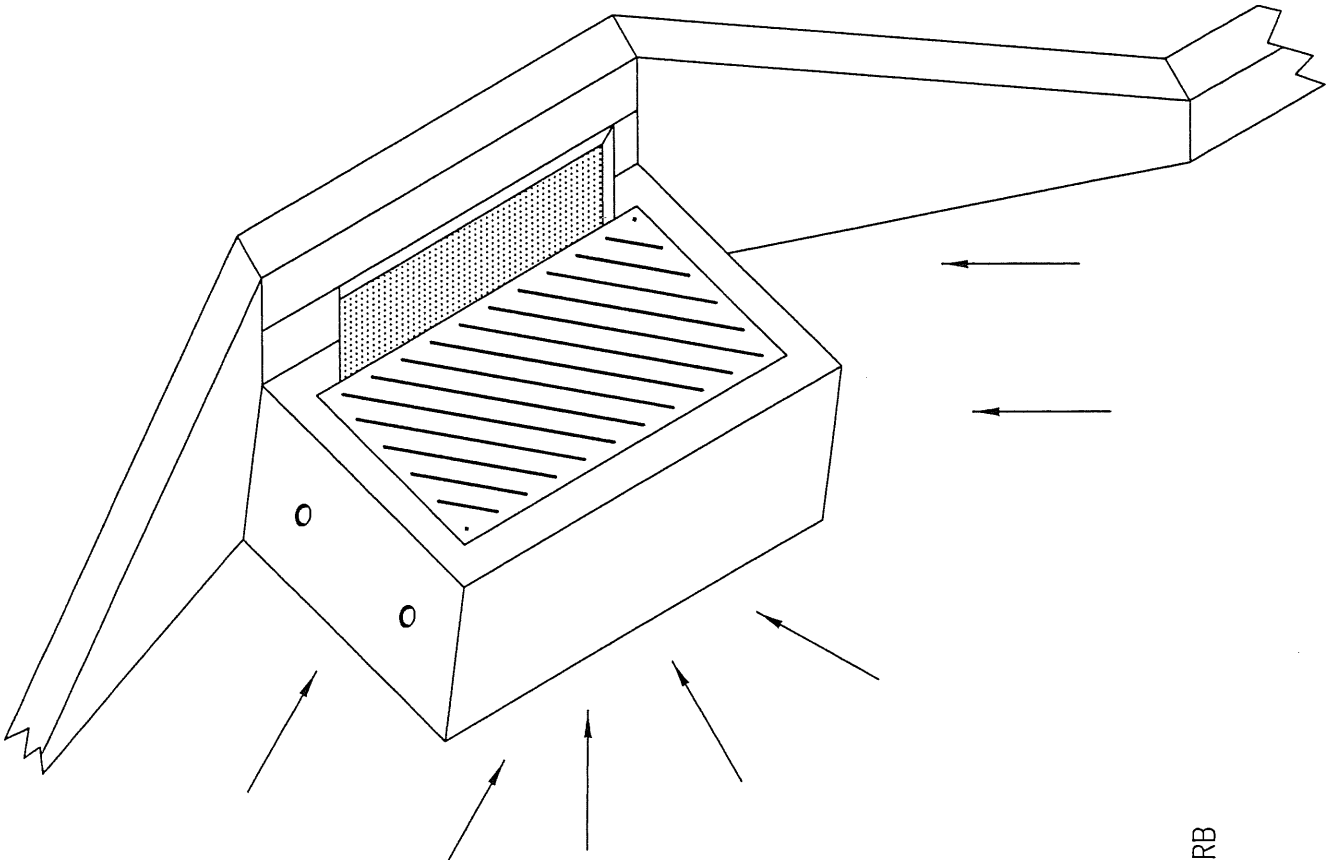
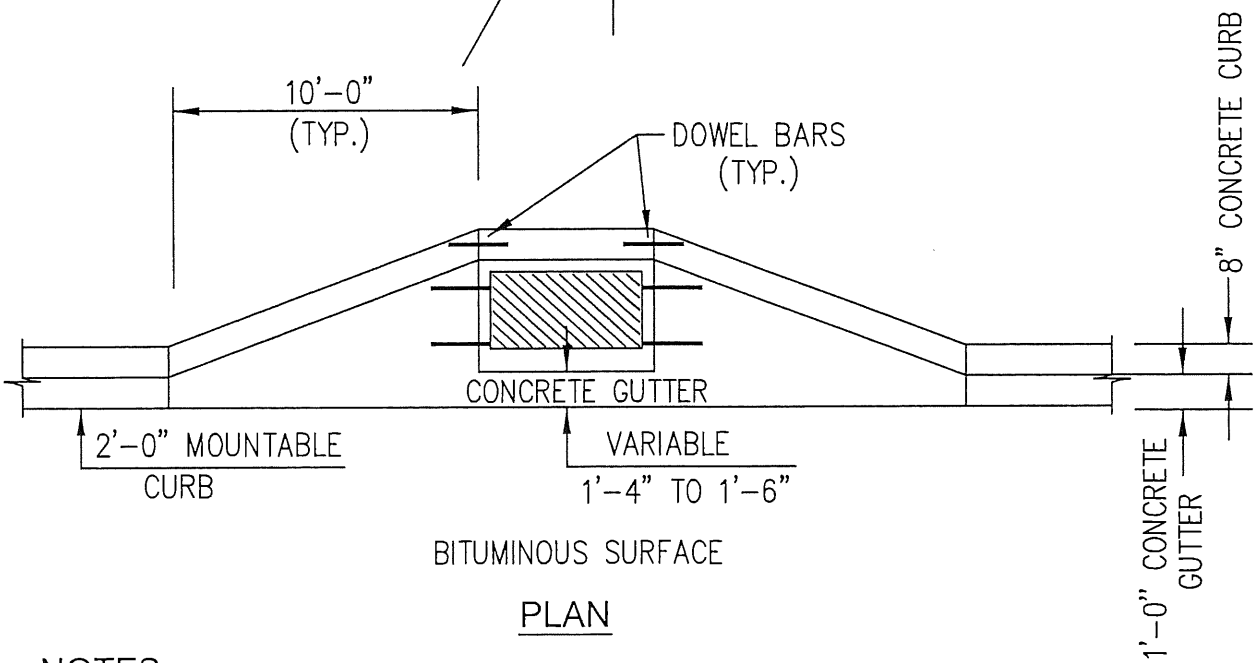
DETAIL No. FP-16





PLAN

NOTES:

- SEE TYPICAL CURB SECTIONS FOR DETAILS OF DOWEL CAPS OR TUBES AND BARS.
- NUMBER OF DOWELS ON EACH SIDE OF PRECAST CATCH BASIN SHALL BE TWO (2) FOR NON-MOUNTABLE CURBS AND FOUR (4) FOR MOUNTABLE CURBS.

STANDARD DETAIL TYPICAL CONCRETE CURB AT PRECAST CATCH BASIN TOP UNIT FRANKLIN PARK BOROUGH	FRANKLIN PARK BOROUGH 2344 WEST INGOMAR ROAD PITTSBURGH, PA 15237 (412) 364-4115 FAX (412) 366-4406 DETAIL No. FP-17

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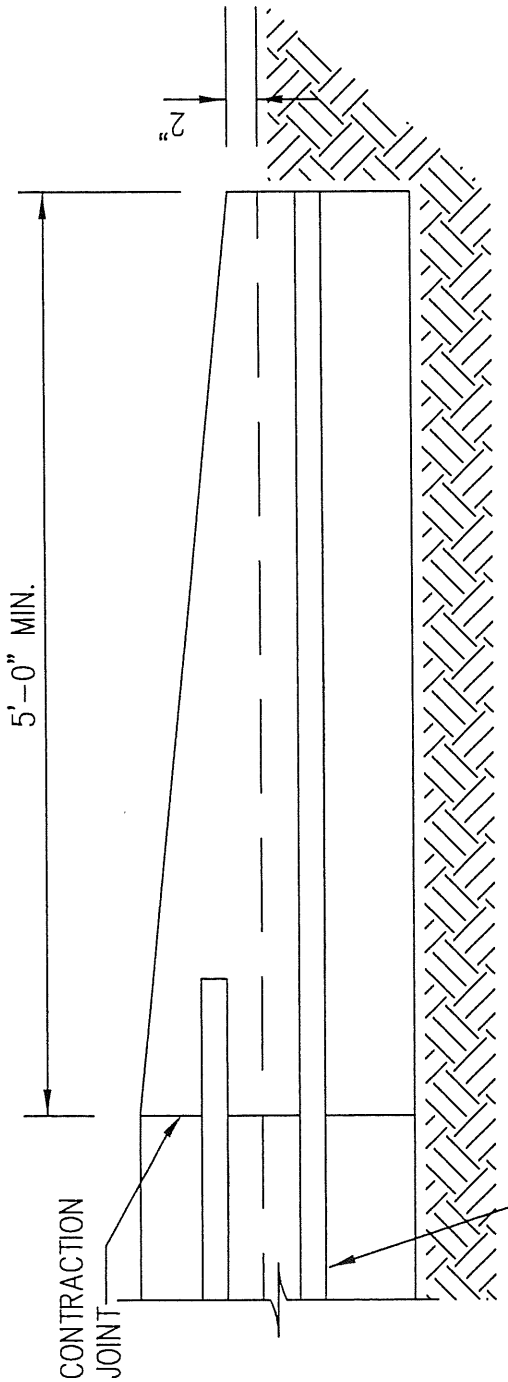

NOSE DOWN CURB

STANDARD DETAIL
NOSE DOWN CURB DETAIL
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
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DETAIL No. FP-18

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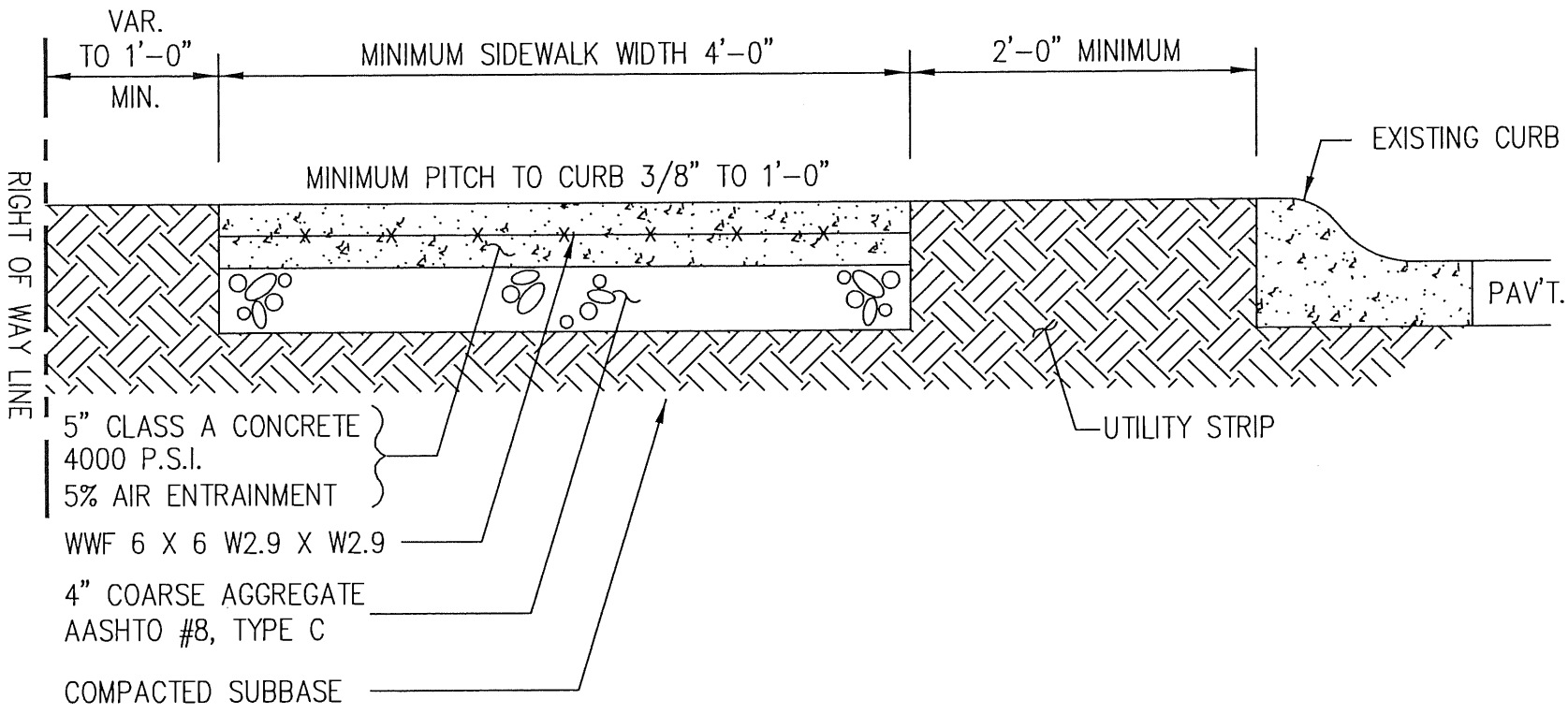
STANDARD DETAIL
SIDEWALK SECTION
FRANKLIN PARK BOROUGH



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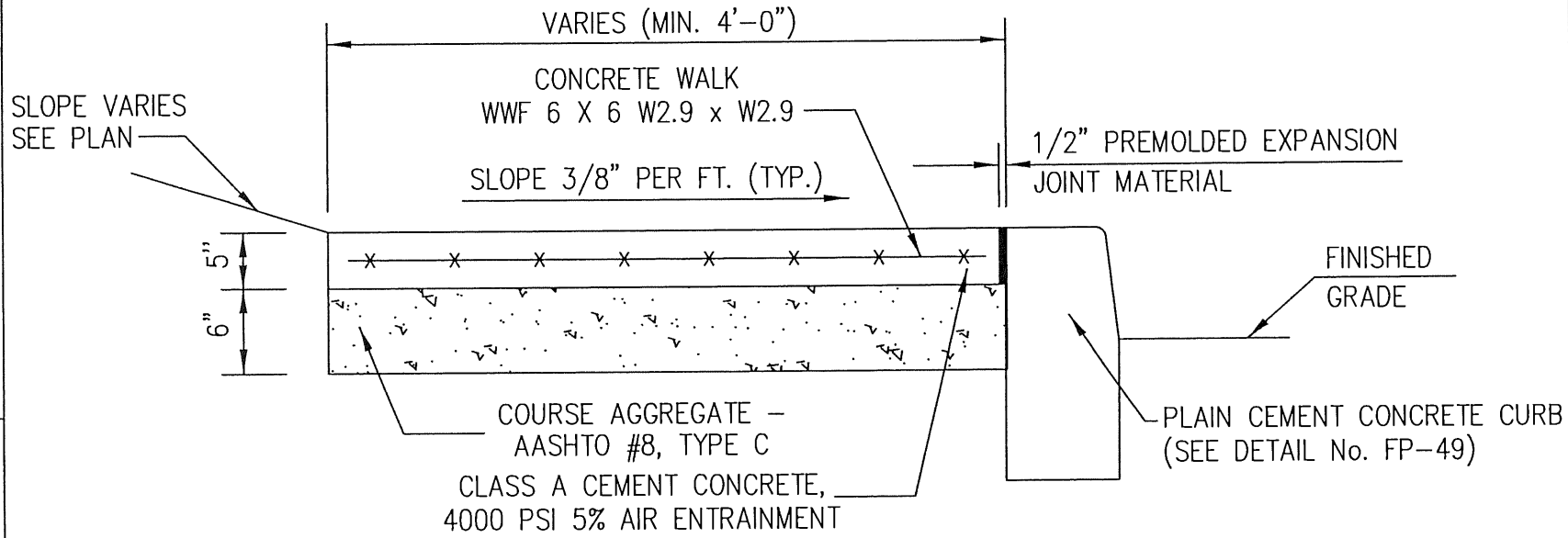
DETAIL No. FP-19

STANDARD DETAIL
CONCRETE SIDEWALK ADJACENT TO CURB
FRANKLIN PARK BOROUGH

NOTE:

1. SIDEWALK TO HAVE STIFF BROOM FINISH PERPENDICULAR TO DIRECTION OF PEDESTRIAN TRAFFIC.
2. CONSTRUCT IN ACCORDANCE WITH PENNDOT PUBLICATION 408, EXCEPT AS NOTED.
3. SEE SITE PLAN FOR SIDEWALK LOCATION AND WIDTHS.
4. CONCRETE SHALL MINIMUM 4000 PSI COMPRESSIVE STRENGTH.
5. EXPANSION JOINTS SHALL BE EVERY 200 FEET WITH CONTRACTION JOINTS CUT EVERY 4 FEET, A MINIMUM OF 1 INCH IN DEPTH.



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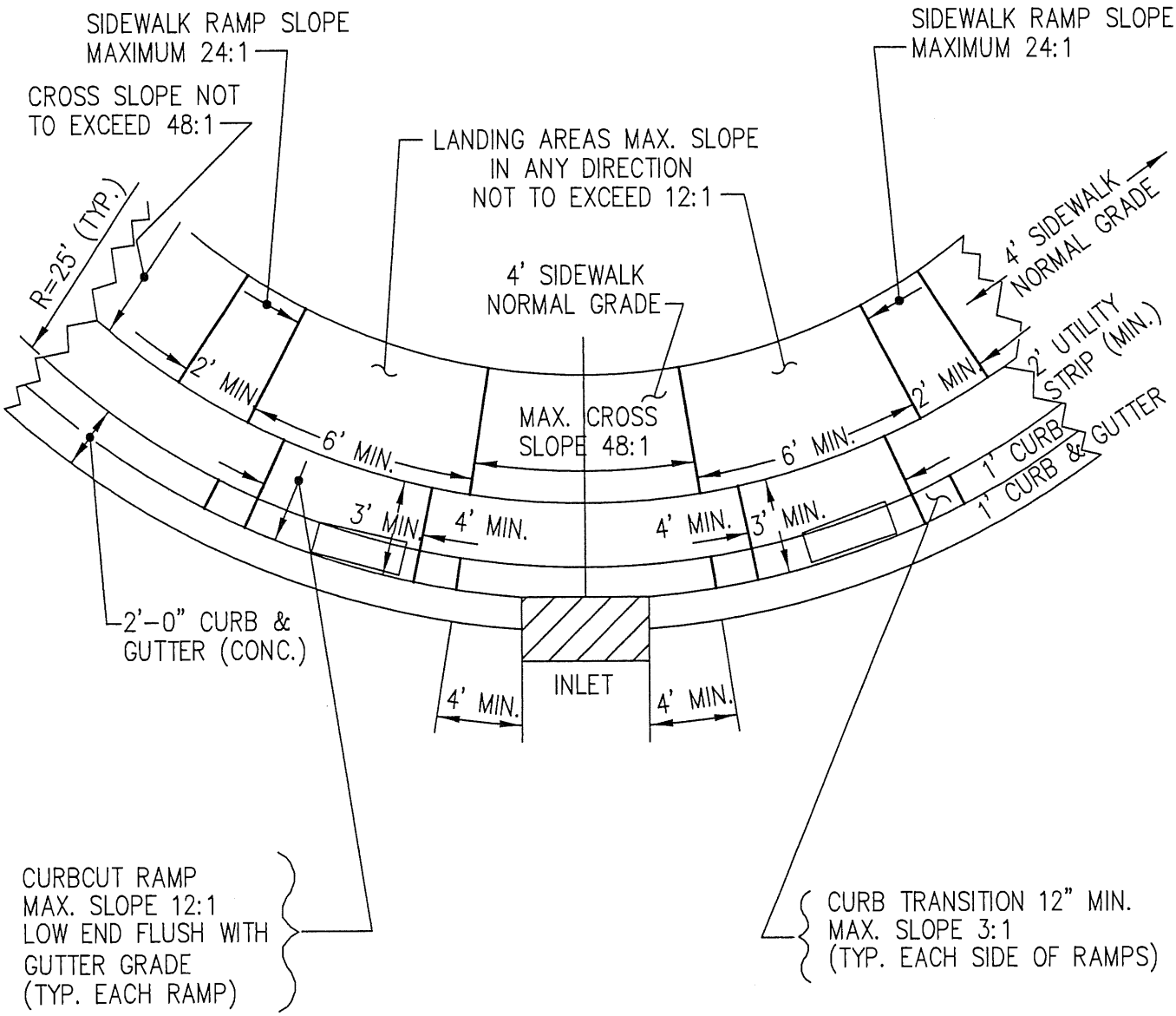
DETAIL No. FP-20



NOTES:

TYPICALLY LOCATE CURBCUT RAMPS 5 FOOT MINIMUM FROM ANY INLET.

STANDARD DETAIL
DIAGONAL CURBCUT RAMP
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
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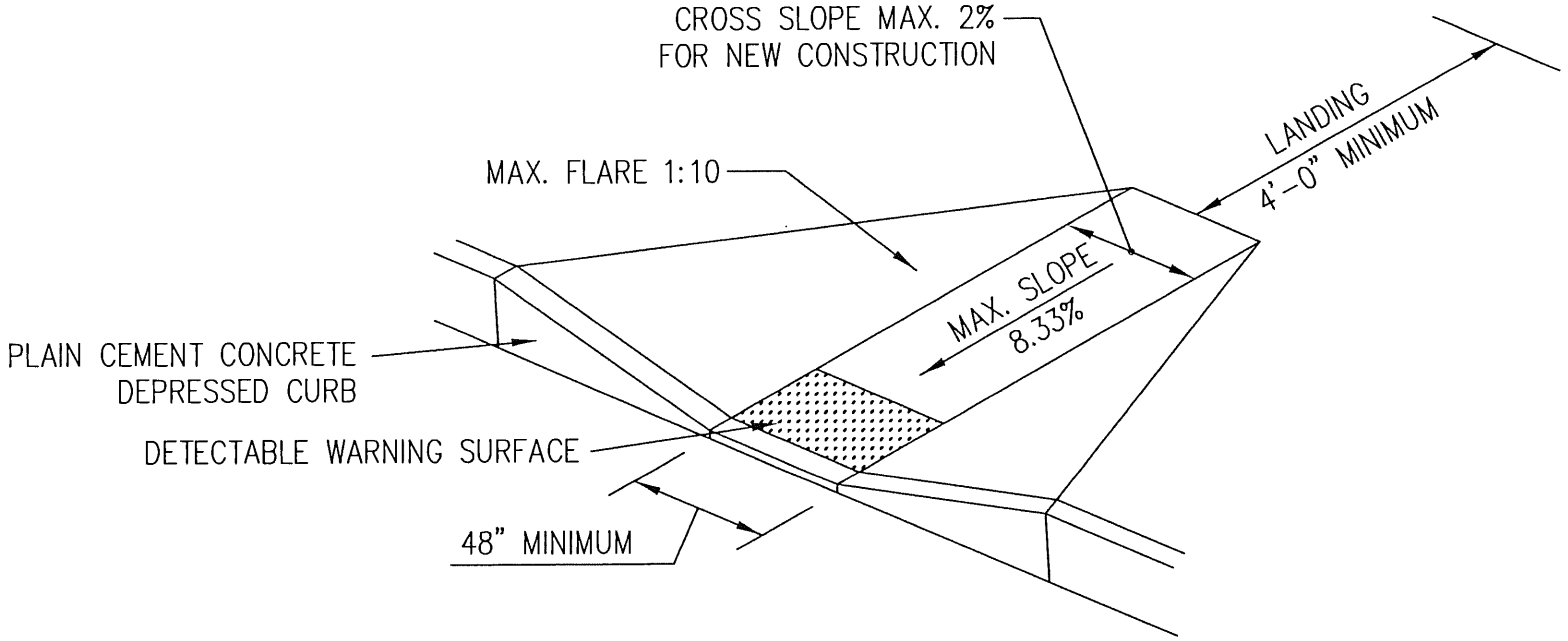
DETAIL No. FP-21

NOTE:

1. IF LANDING IS LESS THAN 48", SLOPE OF FLARED SIDE CAN NOT EXCEED 1:12.
2. DEPRESSED CURB ABOVE ROADWAY CAN NOT EXCEED 1/4".



TYPE 1 HANDICAP ACCESSIBLE RAMP DETAIL

STANDARD DETAIL
TYPE 1 HANDICAP ACCESSIBLE RAMP DETAIL
FRANKLIN PARK BOROUGH

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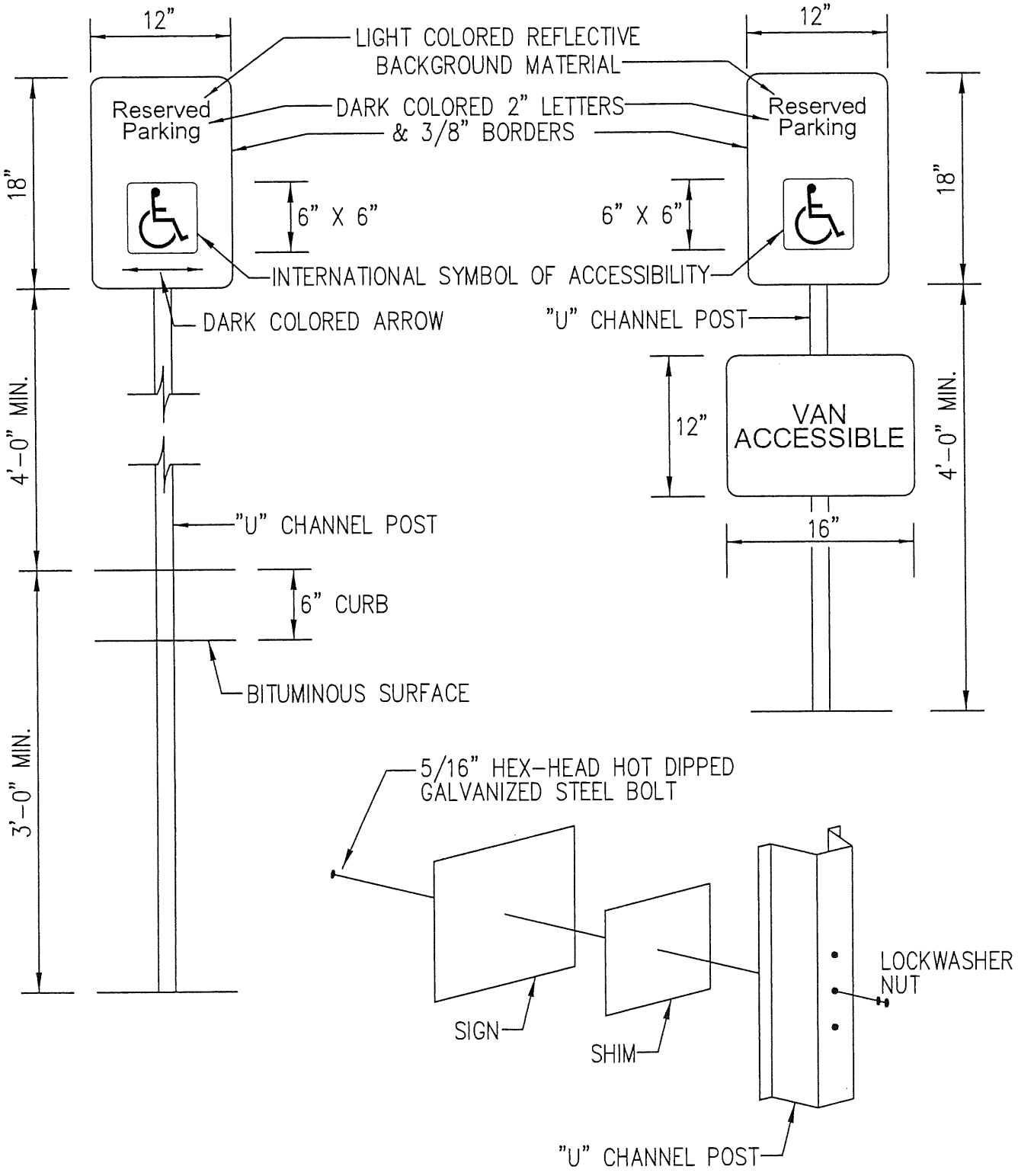
DETAIL No. FP-22



NOTE: FINE AMOUNTS AND LOCAL ORDINANCE REFERENCES SHALL BE POSTED ON SIGN. CONTACT LOCAL BUILDING INSPECTOR FOR REQUIREMENTS.

STANDARD DETAIL
DISABLED PARKING SIGN
FRANKLIN PARK BOROUGH

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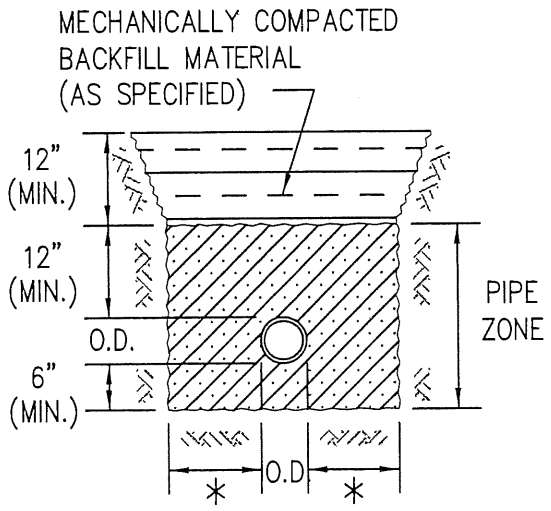
DETAIL No. FP-23

* 6" MINIMUM
12" MAXIMUM

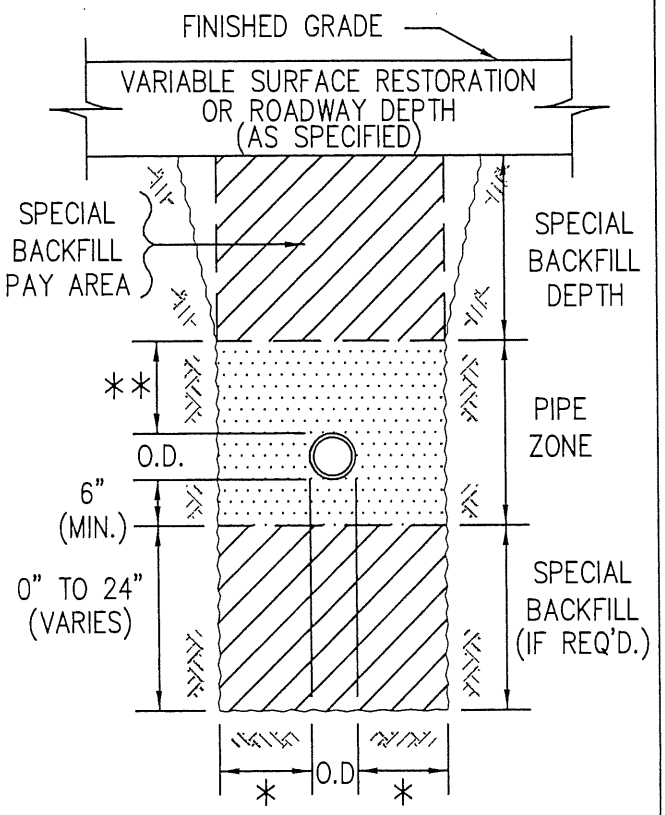
** DEPTH OF VERTICAL WALL OF TRENCH ABOVE TOP OF PIPE



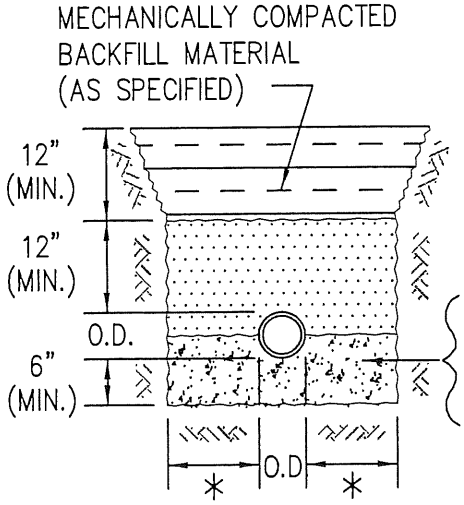
TYPICAL BEDDING & PIPE ZONE

PIPE SHALL BE SUPPORTED BY A MATERIAL APPROVED BY THE ENGINEER

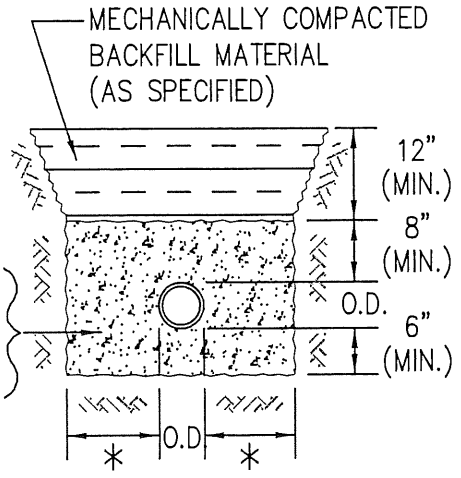
CONCRETE OR THERMO PLASTIC PIPE ACCEPTABLE UNDER ROADS & CURBS



ROADWAY CROSSING SPECIAL BACKFILL



TYPICAL CONCRETE CRADLE



TYPICAL CONCRETE ENCASEMENT

STANDARD DETAIL
PIPE BEDDING FRANKLIN PARK BOROUGH

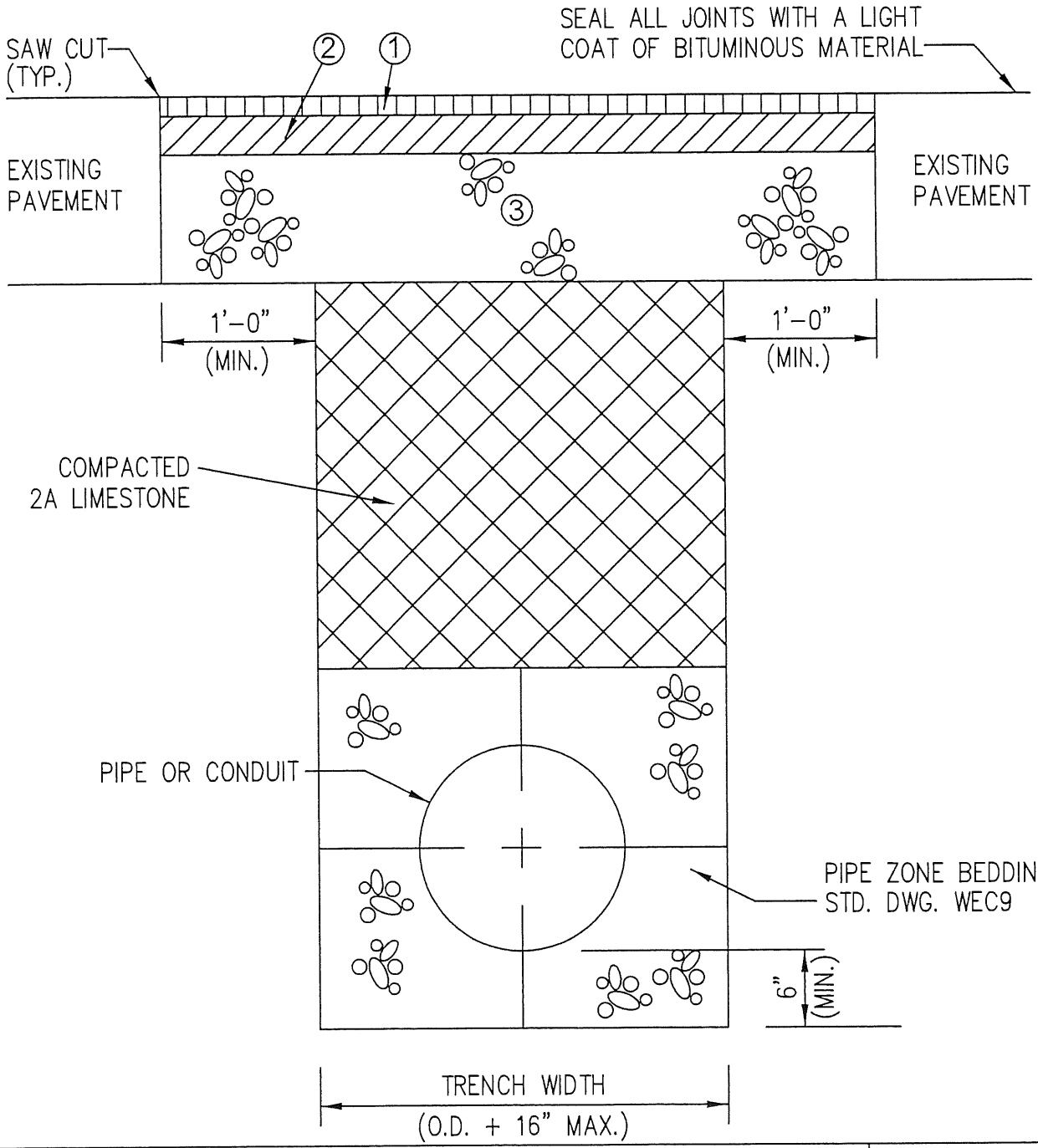
FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-24

① SUPERPAVE ASPHALT MIXTURE DESIGN, HMA WEARING COURSE, PG 64-22, < 0.3 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-L OR MATCH EXISTING WHICHEVER IS GREATER.

② SUPERPAVE ASPHALT MIXTURE DESIGN, HMA BINDER COURSE, PG 64-22, 0.3 TO < 3 MILLION ESALS, 25.0 MM MIX, 3" DEPTH OR MATCH EXISTING WHICHEVER IS GREATER.

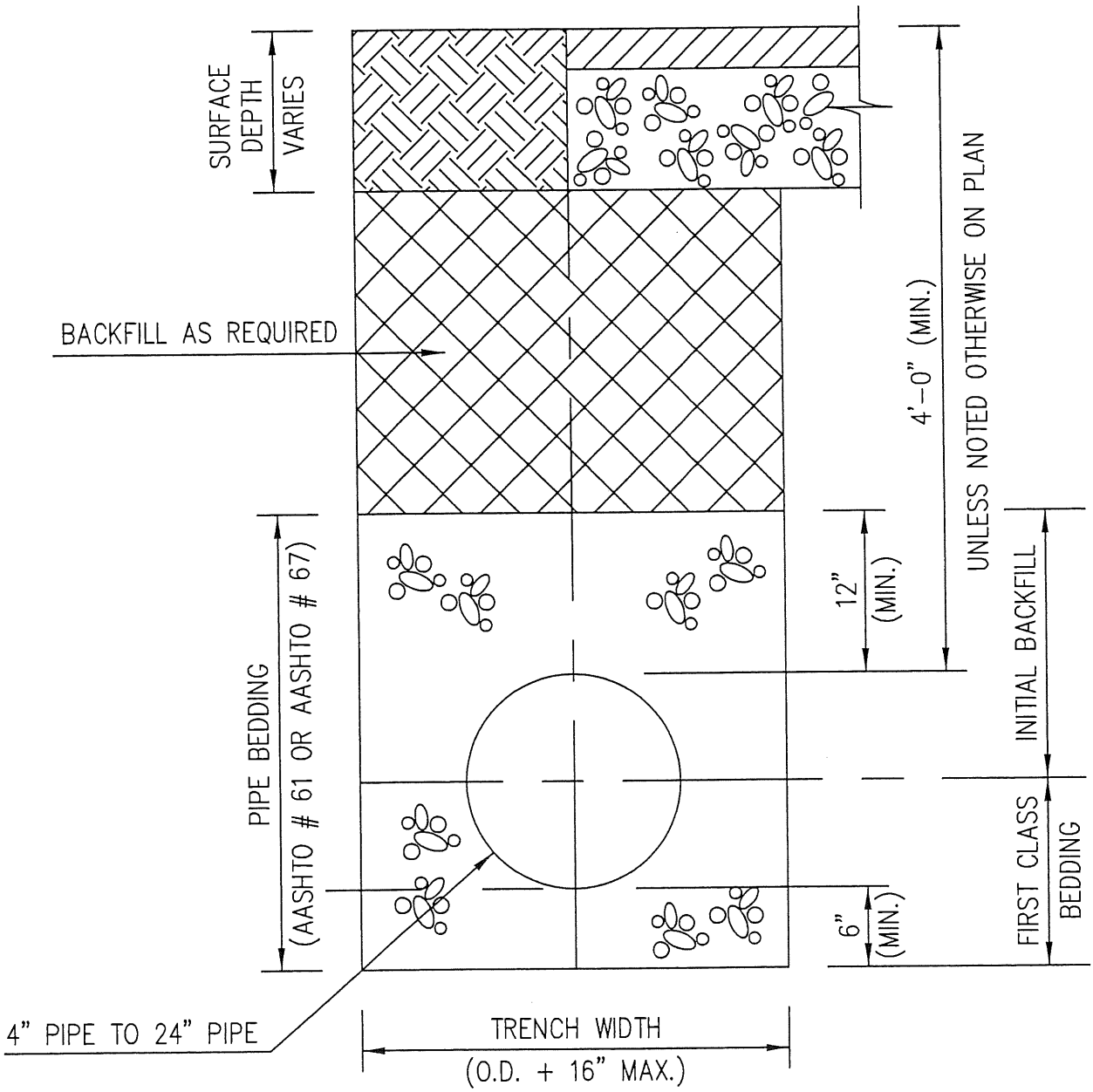
③ 10" COMPACTED AGGREGATE BASE COURSE, AASHTO #1 OR MATCH EXISTING WHICHEVER IS GREATER.



STANDARD DETAIL
PAVEMENT RESTORATION
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

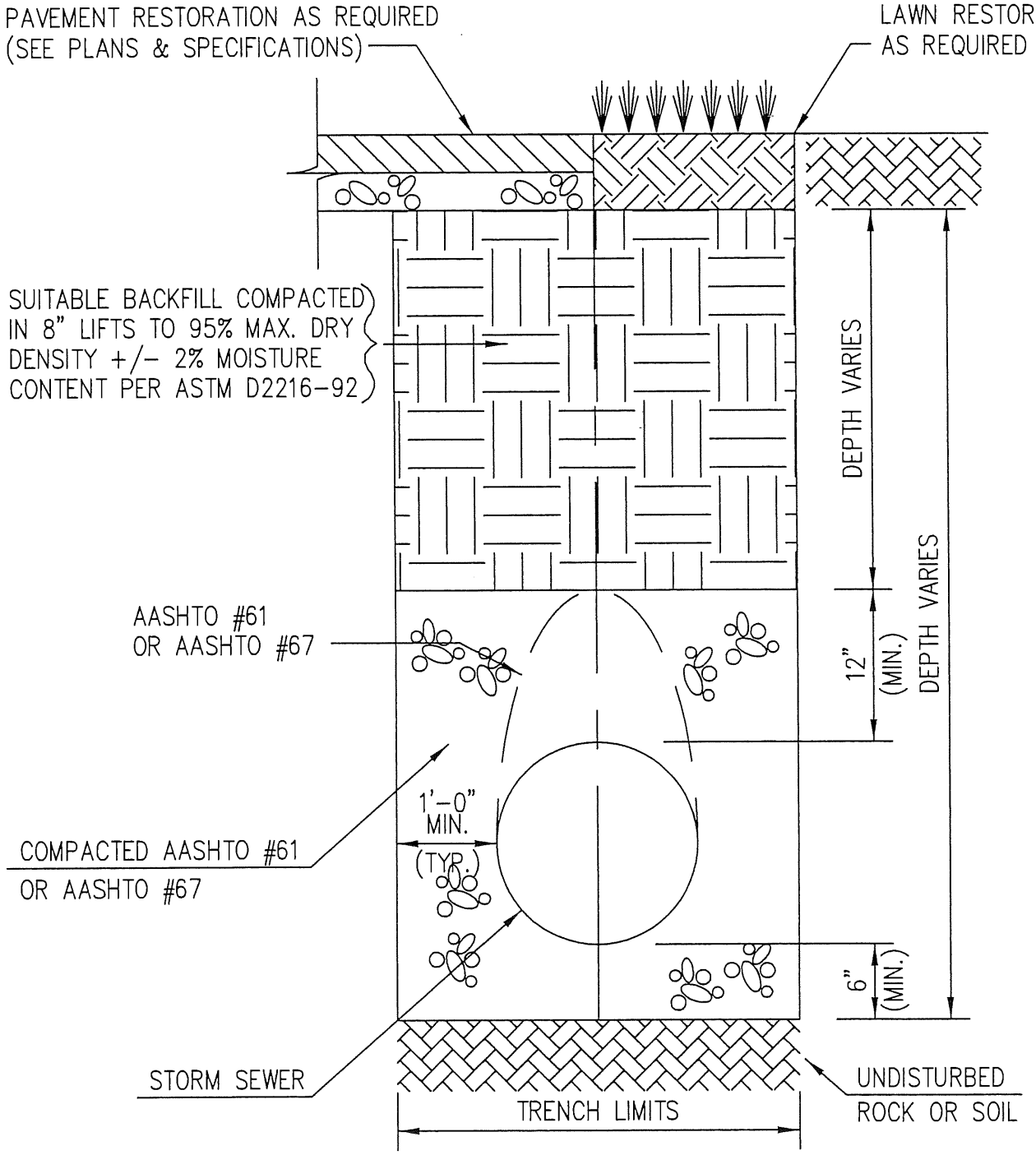
DETAIL No. FP-25



STANDARD DETAIL
PIPE TRENCH DETAIL
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

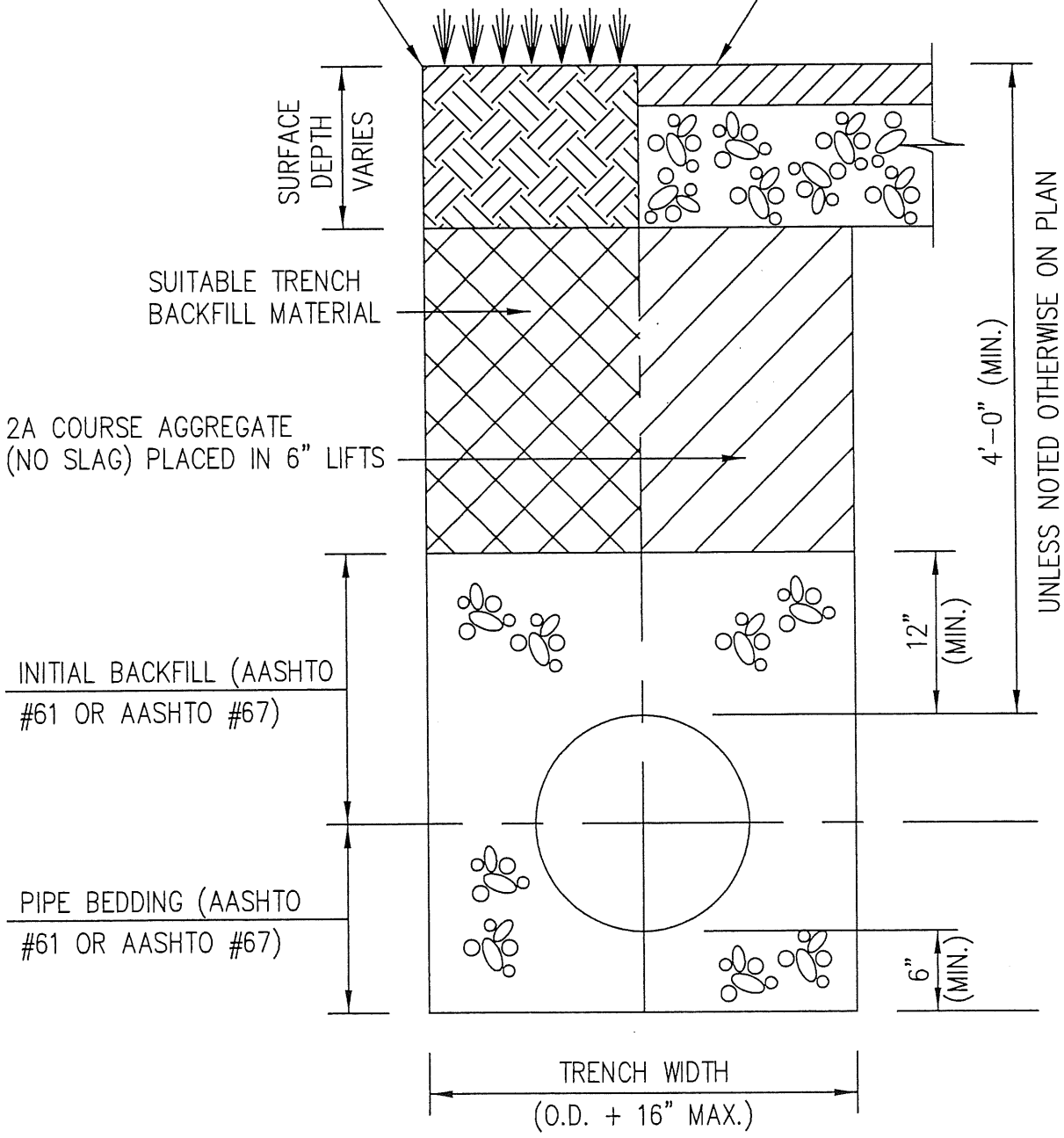
DETAIL No. FP-26



STANDARD DETAIL
STORM TRENCH DETAIL (PLASTIC OR METAL)
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

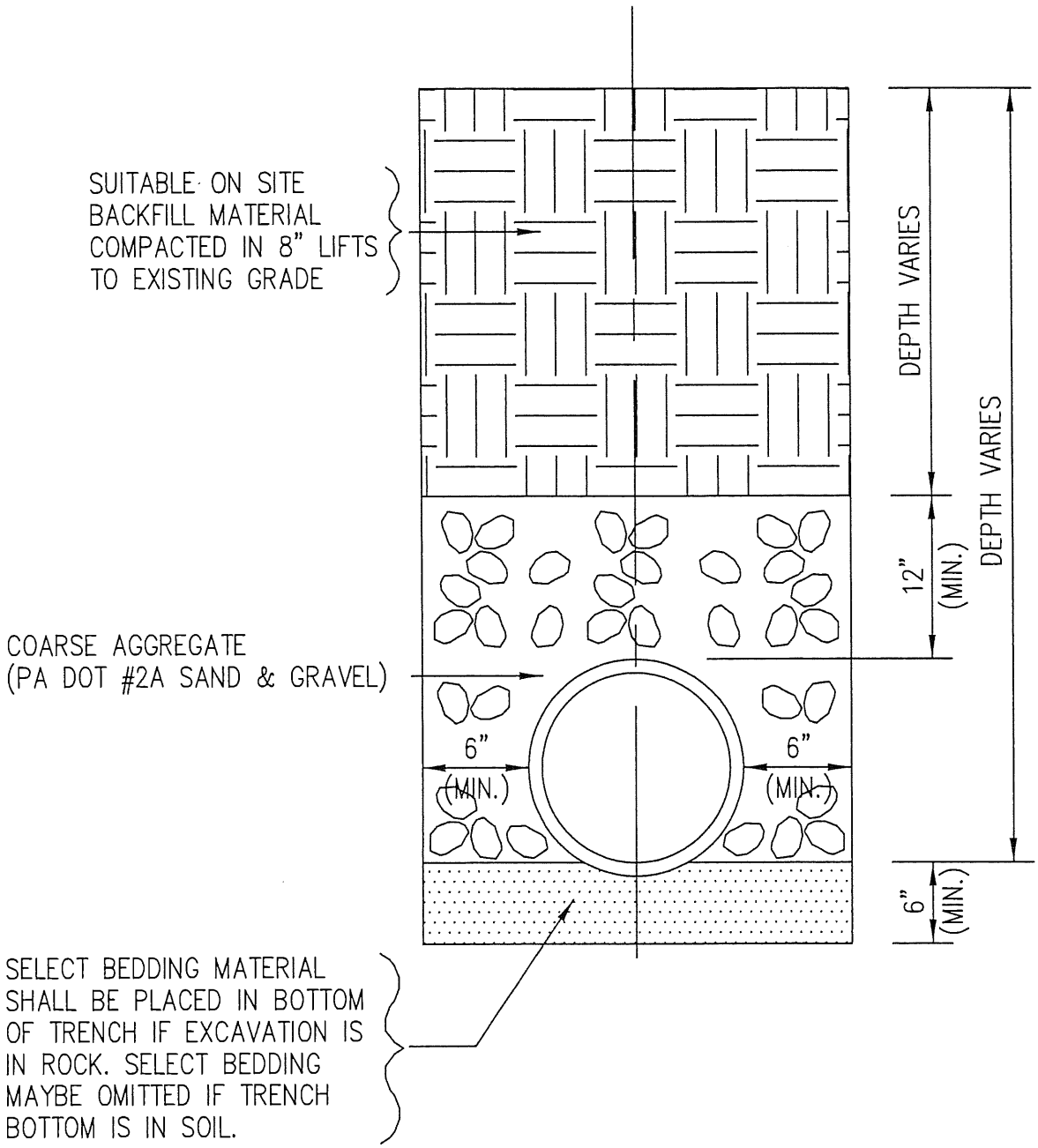
DETAIL No. FP-27



STANDARD DETAIL
WATERLINE TRENCH DETAIL
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-28



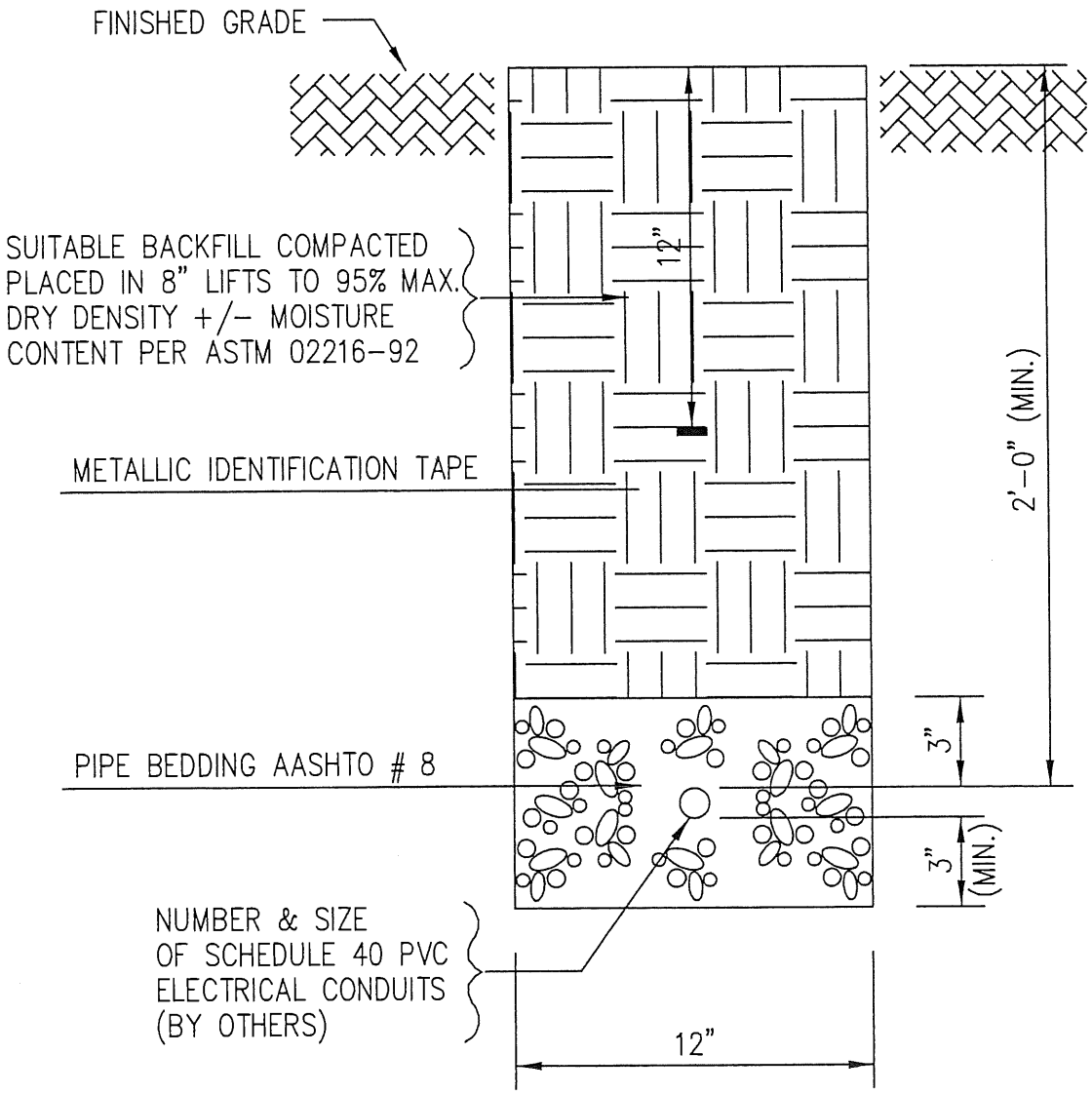
STANDARD DETAIL
GAS TRENCH DETAIL
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-29

NOTE:

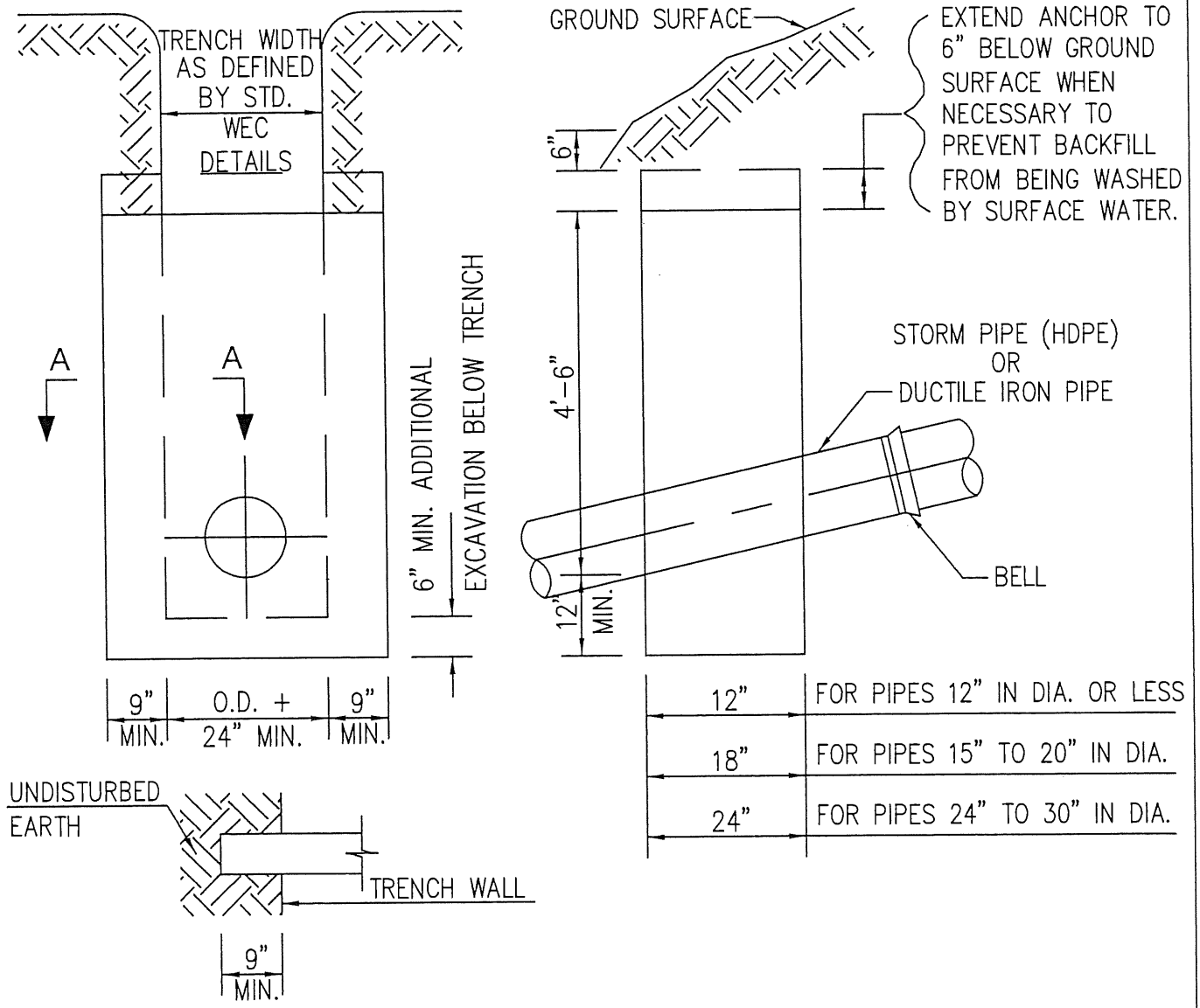
1. ALL TRENCHING BEDDING AND BACKFILLING BY THE SITE CONTRACTOR.
2. ELECTRICAL CONDUIT AND CONDUCTORS SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR.



STANDARD DETAIL
ELECTRICAL TRENCH DETAIL
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-30



SECTION A-A

CONCRETE ANCHORS FOR PIPES ONSTEEP GRADES

- PROVIDE NO ANCHORS ON GRADES LESS THAN 20% UNLESS NOTED.
- PROVIDE ANCHORS 36 FOOT C TO C ON GRADES BETWEEN 20% AND 34%.
- PROVIDE ANCHORS 24 FOOT C TO C ON GRADES BETWEEN 34% AND 50%.
- PROVIDE ANCHORS 16 FOOT C TO C ON GRADES BETWEEN 50% AND 70%.
- FOR CONDITIONS OTHER THAN THESE SHOWN, THE ANCHORS SHALL BE PROVIDED AS REQUIRED BY THE CONTRACT PLANS OR ORDERED IN THE FIELD BY THE OWNER'S REPRESENTATIVE.
- EXCAVATE BEYOND TRENCH WIDTH AND DEPTH AS SHOWN ABOVE AND POUR CONCRETE AGAINST UNDISTURBED EARTH.

STANDARD DETAIL CONCRETE ANCHOR FOR PIPE LINES FRANKLIN PARK BOROUGH	FRANKLIN PARK BOROUGH 2344 WEST INGOMAR ROAD PITTSBURGH, PA 15237 (412) 364-4115 FAX (412) 366-4406 DETAIL No. FP-31

NOTES

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE BUILDING CODE. ACI 318 (LATEST REVISION) EXCEPT AS OTHERWISE NOTED ON THE DRAWINGS OR SPECIFIED HEREAFTER.

2. SIZE AND SPACING OF REINFORCING IS NOTED AS FOLLOWS:
   #4 (BAR SIZE) 6" (SPACING)

3. KEYWAYS SHALL BE PROVIDED AT ALL CONSTRUCTION JOINTS IN ACCORDANCE WITH DETAIL No. WEC-29 UNLESS OTHERWISE NOTED. ALL KEYWAYS SHALL BE TYPE A. 1/8" X 6" STEEL WATER STOPS SHALL BE PROVIDED IN ANY CONSTRUCTION JOINT BELOW THE LIQUID LEVEL FOR LIQUID CONTAINING OR LIQUID CONVEYING STRUCTURES AND BELOW ASSUMED WATER OR FLOOD LEVEL FOR ALL EXTERIOR BASEMENT AND TUNNEL WALLS. BUTTING OR LAPPING JOINTS OF PLATES SHALL BE CONTINUOUSLY WELDED AT POINT OF JOINTURE TO PROVIDE A CONTINUOUS WATER STOP FOR ITS ENTIRE LENGTH.

4. STRESS STEEL IS ALWAYS SHOWN NEXT TO THE SURFACE AND SHOULD BE PLACED WITH THE MINIMUM CONCRETE COVER IN ACCORDANCE WITH ACT 318 (LATEST REVISION) OR AS FOLLOWS:

(A) CONCRETE COST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3" MINIMUM COVER
(B) FORMED CONCRETE EXPOSED TO EARTH. WATER OR WEATHER	
#6 BARS OR LARGER	2" MINIMUM COVER
#5 BARS OR LESS	1 1/2" MINIMUM COVER
(C) CONCRETE NOT EXPOSED TO WEATHER IN CONTACT WITH WATER OR EARTH:	
SLABS AND WALLS	3/4" MINIMUM COVER
BEAMS, GIRDERS & COLUMNS	1 1/2" MINIMUM COVER

5. ALL SPICES IN REINFORCING SHALL CONFORM TO THE REQUIREMENTS OF ACT 318 (LATEST REVISION)

BAR SIZE	MIN. SPLICE LENGTHS OF BEAMS, SLABS & WALLS *	MIN. SPLICE LENGTHS OF COLUMNS
#4	22"	15"
#5	27"	18"
#6	32"	23"
#7	38"	27"
#8	45"	30"
#9	57"	34"
#10	72"	38"
#11	89"	43"

* (A) TOP BAR SPLICE LENGTH TO BE 1.4 TIMES THOSE GIVEN.
(B) IF SPLICE OCCURS AT THE POINT OF MAXIMUM STRESS THEY MUST BE STAGGERED.

6. ALL HOOKS AND BENDS SHALL CONFORM TO ACI CODE 318 (LATEST REVISION) AS SHOWN IN ITS "MANUAL OF STANDARDS PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (LATEST REVISION)

7. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, THE CORNERS OF ALL OPENINGS IN CONCRETE WALLS OR SLABS SHALL BE REINFORCED WITH #5 X 3'-0" LONG BARS PLACED DIAGONALLY TO EACH CORNER OF THE OPENING. ROUND OPENINGS SHALL BE REINFORCED WITH #5 BARS BENT TO CONFORM TO THE SHAPE OF THE OPENING. FOR SLABS OR WALLS LESS THAN 8" THICK, SUCH REINFORCING SHALL CONSIST OF ONE BAR AND FOR SLABS OR WALLS 8" OR GREATER IN THICKNESS. REINFORCING SHALL CONSIST OF BARS ON EACH FACE.

8. UNLES OTHERWISE DETAILED, SLABS ON GRADE SHALL BE REINFORCED WITH 6" X 6" #6/8. WELDED WIRE FABRIC AND #4 X 3'-0" AT 12" PERIMETER BARS SHALL BE INSTALLED IN THE SLAB PERPENDICULAR TO ALL DISCONTINUOUS EDGES.

9. ALL EXPOSED EDGES OF CONCRETE WALLS SHALL BE BEVELED 3/4" UNLESS OTHERWISE NOTED.

10. CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. ADDITIONAL JOINTS SHALL BE INSTALLED. HOWEVER, AS NECESSARY TO MEET THE FOLLOWING REQUIREMENTS:

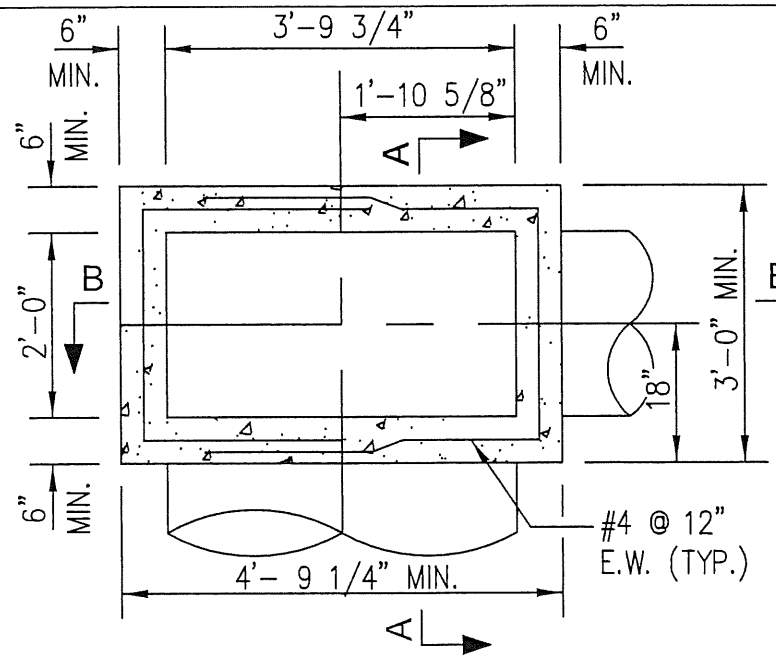
	MAX. DIMENSION OF POUR
(A) WALL WITH STRAIGHT RUNS GREATER THAN 20'-0"	30'-0"
(B) SLABS ON GRADE (12" OR GREATER)	50'-0"
(C) SLABS ON GRADE LESS THAN 12"	20'-0"
(D) SLABS SUPPORTED ON BEAMS OR WALLS	20'-0"

11. EQUIPMENT PADS SHALL BE DOWELED INTO CONCRETE FLOOR SLABS WITH ONE #6 DOWEL FOR EVERY SQUARE FOOT OF PAD SURFACE, MINIMUM HORIZONTAL PAD REINFORCING SHALL BE #5 AT 12", TOP EACH WAY.

STANDARD DETAIL
CONCRETE & REINFORCING STEEL NOTES
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

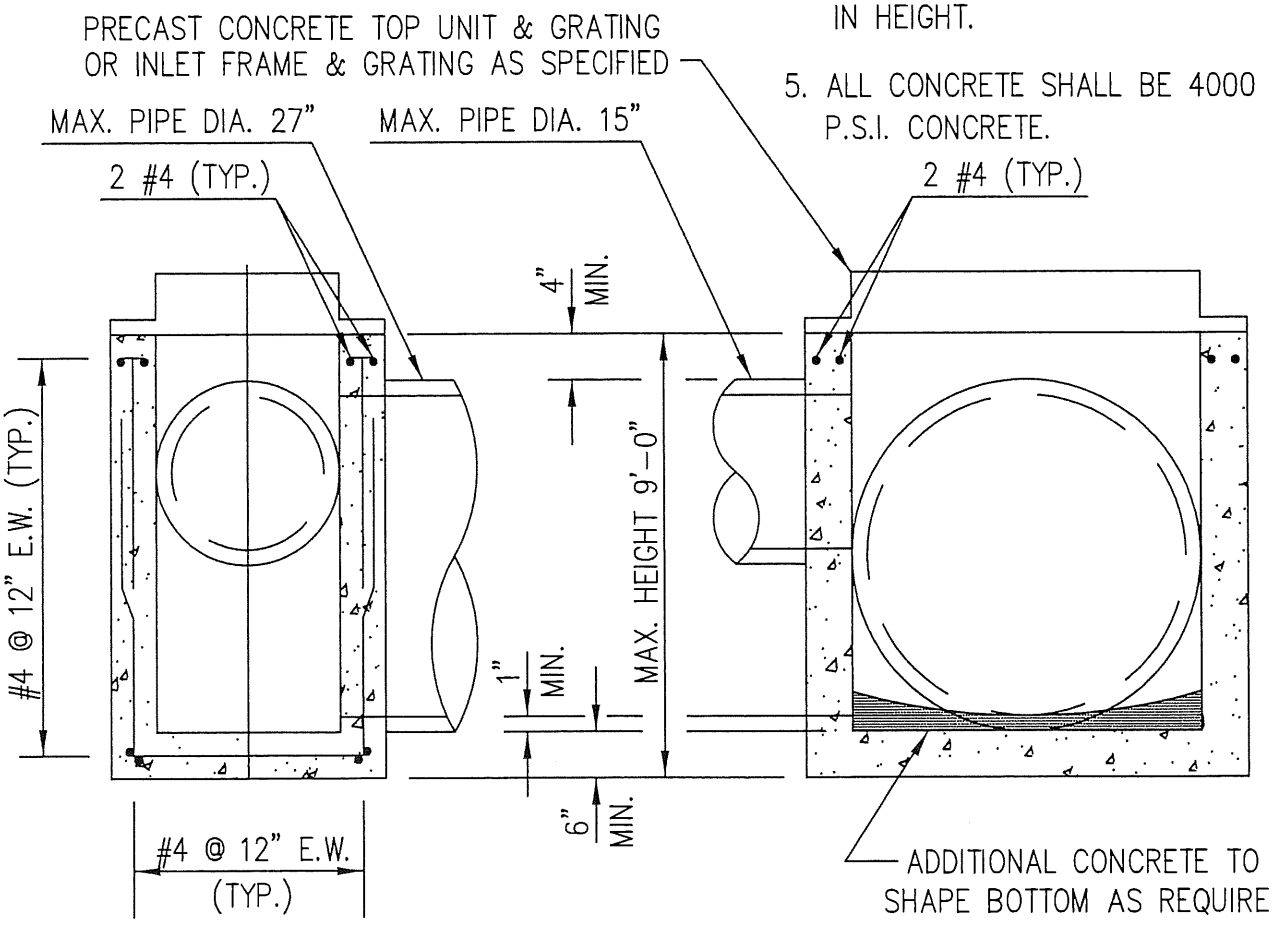
DETAIL No. FP-32



PLAN

NOTE:

1. PIPE OR PIPES SHALL BE LOCATED AS INDICATED.
2. WEEP HOLES AS REQUIRED SHALL BE PLACED APPROPRIATE ELEVATIONS TO COMPLETELY DRAIN THE SUBGRADE PRIOR TO PLACING THE SUBBASE, BASE COURSE OR PAVEMENT.
3. INLETS THAT EXCEED THE MAXIMUM DEPTH OR INSIDE DIMENSIONS OF THE BOX AS SHOWN SHALL REQUIRE A SPECIAL DESIGN FOR H-20 HIGHWAY LOADING.
4. PROVIDE LADDER BARS FOR STRUCTURE THAT EXCEEDS 4 FEET IN HEIGHT.
5. ALL CONCRETE SHALL BE 4000 P.S.I. CONCRETE.



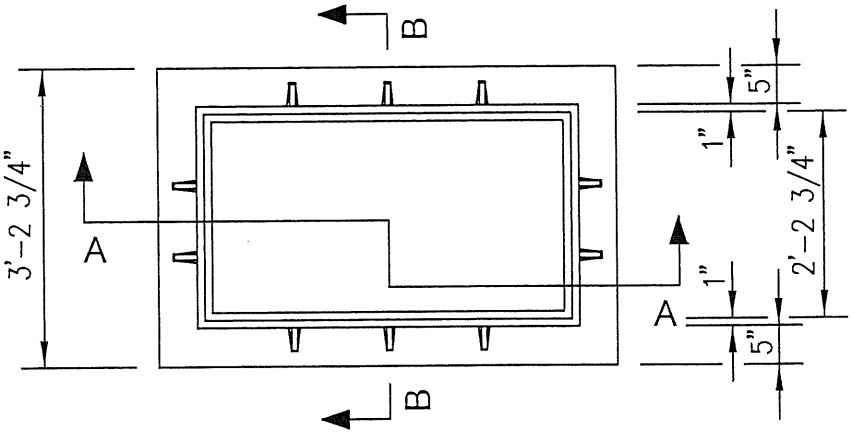
SECTION A-A

SECTION B-B

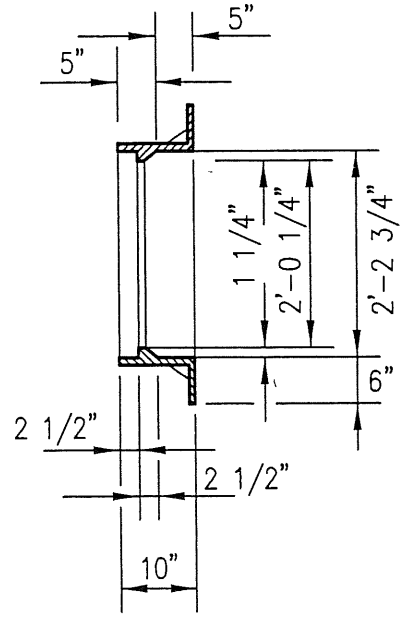
STANDARD DETAIL
2' X 4' REINFORCED CONC. BOX FOR INLET OR CATCH BASIN CAST-IN-PLACE
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

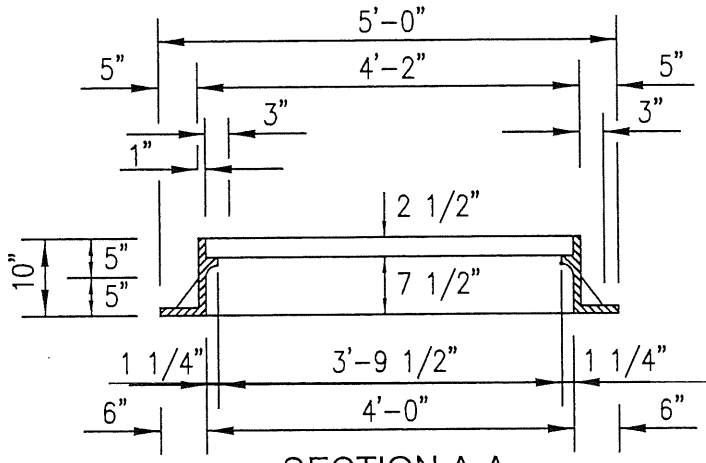
DETAIL No. FP-33



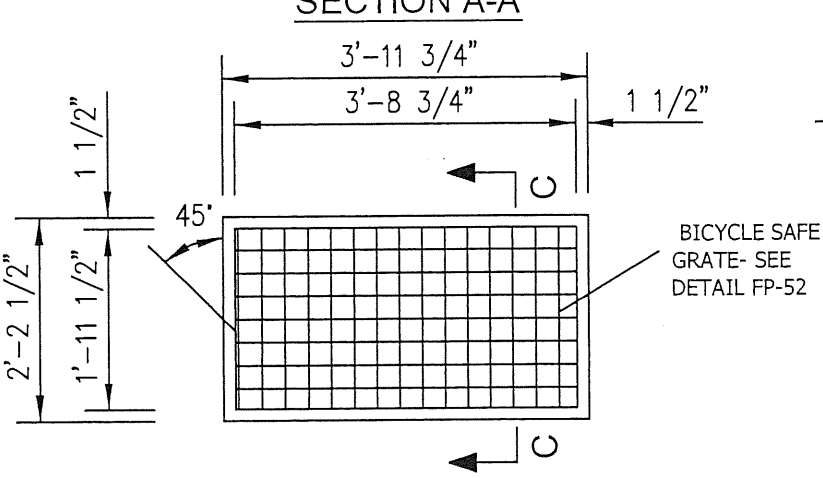
PLAN



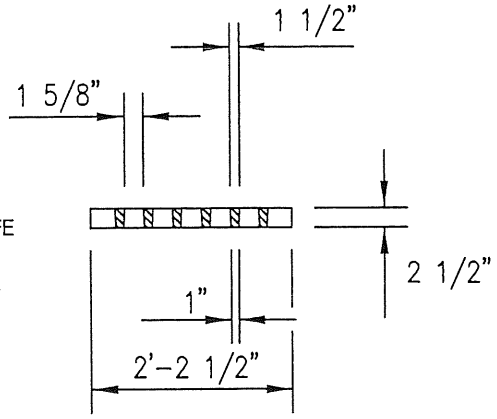
SECTION B-B



SECTION A-A



COVER



SECTION C-C

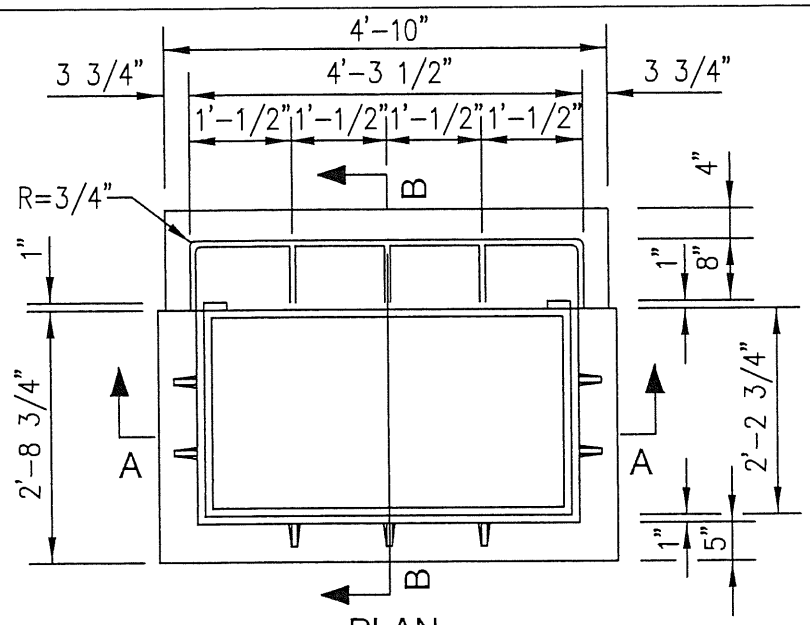
NOTE:

- FOR INSTALLATION AT APRONS, RAMPS, PARKING AREAS OR IN THE CENTER OF STREETS GRATING SHALL BE BICYCLE SAFE.

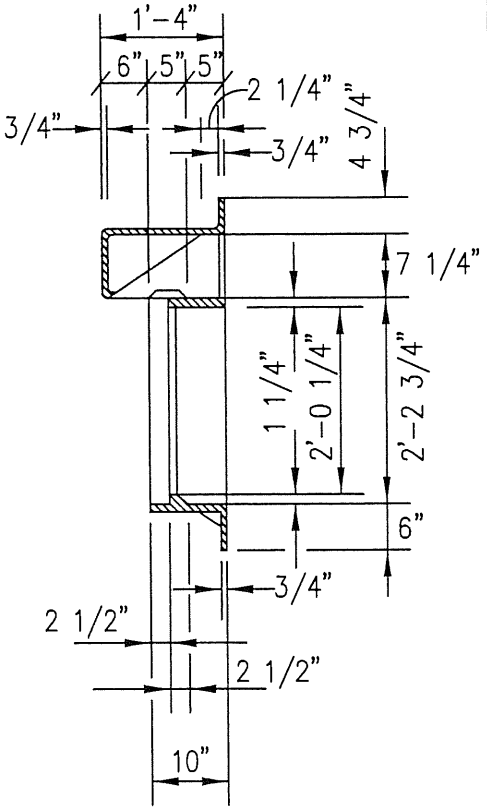
STANDARD DETAIL
4'-0" INLET COVER PLAN & SECTIONS
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

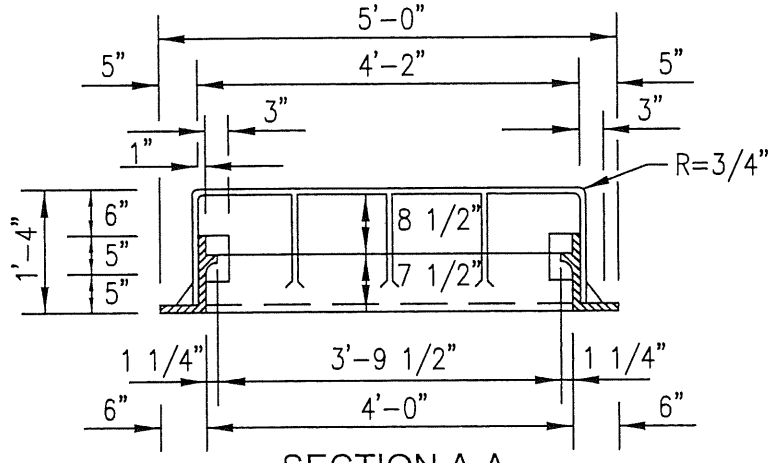
DETAIL No. FP-34



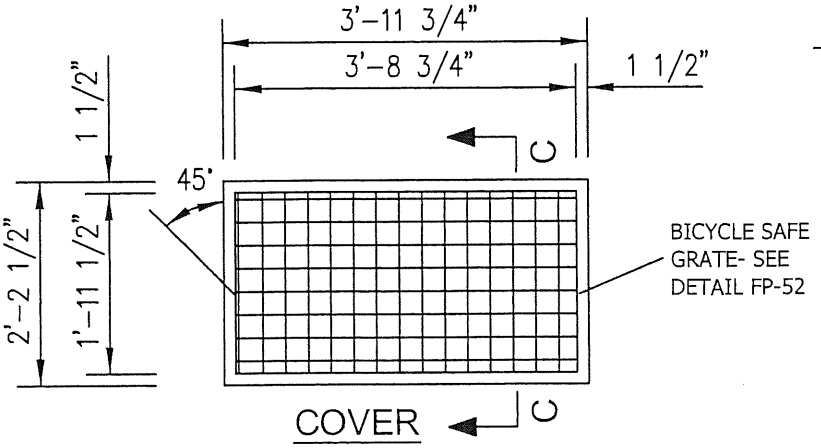
PLAN



SECTION B-B



SECTION A-A



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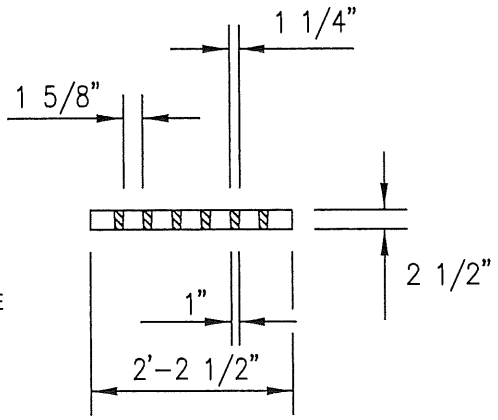


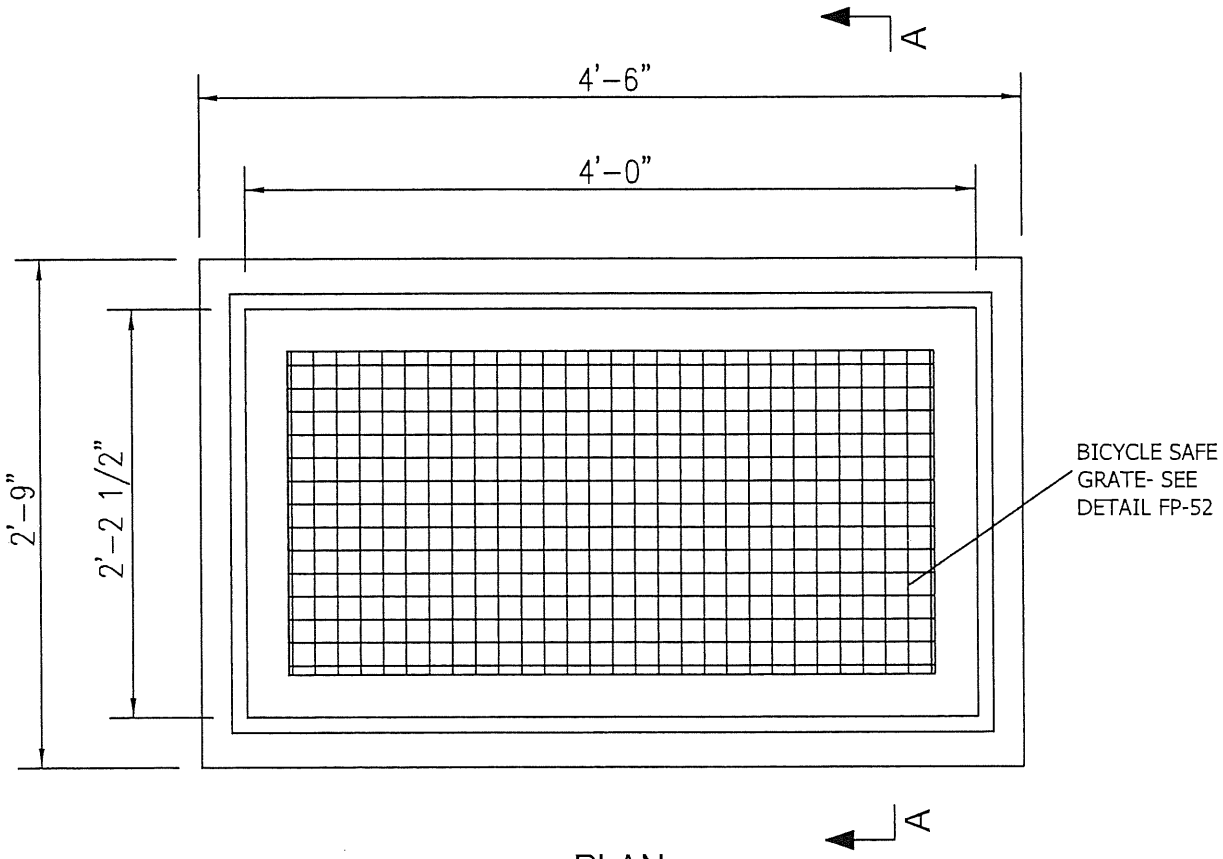
SECTION C-C

NOTE: FOR INSTALLATION AT APRONS, RAMPS, PARKING AREAS OR IN ROADWAYS, GRATING SHALL BE BICYCLE SAFE.

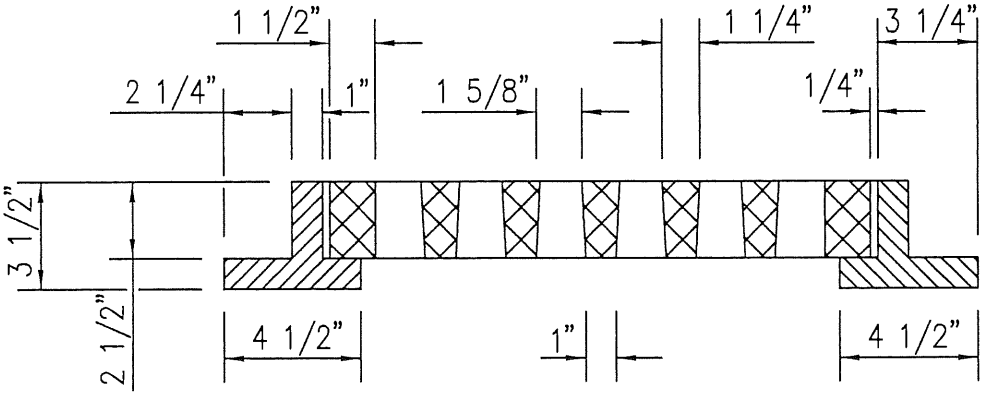
STANDARD DETAIL
4'-0" SPECIAL INLET WITH C.I. HOOD
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-35



PLAN



SECTION A-A

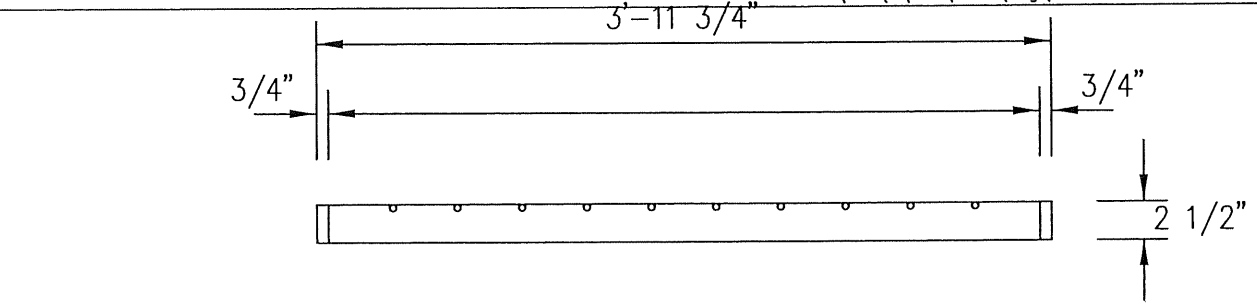
NOTE: FOR INSTALLATION AT APRONS, RAMPS, PARKING AREAS OR IN ROADWAYS, GRATING SHALL BE BICYCLE SAFE.

STANDARD DETAIL
4'-0" SHALLOW INLET
FRANKLIN PARK BOROUGH

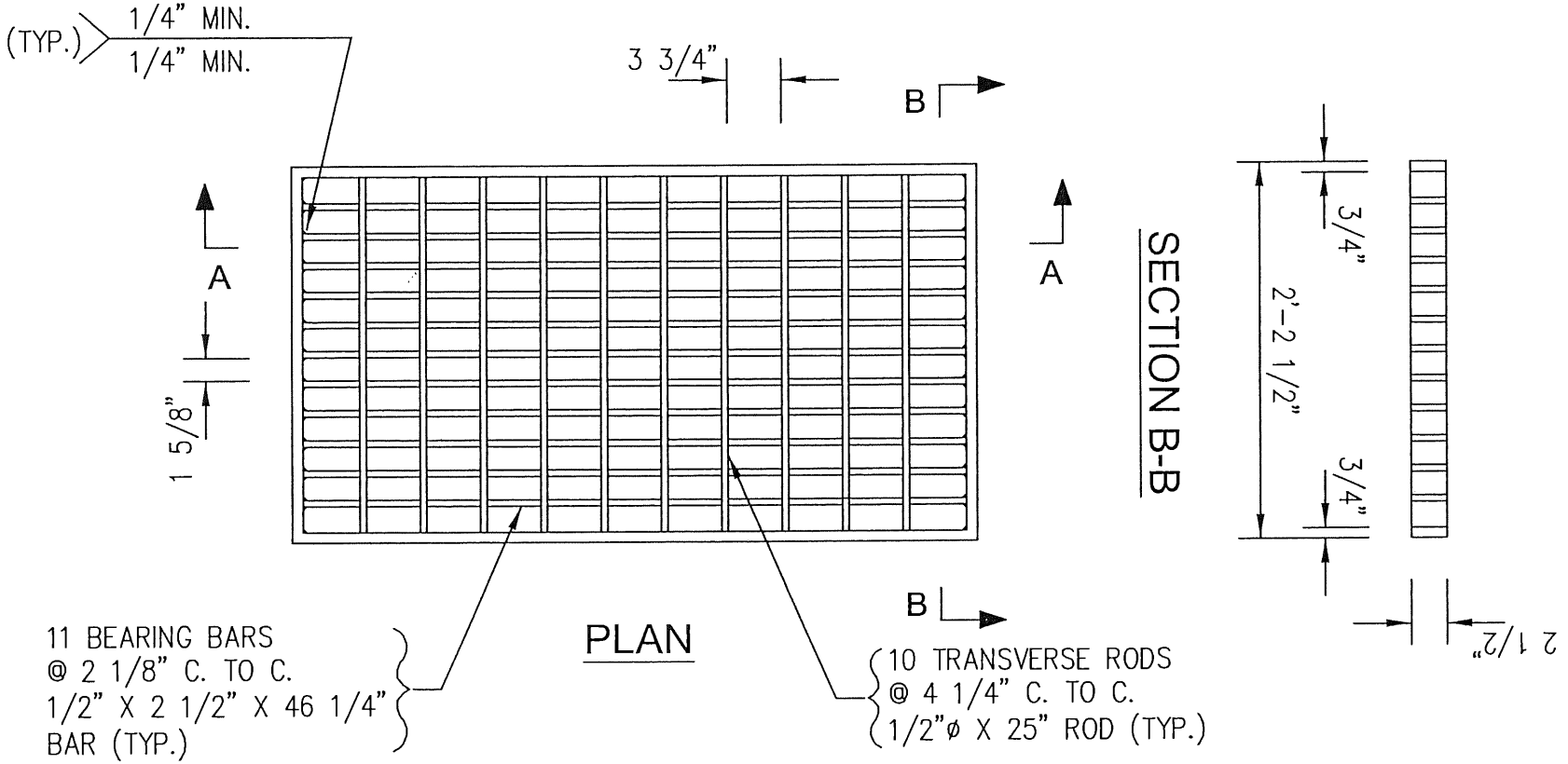
FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 365-4406

DETAIL No. FP-36

STANDARD DETAIL
PENNDOT BICYCLE STEEL GRATE
FRANKLIN PARK BOROUGH



SECTION A-A



PLAN

SECTION B-B

PENNDOT BICYCLE SAFE STEEL GRATE

(FOR ADDITIONAL INFORMATION SEE PENNDOT STD. DWG. RC-34M)

FRANKLIN PARK BOROUGH
2344 WEST NIGMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-37

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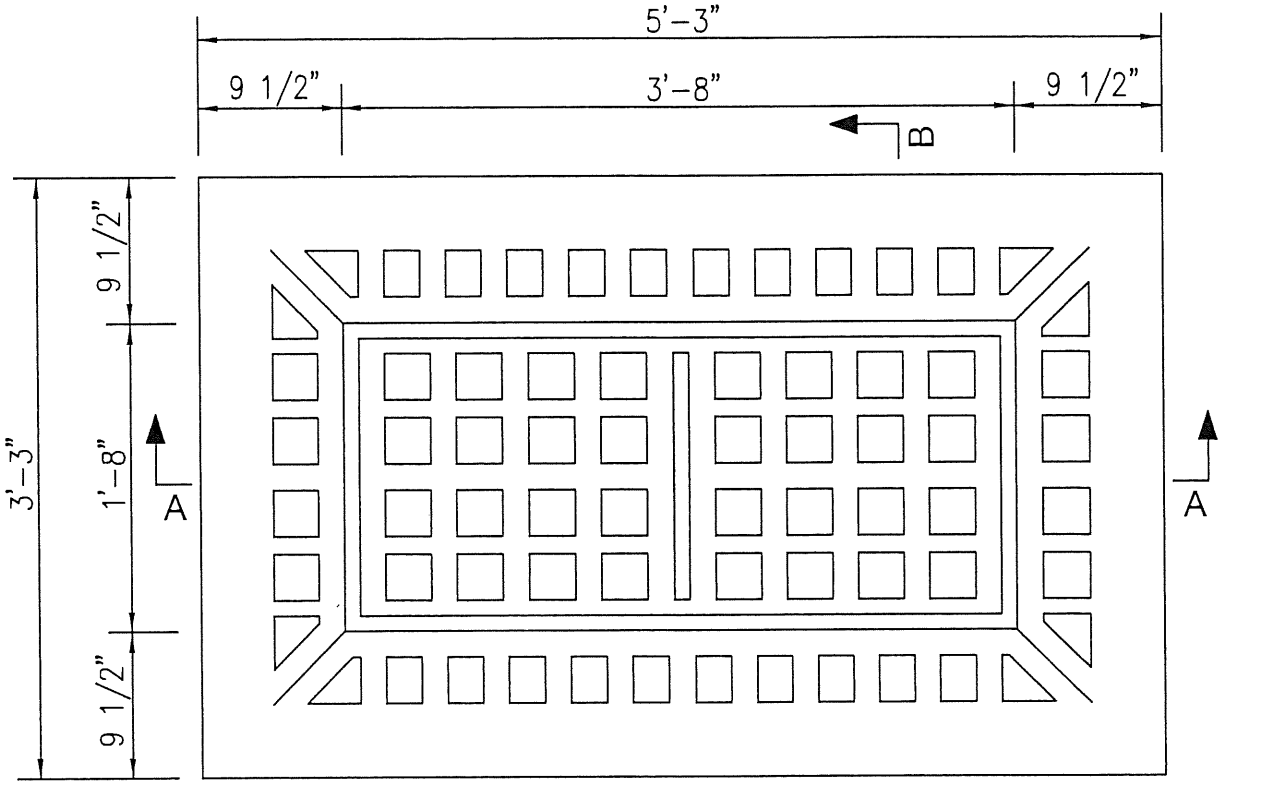
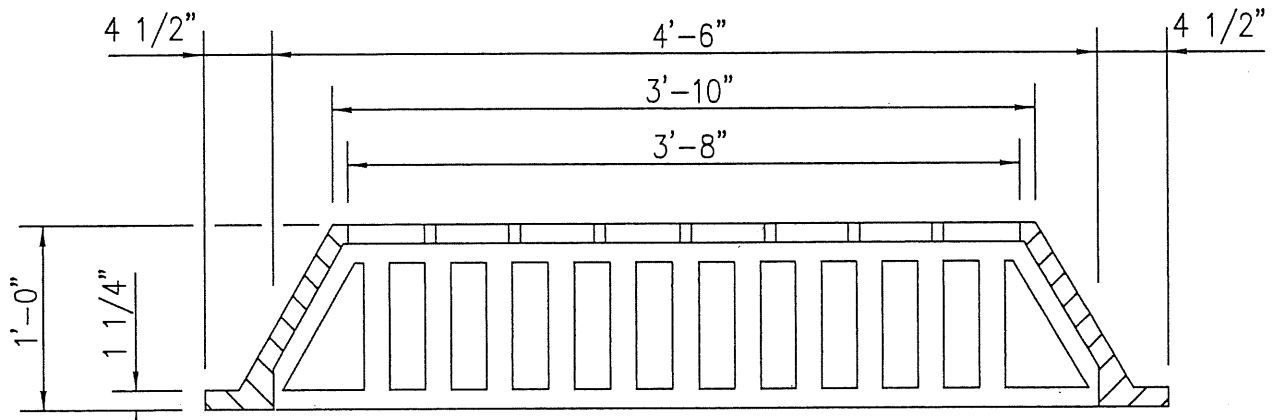
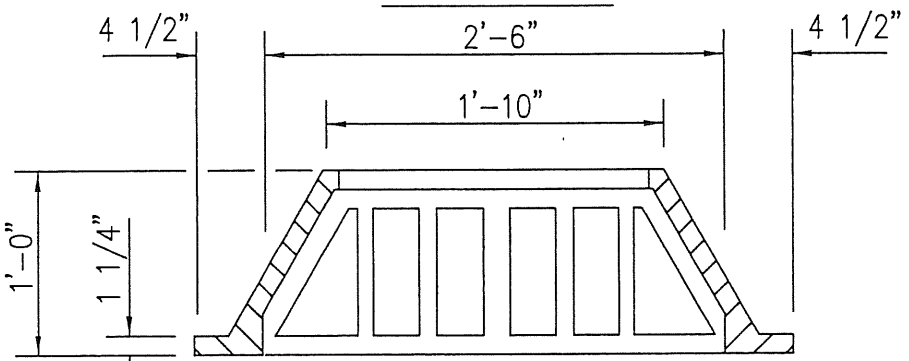


PLAN B



SECTION A-A



SECTION B-B

STANDARD DETAIL
BEEHIVE INLET FRANKLIN
PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

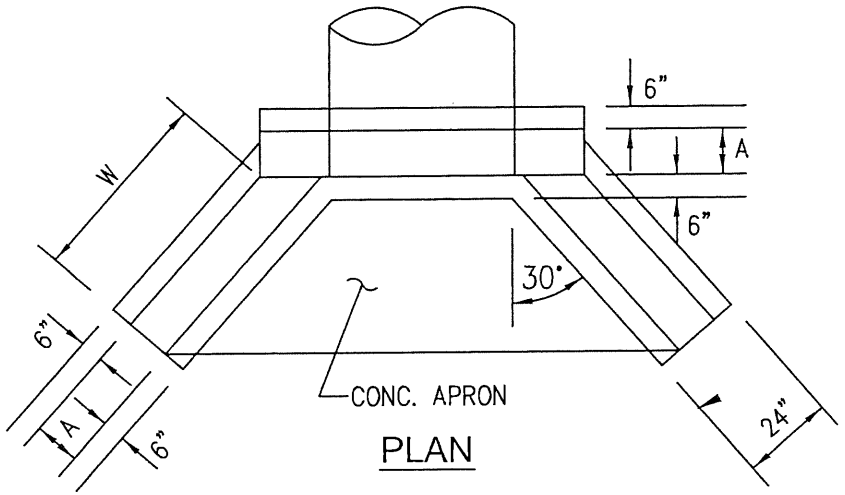
DETAIL No. FP-38

STANDARD DETAIL

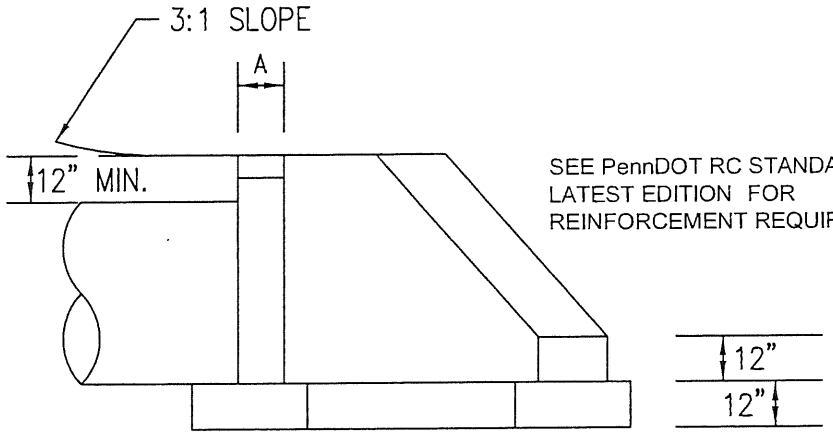
STANDARD TYPE D-W ENDWALL / HEADWALL

FRANKLIN PARK BOROUGH

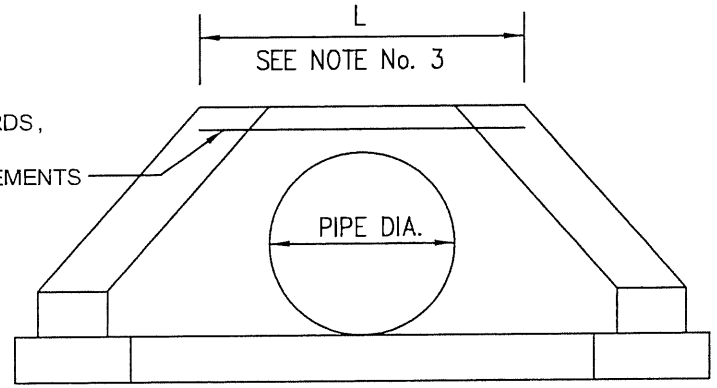
PIPE DIA.	L	W	A
15"	4.0'	4.0'	12"
18"	4.0'	4.0'	12"
24"	4.5'	4.25'	12"
36"	5.8'	4.6'	12"
48"	6.9'	6.9'	12"



PLAN



SIDE ELEVATION



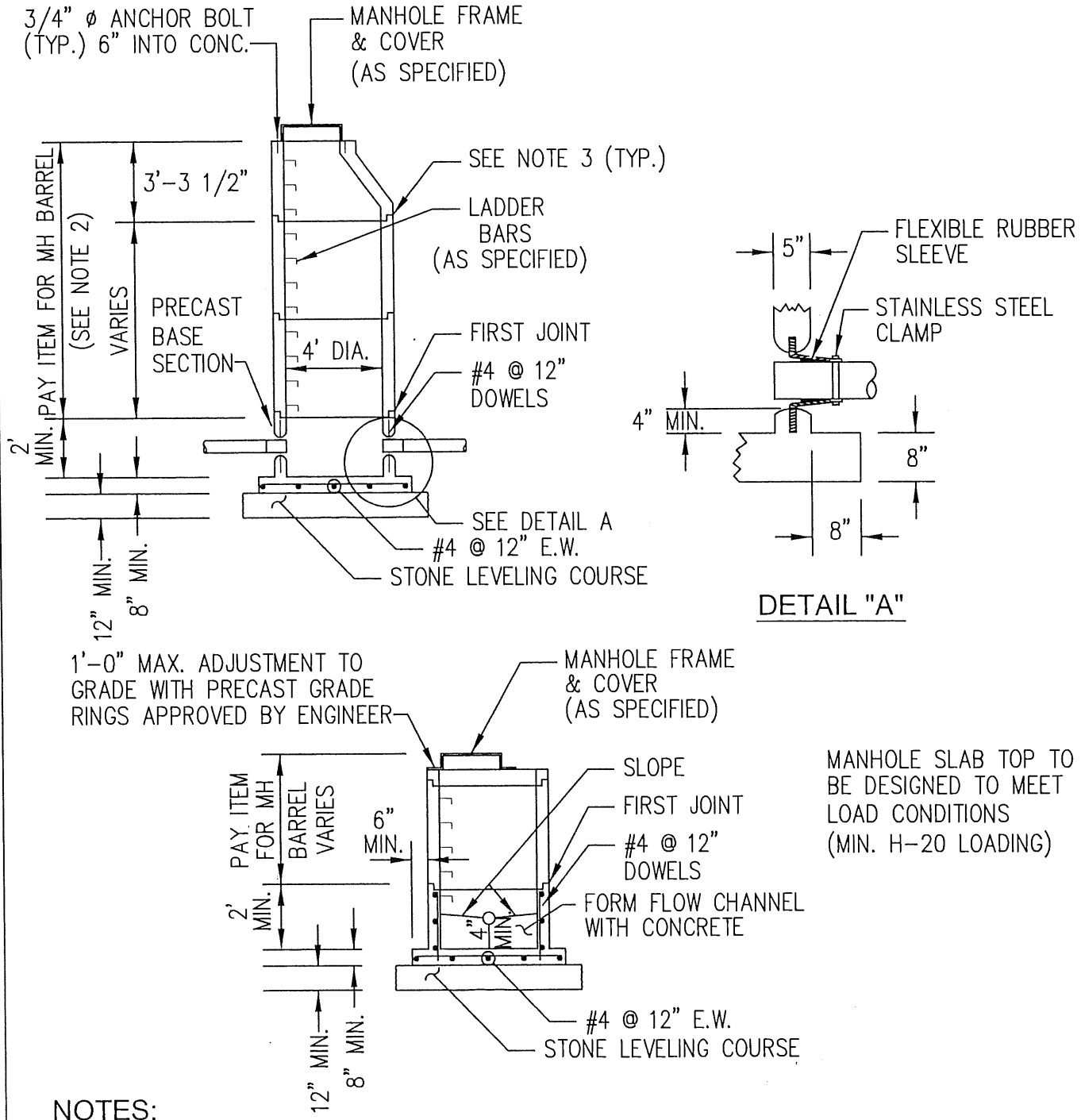
FRONT ELEVATION

NOTES:

1. CONCRETE SHALL BE CLASS A .
2. EXPOSED EDGES SHALL BE CHAMFERED ONE INCH.
3. ADD ONE FOOT TO DIMENSION L WHEN ORIFICE PLATE IS TO BE PLACED ON THE HEADWALL.
4. SHOP DRAWINGS FOR ALL PRECAST HEADWALLS/ENDWALLS OR CONCRETE END SECTIONS MUST BE SUBMITTED FOR APPROVAL.
5. FOR ADDITIONAL INFORMATION SEE PENNDOT STD. DWG. RC-31M.

FRANKLIN PARK BOROUGH
2344 WEST NICKMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

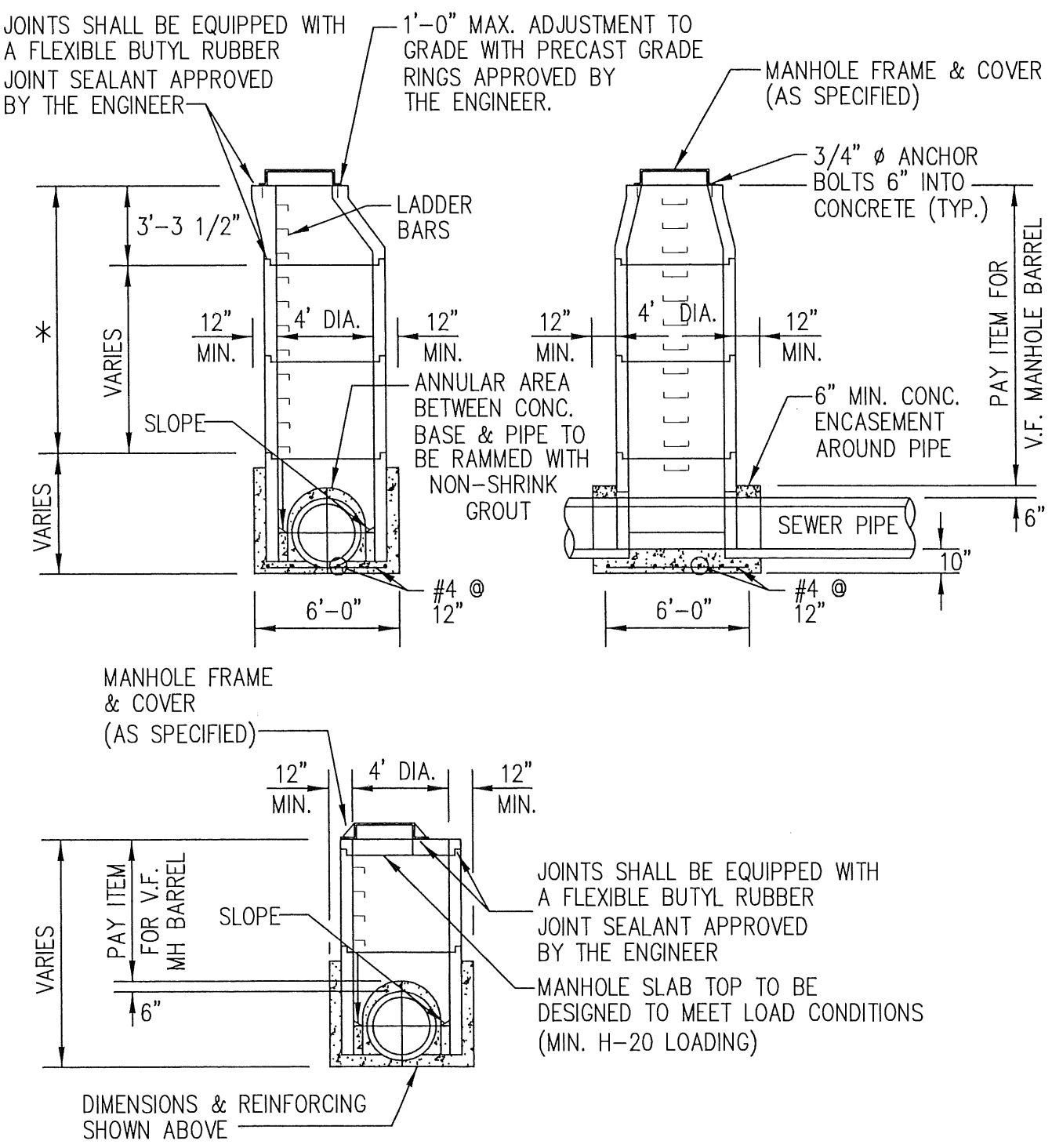
DETAIL No. FP-39



NOTES:

1. PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM-C-478 (LATEST REVISION)
2. IF THIS DIMENSION IS LESS THAN 3'-3" USE A PRECAST CONCRETE SLAB TOP AS SHOWN.
3. JOINTS SHALL BE EQUIPPED WITH FLEXIBLE BUTYL RUBBER JOINT SEALANT APPROVED APPROVED BY THE ENGINEER.
4. BASE SLAB POURED MONOLYTHICALLY WITH WALLS.

STANDARD DETAIL PRECAST CONCRETE MANHOLE FOR SEWERS 8" TO 18" PRECAST BASE SECTION FRANKLIN PARK BOROUGH	FRANKLIN PARK BOROUGH 2344 WEST INGOMAR ROAD PITTSBURGH, PA 15237 (412) 364-4115 FAX (412) 366-4406 DETAIL No. FP-40



NOTES:

- PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C-478 LATEST REVISION.

* IF THIS DIMENSION IS LESS THAN 3'-3" USE A PRECAST CONCRETE SLAB TOP SHOWN.

STANDARD DETAIL

CAST-IN PLACE BASE PRECAST CONCRETE MANHOLE FOR SEWERS 8" TO 18"

FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
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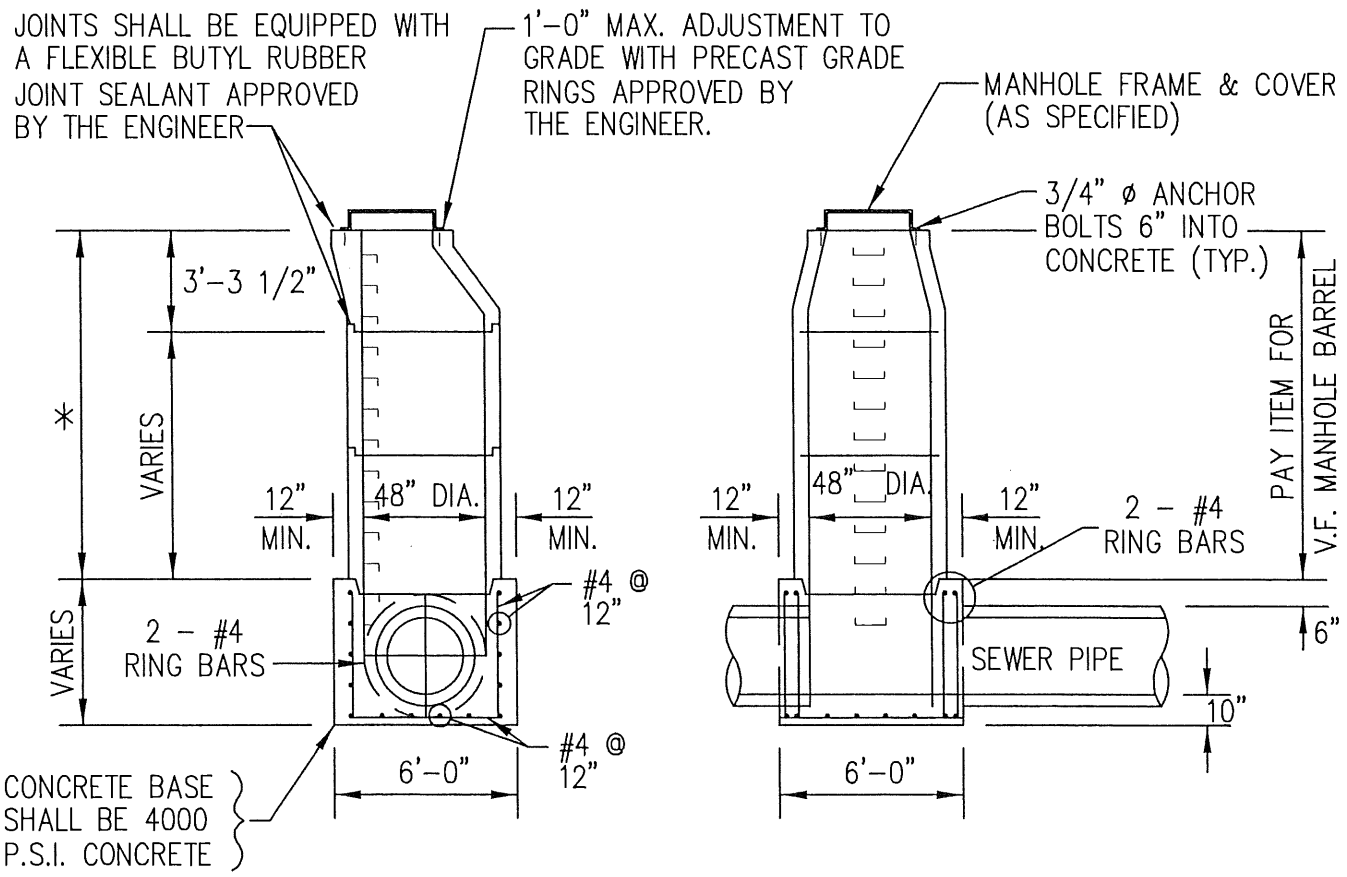
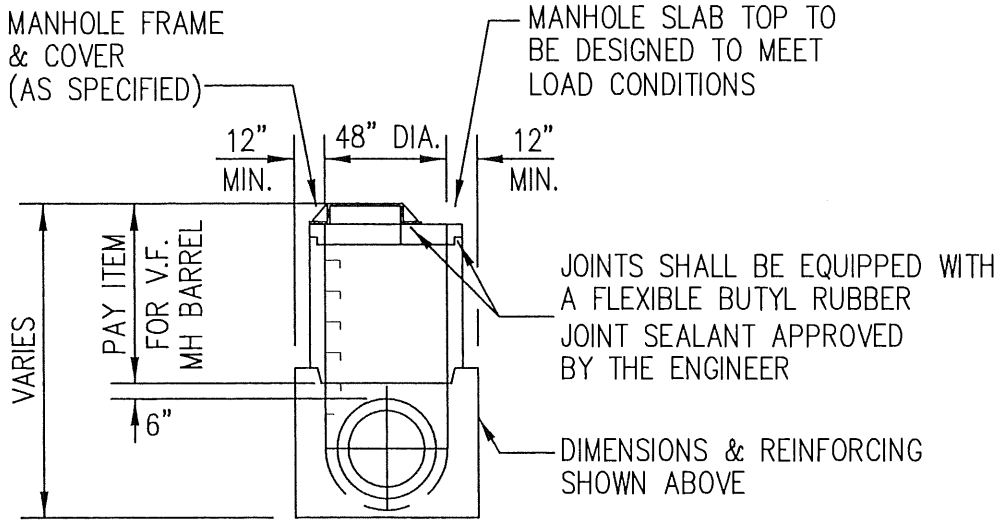
DETAIL No. FP-41



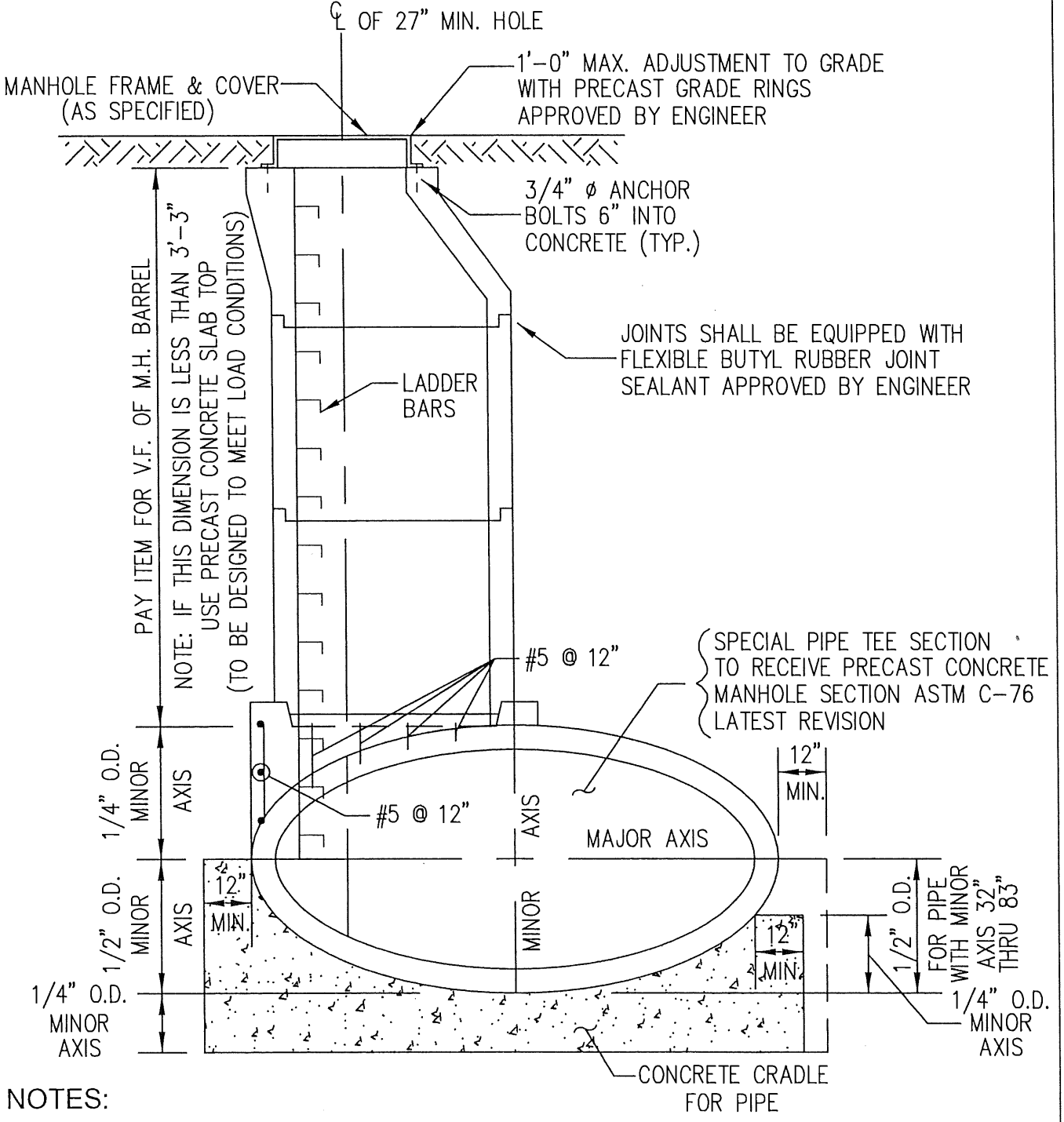


NOTES:

- PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C-478 LATEST REVISION.

* IF THIS DIMENSION IS LESS THAN 3'-3" USE A PRECAST CONCRETE SLAB TOP SHOWN.

STANDARD DETAIL CAST-IN PLACE BASE PRECAST CONCRETE MANHOLE FOR SEWERS 20" TO 32" FRANKLIN PARK BOROUGH	FRANKLIN PARK BOROUGH 2344 WEST INGOMAR ROAD PITTSBURGH, PA 15237 (412) 364-4115 FAX (412) 366-4406 DETAIL No. FP-42



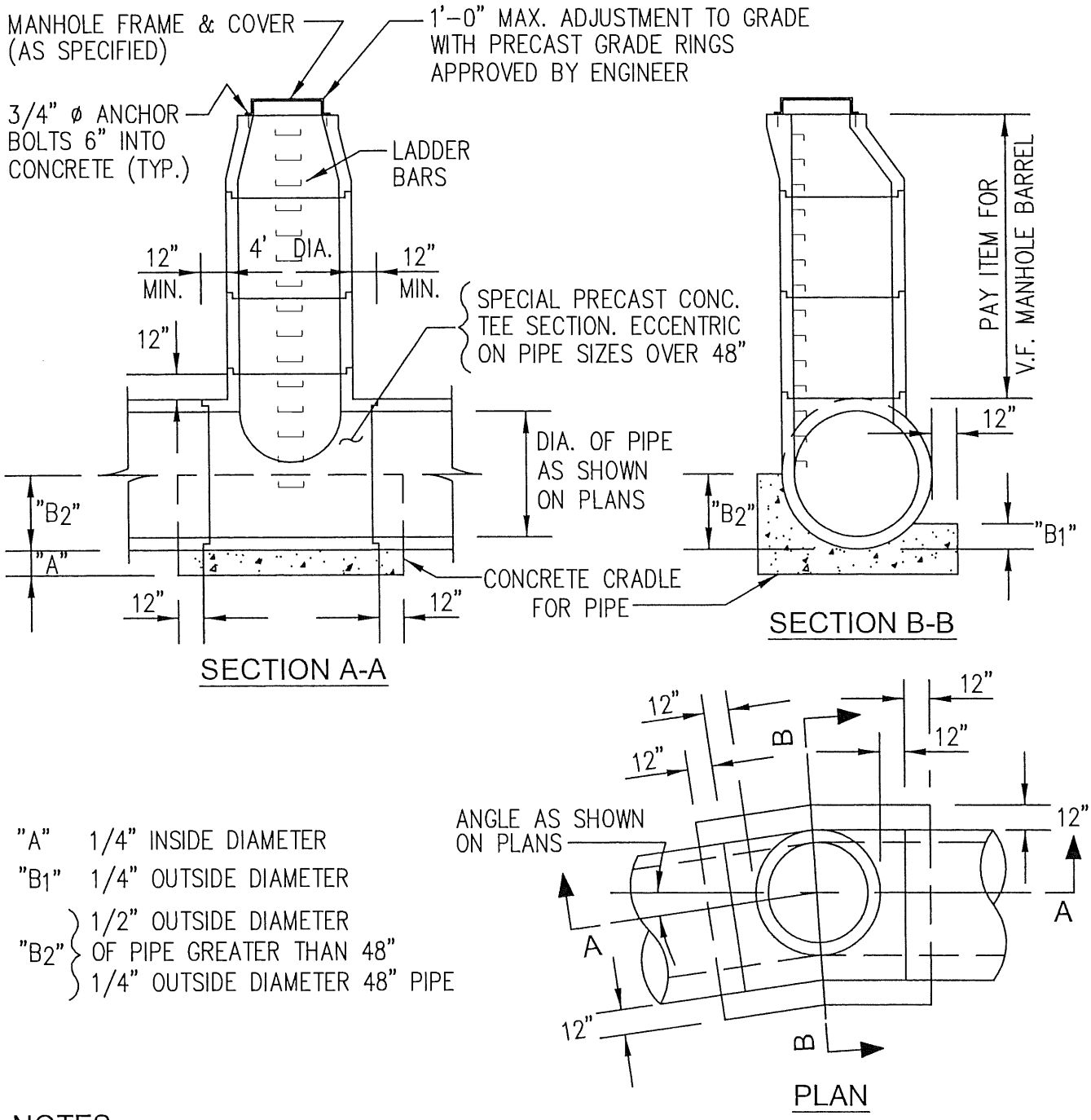
NOTES:

- PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C-478 OR ASTM C-76 (AS REQUIRED) LATEST REVISION.
- EXTEND CONCRETE CRADLE BASE A MINIMUM OF 12" BEYOND ENDS OF SPECIAL PIPE TEE SECTION.
- ALL PIPE AND MANHOLE SECTIONS SHALL BE DESIGNED TO MEET LOAD CONDITIONS, INCLUDING H-20 HIGHWAY LOADING.

STANDARD DETAIL
HORIZONTAL ELLIPTICAL PIPE MANHOLE INSTALLATION
(32" X 49" PIPE AND LARGER)
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-43



"A" 1/4" INSIDE DIAMETER

"B1" 1/4" OUTSIDE DIAMETER

"B2" 1/2" OUTSIDE DIAMETER OF PIPE GREATER THAN 48"
1/4" OUTSIDE DIAMETER 48" PIPE

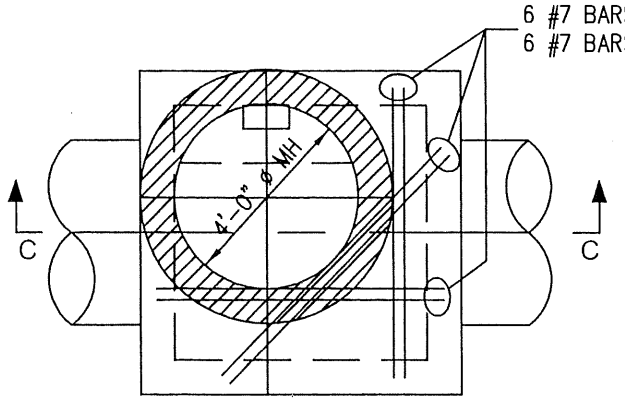
NOTES:

- JOINTS IN VERTICAL SHAFT SHALL BE EQUIPPED WITH FLEXIBLE BUTYL RUBBER JOINT SEALANT APPROVED BY THE ENGINEER.
- PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C-478 OR ASTM C-76 (AS REQUIRED) LATEST REVISION.
- BOTTOM SECTION (ECCENTRIC TEE) ASTM C-76 LASTEST REVISIONS.
- ALL PIPE AND MANHOLE SECTIONS SHALL BE DESIGNED TO MEET LOAD CONDITIONS, INCLUDING H-20 HIGHWAY LOADING.

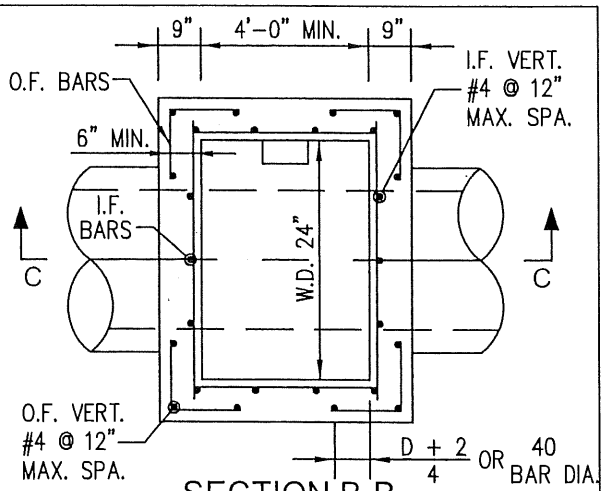
STANDARD DETAIL
PRECAST CONCRETE MANHOLE FOR SEWERS 48" & OVER
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-44

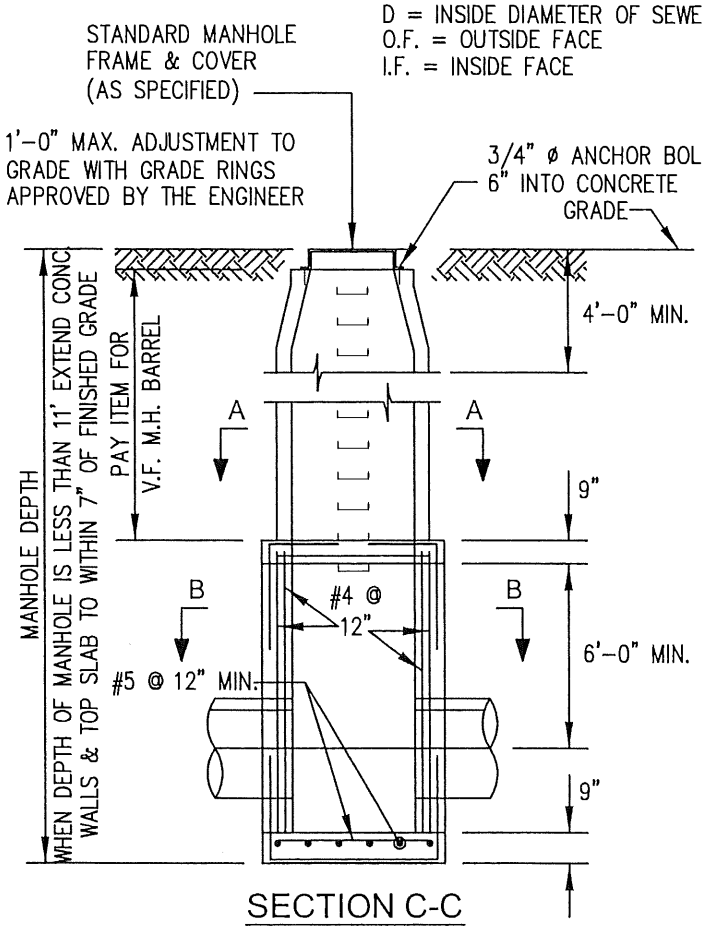


SECTION A-A



SECTION B-B

H = DEPTH FROM GROUND SURFACE TO POINT OF CONSIDERATION
D = INSIDE DIAMETER OF SEWER
O.F. = OUTSIDE FACE
I.F. = INSIDE FACE



SECTION C-C

WALL REINFORCING H \ D	36	42	48	54	60	66	72
10							
12							
14	#4 @ 12"	O.F.					
16	#4 @ 12"	I.F.					
18							
20							
22							
24							
26	#4 @ 6"	O.F.					
28	#4 @ 12"	I.F.		#4 @ 6"	O.F.		
30				#4 @ 12"	I.F.		
32							
34							
36				#5 @ 6"	O.F.		
38				#4 @ 6"	I.F.	#6 @ 7"	O.F.
40							
42						#4 @ 6"	I.F.

TOP SLAB REINFORCING H \ D	36	42	48	54	60	66	72
10	#5 @ 6"			#6 @ 6"		#6 @ 4 1/2"	
12							
14	#4 @ 10"			#4 @ 6"		#5 @ 6"	
16	#4 @ 6"			#5 @ 6"		#5 @ 8"	
18	#5 @ 8"						
20						#5 @ 6"	
22							
24	#5 @ 6"					#6 @ 6"	
26				#6 @ 6"			
28							
30							
32	#6 @ 6"			#6 @ 4 1/2"		#6 @ 4 1/2"	
34							
36							
38						#6 @ 4 1/2" 10" SLAB UNDER DASH LINE	
40							
42	#6 @ 4 1/2"			#6 @ 4"			

- HORIZONTAL REINFORCEMENT NOT SHOWN, SEE PLAN ABOVE
- SHAPE MANHOLE BOTTOM TO SEMI-CIRCLE OR USE HALF SECTION OF PIPE.
- JOINTS SHALL BE EQUIPPED WITH FLEXIBLE BUTYL RUBBER JOINT SEALANT APPROVED BY THE ENGINEER. PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ASTM C-478 LATEST REVISION.

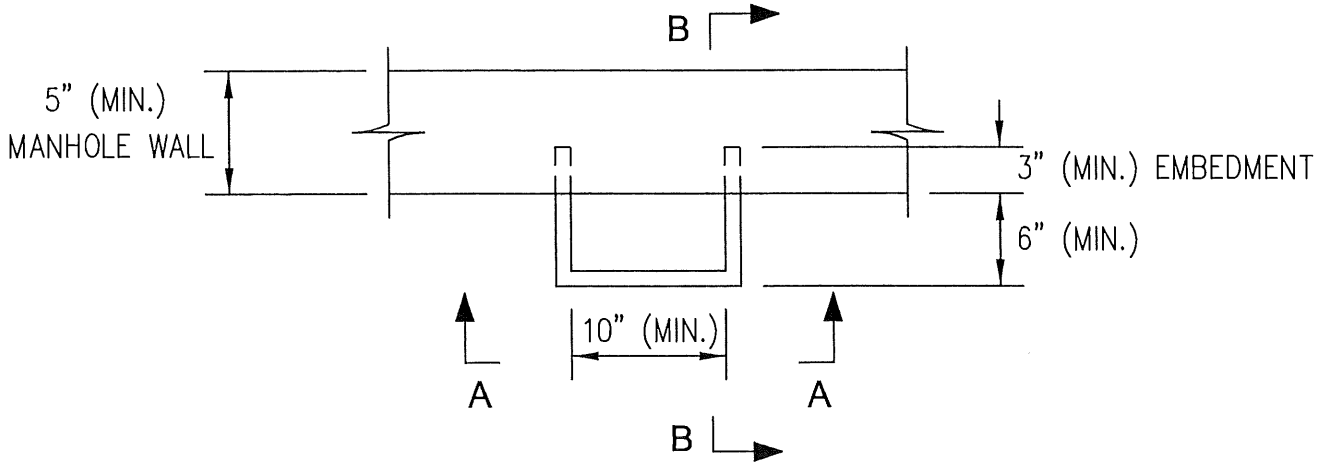
STANDARD DETAIL
SEWER MANHOLE FOR PIPES 36" TO 72"
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

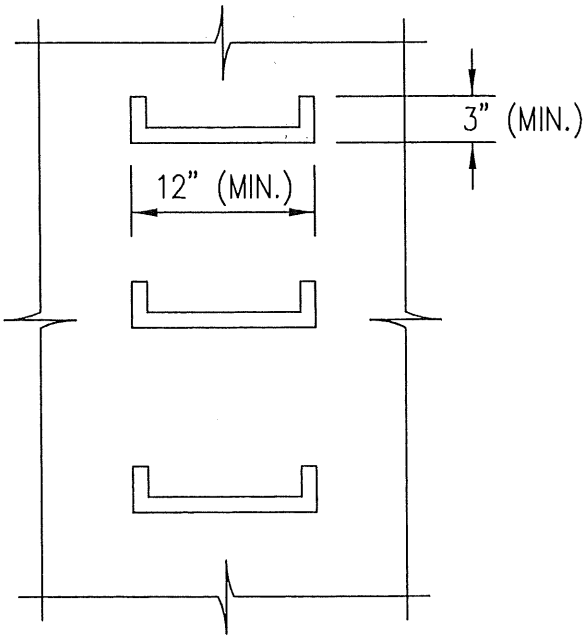
DETAIL No. FP-45

NOTE:

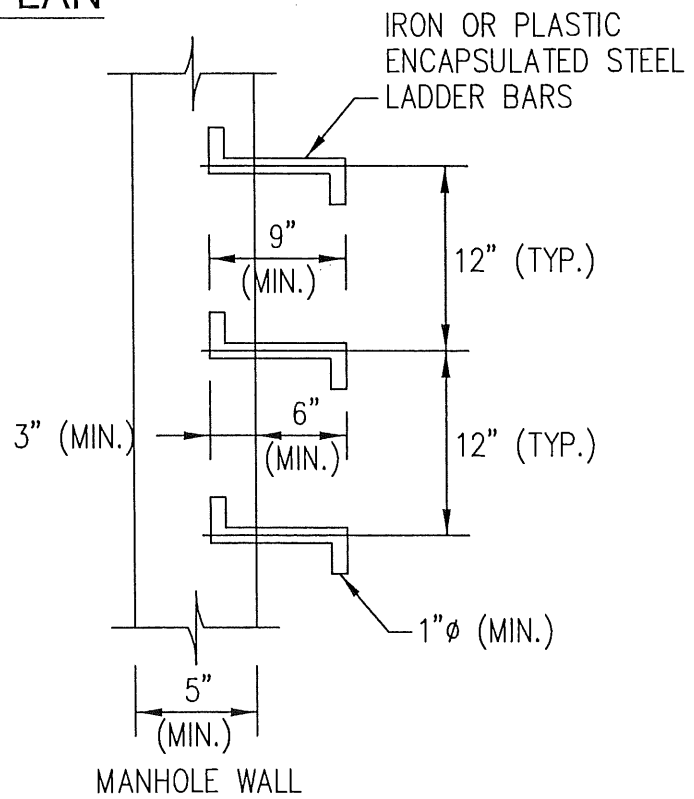
- LADDER BARS SHALL MEET ALL MINIMUM OSHA REQUIREMENTS.



PLAN



SECTION A-A

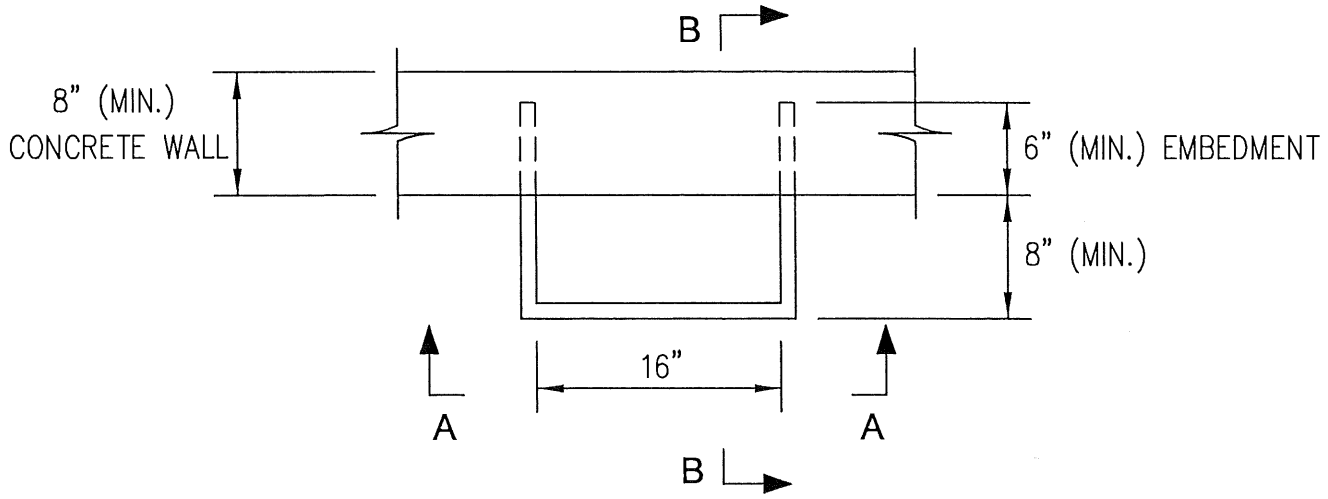


SECTION B-B

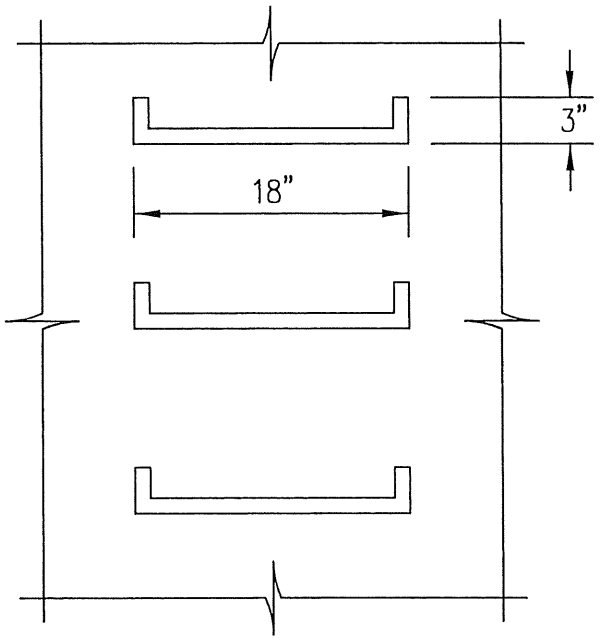
STANDARD DETAIL LADDER BARS FOR MANHOLES FRANKLIN PARK BOROUGH	FRANKLIN PARK BOROUGH 2344 WEST INGOMAR ROAD PITTSBURGH, PA 15237 (412) 364-4115 FAX (412) 366-4406 DETAIL No. FP-46

NOTE:

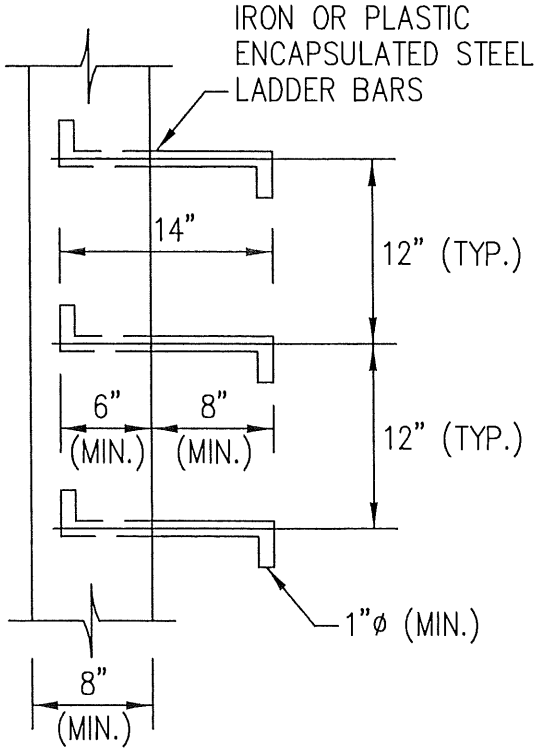
- LADDER BARS SHALL MEET ALL MINIMUM OSHA REQUIREMENTS.



PLAN



SECTION A-A

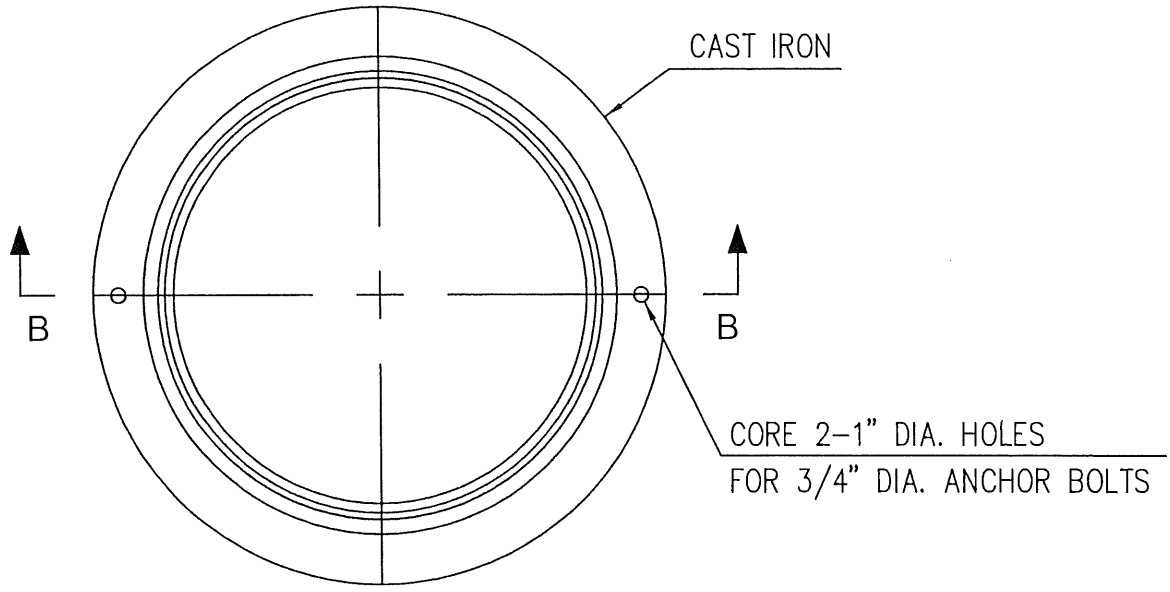


SECTION B-B

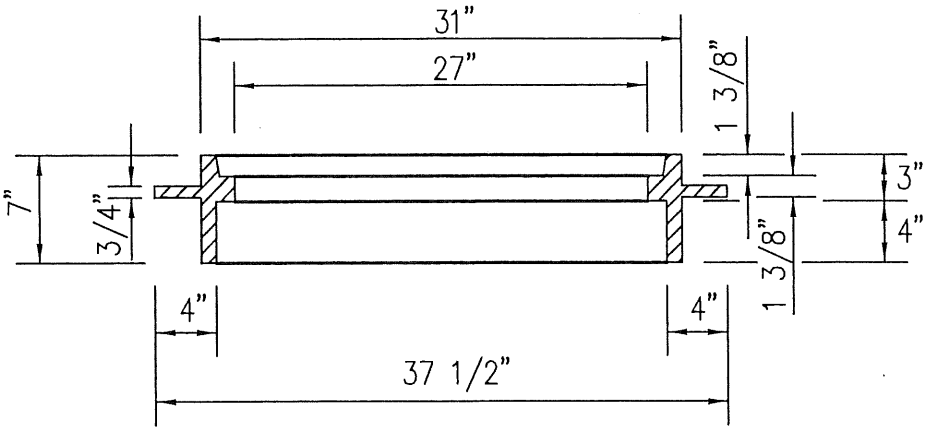
STANDARD DETAIL
LADDER BARS FOR STRUCTURES
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

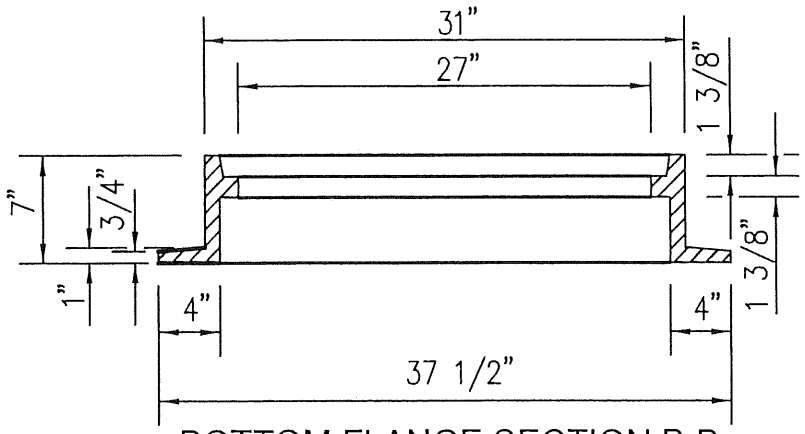
DETAIL No. FP-47



PLAN



CAST-IN-PLACE SECTION B-B



BOTTOM FLANGE SECTION B-B

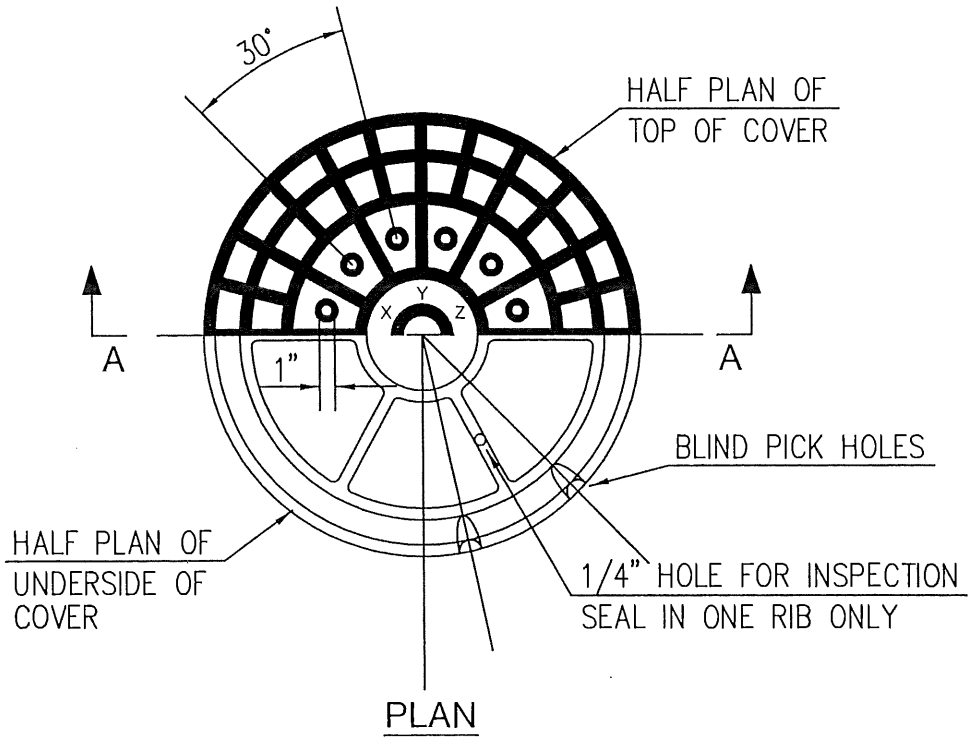
STANDARD DETAIL
CIRCULAR MANHOLE FRAME & COVER
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

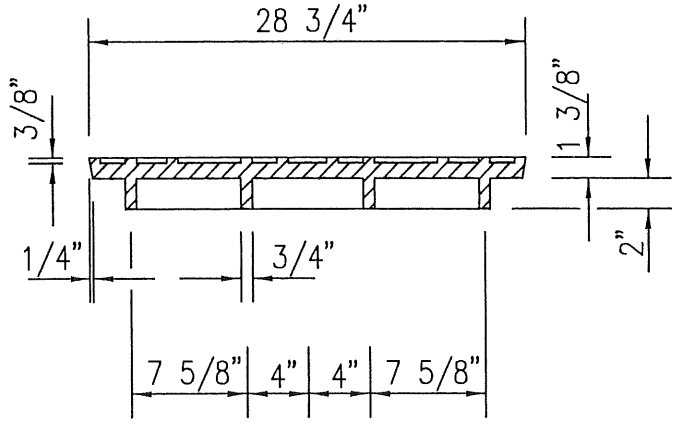
DETAIL No. FP-48

NAMES, LETTERS OR IDENTIFICATION MARK OF USER TO BE CAST IN CIRCLE IN CENTER OF COVER AS ORDERED. LETTERS X–Y–Z USED AS ILLUSTRATION ONLY.

SHADED PORTION – HIGH
PLAIN PORTION – LOW



PLAN

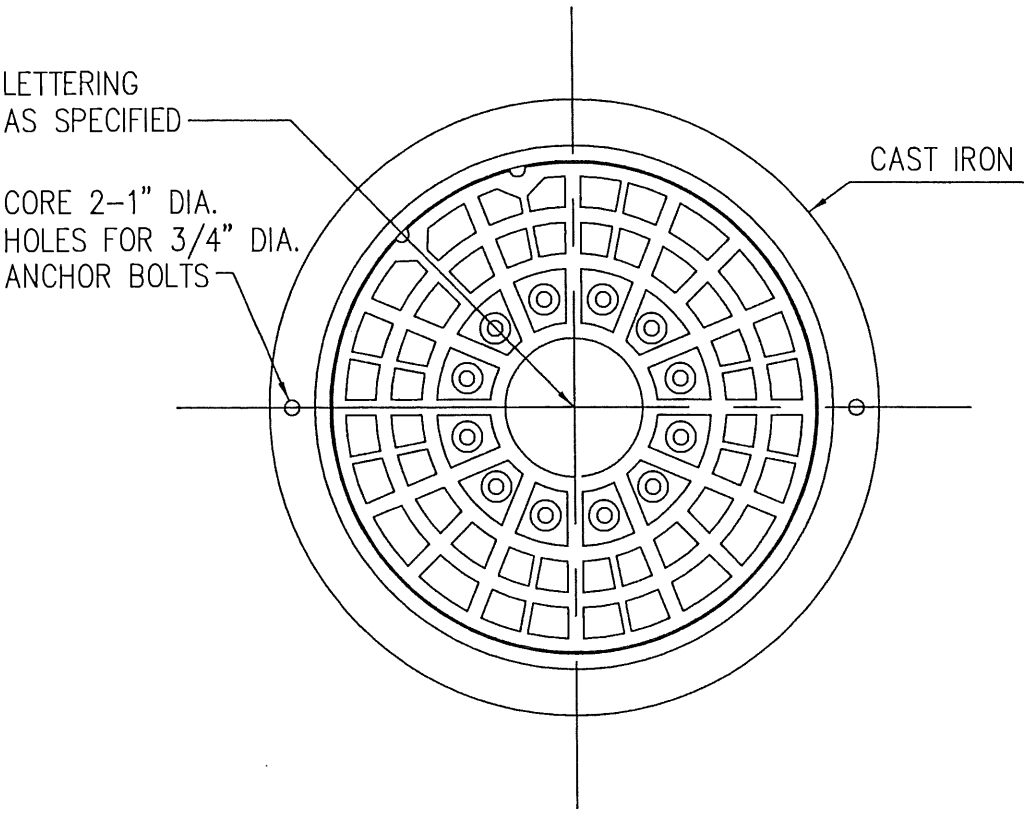


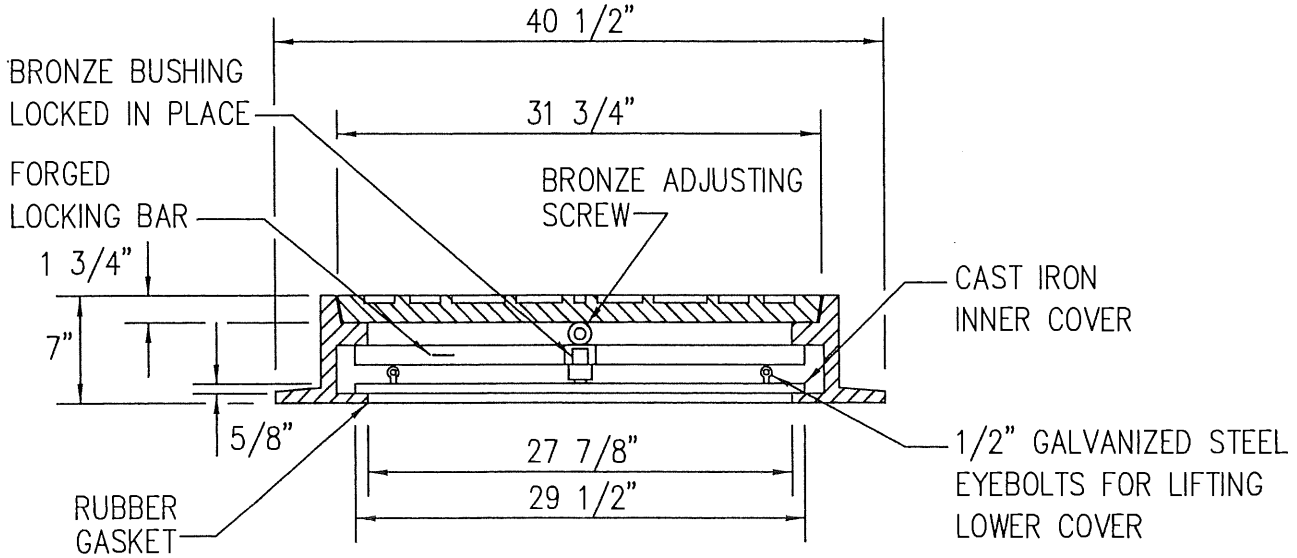
SECTION A-A

STANDARD DETAIL
CIRCULAR MANHOLE FRAME & COVER
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364–4115 FAX (412) 366–4406

DETAIL No. FP-49



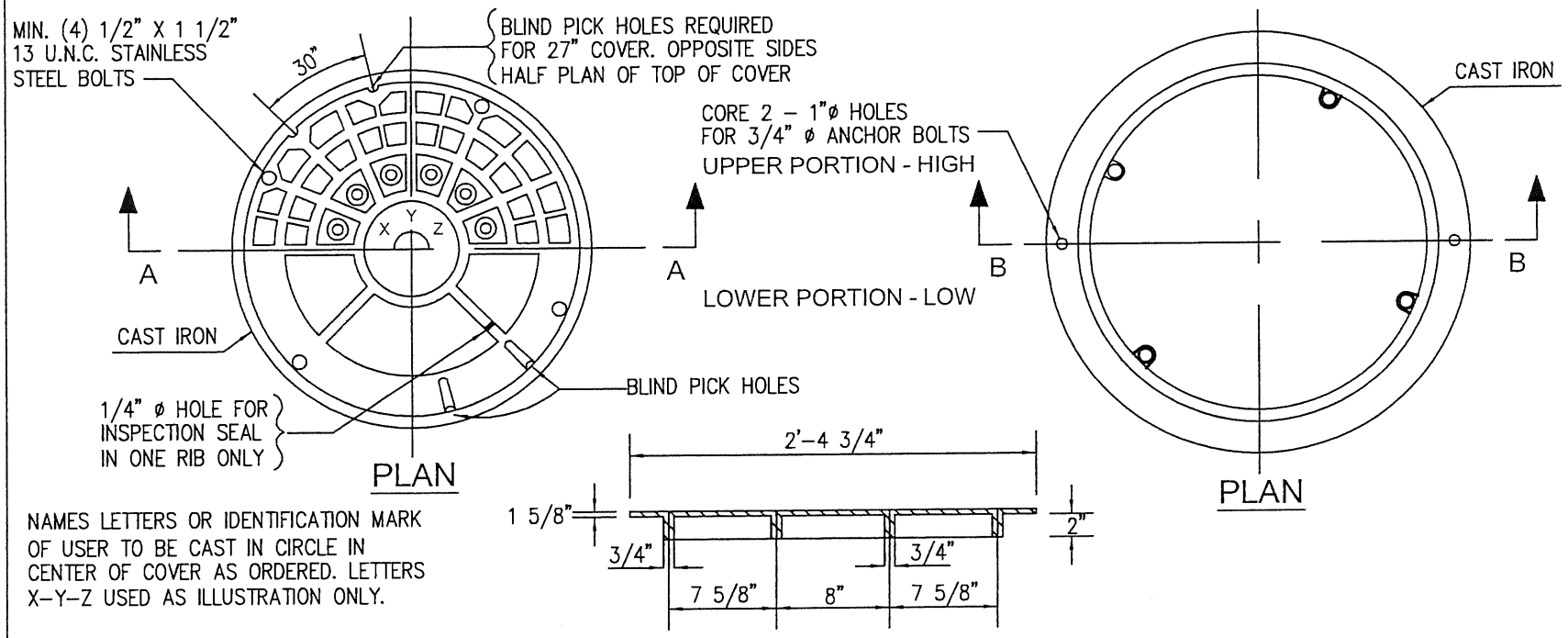


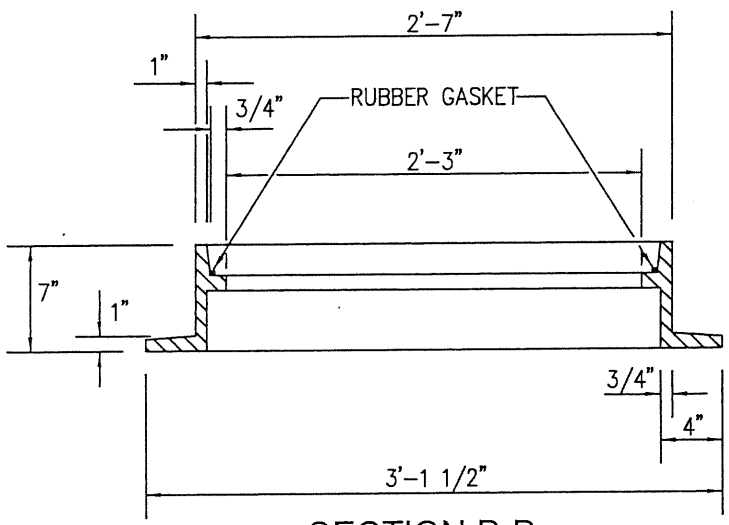
NOTE:

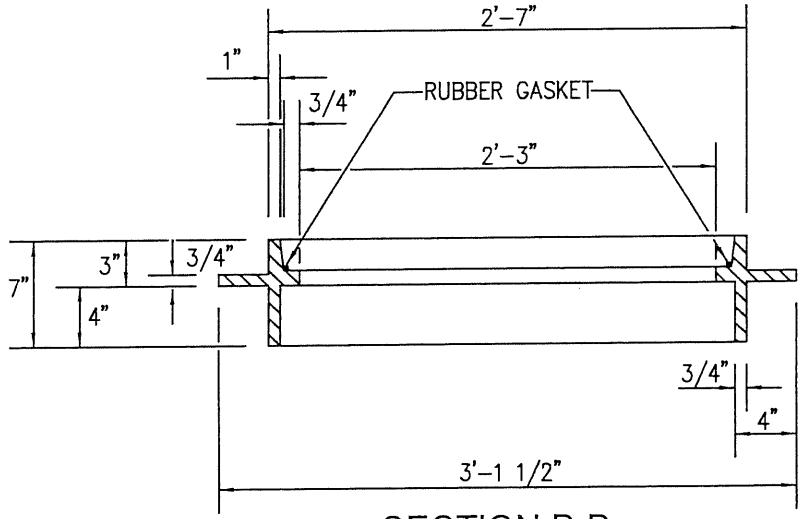
- SEE DETAIL No. WEC-10 FRAME & COVER

STANDARD DETAIL WATERTIGHT MANHOLE FRAME & COVER (WITH INNER COVER) FRANKLIN PARK BOROUGH	FRANKLIN PARK BOROUGH 2344 WEST INGOMAR ROAD PITTSBURGH, PA 15237 (412) 364-4115 FAX (412) 366-4406 DETAIL No. FP-50

STANDARD DETAIL
WATERTIGHT MANHOLE FRAME & COVER BOLT TYPE
FRANKLIN PARK BOROUGH







FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
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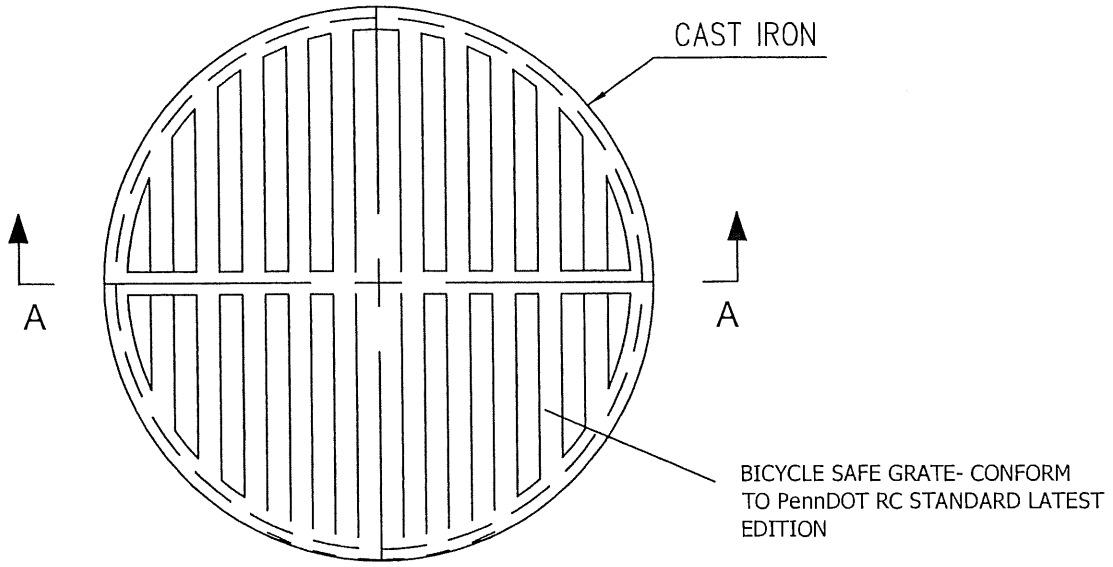
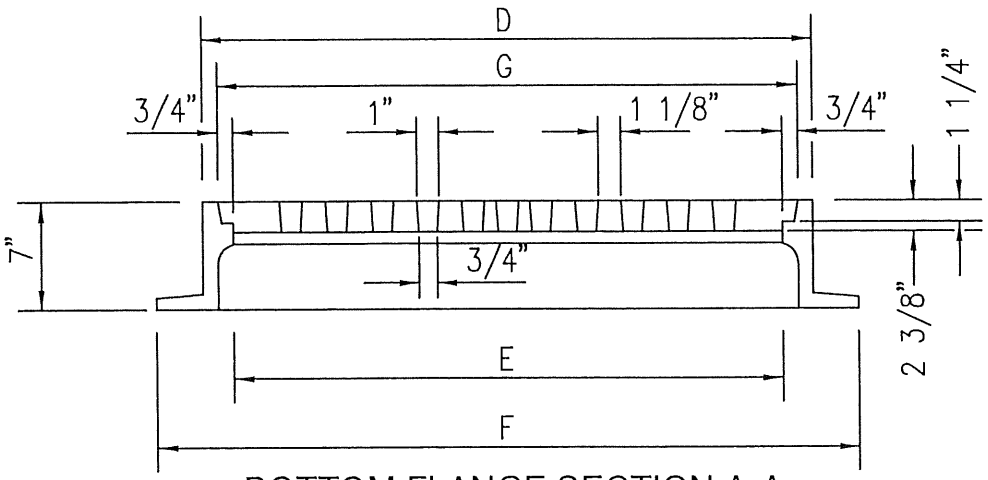
DETAIL No. FP-51



COVER PLAN



BOTTOM FLANGE SECTION A-A

		SIZE OF FRAMES			
		22"	27"	30"	36"
DIMENSIONS	D	26"	31"	34"	40"
	E	22"	27"	30"	36"
	F	32 1/2"	37 1/2"	40 1/2"	46 1/2"
	G	23 3/4"	28 3/4"	31 3/4"	37 3/4"

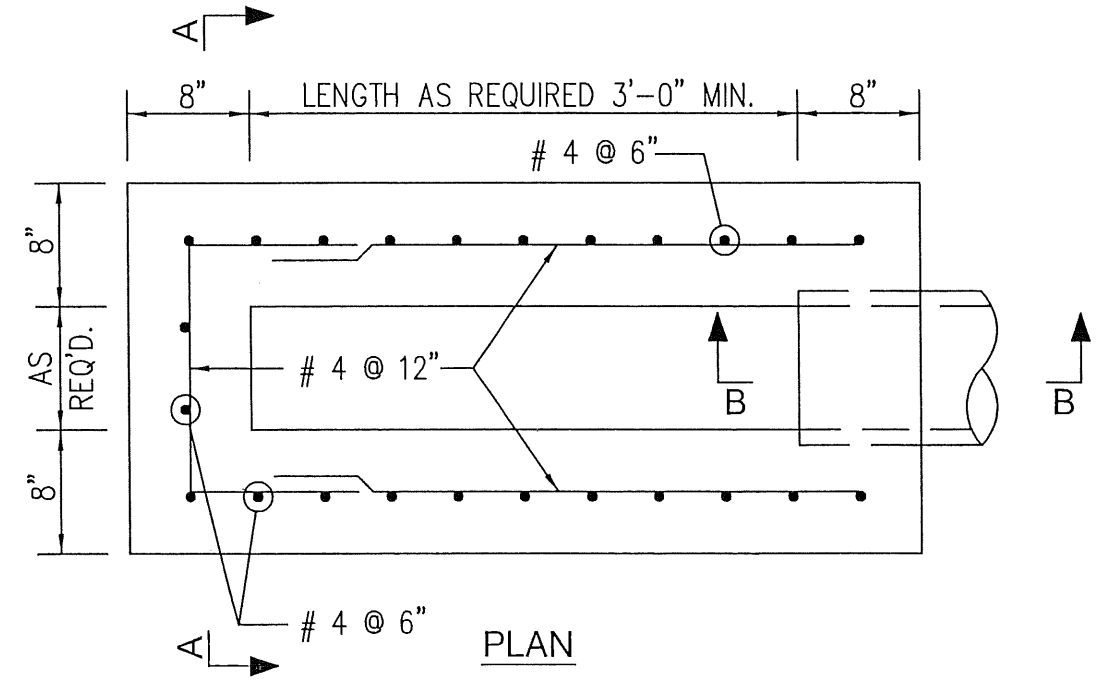
NOTE:

- FOR ALL INSTALLATIONS, GRATING SHALL BE BICYCLE SAFE.

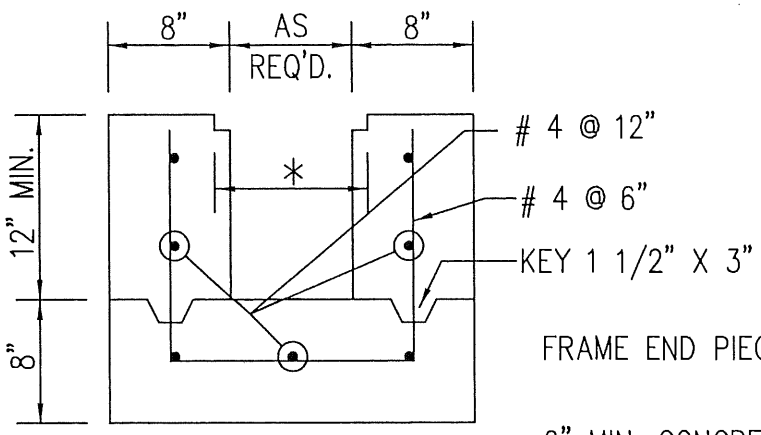
STANDARD DETAIL
SURFACE WATER INLET MANHOLE COVER
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-52

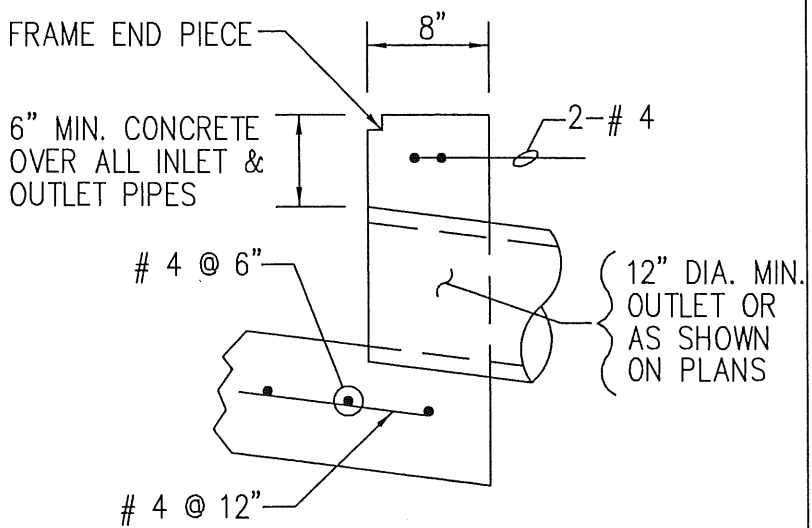


PLAN



SECTION B-B

* FRAME WIDTH AS SPECIFIED

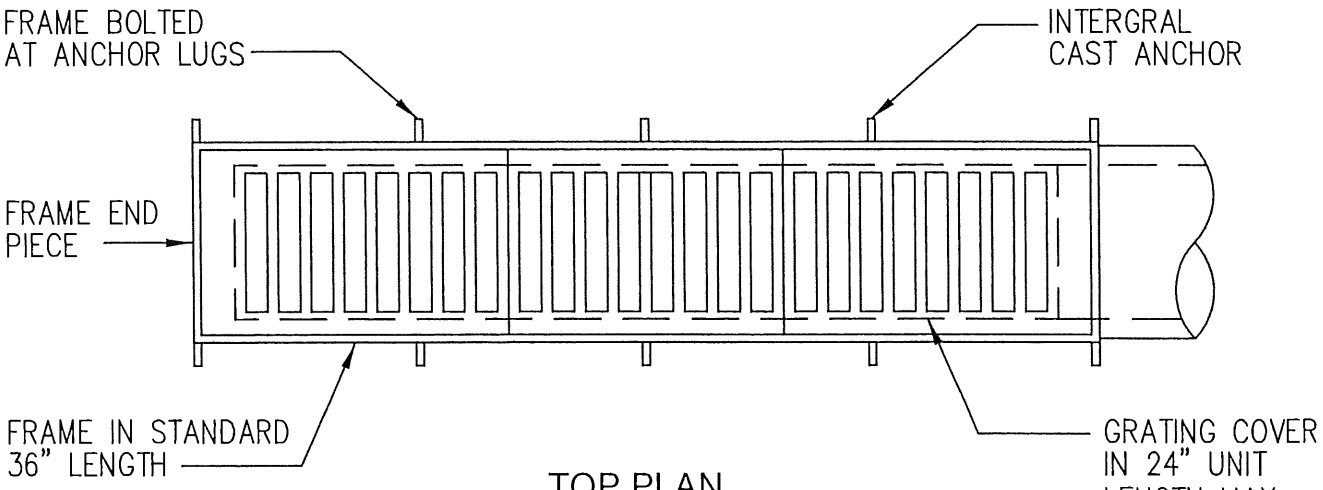


SECTION B-B

STANDARD DETAIL
TRENCH DRAIN FRANKLIN
PARK BOROUGH

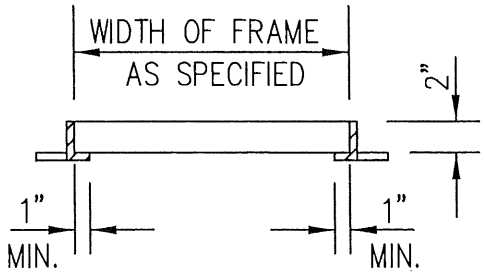
FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-53

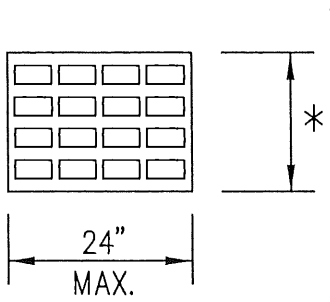


TOP PLAN

NOTE: OPTIONAL BOLTED DOWN COVERS
TO BE SUPPLIED IF SPECIFIED.



CAST IRON FRAME TYPE L

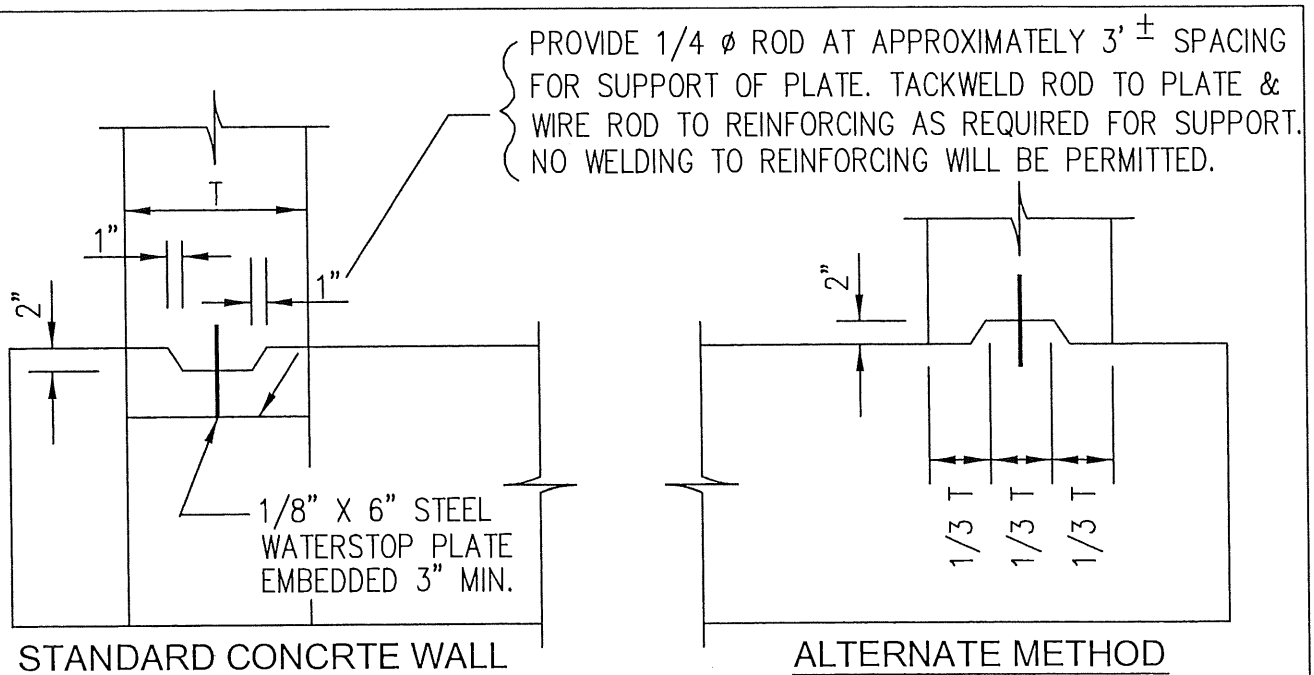


TYPE "C" GRATING

DUCTILE IRON OR STEEL OPEN GRATE TRENCH COVERS

NOTE:
● RECOMMENDED FOR BICYCLE TRAFFIC

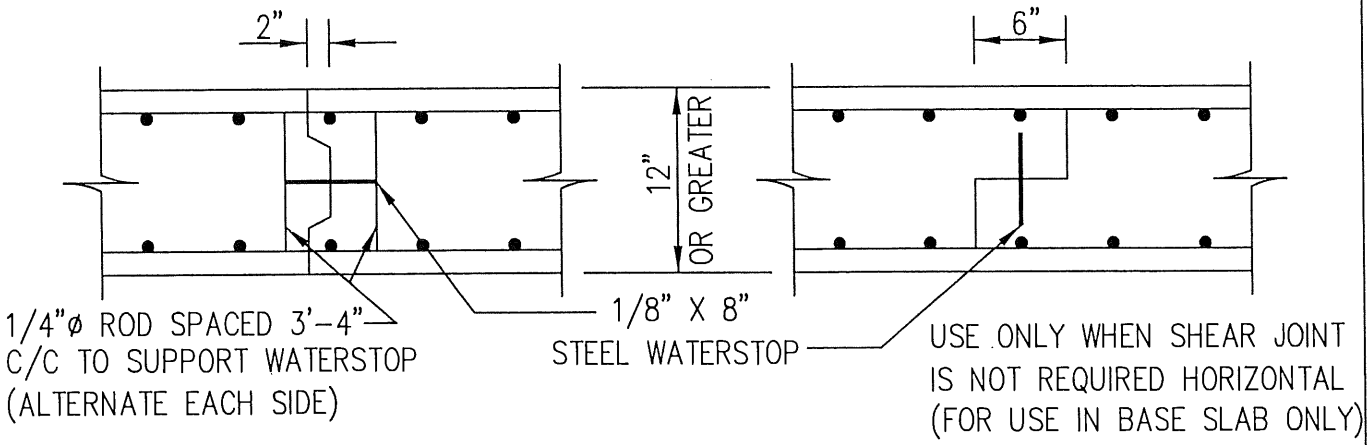
STANDARD DETAIL TRENCH DRAIN COVER FRANKLIN PARK BOROUGH	FRANKLIN PARK BOROUGH 2344 WEST INGOMAR ROAD PITTSBURGH, PA 15237 (412) 364-4115 FAX (412) 366-4406 DETAIL No. FP-54



STANDARD CONCRTE WALL CONSTRUCTION JOINT

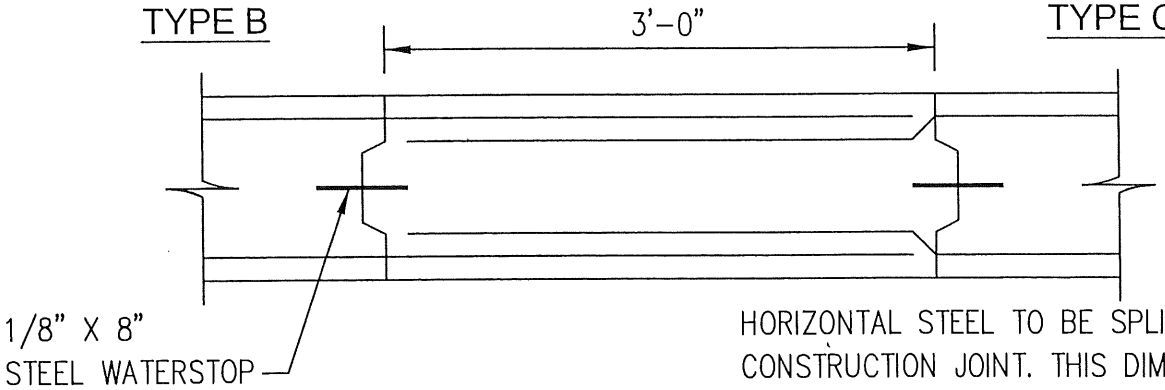
ALTERNATE METHOD IF REQUIRED

TYPE A



TYPE B

TYPE C



TYPE D

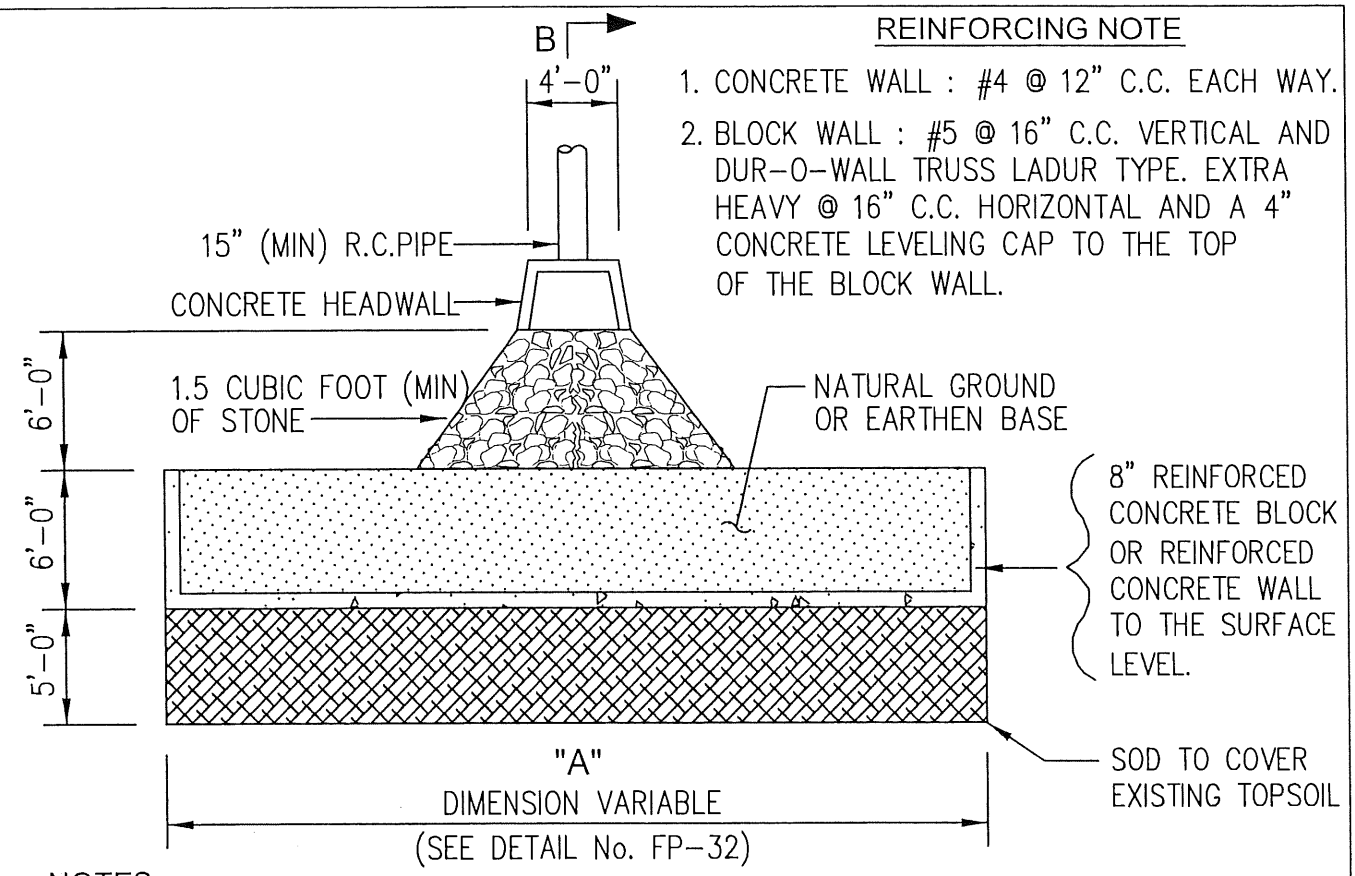
VERTICAL CONSTRUCTION JOINT

(REFER TO DETAIL DRAWINGS FOR ARRANGEMENT OF REINFORCING BARS).

STANDARD DETAIL
CONSTRUCTION JOINTS WITH STEEL WATERSTOPS
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-55

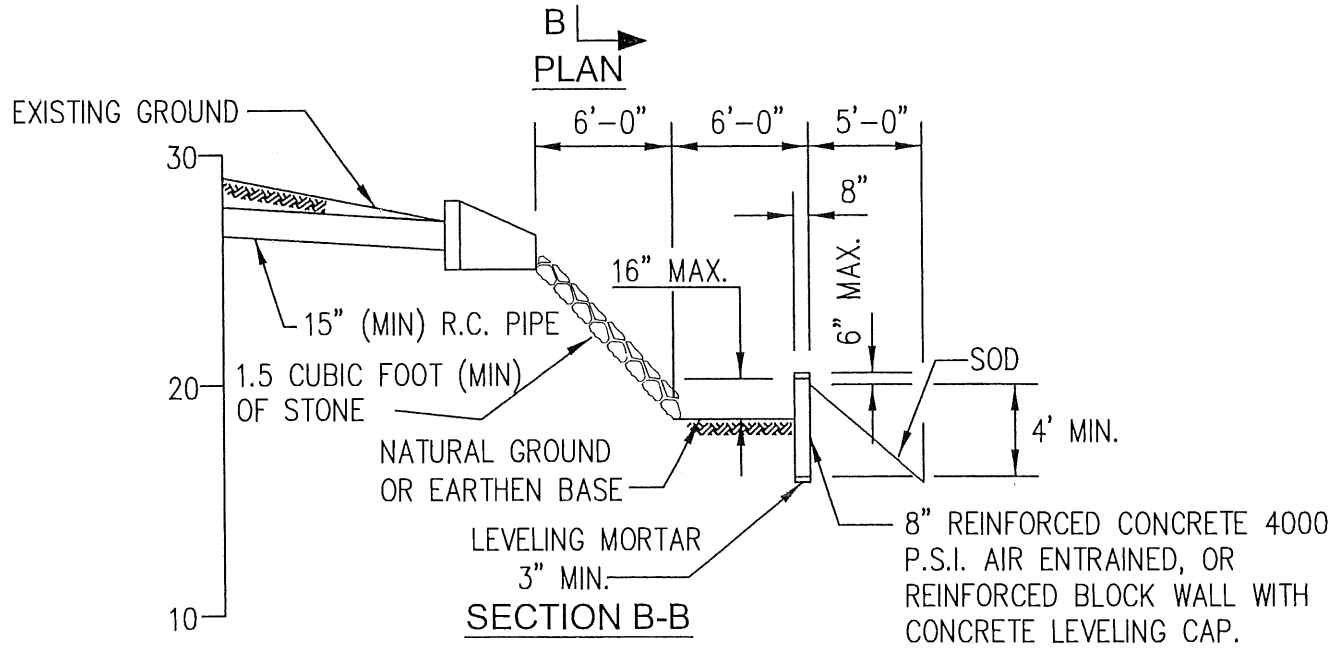


REINFORCING NOTE

1. CONCRETE WALL : #4 @ 12" C.C. EACH WAY.
2. BLOCK WALL : #5 @ 16" C.C. VERTICAL AND DUR-O-WALL TRUSS LADUR TYPE. EXTRA HEAVY @ 16" C.C. HORIZONTAL AND A 4" CONCRETE LEVELING CAP TO THE TOP OF THE BLOCK WALL.

NOTES

1. EVERY SIXTH VERTICAL JOINT OF NEXT TO THE TOP COURSE OF BLOCK TO BE LEFT OPEN FOR DRAINAGE.
2. WEEP HOLES 1 1/2" DIAMETER AT 16" DEPTH ON 8' CENTERS FOR CONCRETE STRUCTURE.



SECTION B-B

STANDARD DETAIL
LEVEL SPREADER
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-56

STANDARD DETAIL

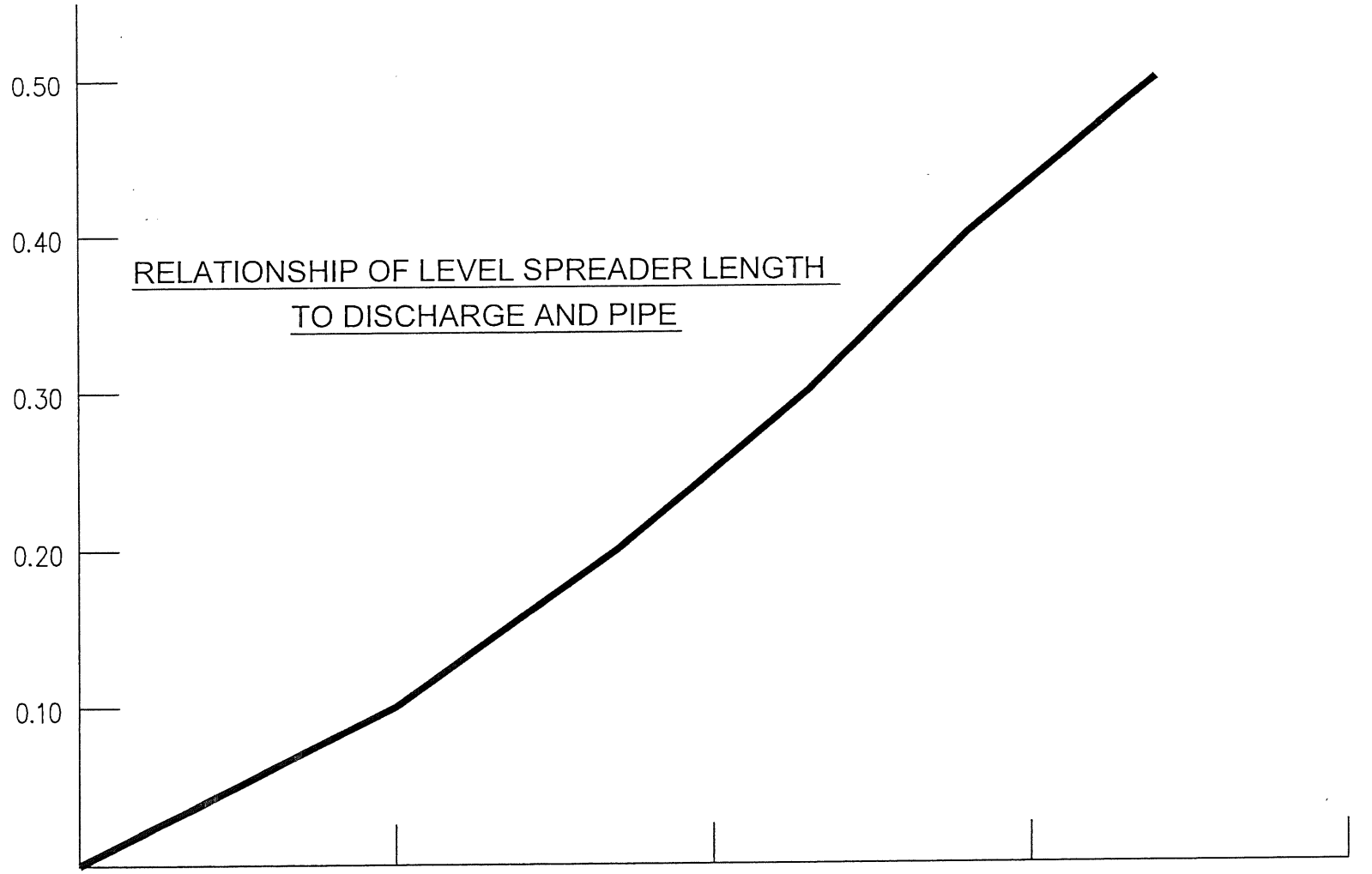
LEVEL SPREADER CHART OF LENGTH TO DISCHARGE AND PIPE

FRANKLIN PARK BOROUGH

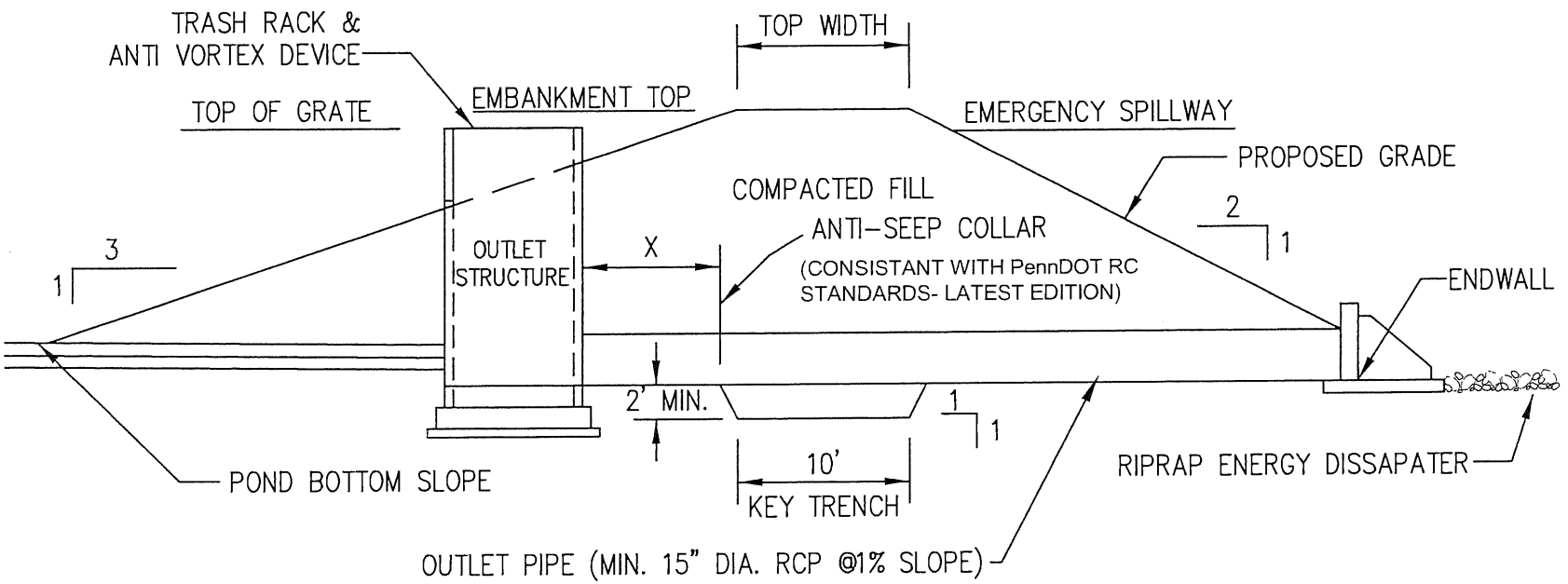
FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-57

MAXIMUM SLOPE WITHIN 200 FEET OF FACILITY FT./ FT.



EMBANKMENT TOP WIDTH (ft.)	EMBANKMENT TOP HEIGHT (ft.)
4'	< 6.0'
6'	6.1' – 9.9'
8'	10' ≈ 15'



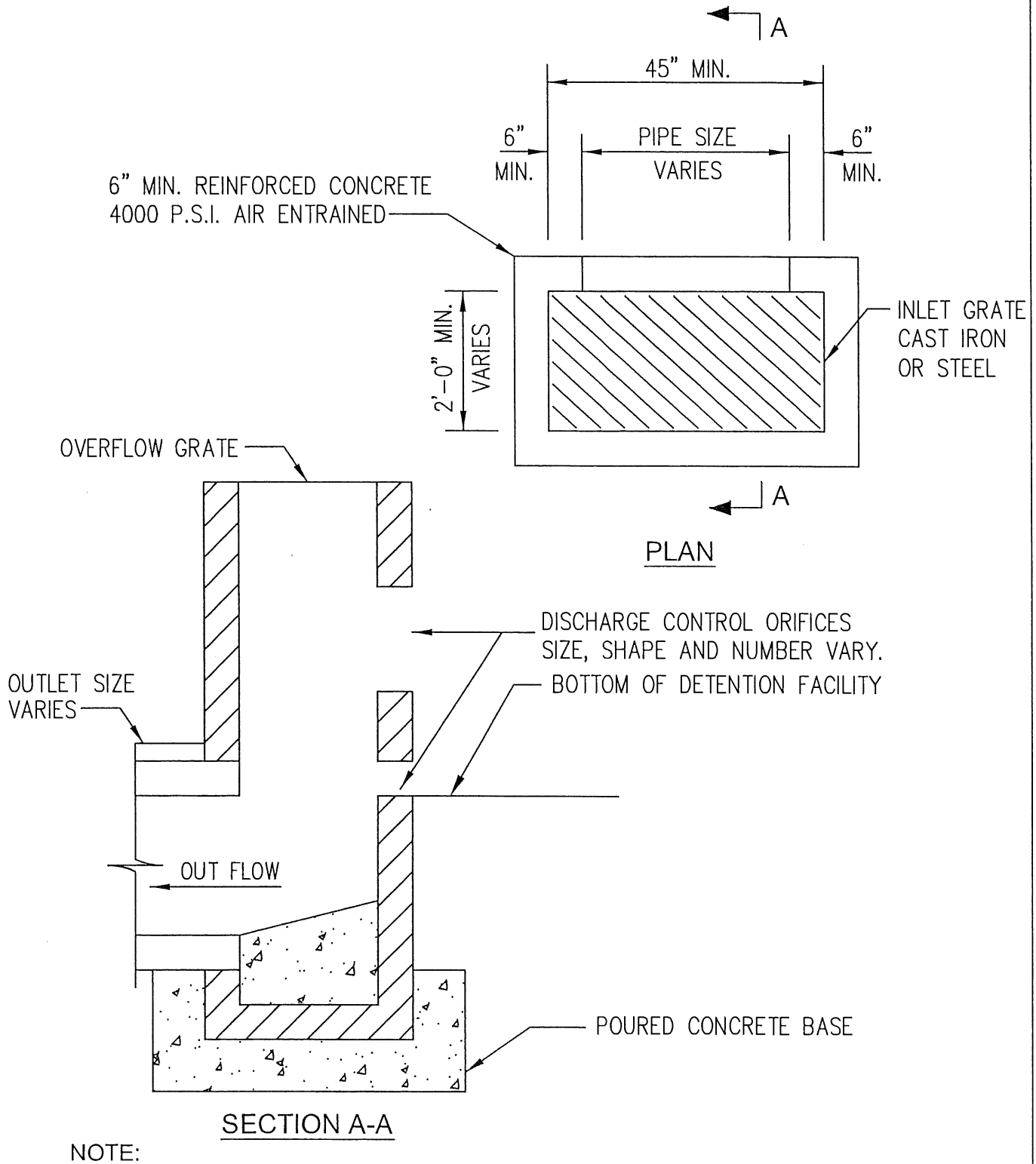
NOTE:

- (SEE DETAIL No. FP-34 FOR INFORMATION ON OUTLET STRUCTURE

STANDARD DETAIL
STORMWATER DETENTION FACILITY TYPICAL PROFILE
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-58



SECTION A-A

NOTE:

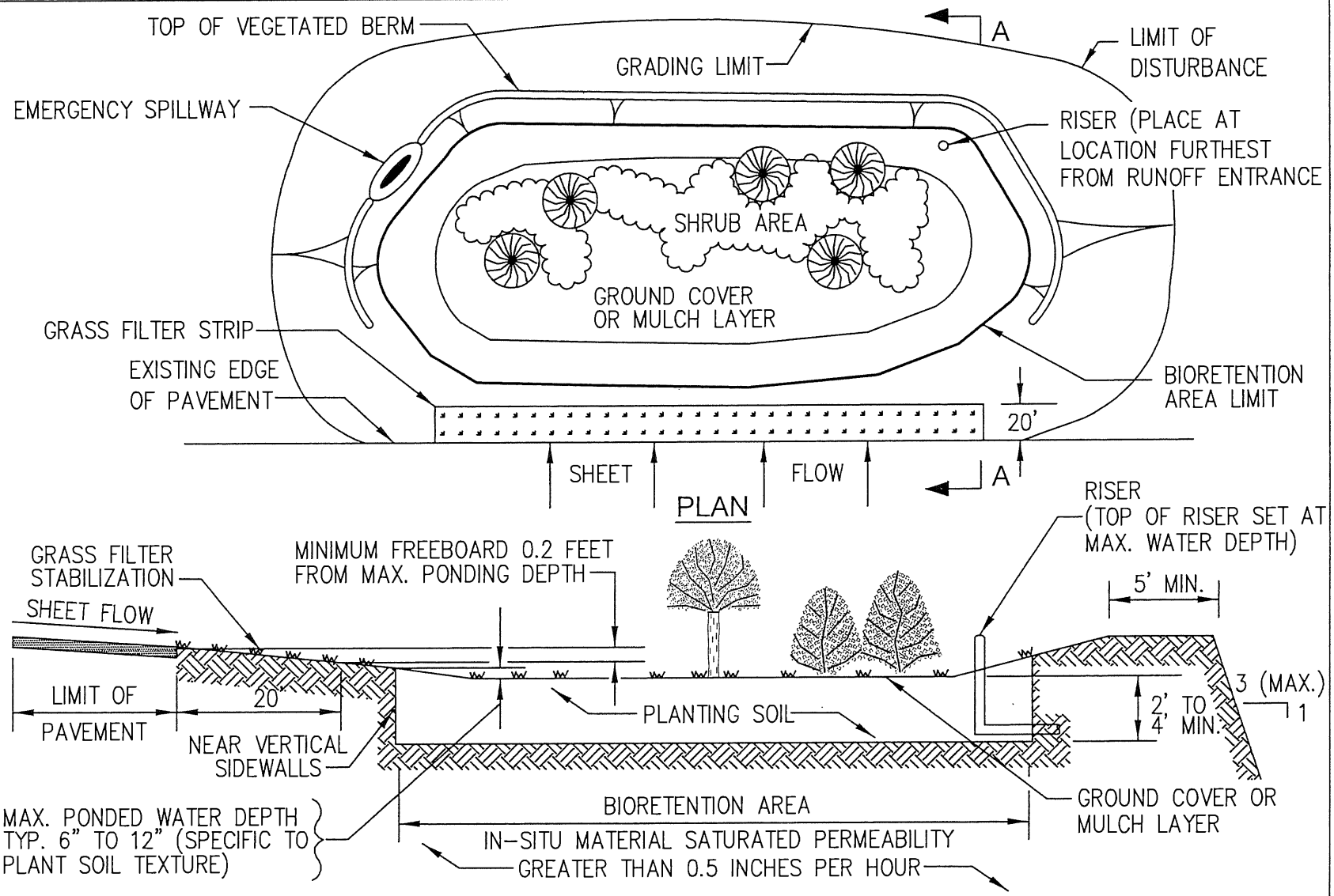
- DIMENSIONS, REINFORCING AND SPECIAL DETAILS SHALL BE ESTABLISHED PER SPECIFIC APPLICATIONS AND SITUATIONS.
- SEE DETAIL No. FP-33

STANDARD DETAIL
STORMWATER FACILITY PLAN AND SECTION
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-59

STANDARD DETAIL
RAIN GARDEN
FRANKLIN PARK BOROUGH



NOTE:

1. IF SOILS ARE NOT ADEQUATE FOR INFILTRATION, INSTALL A DRAIN AT THE BOTTOM OF BIORETENTION AREA.
2. PLANTING SOIL SHALL HAVE COMPOST AND SAND ADDED TO IMPROVE PERCOLATION.
3. DO NOT USE CURB CUTS THAT CONCENTRATE RUNOFF, UNLESS AN ENERGY DISSIPATOR/LEVEL SPREADER ARE USED PRIOR TO ENTRANCE INTO THE RAIN GARDEN.

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
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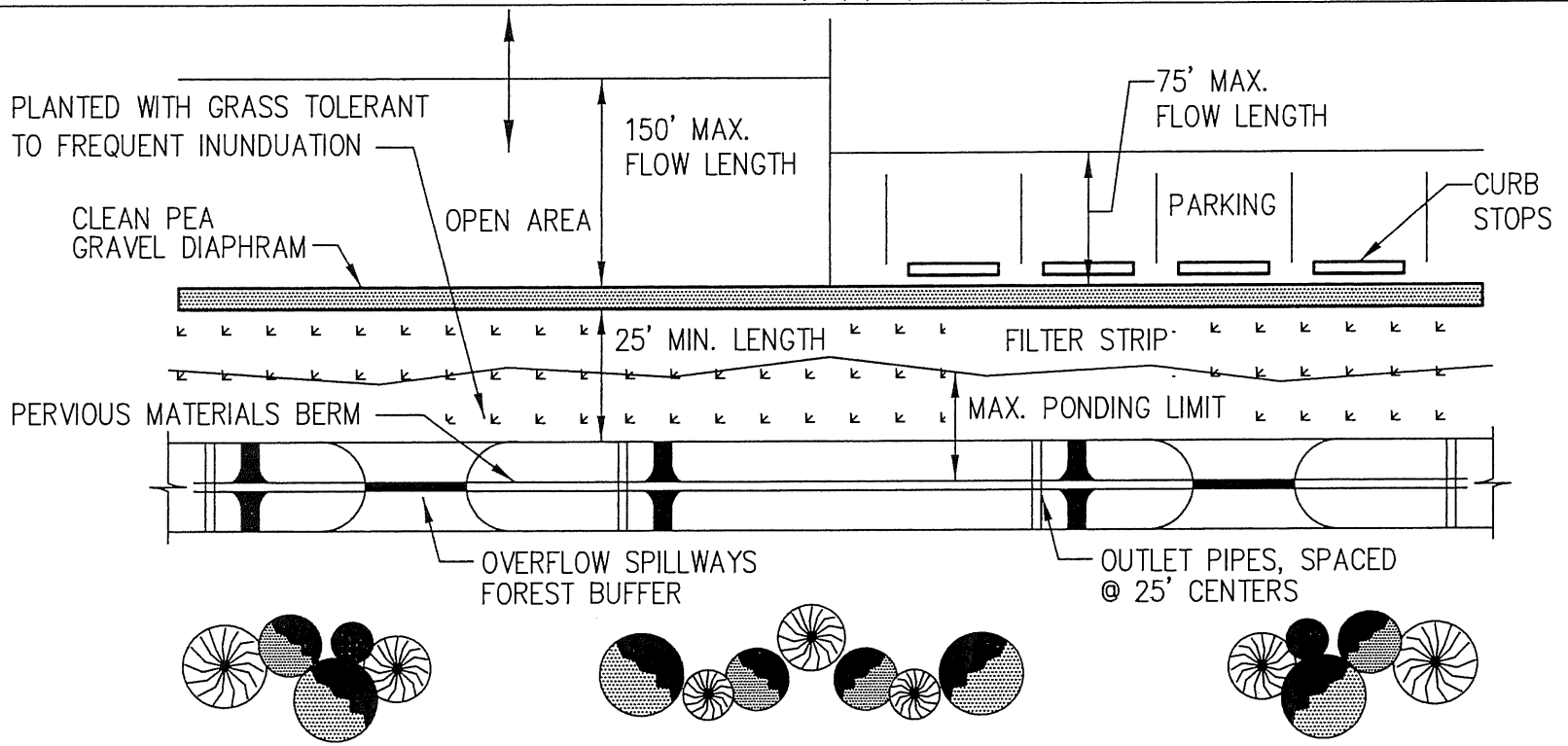
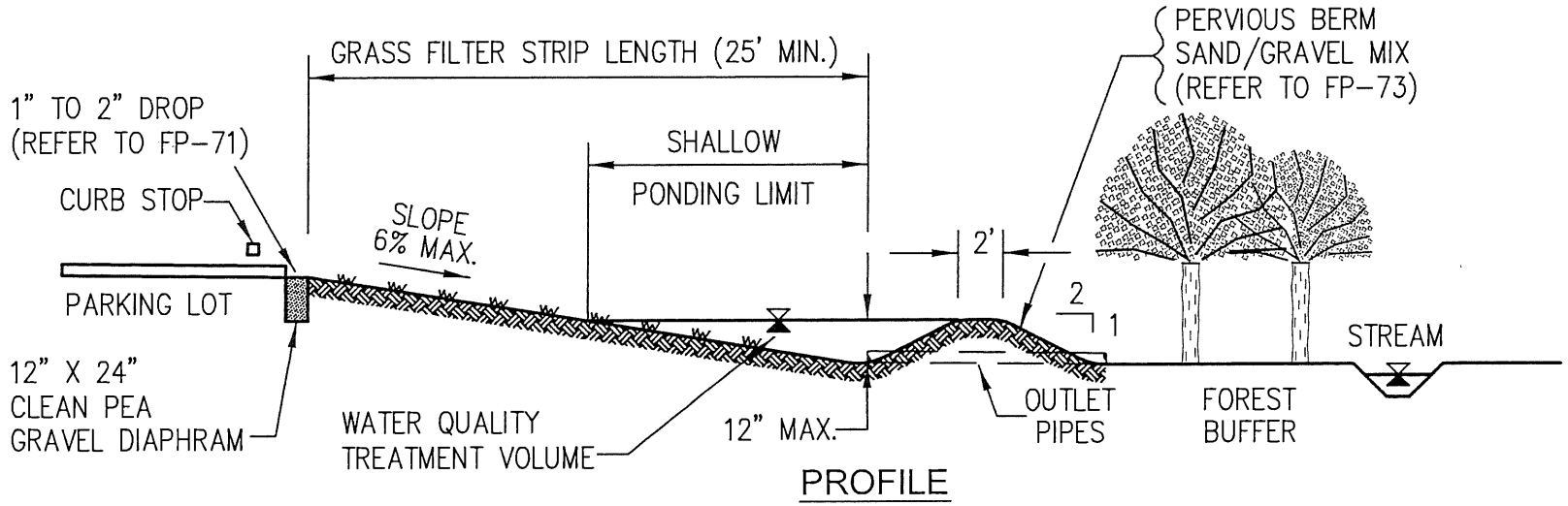
DETAIL No. FP-60

STANDARD DETAIL
TYPICAL FILTER STRIP
FRANKLIN PARK BOROUGH



PLAN

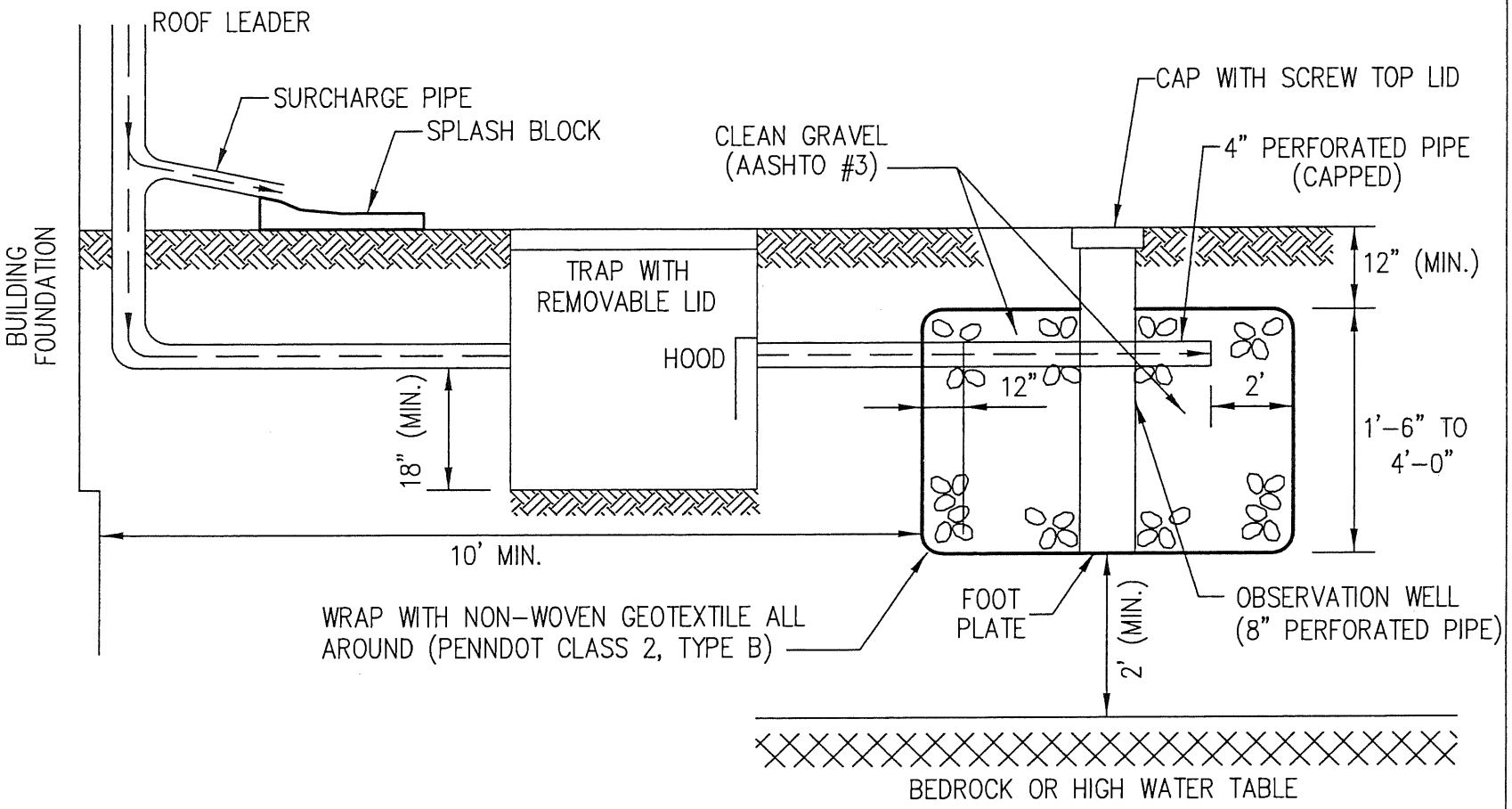


PROFILE

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-61

STANDARD DETAIL
TYPICAL DRY WELL
FRANKLIN PARK BOROUGH



ELEVATION VIEW

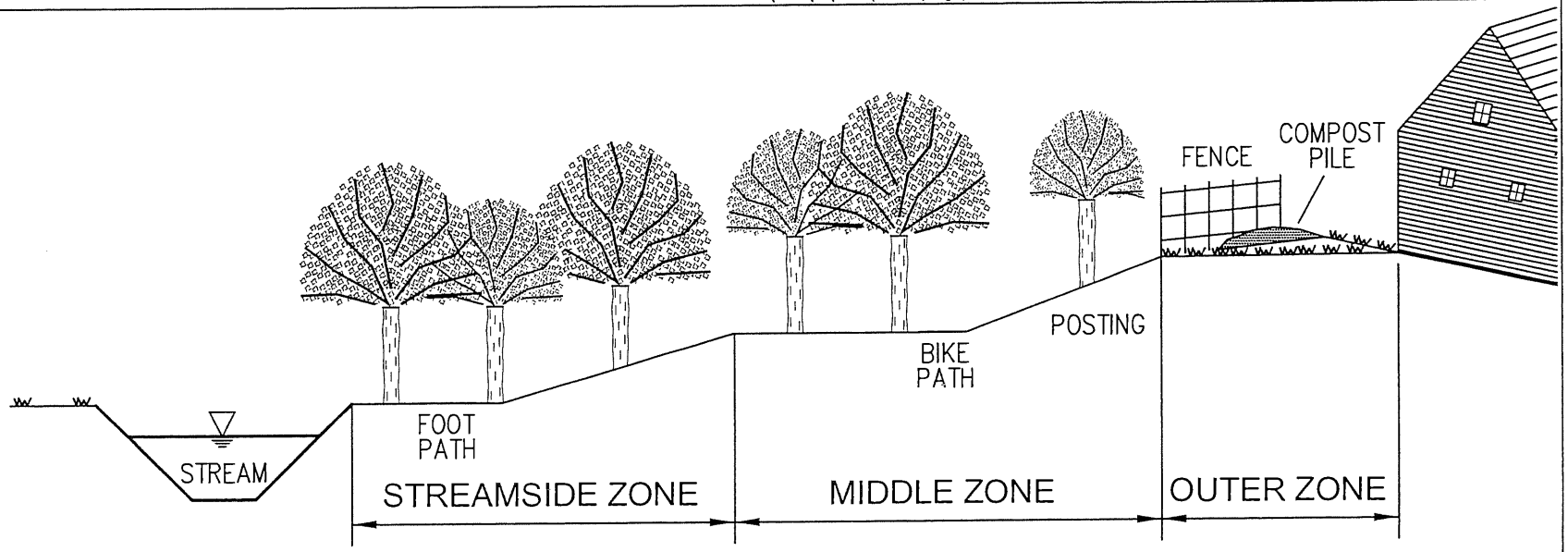
NOTE:

1. ROOF RUNOFF ONLY.
2. DESIGN TO DRAIN COMPLETELY BETWEEN 24 HOURS TO 72 HOURS.
3. OTHER OPTIONAL DESIGNS ACCEPTABLE AND SHALL BE SUBMITTED FOR APPROVAL.

FRANKLIN PARK BOROUGH
2344 WEST NIGMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-62

STANDARD DETAIL
THREE ZONE BUFFER SYSTEM
FRANKLIN PARK BOROUGH



CHARACTERISTICS	STREAMSIDE ZONE	MIDDLE ZONE	OUTER ZONE
FUNCTION	PROTECT THE PHYSICAL INTEGRITY OF THE STREAM ECOSYSTEM	PROVIDE DISTANCE BETWEEN UPLAND DEVELOPEMENT AND STREAMSIDE ZONE	PREVENT ENCROACHMENT AND FILTER BACKYARD RUNOFF
WIDTH	MINIMUM 25 FEET, PLUS WETLANDS AND CRITICAL HABITATS	50' TO 100' DEPENDING ON STREAM ORDER, SLOPE, AND 100 YEAR FLOODPLAIN	25 FOOT MINIMUM SETBACK TO STRUCTURES
VEGETATIVE TARGET	UNDISTURBED MATURE FOREST, REFOREST IF GRASS	MANAGED FOREST SOME CLEARING ALLOWABLE	FOREST ENCOURAGED, BUT USUALLY TURFGRASS
ALLOWABLE USES	*VERY RESTRICTED* FLOOD CONTROL, UTILITY RIGHTS OF WAY, FOOTPATHS ETC.	*RESTRICTED* SOME RECREATIONAL USES, SOME STORMWATER BMP's, BIKE PATHS, TREE REMOVAL BY PERMIT	*UNRESTRICTED* RESIDENTIAL USES INCL. LAWN, GARDEN, COMPOST, YARD WASTE, MOST STORMWATER BMP's

FRANKLIN PARK BOROUGH
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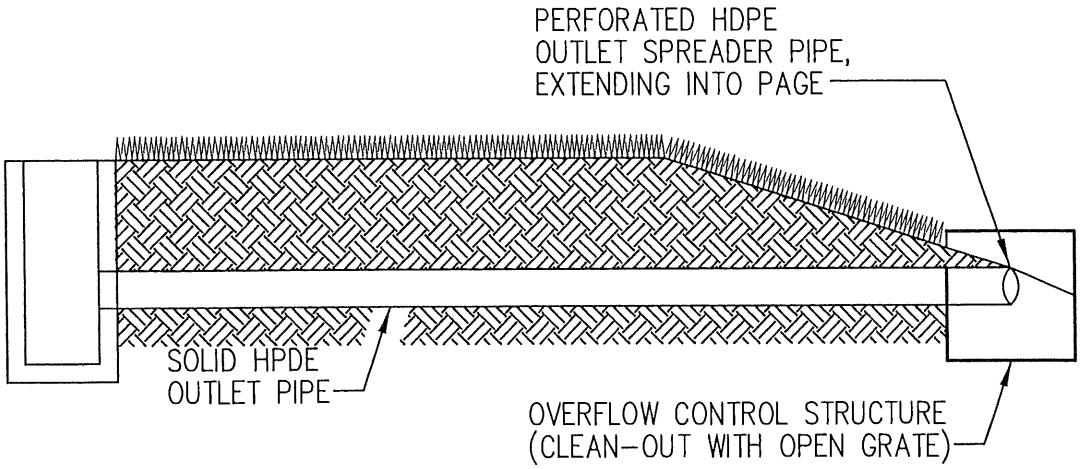
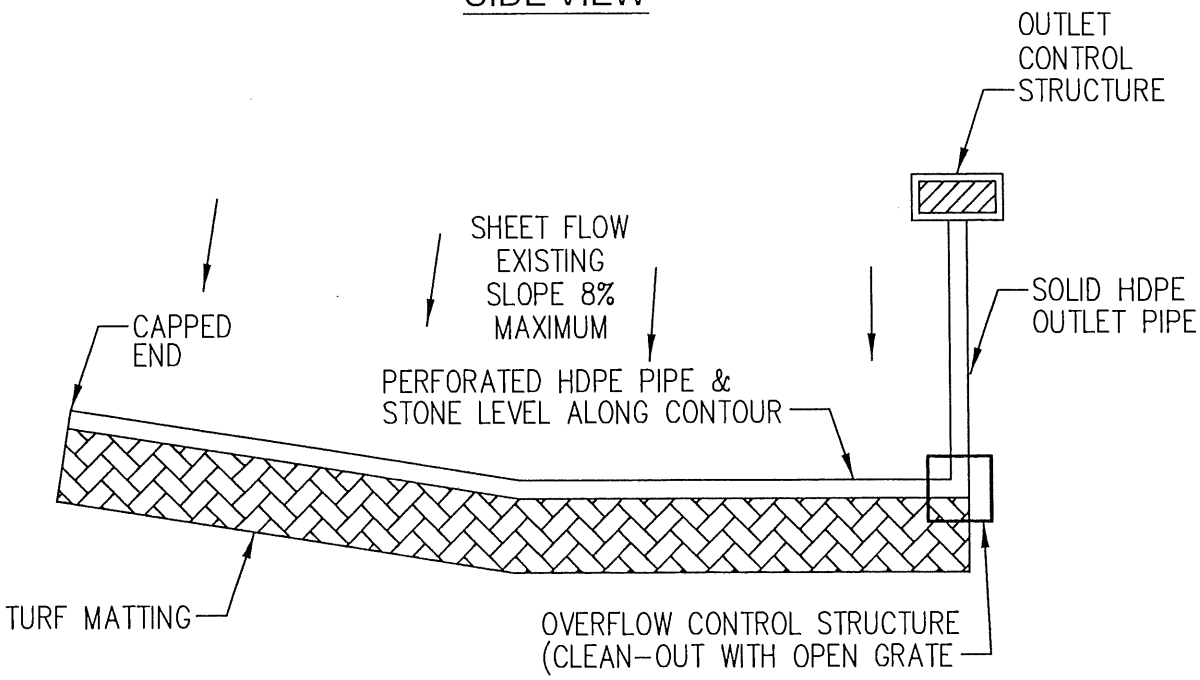
DETAIL No. FP-63



SIDE VIEW



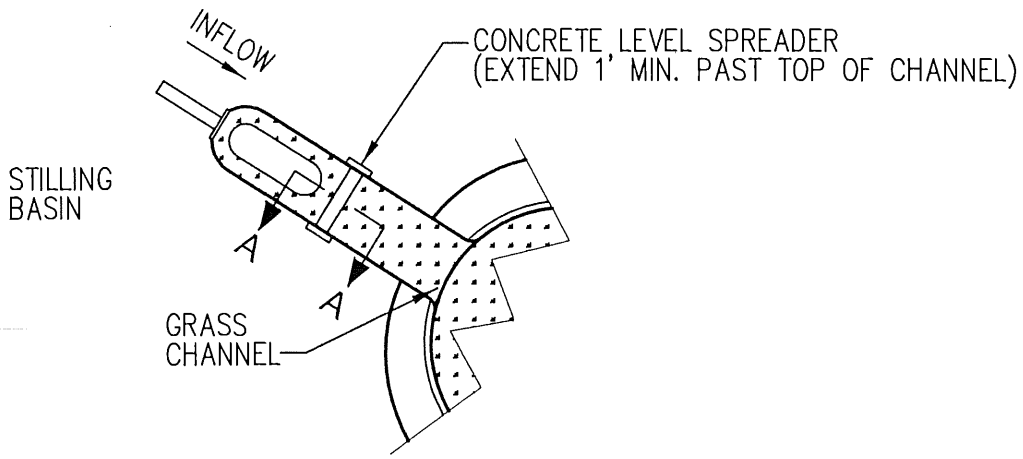
PLAN VIEW

NOTE:

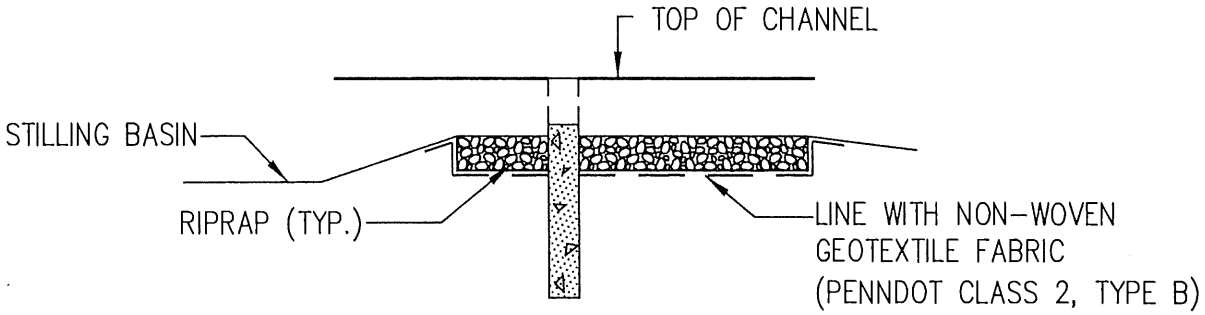
1. LEVEL SPREADERS MUST BE LEVEL.
2. LEVEL SPREADERS SHALL SAFELY DIFFUSE THE 10 YEAR STORM PEAK RATE WITH NON-EROSIVE DISCHARGE VELOCITIES.

TYPE 1

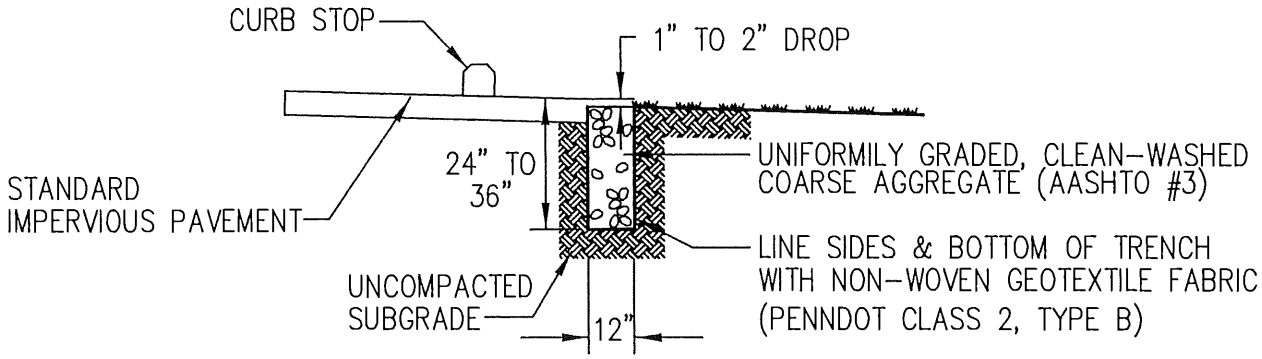
STANDARD DETAIL LEVEL SPREADER, TYPE 1 FRANKLIN PARK BOROUGH	FRANKLIN PARK BOROUGH 2344 WEST INGOMAR ROAD PITTSBURGH, PA 15237 (412) 364-4115 FAX (412) 366-4406 DETAIL No. FP-64



SWALE LEVEL SPREADER



SECTION A-A



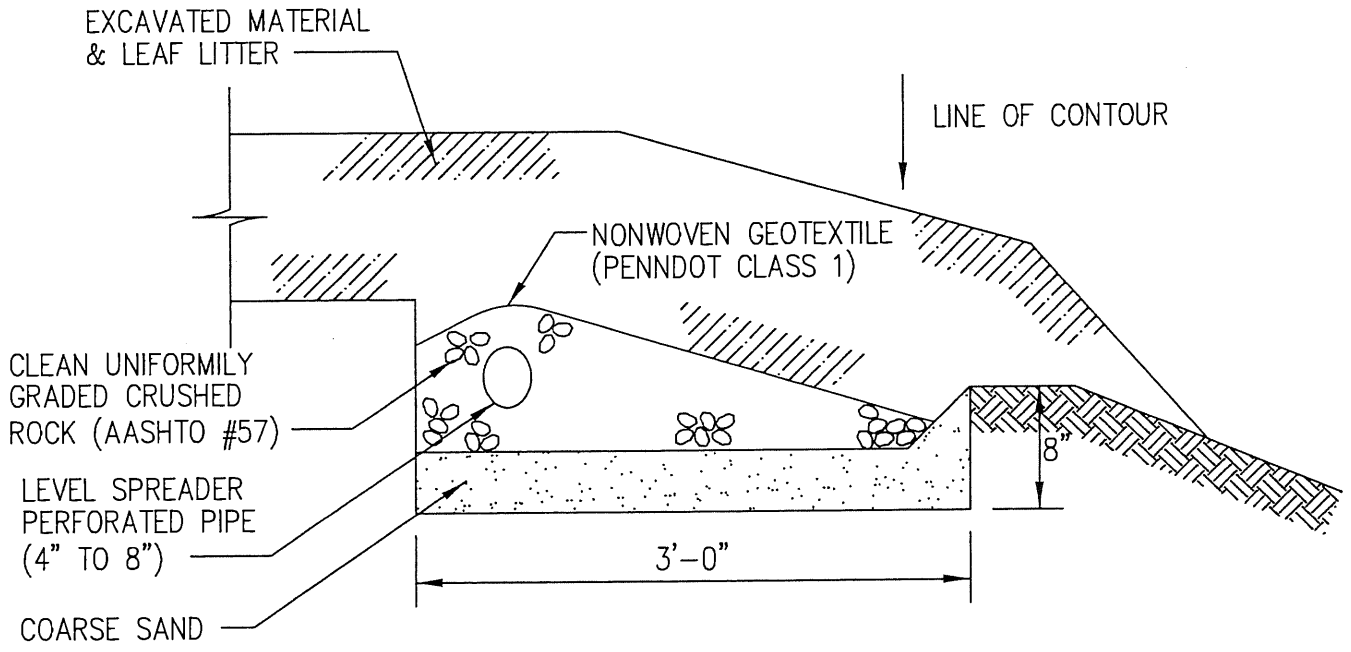
EDGE OF PAVEMENT LEVEL SPREADER

NOTE:

1. LEVEL SPREADERS MUST BE LEVEL.
2. LEVEL SPREADERS SHALL SAFELY DIFFUSE THE 10 YEAR STORM PEAK DATE WITH NON-EROSIVE DISCHARGE VELOCITIES.

STANDARD DETAIL LEVEL SPREADER, TYPE 2 FRANKLIN PARK BOROUGH	FRANKLIN PARK BOROUGH 2344 WEST INGOMAR ROAD PITTSBURGH, PA 15237 (412) 364-4115 FAX (412) 366-4406 DETAIL No. FP-65

STANDARD DETAIL
LEVEL SPREADER, TYPE 3
FRANKLIN PARK BOROUGH



TYPE 3

NOTE:

1. FOLLOW INFILTRATION CRITERIA FOUND IN APPENDIX C OF PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
2. DRAW DOWN SHOULD CONFORM TO CHAPTER 3 OF PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
3. MINIMUM DEPTH OF FILTERING MEDIA IS 12 INCHES.
4. PRETREATMENT FOR DEBRIS AND SEDIMENT MAY BE NEEDED BASED ON ANTICIPATED INFLOW CHARACTERISTICS.
5. POSITIVE OVERFLOW REQUIRED.

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
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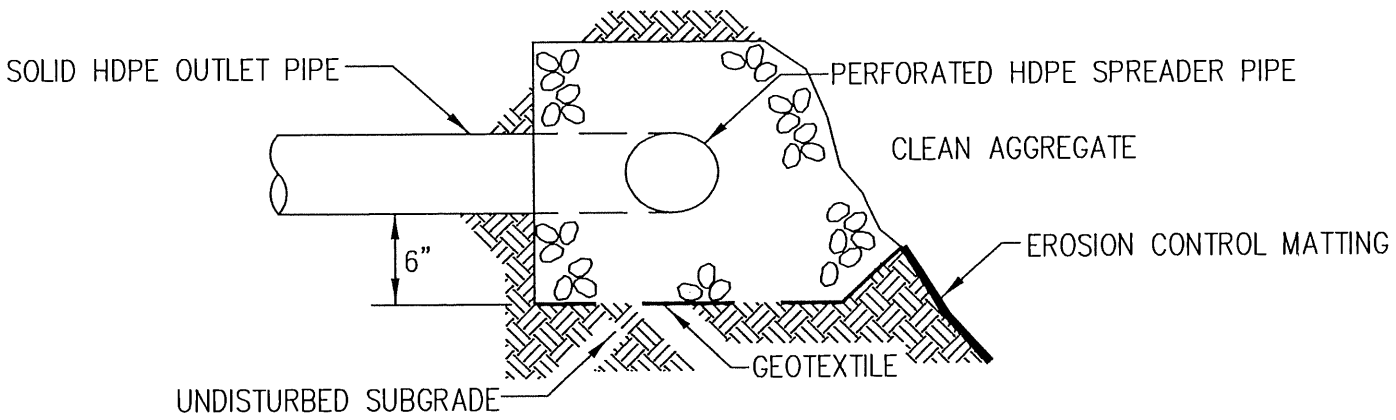
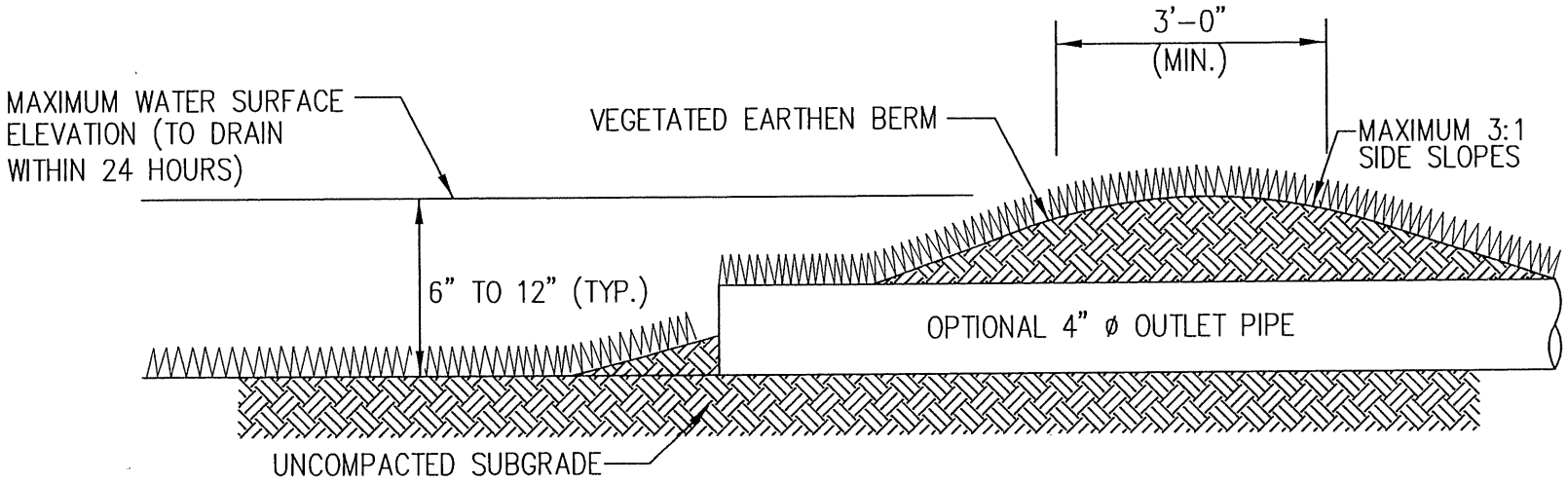
DETAIL No. FP-66

NOTE: CONSTRUCT BERM WITH SAND, GRAVEL AND SANDY LOAM TO PROMOTE VEGETATIVE COVER





NOTE:

1. LEVEL SPREADERS MUST BE LEVEL.
2. LEVEL SPREADERS SHALL SAFELY DIFFUSE THE 10 YEAR STORM PEAK DATE WITH NON-EROSIVE DISCHARGE VELOCITIES.
3. IF OPTIONAL 4" DIAMETER PIPE IS USED, EARTHEN BERM SHOULD BE 12" IN FEIGHT.

STANDARD DETAIL
LEVEL SPREADER, TYPE 4
FRANKLIN PARK BOROUGH

DETAIL No. FP-67

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
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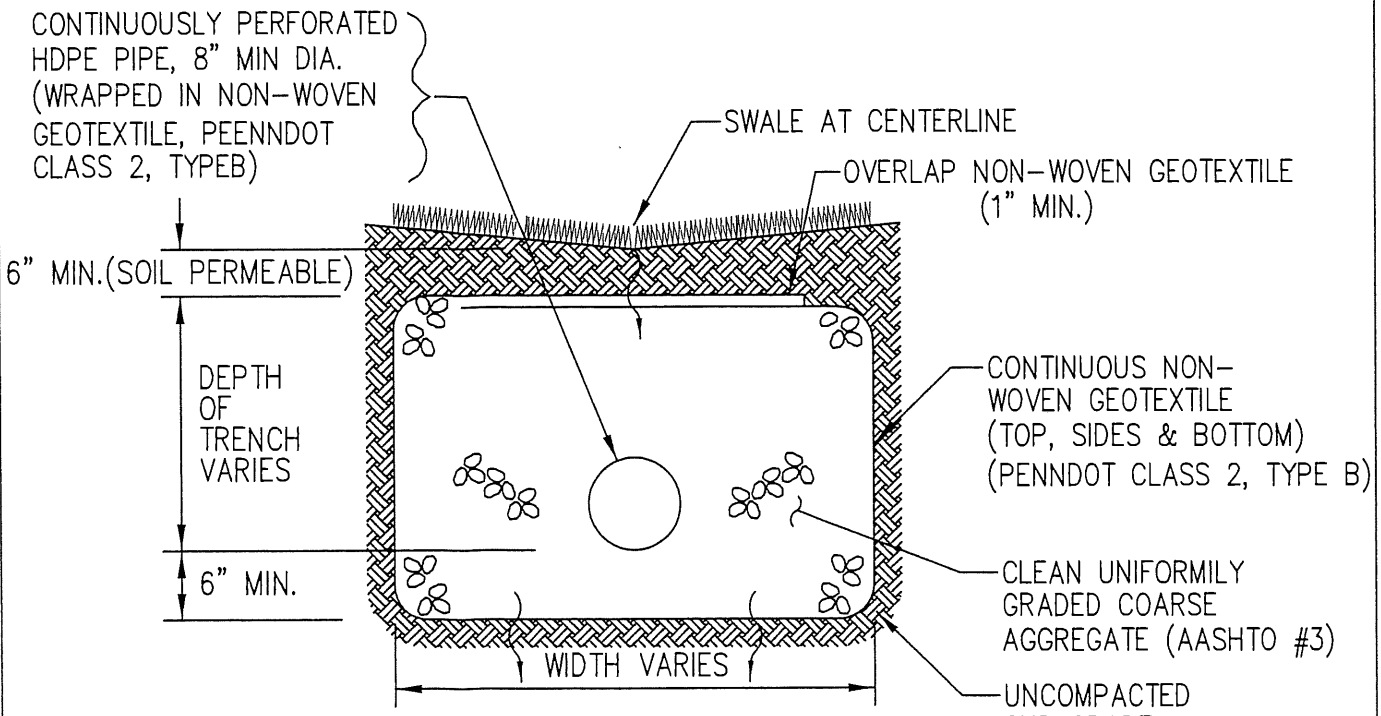
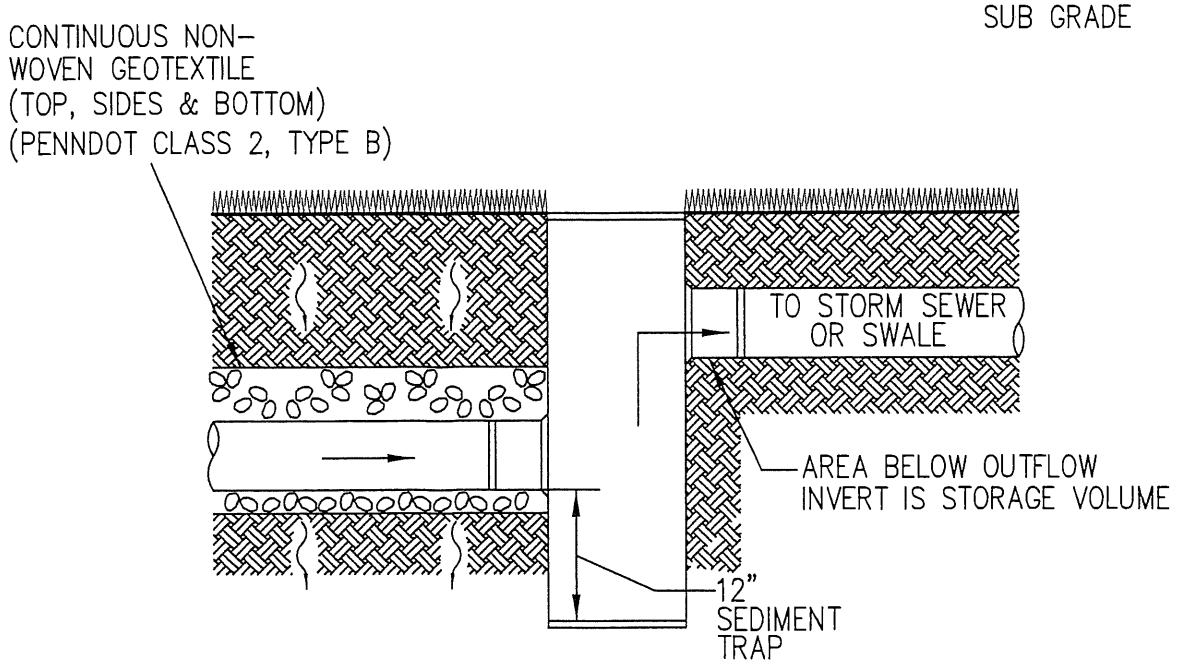
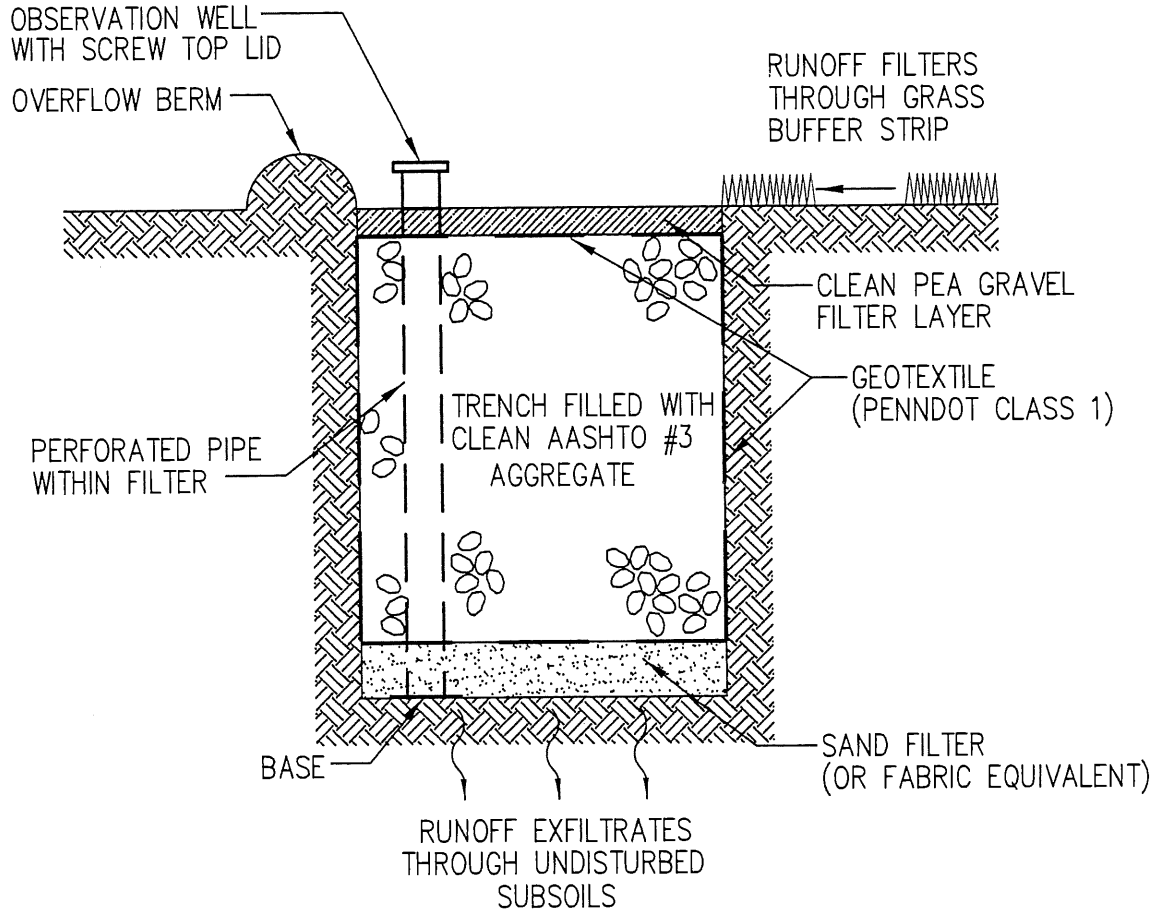




NOTE:

1. BOTTOM OF TRENCH SHALL BE LEVEL.
2. TRENCH WIDTH SHALL BE 3 FEET TO 8 FEET.
3. MAINTAIN MINIMUM COVER OVER PIPE.

STANDARD DETAIL INFILTRATION TRENCH FRANKLIN PARK BOROUGH	FRANKLIN PARK BOROUGH 2344 WEST INGOMAR ROAD PITTSBURGH, PA 15237 (412) 364-4115 FAX (412) 366-4406 DETAIL No. FP-68



NOTE:

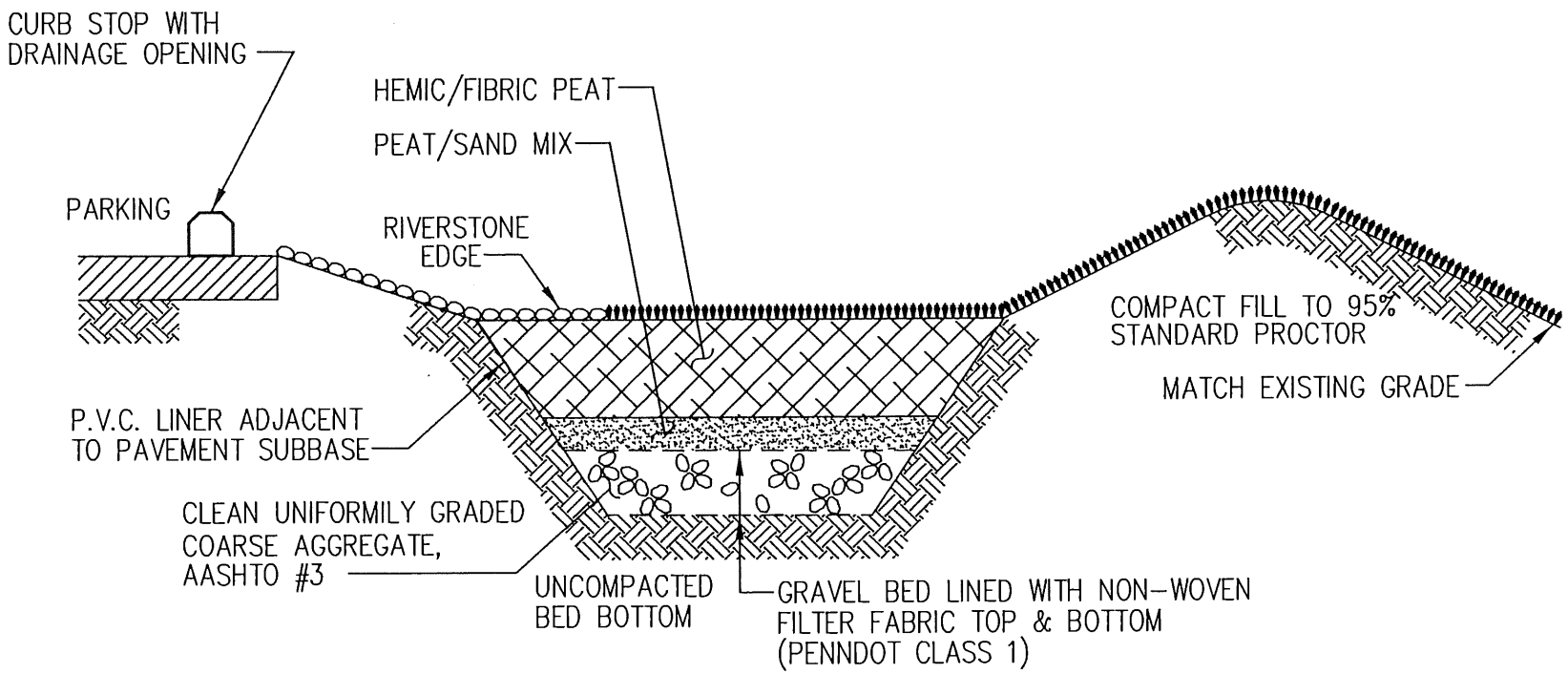
1. FOLLOW INFILTRATION CRITERIA FOUND IN PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
2. DRAW DOWN SHOULD CONFORM TO CHAPTER 3 OF PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
3. MINIMUM DEPTH OF FILTERING MEDIA IS 12 INCHES.
4. PRETREATMENT FOR DEBRIS AND SEDIMENT MAY BE NEEDED BASED ON ANTICIPATED INFLOW CHARACTERISTICS.
5. POSITIVE OVERFLOW REQUIRED.

STANDARD DETAIL
INFILTRATION FILTER
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-69

NOTE: PEAT BED TO BE PLANTED WITH REED CANARY GRASS OR ROUGH STALKED BLUEGRASS AT A RATE OF 20LBS. /ACRE



NOTE:

1. FOLLOW INFILTRATION CRITERIA FOUND IN PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
2. DRAW DOWN SHOULD CONFORM TO CHAPTER 3 OF PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
3. MINIMUM DEPTH OF FILTERING MEDIA IS 12 INCHES.
4. PRETREATMENT FOR DEBRIS AND SEDIMENT MAY BE NEEDED BASED ON ANTICIPATED INFLOW CHARACTERISTICS.
5. POSITIVE OVERFLOW REQUIRED.

STANDARD DETAIL
STORMWATER PEAT FILTER
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
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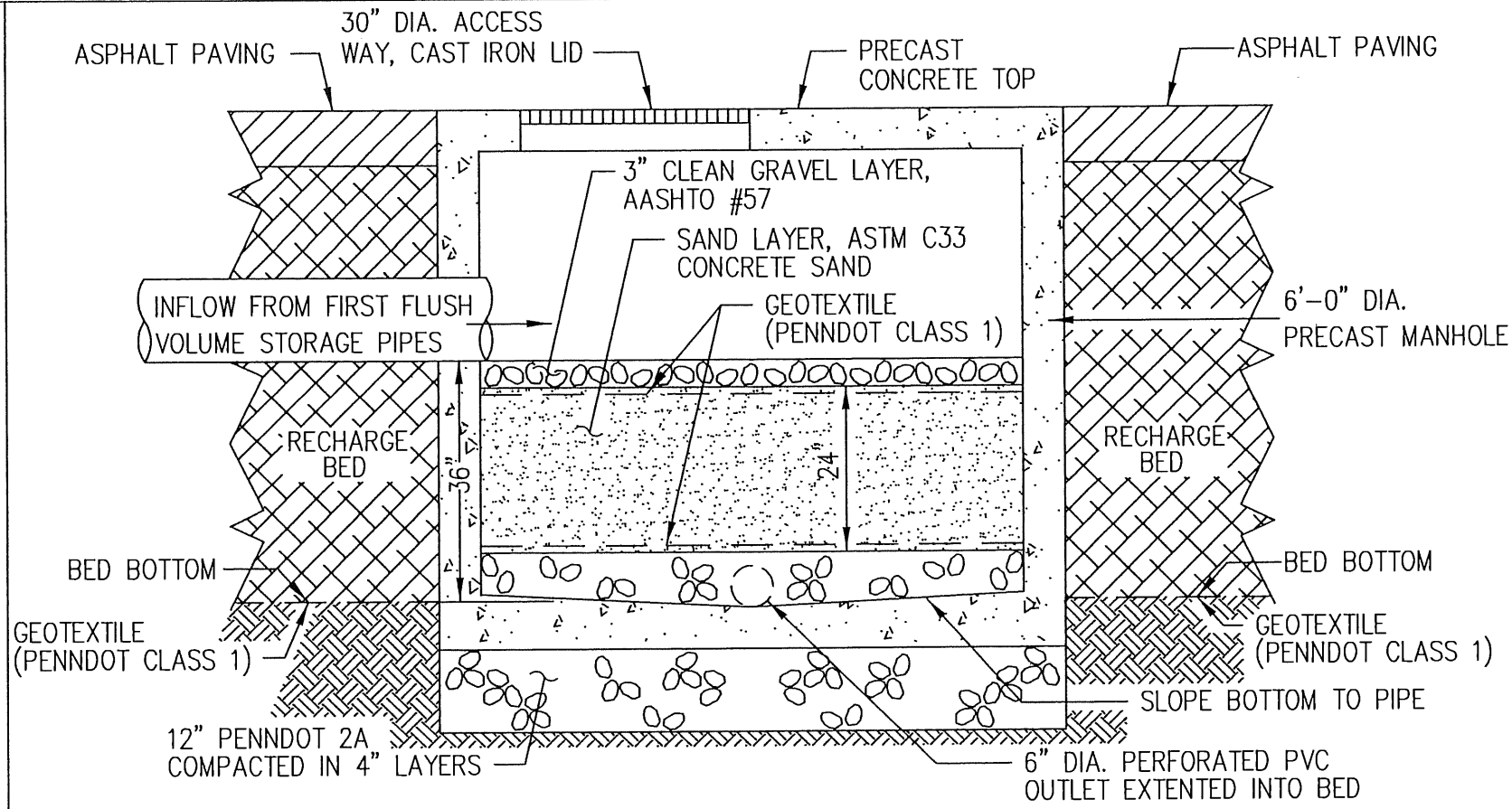
DETAIL No. FP-70

STANDARD DETAIL
SMALL SUBSURFACE FILTER
FRANKLIN PARK BOROUGH



NOTE:

1. FOLLOW INFILTRATION CRITERIA FOUND IN PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
2. DRAW DOWN SHOULD CONFORM TO CHAPTER 3 OF PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
3. MINIMUM DEPTH OF FILTERING MEDIA IS 12 INCHES.
4. PRETREATMENT FOR DEBRIS AND SEDIMENT MAY BE NEEDED BASED ON ANTICIPATED INFLOW CHARACTERISTICS.
5. POSITIVE OVERFLOW REQUIRED.

DETAIL No. FP-71

FRANKLIN PARK BOROUGH
2344 WEST NEWMAR ROAD
PITTSBURGH, PA 15237
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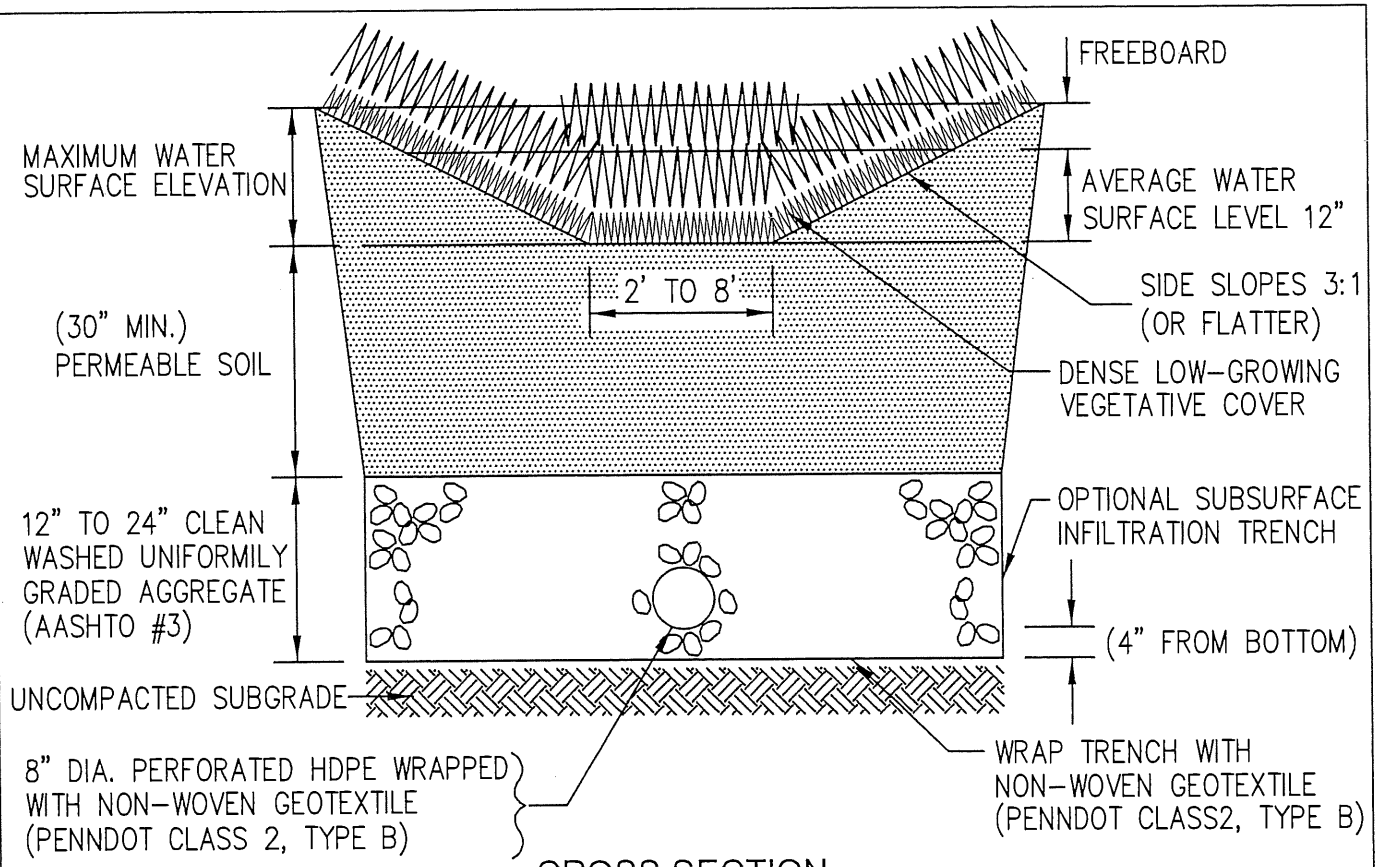
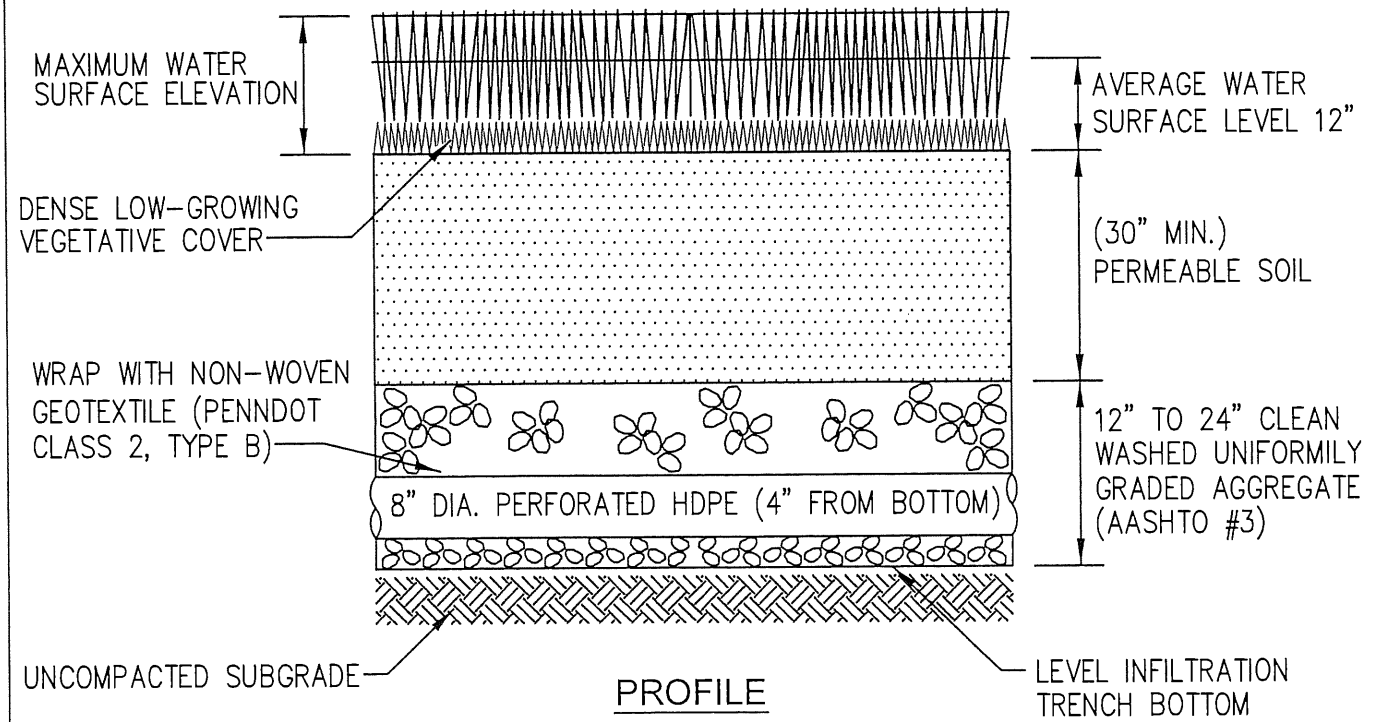


CROSS SECTION



PROFILE

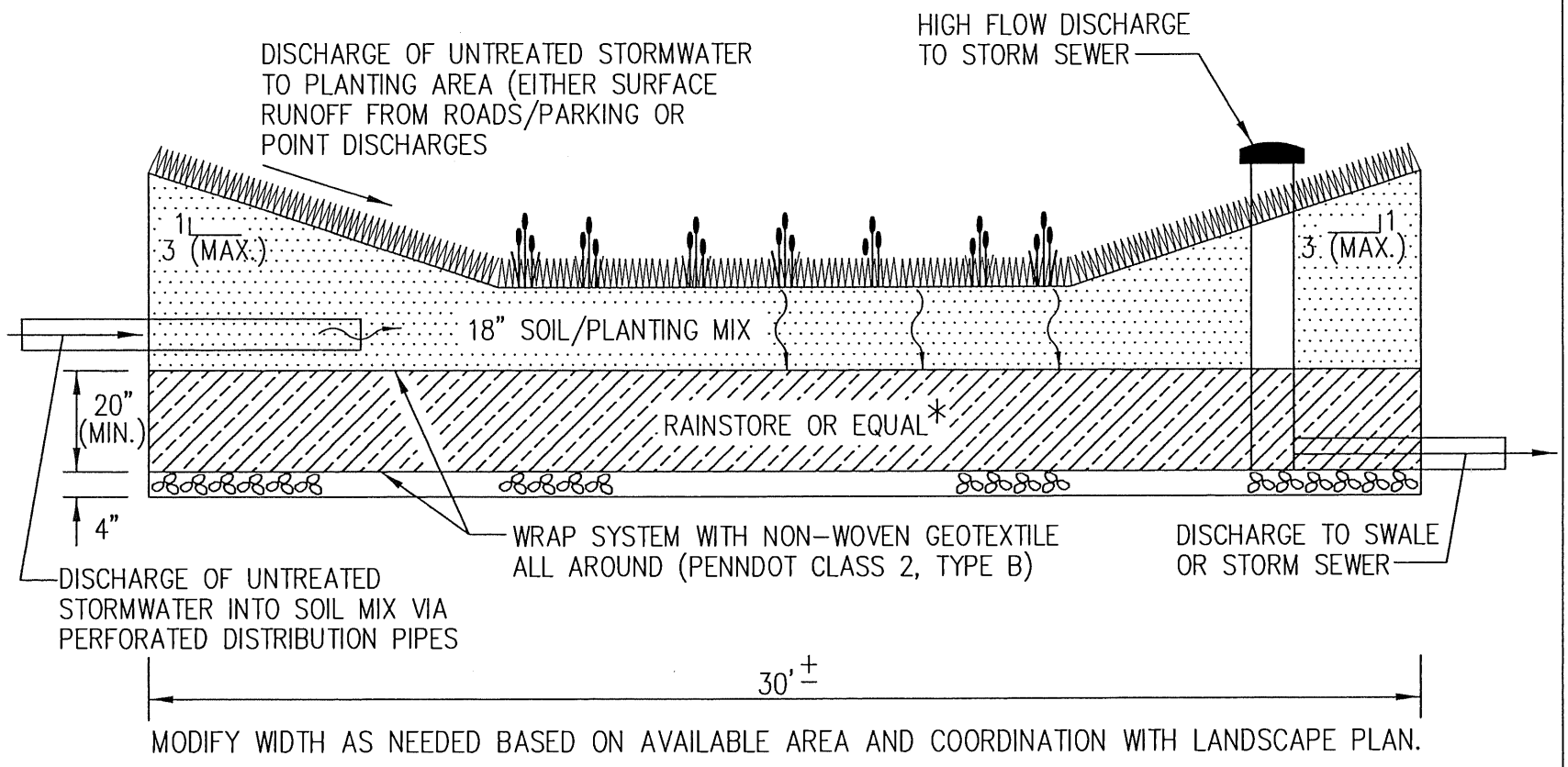
NOTE: LONGITUDINAL SLOPE FROM 1% TO 6%

STANDARD DETAIL
VEGETATED SWALE, TYPE 1
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
(412) 364-4115 FAX (412) 366-4406

DETAIL No. FP-72

STANDARD DETAIL
VEGETATED SWALE WITH INFILTRATION TRENCH, TYPE 2
FRANKLIN PARK BOROUGH



NOTE: RAINSTORE SYSTEM CAN SERVE AS CISTERN FOR IRRIGATION NEEDS AS DESIRED.
* PROPOSED SYSTEM MUST PROVIDE REQUIRED STORAGE VOLUME.

NOTE:

1. PLANT DENSE, LOW-GROWING NATIVE VEGETATION.
2. LONGITUDINAL SLOPE FROM 1% TO 6%.
3. BOTTOM WIDTH (W) FROM 2 FEET TO 8 FEET.
4. SIDE SLOPES SHALL RANGE FROM 3:1 TO 5:1.

FRANKLIN PARK BOROUGH
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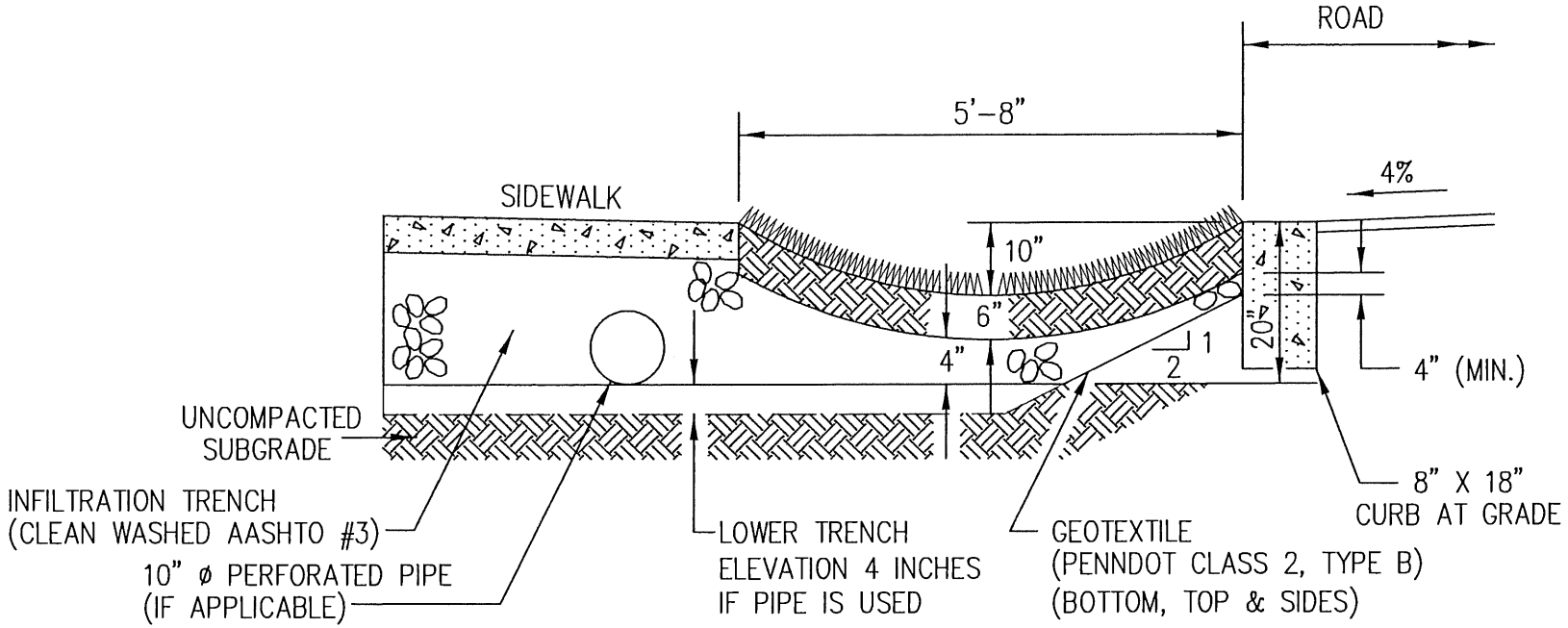
DETAIL No. FP-73

STANDARD DETAIL
VEGETATED GRASS SWALE, TYPE 3
FRANKLIN PARK BOROUGH



NOTE:

1. PLANT DENSE, LOW-GROWING NATIVE VEGETATION.
2. LONGITUDINAL SLOPE FROM 1% TO 6%.
3. BOTTOM WIDTH (W) FROM 2 FEET TO 8 FEET.
4. SIDE SLOPES SHALL RANGE FROM 3:1 TO 5:1.

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
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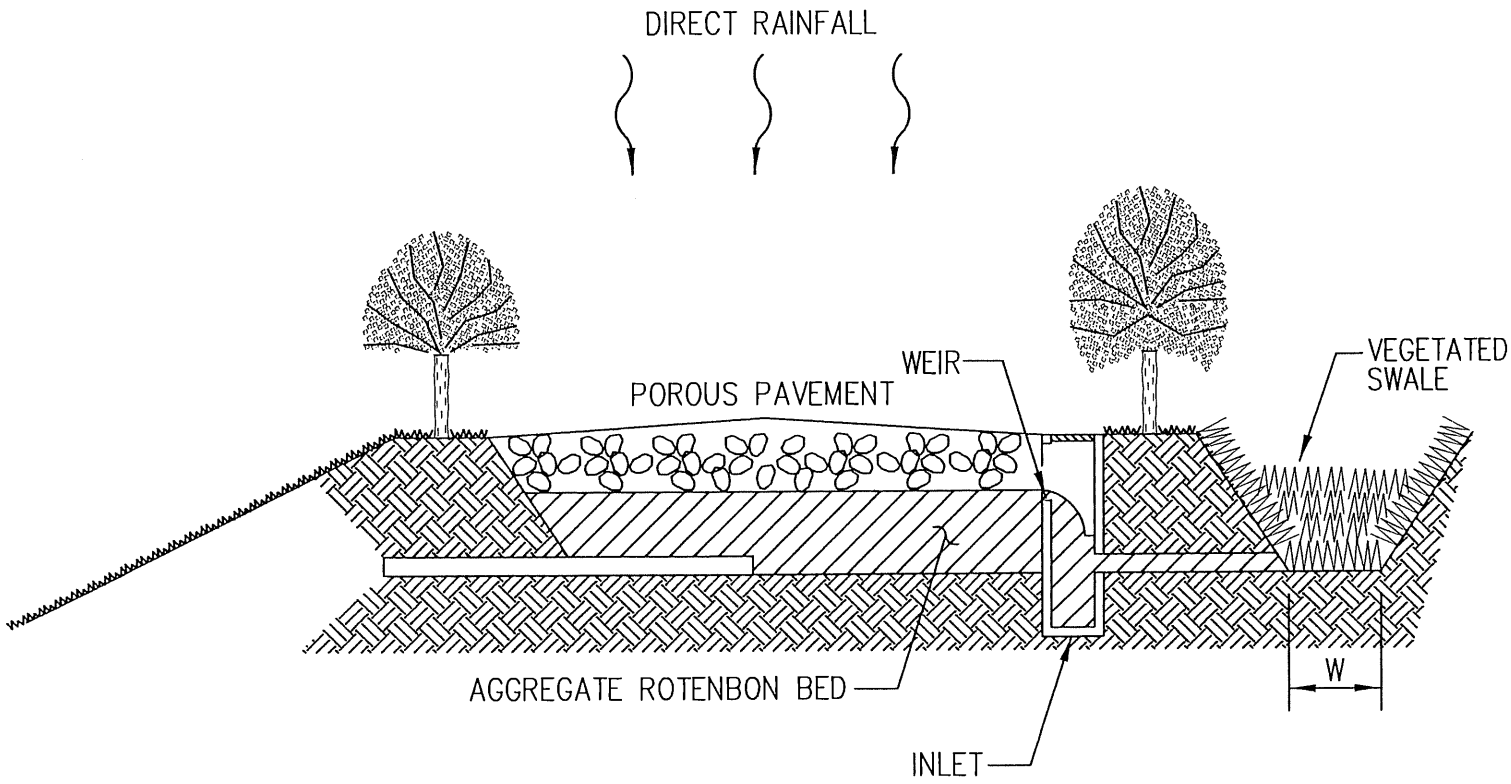
DETAIL No. FP-74

STANDARD DETAIL
VEGETATED SWALE, TYPE 4
FRANKLIN PARK BOROUGH



NOTE:

1. PLANT DENSE, LOW-GROWING NATIVE VEGETATION.
2. LONGITUDINAL SLOPE FROM 1% TO 6%.
3. BOTTOM WIDTH (W) FROM 2 FEET TO 8 FEET.
4. SIDE SLOPES SHALL RANGE FROM 3:1 TO 5:1.

FRANKLIN PARK BOROUGH
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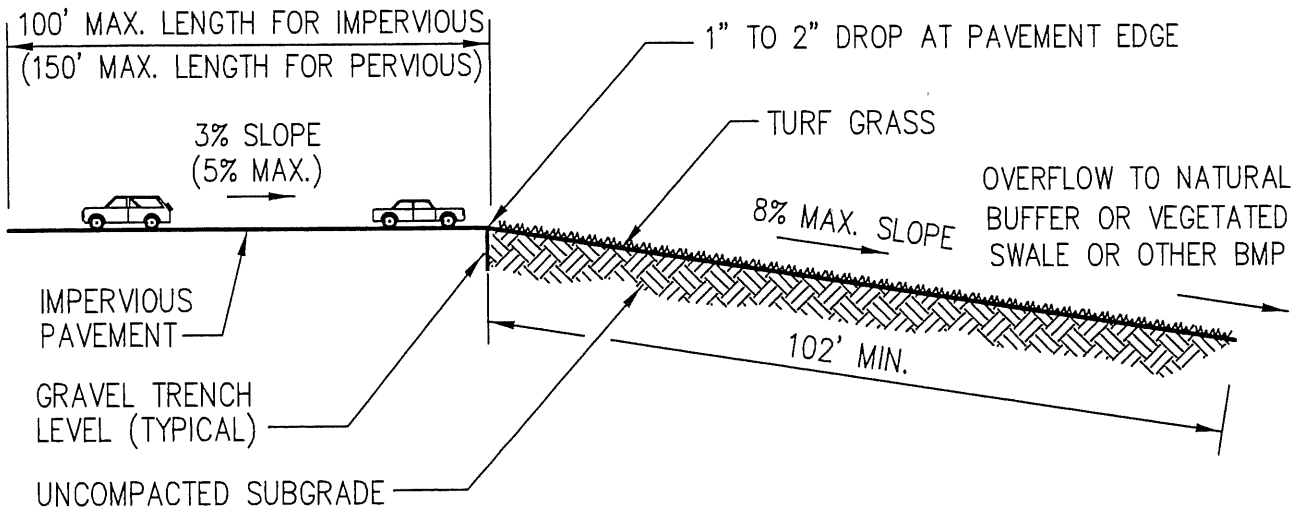
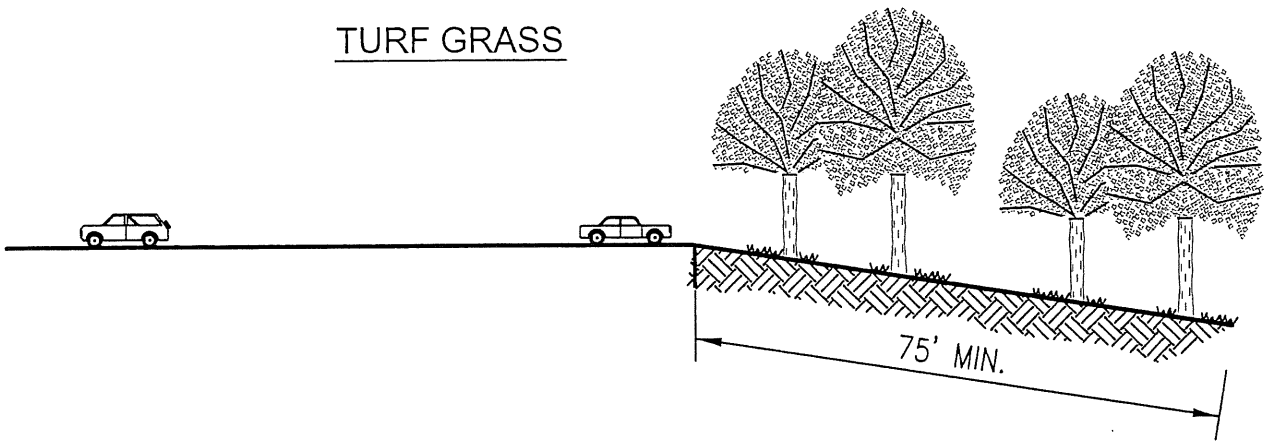
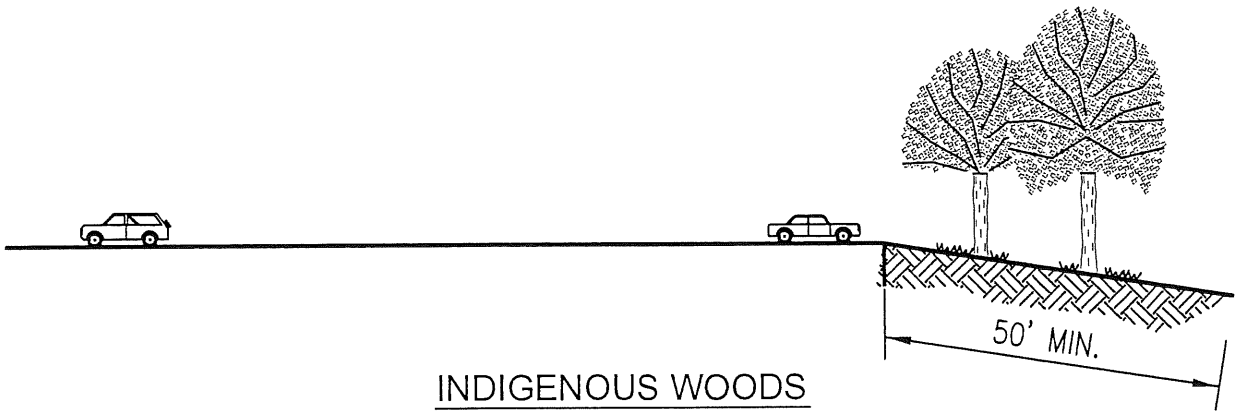
DETAIL No. FP-75



TURF GRASS



NATIVE GRASS AND PLANTED WOODS GRASS



INDIGENOUS WOODS

NOTE: TRANSVERSE SLOPE SHALL NOT EXCEED 1%.

STANDARD DETAIL
FILTER STRIP FOR NATURAL RESTORATION
FRANKLIN PARK BOROUGH

FRANKLIN PARK BOROUGH
2344 WEST INGOMAR ROAD
PITTSBURGH, PA 15237
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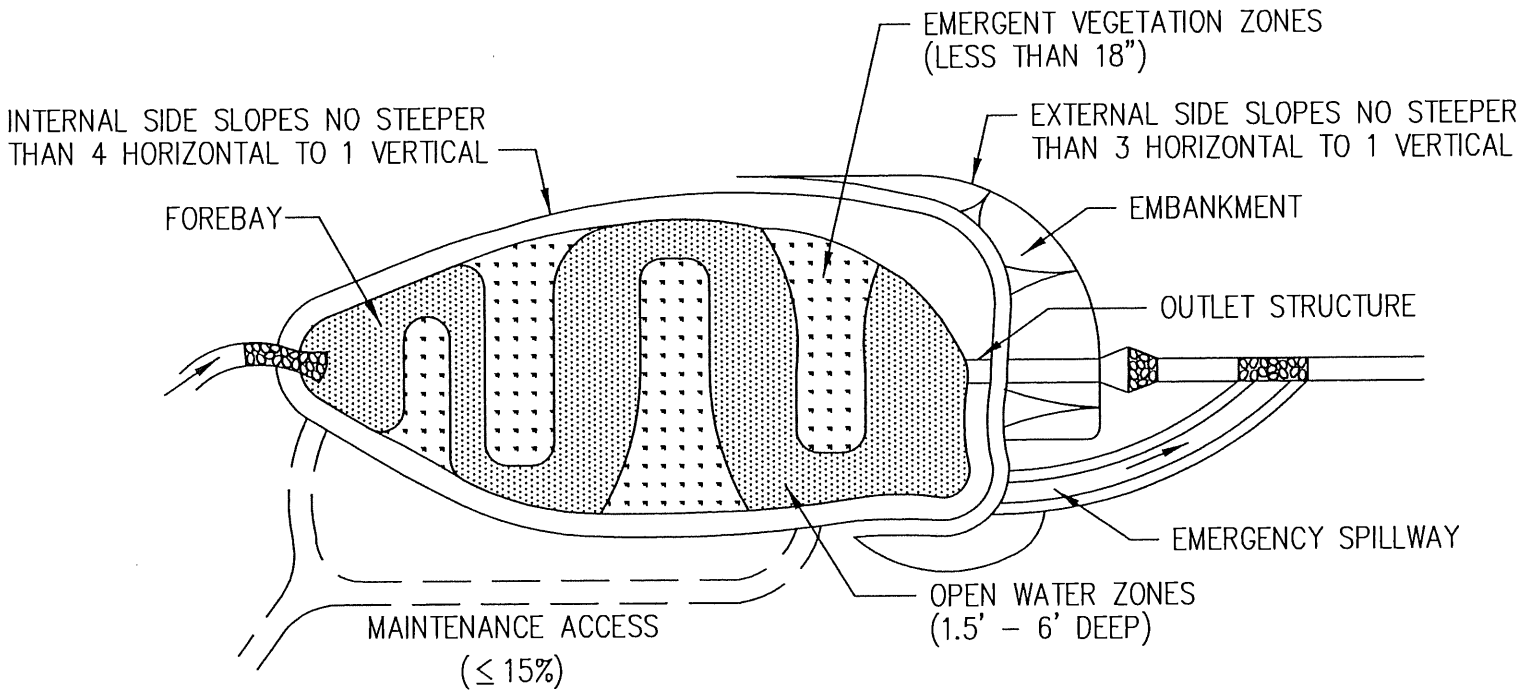
DETAIL No. FP-76

STANDARD DETAIL
TYPE 1 CONSTRUCTED WETLAND
FRANKLIN PARK BOROUGH



NOTE:

1. DRAINAGE AREA GREATER THAN FIVE ACRES.
2. NEEDS PERENNIAL WATER SOURCE.
3. ADJUSTABLE PERMANENT POOL WATER SURFACE ELEVATION DEVICE.
4. PLANTING DESIGN MUST BE PREPARED, SIGNED, AND SEALED BY A REGISTERED LANDSCAPE ARCHITECT.

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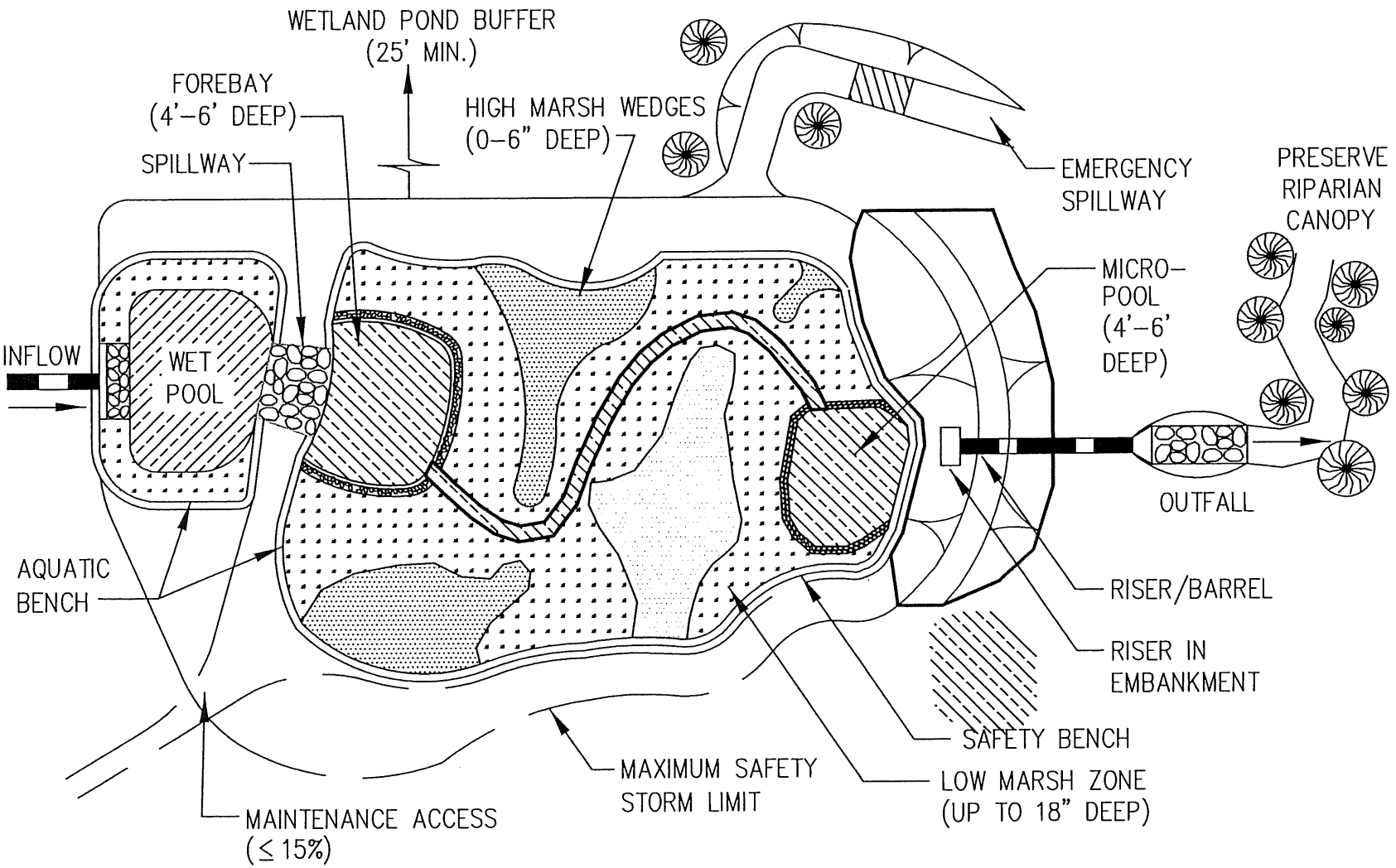
DETAIL No. FP-77

STANDARD DETAIL
TYPE 2 CONSTRUCTED WETLAND
FRANKLIN PARK BOROUGH



NOTE:

1. DRAINAGE AREA GREATER THAN FIVE ACRES.
2. NEEDS PERENNIAL WATER SOURCE.
3. ADJUSTABLE PERMANENT POOL WATER SURFACE ELEVATION DEVICE.
4. PLANTING DESIGN MUST BE PREPARED, SIGNED, AND SEALED BY A REGISTERED LANDSCAPE ARCHITECT.

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DETAIL No. FP-78

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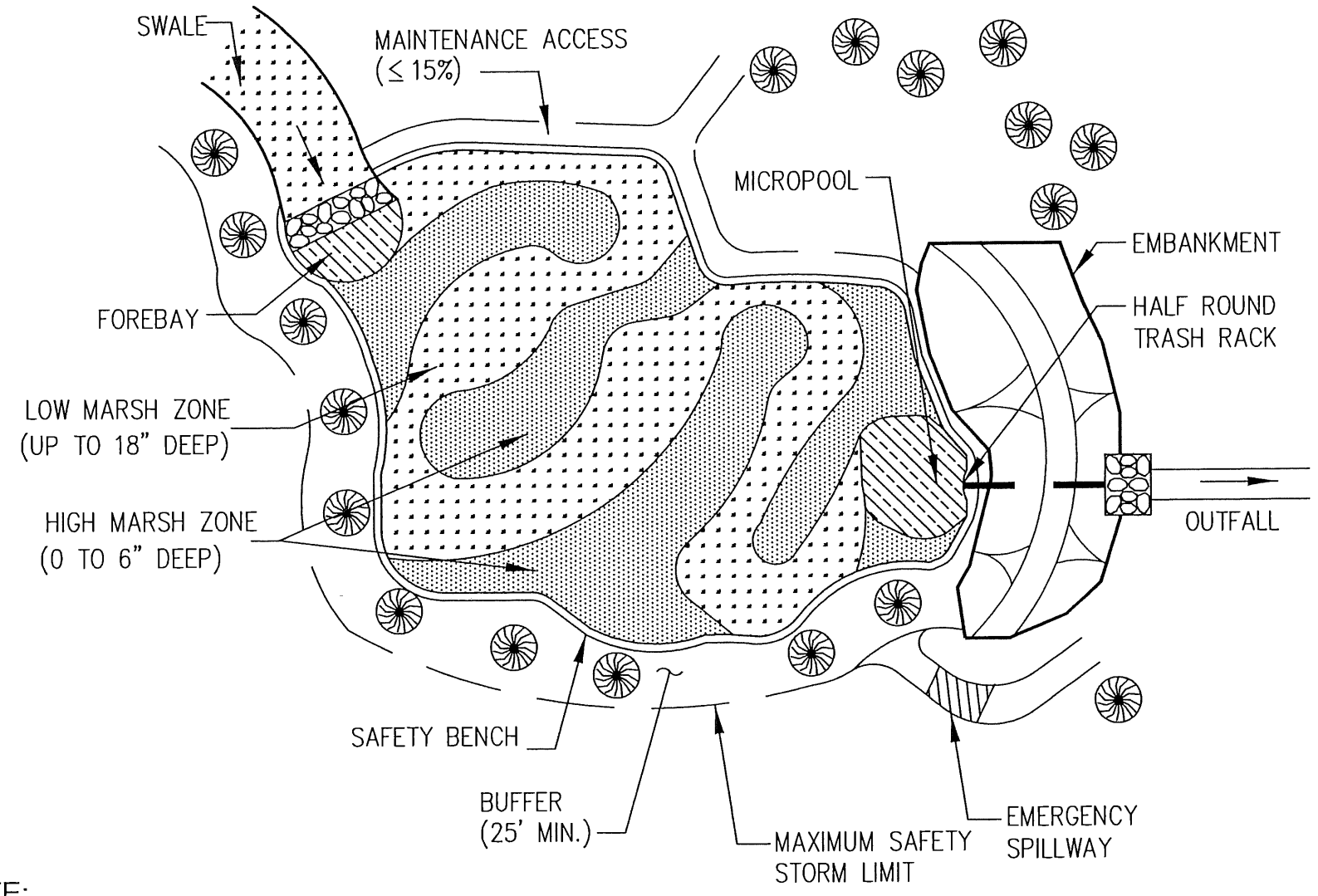
STANDARD DETAIL

TYPE 3 POCKET CONSTRUCTED WETLAND

FRANKLIN PARK BOROUGH



NOTE:

1. DRAINAGE AREA GREATER THAN FIVE ACRES.
2. NEEDS PERENNIAL WATER SOURCE.
3. ADJUSTABLE PERMANENT POOL WATER SURFACE ELEVATION DEVICE.
4. PLANTING DESIGN MUST BE PREPARED, SIGNED, AND SEALED BY A REGISTERED LANDSCAPE ARCHITECT.

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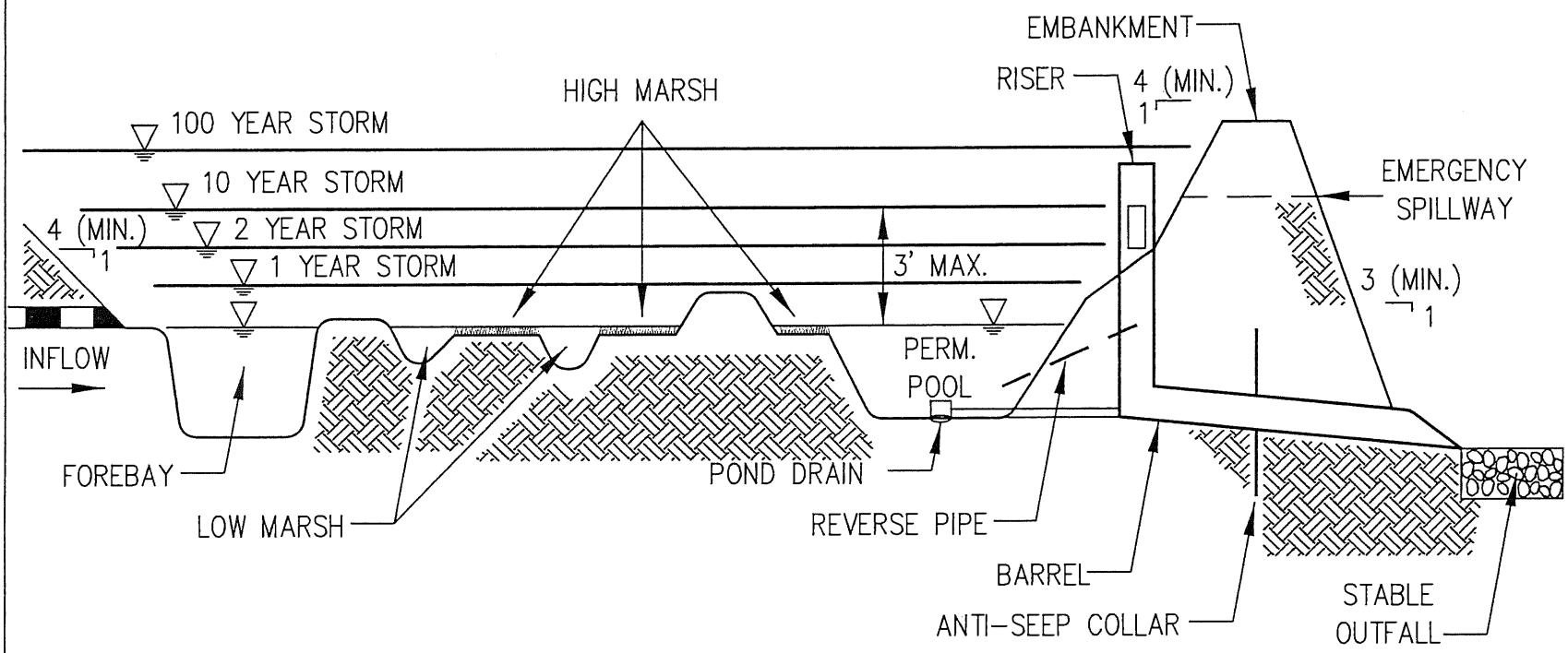
DETAIL No. FP-79

STANDARD DETAIL
TYPE 3 CONSTRUCTED WETLAND CROSS SECTION
FRANKLIN PARK BOROUGH



CROSS SECTION

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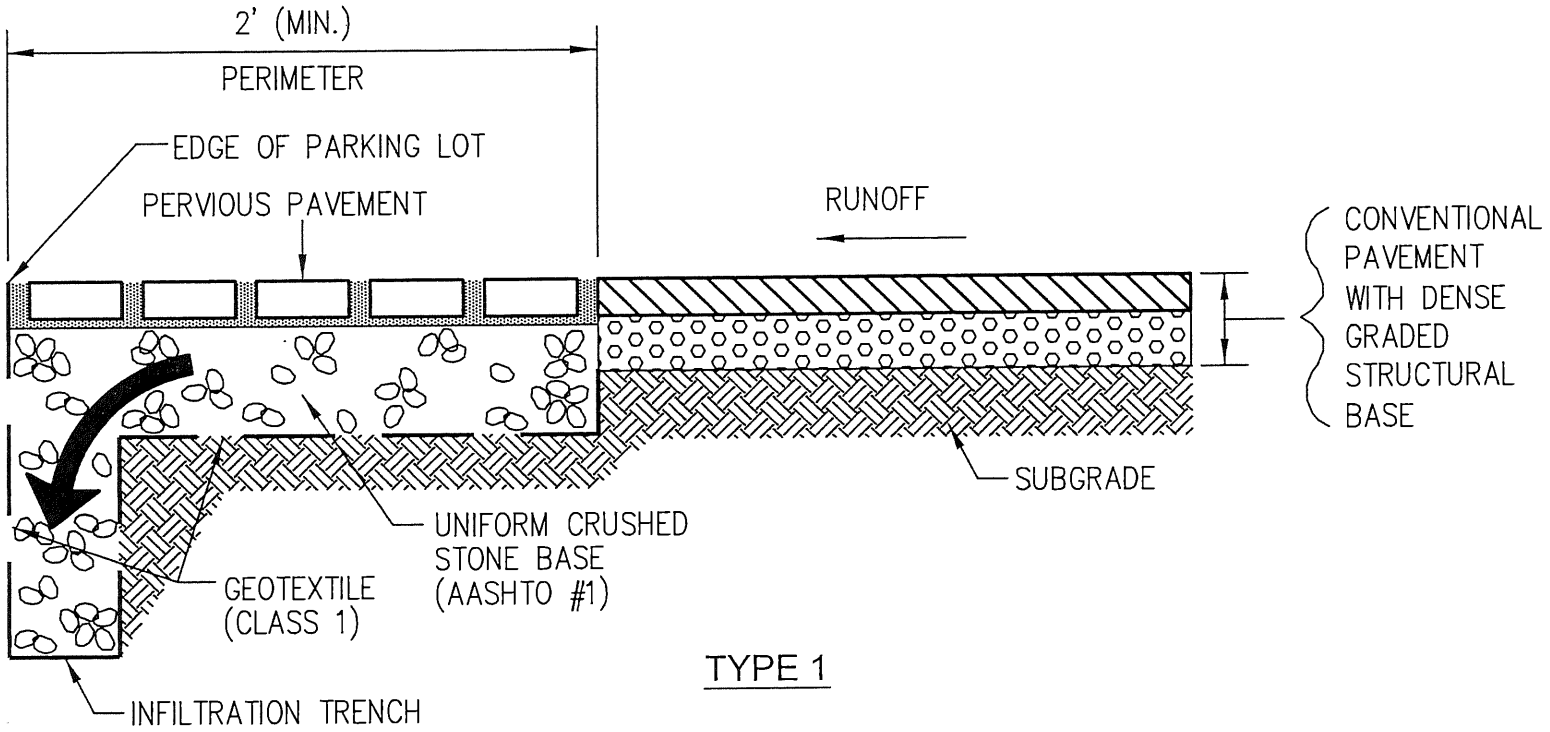
DETAIL No. FP-80

STANDARD DETAIL

TYPICAL POROUS PAVEMENT PERIMETER TYPE 1

FRANKLIN PARK BOROUGH



TYPE 1

NOTE:

1. FOLLOW INFILTRATION CRITERIA FOUND IN PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
2. DRAW DOWN SHOULD CONFORM TO CHAPTER 3 OF PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
3. MINIMUM DEPTH OF FILTERING MEDIA IS 12 INCHES.
4. PRETREATMENT FOR DEBRIS AND SEDIMENT MAY BE NEEDED BASED ON ANTICIPATED INFLOW CHARACTERISTICS.
5. POSITIVE OVERFLOW REQUIRED.
6. PERIMETER CATCHMENT SHALL BE PROVIDED FOR ALL PERVIOUS PAVEMENT PARKING LOT DESIGNS.

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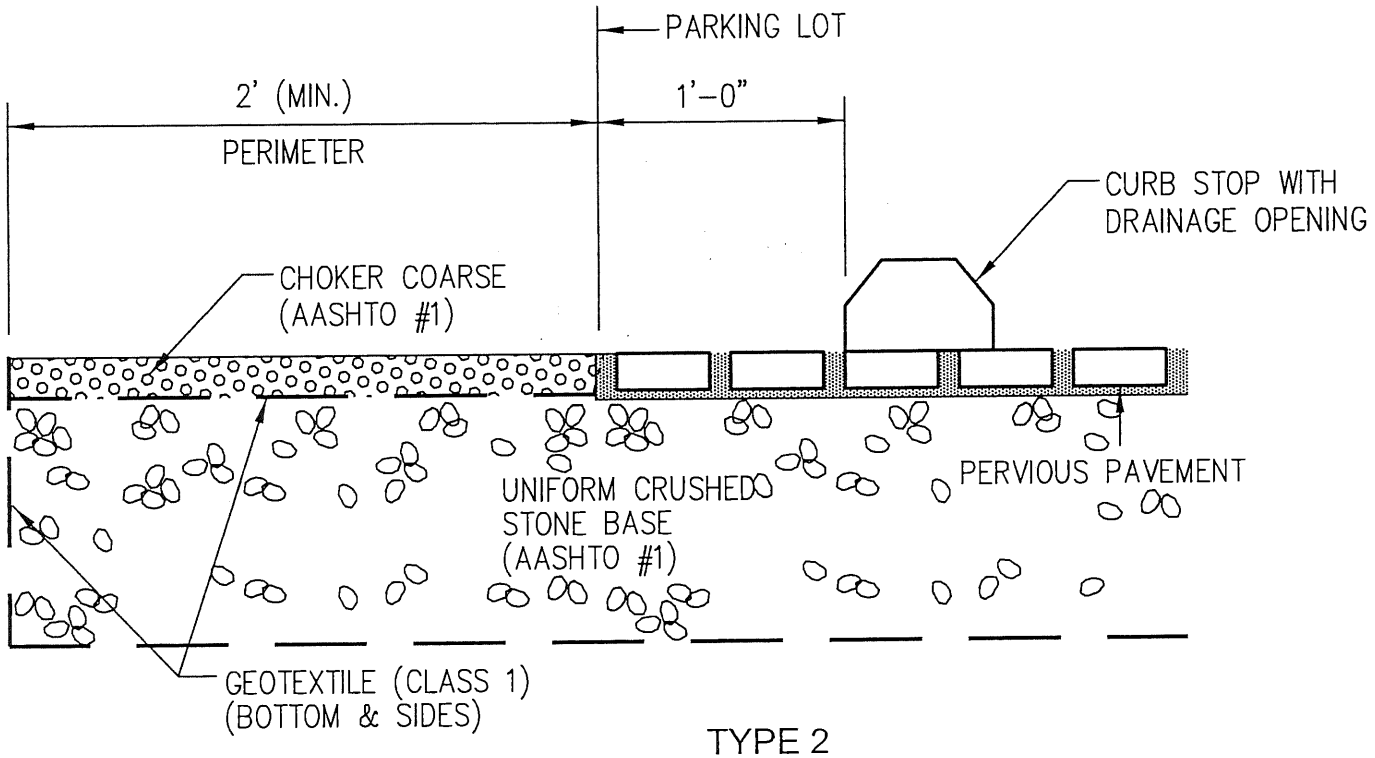
DETAIL No. FP-81

STANDARD DETAIL

TYPICAL POROUS PAVEMENT PERIMETER TYPE 2

FRANKLIN PARK BOROUGH



TYPE 2

NOTE:

1. FOLLOW INFILTRATION CRITERIA FOUND IN APPENDIX C OF PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
2. DRAW DOWN SHOULD CONFORM TO CHAPTER 3 OF PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
3. MINIMUM DEPTH OF FILTERING MEDIA IS 12 INCHES.
4. PRETREATMENT FOR DEBRIS AND SEDIMENT MAY BE NEEDED BASED ON ANTICIPATED INFLOW CHARACTERISTICS.
5. POSITIVE OVERFLOW REQUIRED.
6. PERIMETER CATCHMENT SHALL BE PROVIDED FOR ALL PERVIOUS PAVEMENT PARKING LOT DESIGNS.

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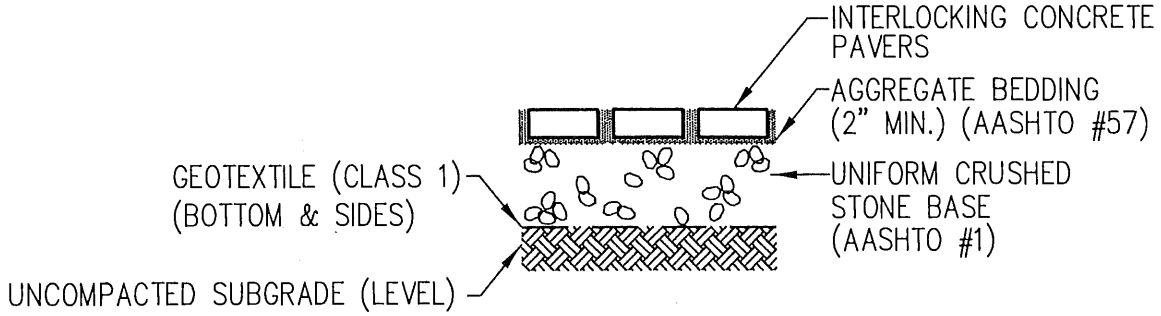
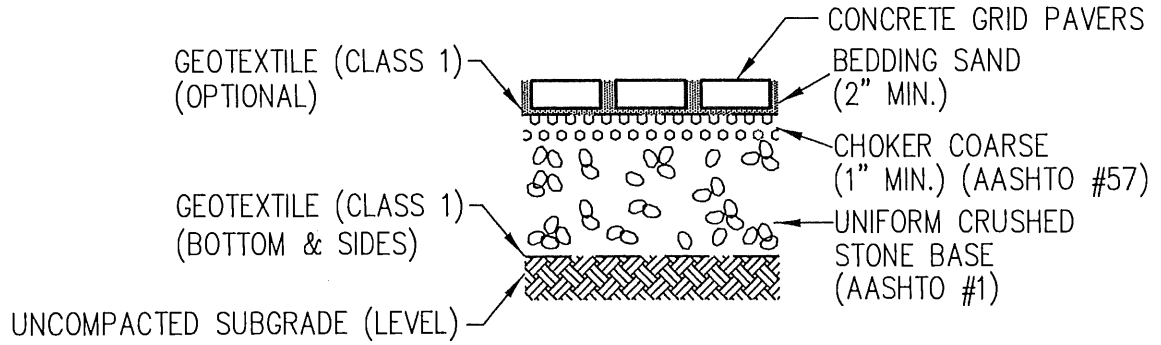
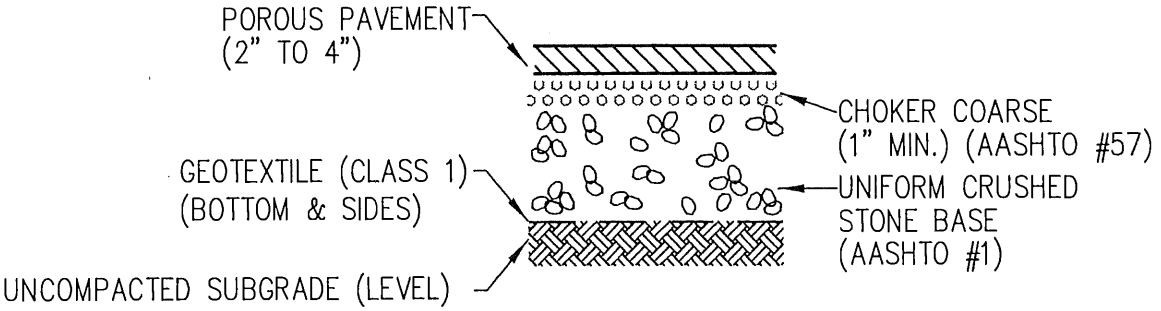
DETAIL No. FP-82



INTERLOCKING CONCRETE PAVERS
CROSS SECTION



CONCRETE GRID PAVERS
CROSS SECTION



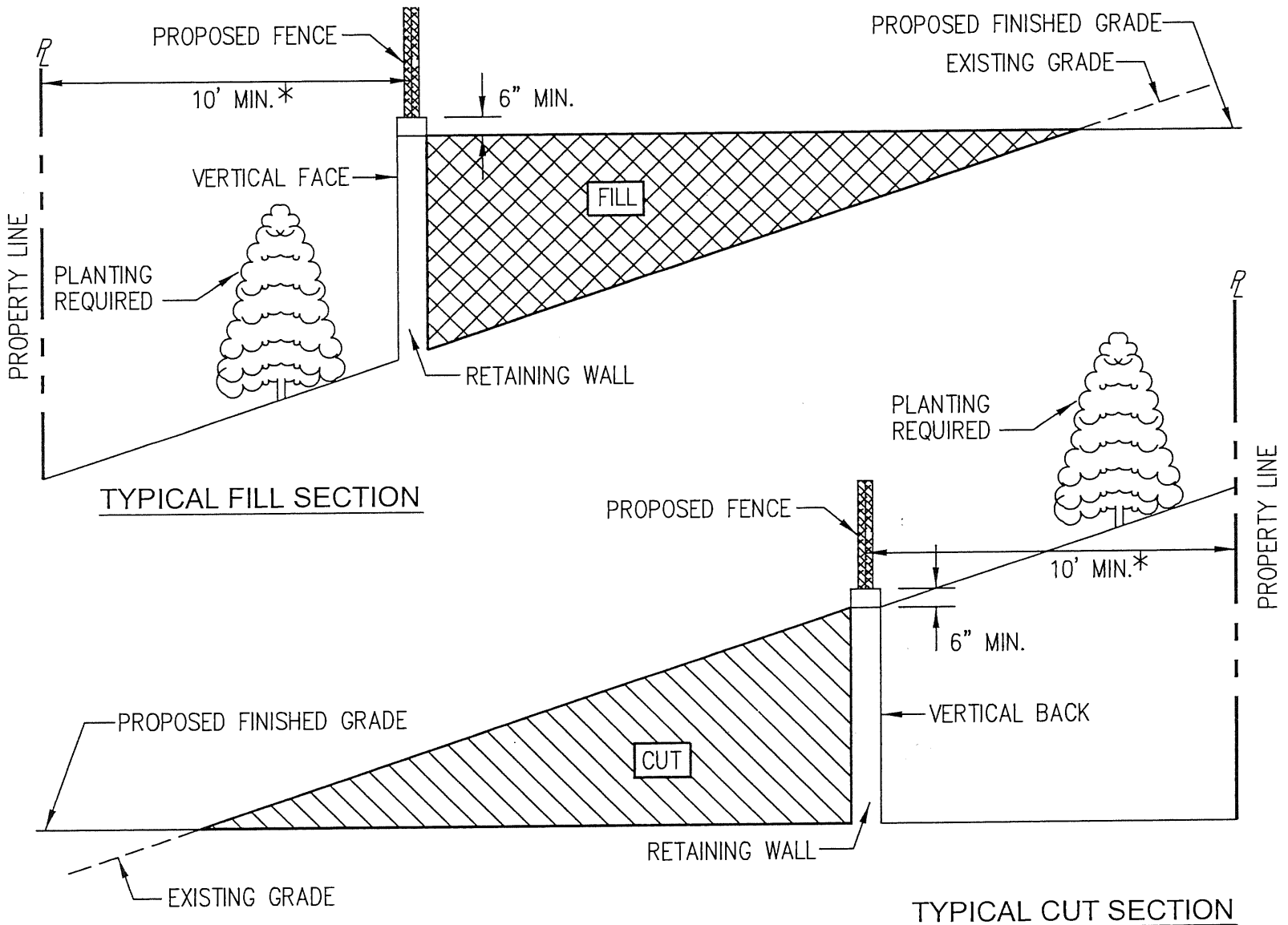
POROUS PAVEMENT
CROSS SECTION

NOTE:

1. FOLLOW INFILTRATION CRITERIA FOUND IN PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
2. DRAW DOWN SHOULD CONFORM TO CHAPTER 3 OF PA STORMWATER BEST MANAGEMENT PRACTICES MANUAL.
3. MINIMUM DEPTH OF FILTERING MEDIA IS 12 INCHES.
4. PRETREATMENT FOR DEBRIS AND SEDIMENT MAY BE NEEDED BASED ON ANTICIPATED INFLOW CHARACTERISTICS.
5. POSITIVE OVERFLOW REQUIRED.

STANDARD DETAIL PERMEABLE PAVEMENT OPTIONS FRANKLIN PARK BOROUGH	FRANKLIN PARK BOROUGH 2344 WEST INGOMAR ROAD PITTSBURGH, PA 15237 (412) 364-4115 FAX (412) 366-4406 DETAIL No. FP-83

STANDARD DETAIL
CONCEPTUAL SECTION THROUGH RETAINING WALLS
FRANKLIN PARK BOROUGH



*NOTE: SETBACK MUST INCLUDE LENGTH REQUIRED FOR DEADMAN, REINFORCEMENT GEOTEXTILE GRID, ETC.

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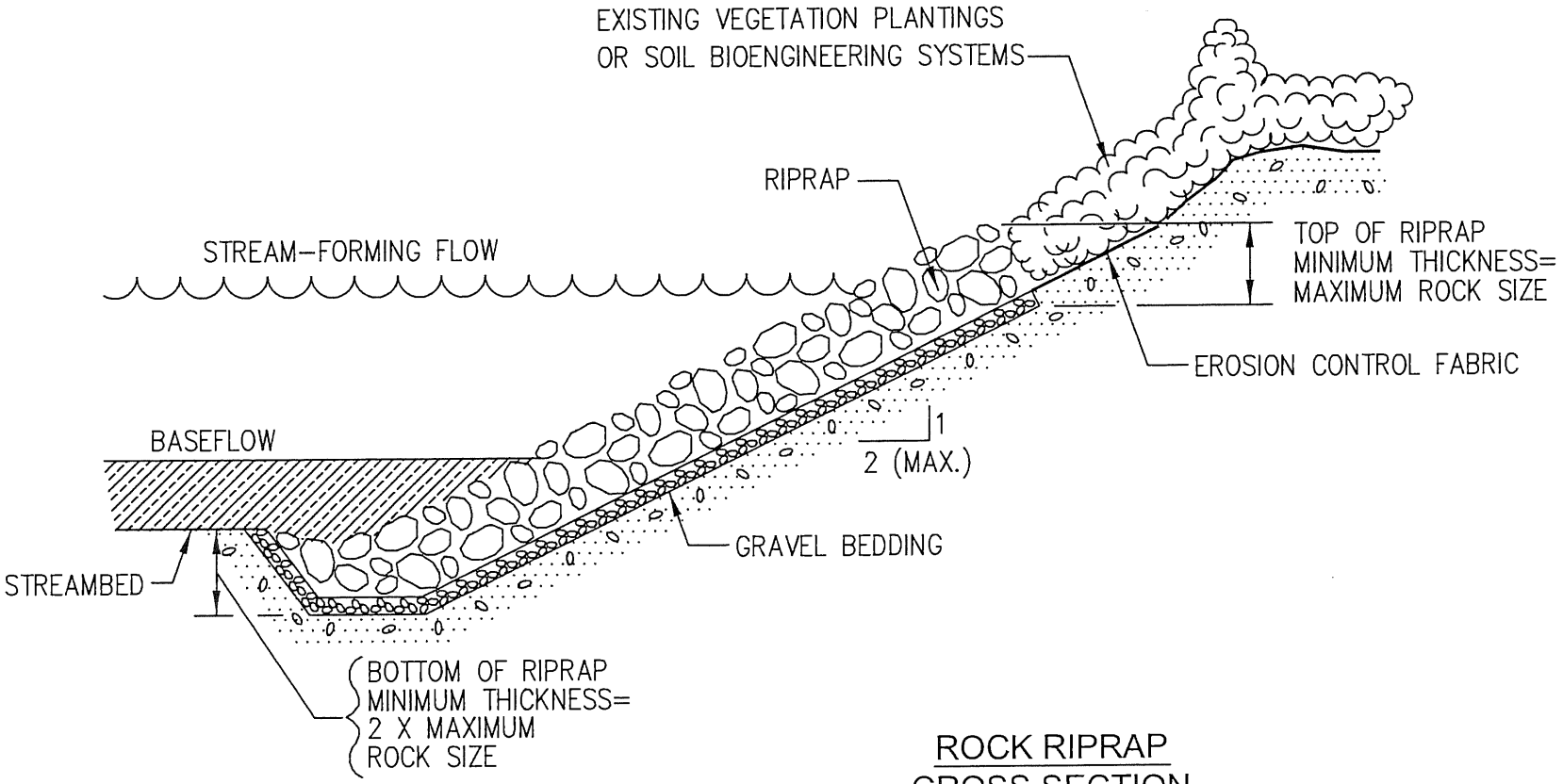
DETAIL No. FP-84

STANDARD DETAIL
STREAM BANK STABILIZATION ROCK RIPRAP
FRANKLIN PARK BOROUGH



ROCK RIPRAP
CROSS SECTION

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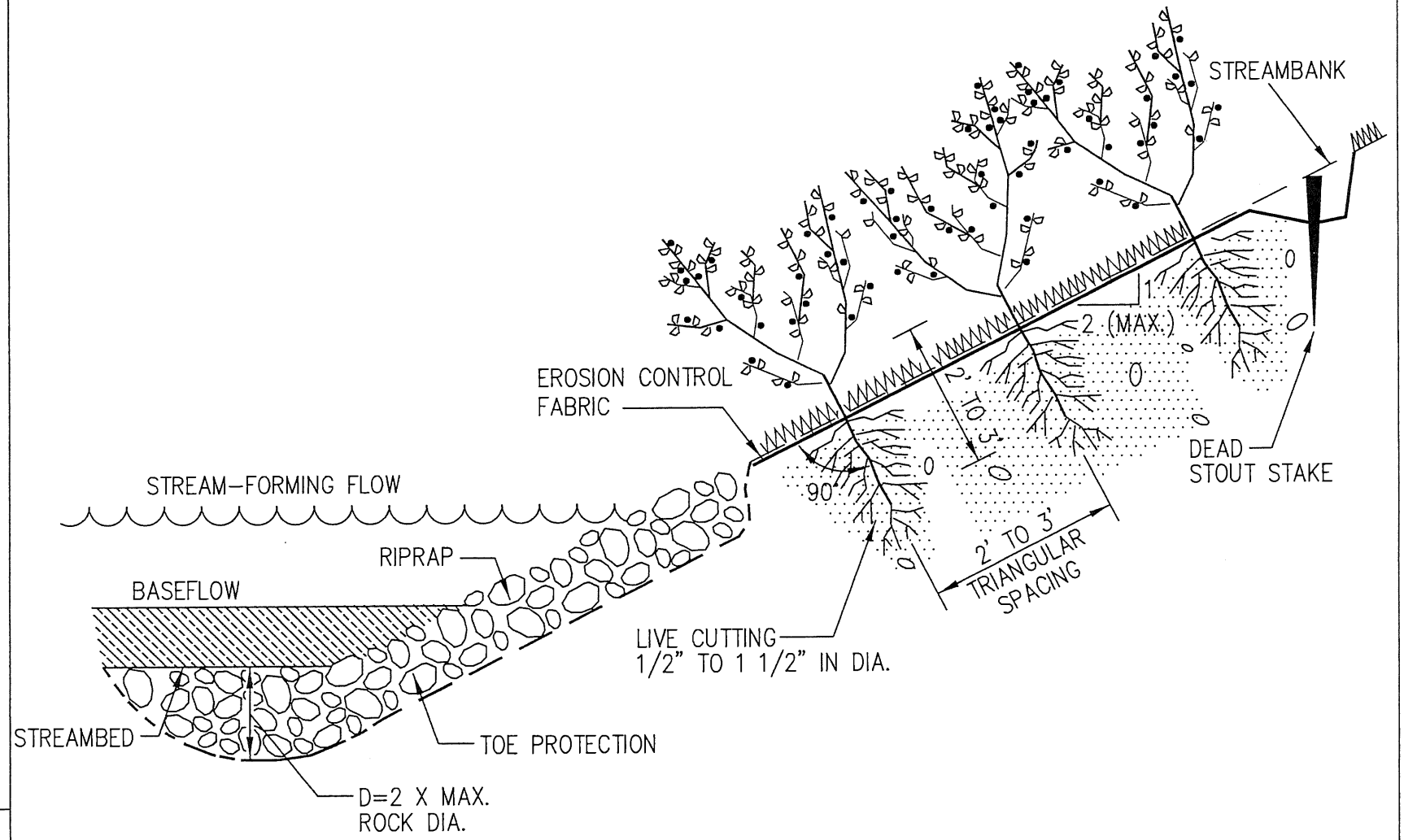
DETAIL No. FP-85

STANDARD DETAIL
STREAM BANK STABILIZATION LIVE STAKE
FRANKLIN PARK BOROUGH



LIVE STAKE
CROSS SECTION

NOTE: ROOTED/LEAFED CONDITION OF THE LIVING PLANT MATERIAL IS NOT REPRESENTATIVE OF THE TIME OF INSTALLATION.

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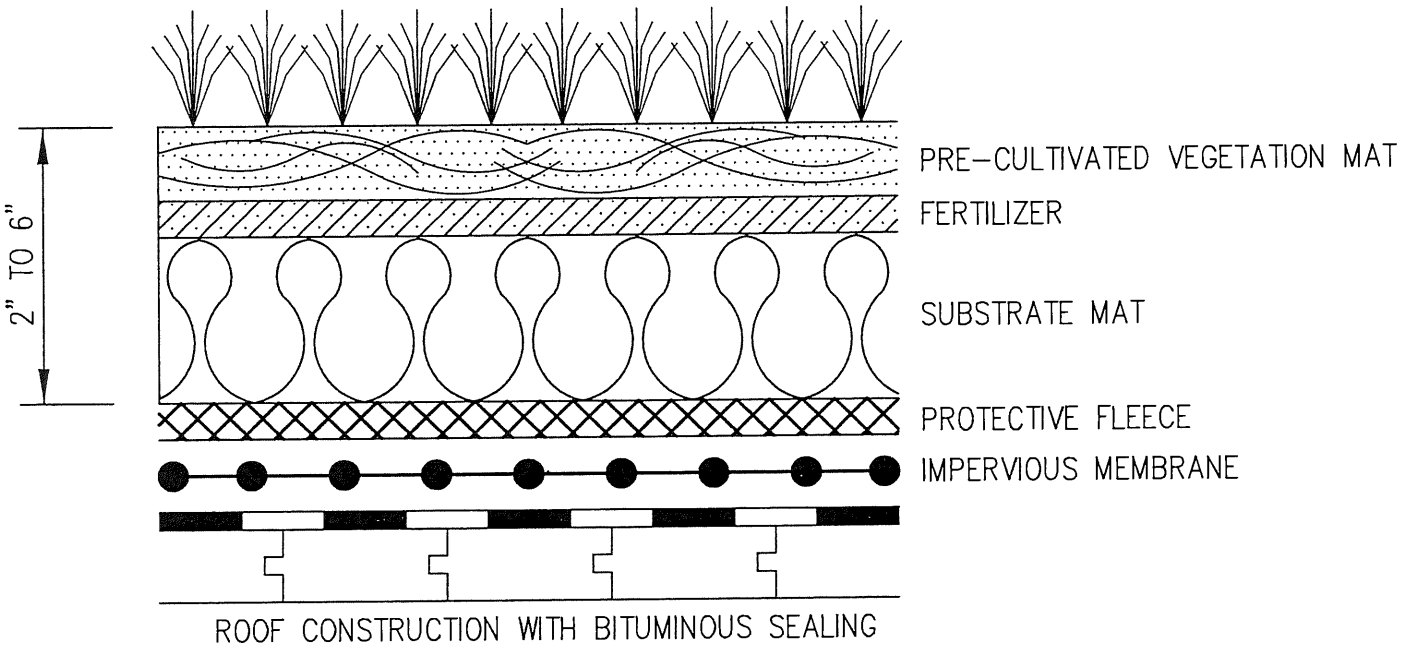
DETAIL No. FP-86

STANDARD DETAIL
GREEN ROOF
FRANKLIN PARK BOROUGH



GREENING OF A ROOF WITH AN INCLINE
(≤ 30°SLOPE)

NOTE:

1. STORMWATER QUANTITY CONTROL CAN BE INCORPORATED INTO THE DESIGN.
2. ASSEMBLED PANELS USED ON SLOPES GREATER THAN 2:12 MUST ENSURE STABILITY AGAINST SLIDING.
3. STRUCTURAL INTEGRITY OF THE BUILDING MUST BE PROVIDED.

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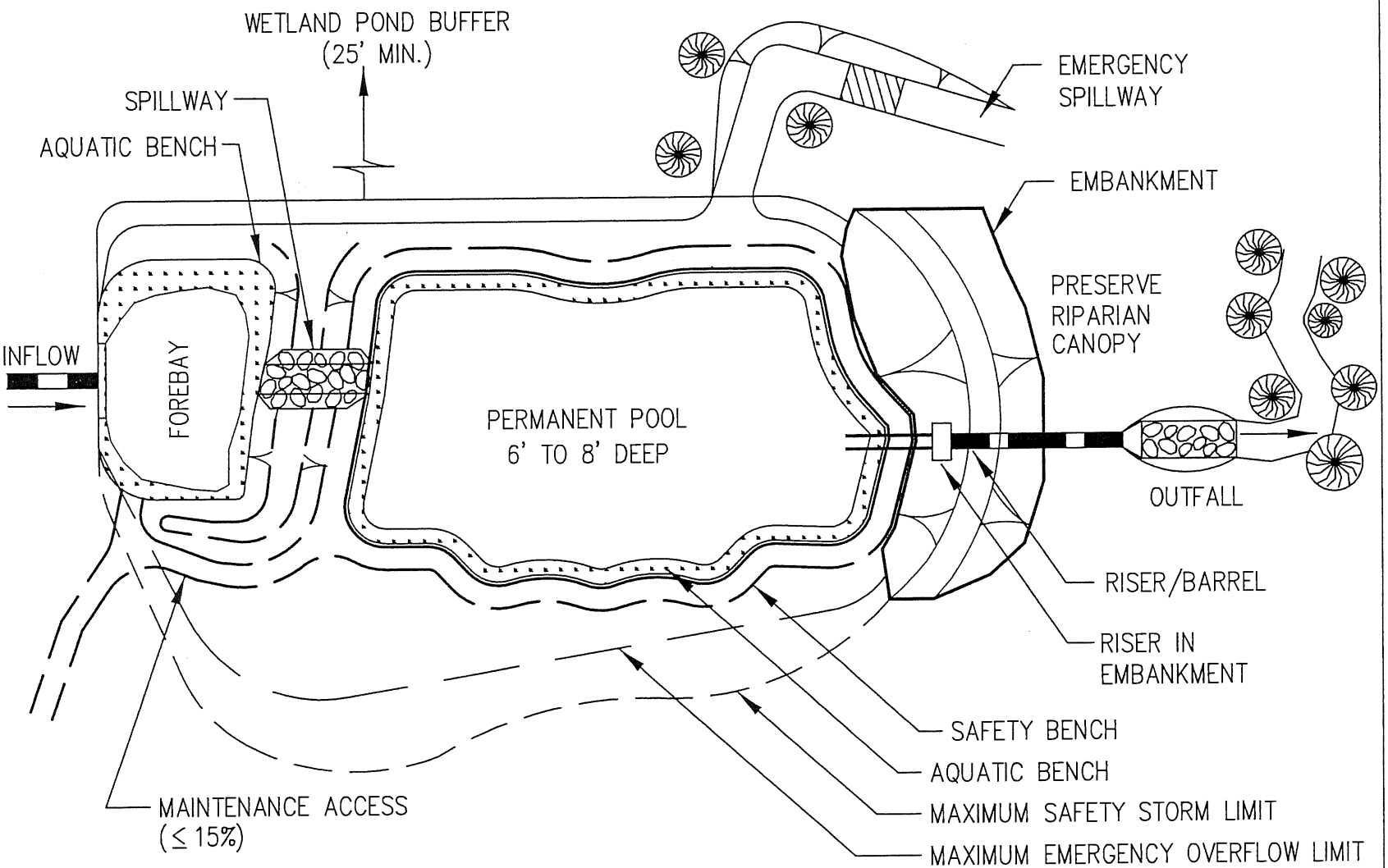
DETAIL No. FP-87

STANDARD DETAIL

TYPE 1 WET POND/RETENTION BASIN PLAN

FRANKLIN PARK BOROUGH



NOTE:

1. NEEDS HIGH WATER TABLE OR USE IMPERVIOUS LINER.
2. DRAINAGE AREA GREATER THAN 5 ACRES OR HAS A PERENNIAL WATER SOURCE.
3. LENGTH TO WIDTH RATIO 2 TO 1.
4. PLANTING DESIGN MUST BE PREPARED, SIGNED, AND SEALED BY A REGISTERED LANDSCAPE ARCHITECT.

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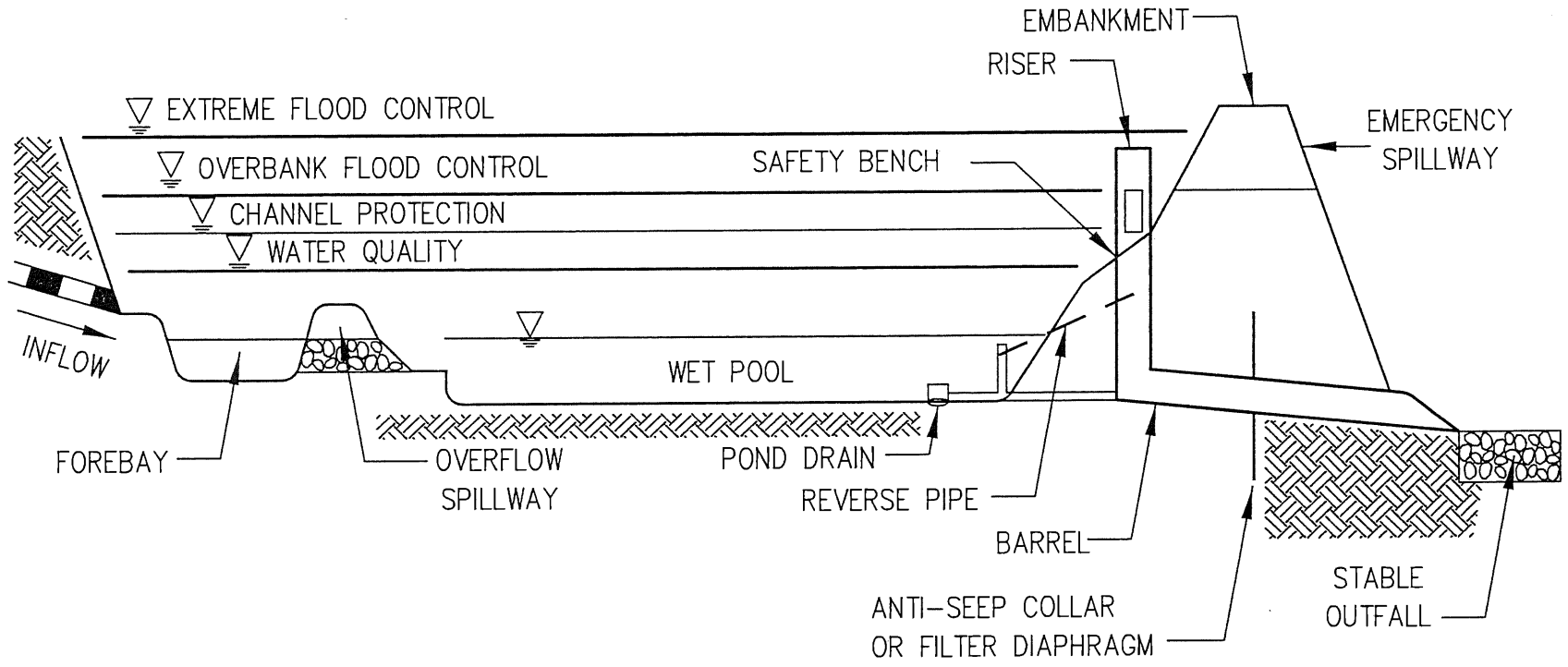
DETAIL No. FP-88

STANDARD DETAIL
TYPE 1 WET POND/RETENTION BASIN CROSS SECTION
FRANKLIN PARK BOROUGH



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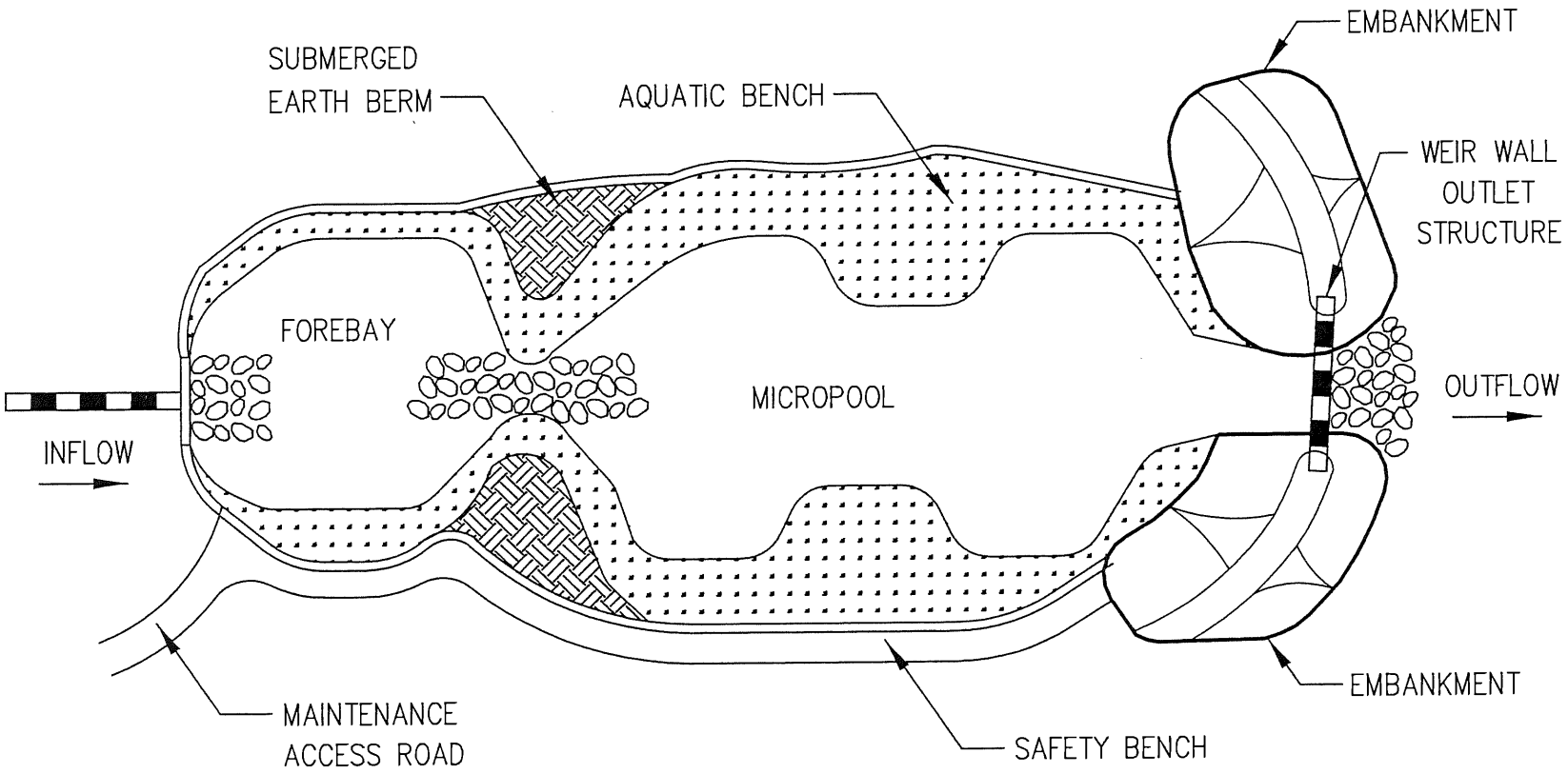
DETAIL No. FP-89

STANDARD DETAIL
TYPE 2 WET POND/RETENTION BASIN
FRANKLIN PARK BOROUGH



APPLICATIONS:

- WET PONDS
- WET DETENTION PONDS
- POCKET WET PONDS
- OFFLINE WET PONDS
- RETROFIT FOR EXISTING DETENTION BASINS

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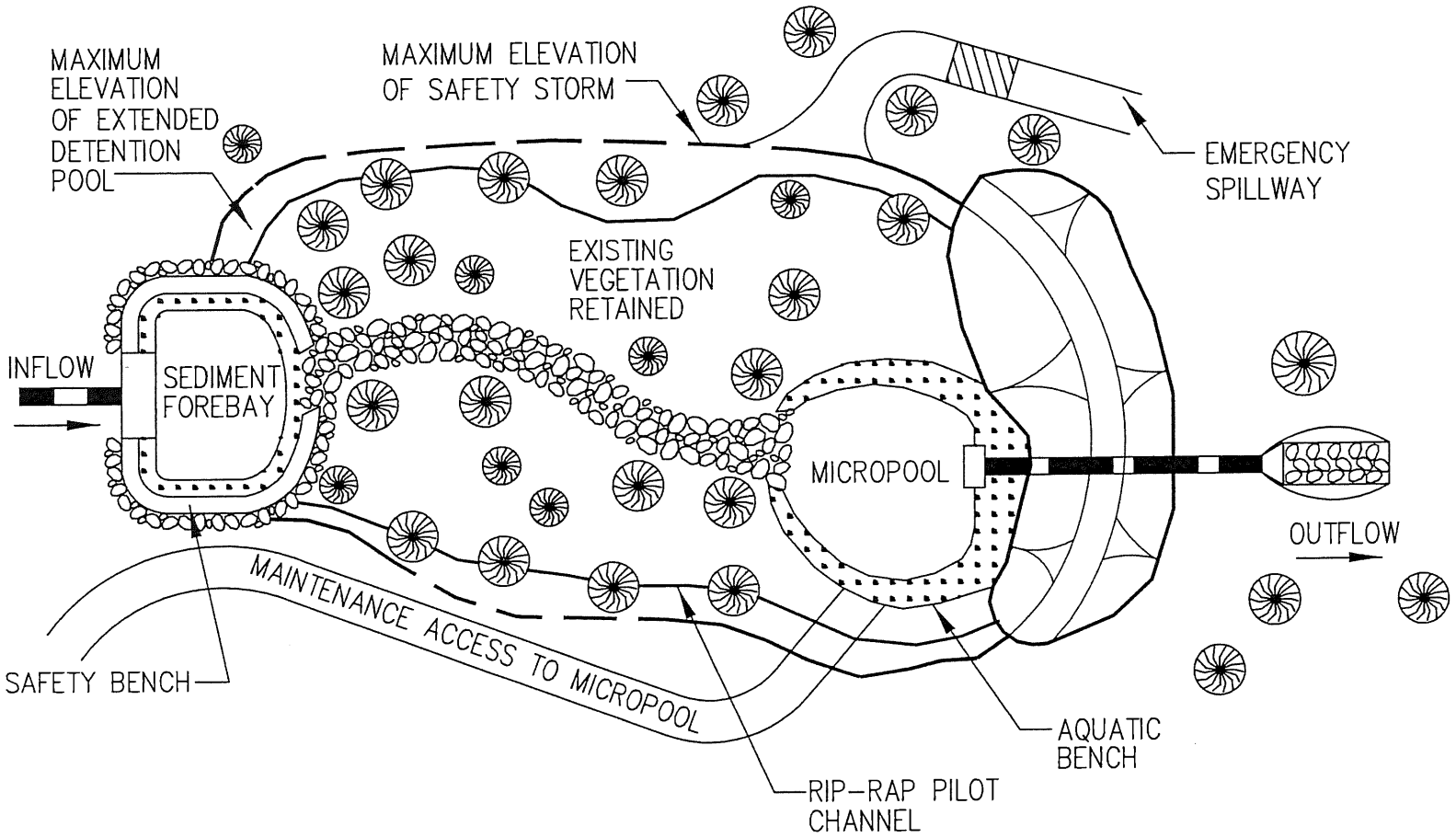
DETAIL No. FP-90

STANDARD DETAIL
DRY EXTENDED DETENTION BASIN PLAN
FRANKLIN PARK BOROUGH



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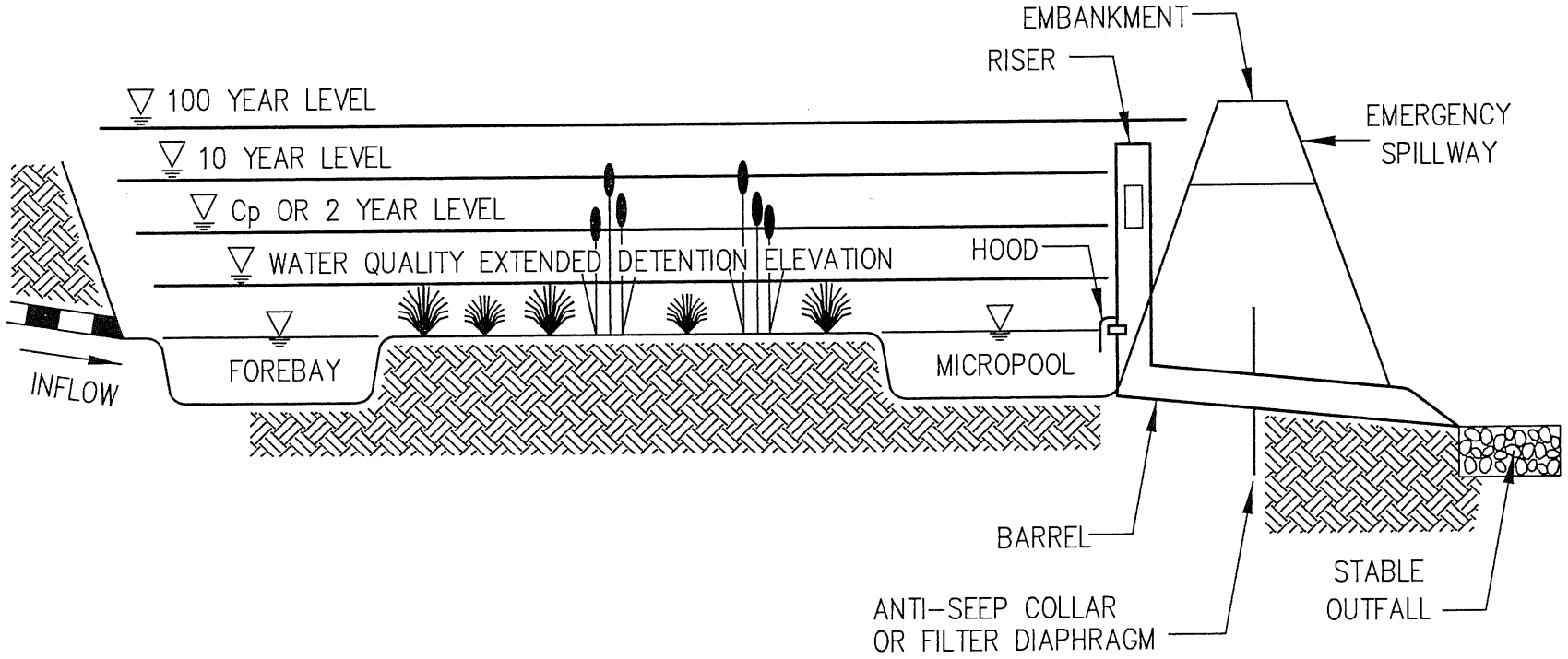
DETAIL No. FP-91

STANDARD DETAIL
DRY EXTENDED DETENTION BASIN CROSS SECTION
FRANKLIN PARK BOROUGH



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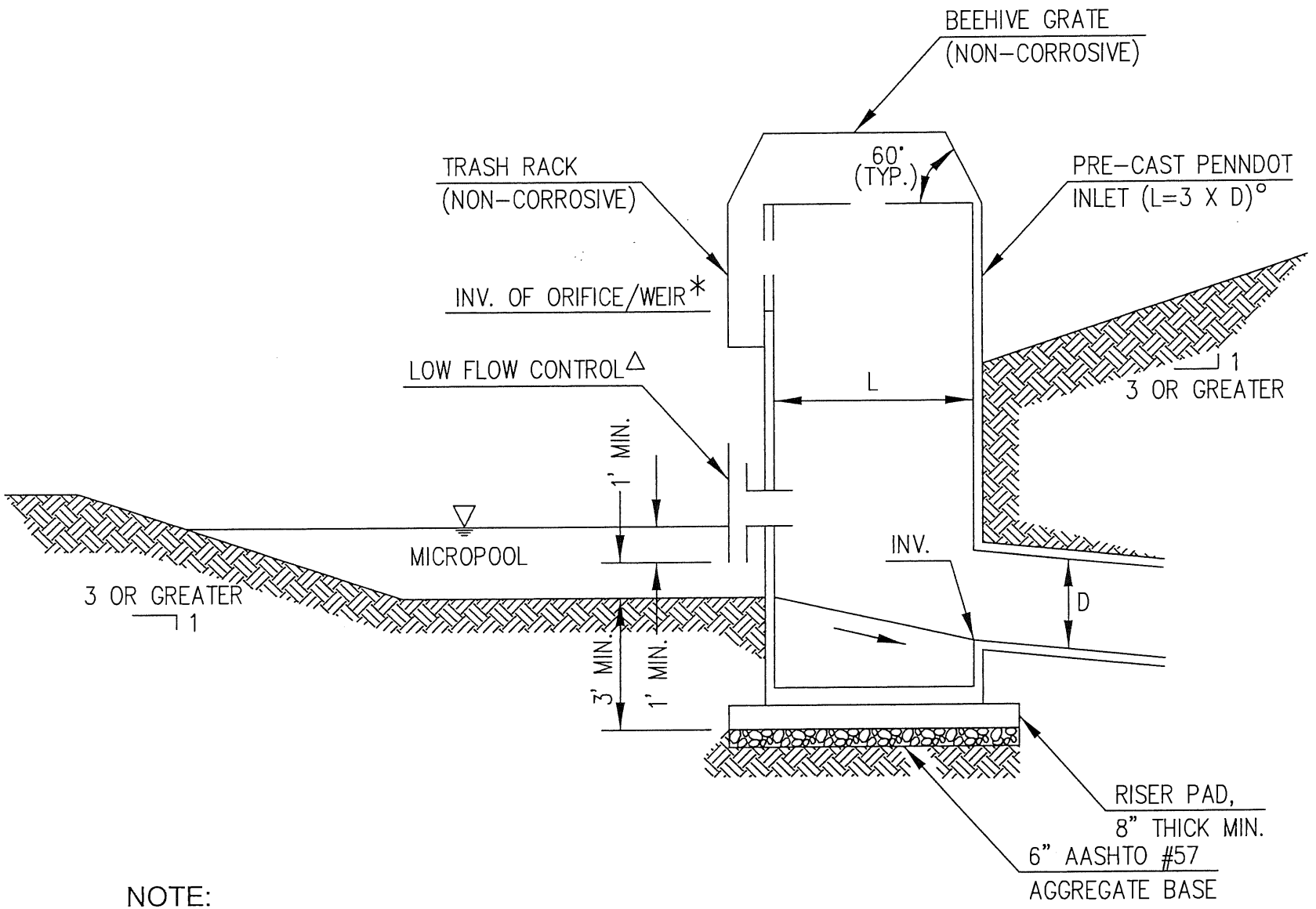
DETAIL No. FP-92

STANDARD DETAIL
OUTLET STRUCTURE FOR DRY EXTENDED DETENTION BASIN
FRANKLIN PARK BOROUGH



NOTE:

* ∗ NUMBER AND TYPE OF CONTROL(S) WILL VARY WITH EACH WATERSHED.
* △ PROVIDE AN EQUAL SIZED OPENING AT THE TOP EQUAL TO SUBMERGED OPENING.
* ○ ANY RISER PROPOSED THAT IS NOT PENNDOT APPROVED SHALL HAVE STRUCTURAL CALCULATIONS SUBMITTED TO SUPPORT DESIGN.

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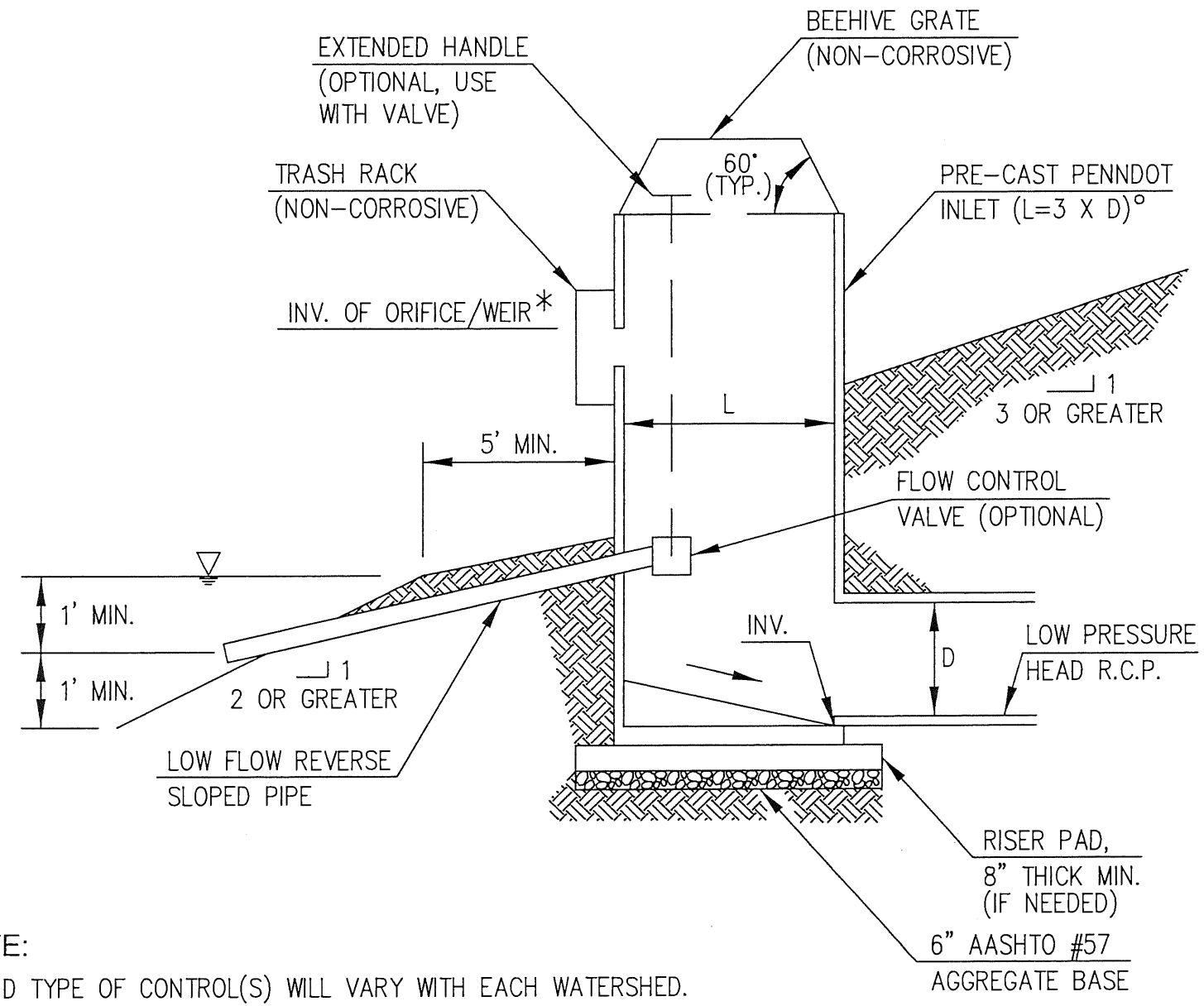
DETAIL No. FP-93

STANDARD DETAIL

OUTLET STRUCTURE FOR WET POND/RETENTION BASIN

FRANKLIN PARK BOROUGH



NOTE:

* NUMBER AND TYPE OF CONTROL(S) WILL VARY WITH EACH WATERSHED.

o ANY RISER PROPOSED THAT IS NOT PENNDOT APPROVED SHALL HAVE STRUCTURAL CALCULATIONS SUBMITTED TO SUPPORT DESIGN.

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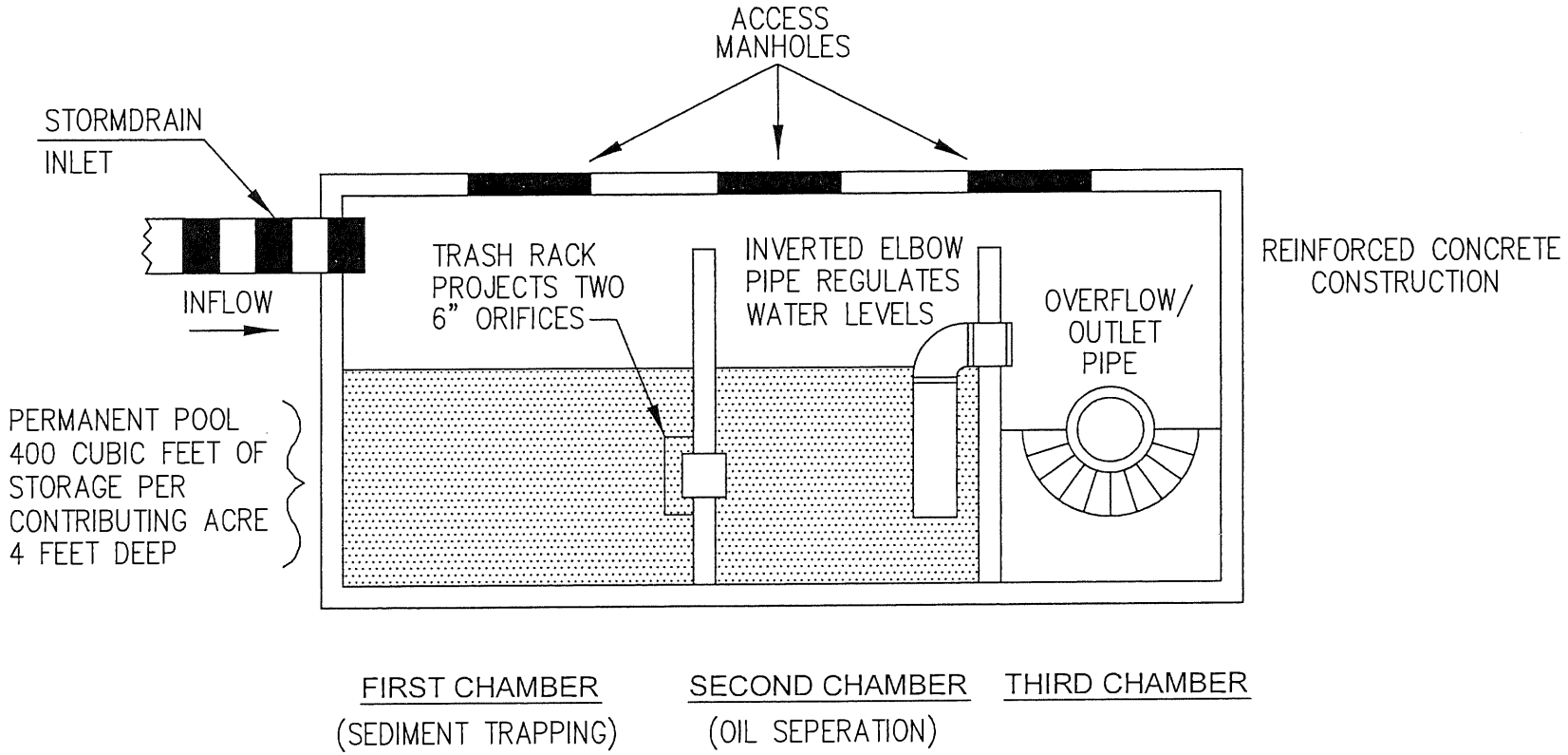
DETAIL No. FP-94

STANDARD DETAIL
WATER QUALITY INLET
FRANKLIN PARK BOROUGH



DETAIL No. FP-95

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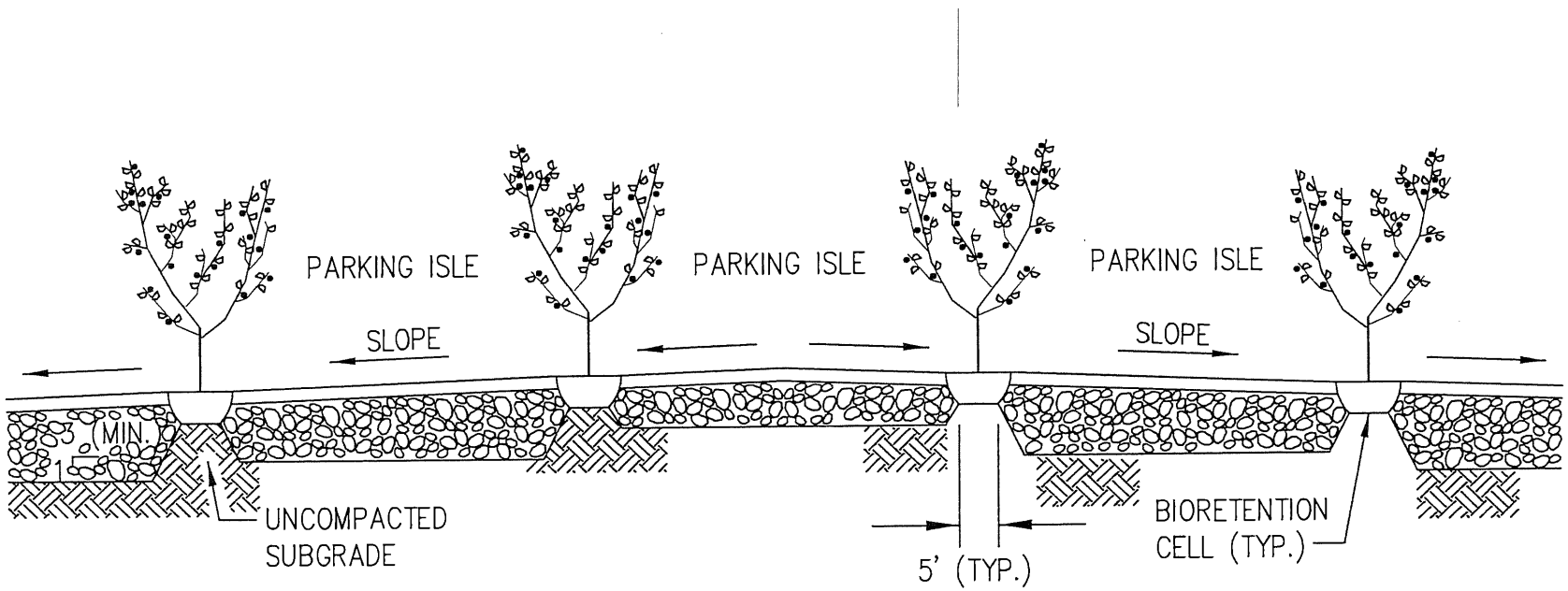
STANDARD DETAIL
PERVIOUS PAVEMENT, SLOPED
FRANKLIN PARK BOROUGH



NOTE:

1. REFER TO FP-88 FOR OPTIONS AND MATERIALS.
2. BOTTOMS OF INFILTRATION UNITS SHALL BE LEVEL.
3. REFER TO THE PA. STOTMWATER BEST MANAGEMENT PRACTICES MANUAL FOR REQUIRED SOIL TESTING PROTOCOLS.
4. ADEQUATE AREA BELOW THE FROST LINE MUST BE PROVIDED TO INFILTRATE THE DESIGN VOLUME WITHIN 24 HOURS TO 72 HOURS.
5. RUNOFF FROM AREAS OUTSIDE THE PERVIOUS PAVEMENT AREA SHALL BE COLLECTED AND PROPERLY TREATED BEFORE ENTERING THE INFILTRATION UNIT.

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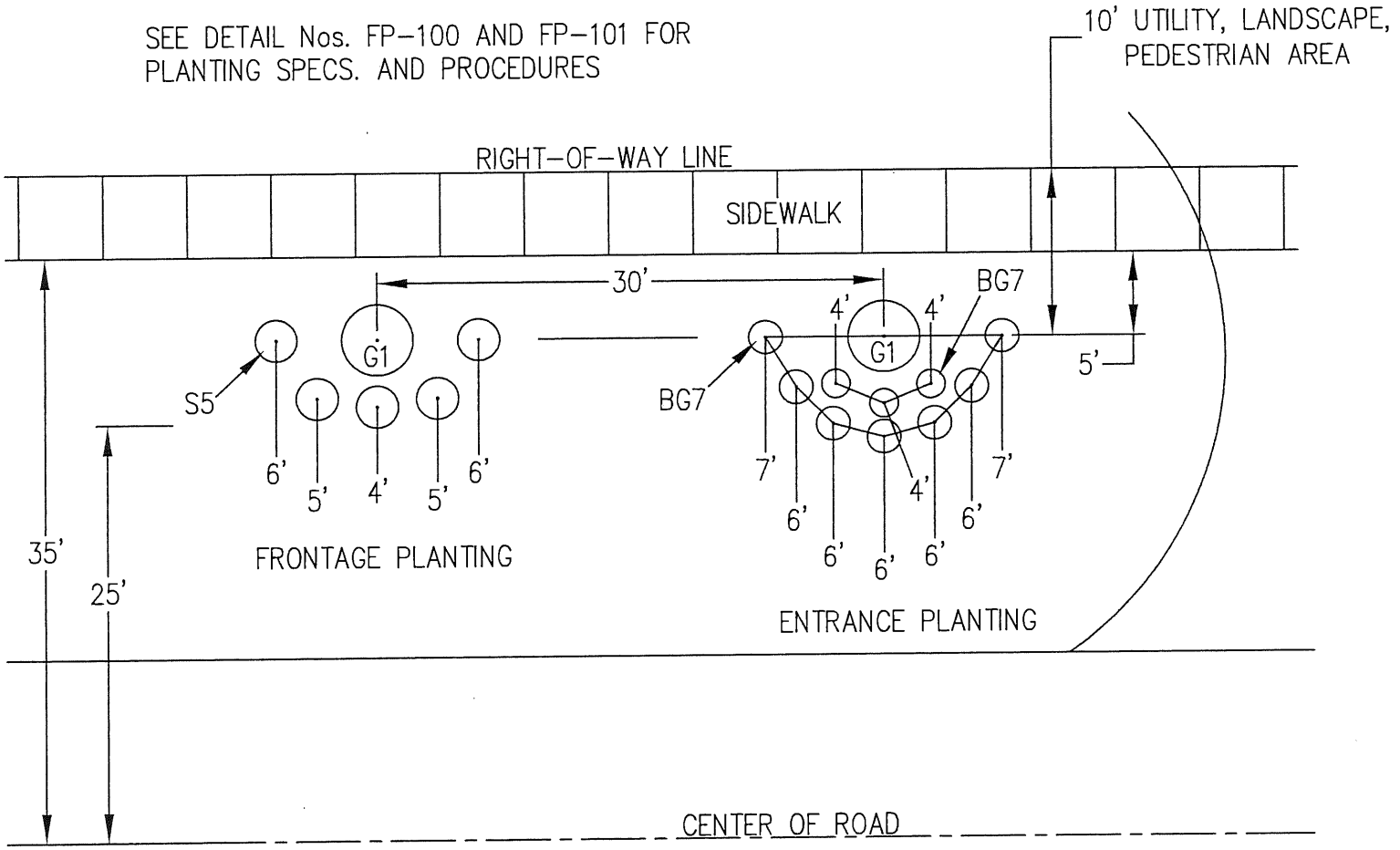
DETAIL No. FP-96

PEDESTRIAN LANDSCAPE AREA
ARTERIAL ROAD
FRANKLIN PARK BOROUGH



NOTE: SHRUB MEASUREMENTS TAKEN FROM TRUNK OF TREE

NOTE: DIFFERENT SHRUBS AT BOTH SIDES OF BUILDING ENTRANCES

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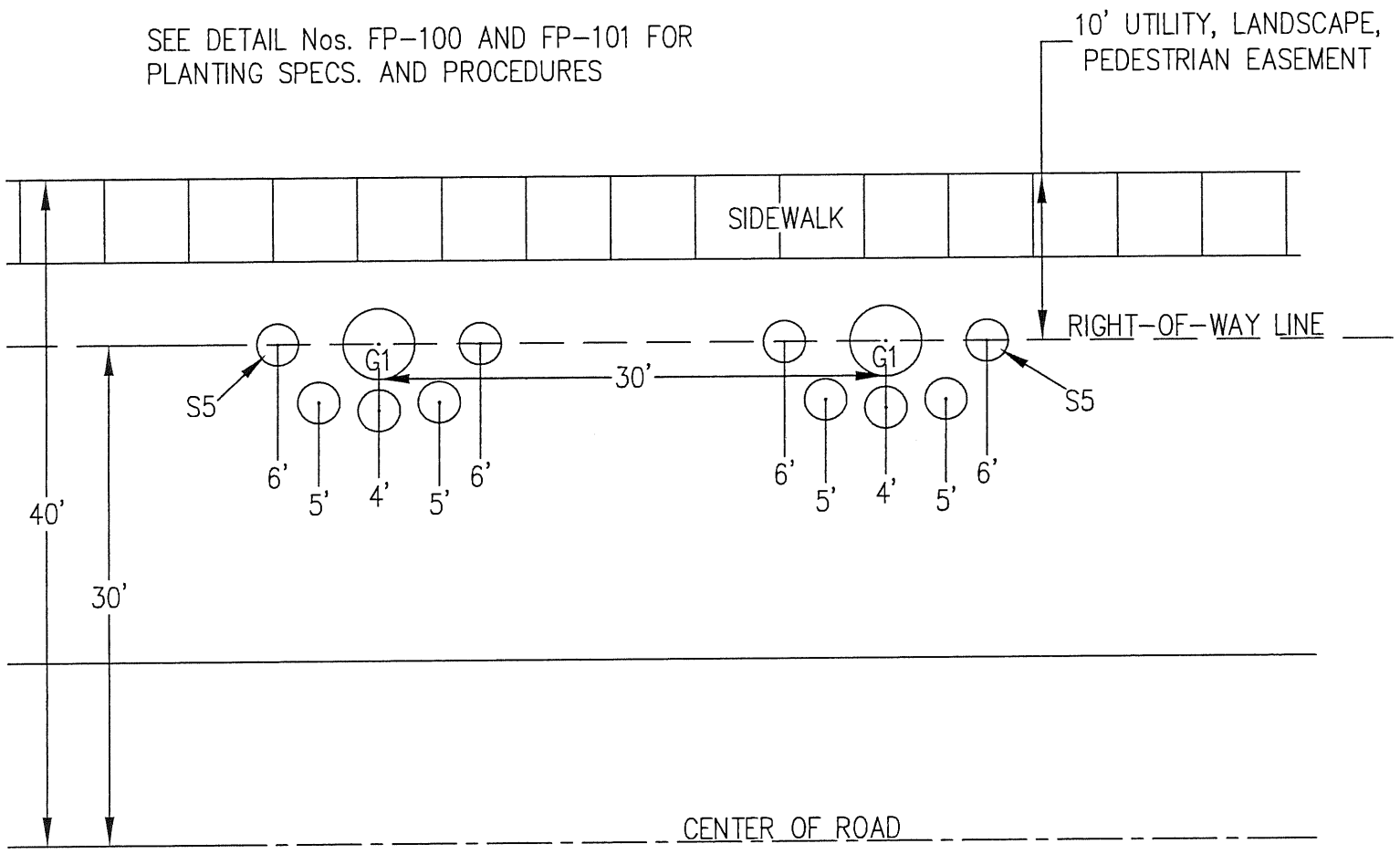
DETAIL No. FP-97

SEE DETAIL Nos. FP-100 AND FP-101 FOR
PLANTING SPECS. AND PROCEDURES



NOTE: SHRUB MEASUREMENTS
TAKEN FROM TRUNK OF TREE

PEDESTRIAN LANDSCAPE AREA
COLLECTOR ROAD
FRANKLIN PARK BOROUGH

DETAIL No. FP-98

FRANKLIN PARK BOROUGH
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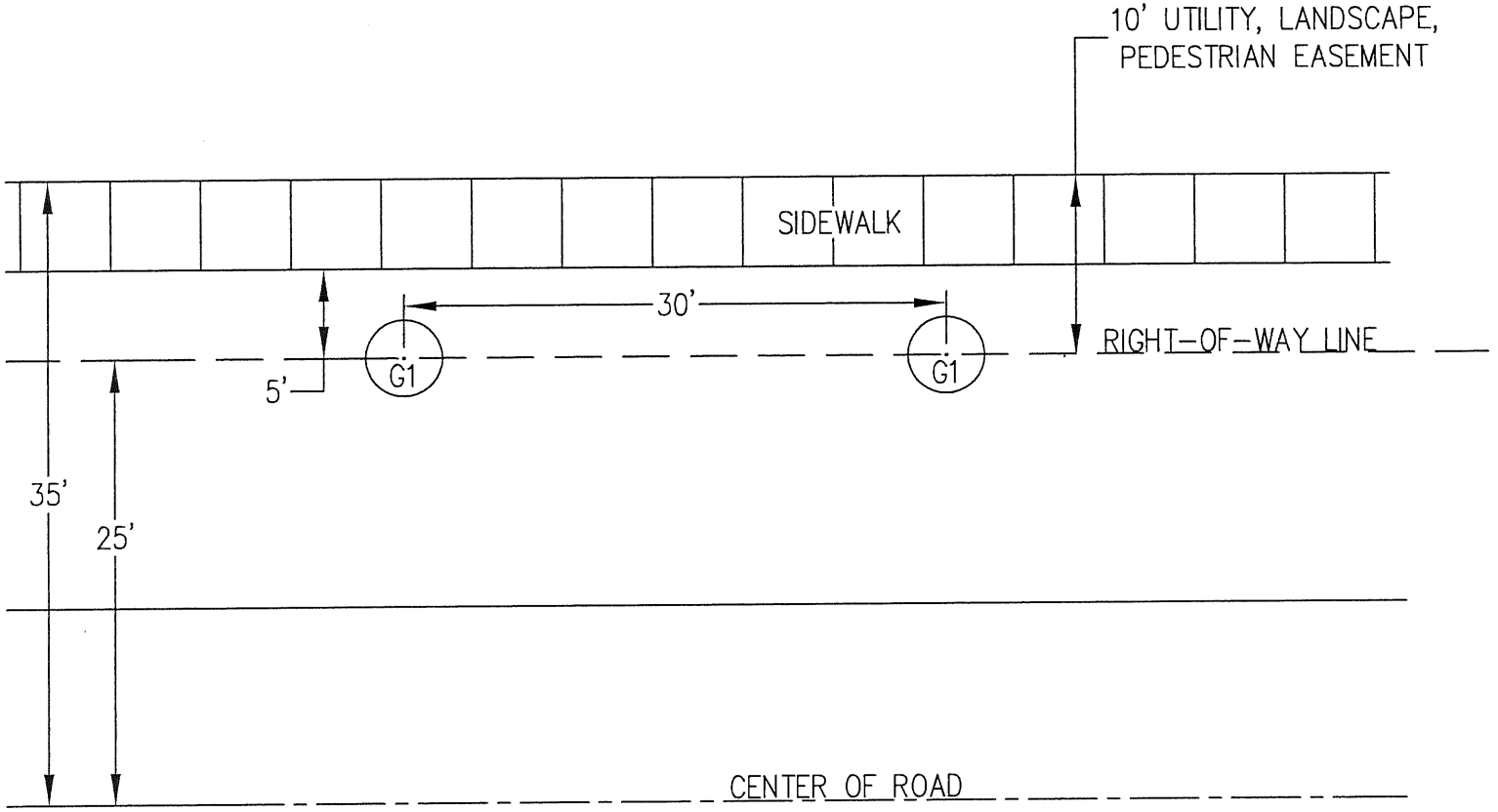
SEE DETAIL Nos. FP-100 AND FP-101 FOR
PLANTING SPECS. AND PROCEDURES



NOTE: SHRUB MEASUREMENTS
TAKEN FROM TRUNK OF TREE

PEDESTRIAN LANDSCAPE AREA
RESIDENTIAL ROAD
FRANKLIN PARK BOROUGH

DETAIL No. FP-99

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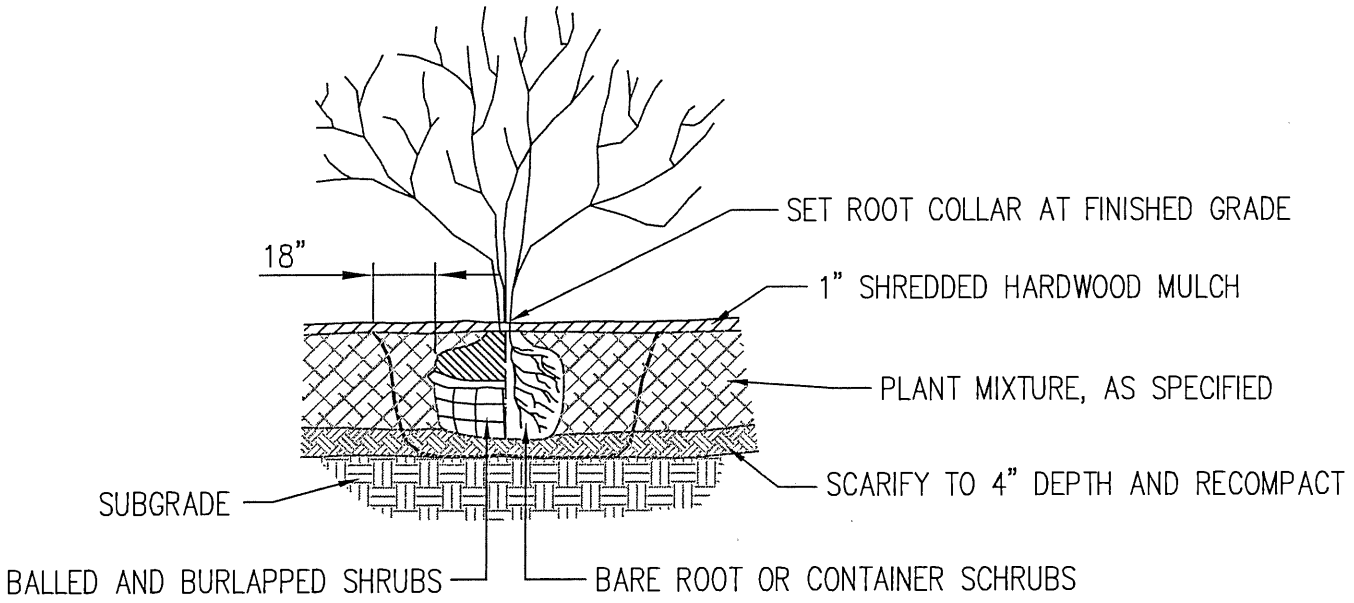
(412) 364-4115 FAX (412) 366-4406

SEE SPECIFICATIONS FOR ADDITIONAL
PLANTING & MAINTENANCE REQUIREMENTS

NOTE:
DO NOT PRUNE EVERGREENS, EXECPT TO
REMOVE DEAD OR BROKEN BRANCHES

THIN BRANCHES AND FOLIAGE (NOT ALL BRANCH
TIPS) BY 1/3, RETAINING NORMAL PLANT SHAPE
(EXECPT EVERGREEN).

REMOVE BURLAP FROM TOP 1/3 OF BALL OR WITH
CONTAINER PLANTS REMOVE POTS AND SPLIT
AS SPECIFIED.



STANDARD DETAIL
PEDESTRIAN LANDSCAPE EASEMENT SHRUB DETAIL
FRANKLIN PARK BOROUGH

DETAIL No. FP-100

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2344 WEST NGOMAR ROAD
PITTSBURGH, PA 15237
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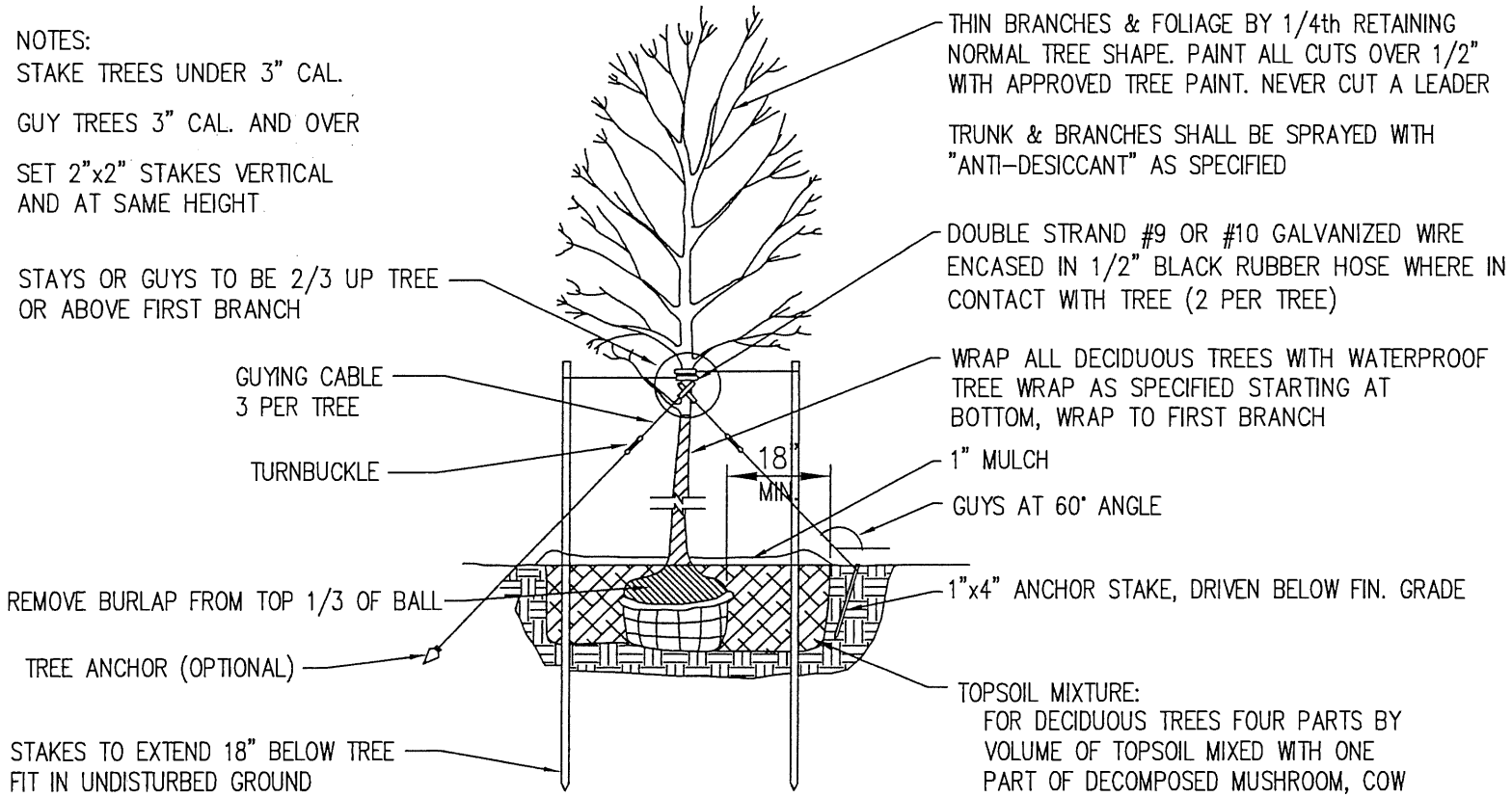
STANDARD DETAIL
PEDESTRIAN LANDSCAPE EASEMENT TREE DETAIL
FRANKLIN PARK BOROUGH

NOTES:
STAKE TREES UNDER 3" CAL.

GUY TREES 3" CAL. AND OVER

SET 2"x2" STAKES VERTICAL AND AT SAME HEIGHT



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2344 WEST NORMAR ROAD
PITTSBURGH, PA 15237
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DETAIL No. FP-101

APPENDIX G

INSPECTION SCHEDULING

A. Inspection Requirements for Improvements

The Borough must be notified at least 72 hours prior to construction of improvements.

IMPROVEMENTS	REQUIRED INSPECTION
ROAD WORK	
Grading	Once per Day
Underdrain	Full Time
Proof Roll Subsurface	Full Time
Geotextile	After Installation
Stone	Full Time
Blacktop	Full Time
STORM WATER	
Pipe	Full Time
Ponds, etc.	Part-Time as Needed
SIDEWALKS	
Subbase	Full Time
Forming	After Installation
Concrete	After Installation

APPENDIX H

BUFFER AREA and LANDSCAPING REQUIREMENTS

A. PLANTS

1. ACTION SUBMITTALS

a. Product Data: For each type of product indicated, including soils.

1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.

2. Pesticides and Herbicides: Include product label and manufacturer's application instructions specific to the Project.

2. INFORMATIONAL SUBMITTALS

a. Qualification Data: For qualified landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.

b. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before start of required maintenance periods.

c. Warranty: Sample of special warranty.

3. QUALITY ASSURANCE

a. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful establishment of plants.

b. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.

c. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.

1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches above the root flare for trees up to 4-inch caliper size, and 12 inches above the root flare for larger sizes.

2. Other Plants: Measure with stems, petioles, and foliage in their normal position.

d. Plant Material Observation: Borough may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Borough retains right to observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.

1. Notify Borough of sources of planting materials seven days in advance of delivery to site.

4. DELIVERY, STORAGE, AND HANDLING

a. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws if applicable.

b. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.

2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.

c. Deliver bare-root stock plants freshly dug. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.

d. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.

e. Handle planting stock by root ball.

f. Store bulbs, corms, and tubers in a dry place at 60 to 65 deg F until planting.

g. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.

5. PROJECT CONDITIONS

a. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.

b. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.

1. Spring Planting: Recommend planting schedule in accordance with each species.
2. Fall Planting: Recommend planting schedule in accordance with each species.

c. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

d. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.

1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

6. MAINTENANCE SERVICE

a. Initial Maintenance Service for Trees and Shrubs: Provide maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.

1. Maintenance Period: 12 months from date of planting completion.

b. Initial Maintenance Service for Ground Cover and Other Plants: Provide maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.

1. Maintenance Period: Six months from date of planting completion.

B. PRODUCTS

1. PLANT MATERIAL

a. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule or Plant Legend shown on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than ¾ inch in diameter; or with stem girdling roots will be rejected.

2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.

b. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Borough, with a proportionate increase in size of roots or balls.

c. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

d. Labeling: Label at least one plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant as shown on Drawings.

e. The Borough promotes and encourages environmentally friendly development by insuring all vegetation, plants and trees selected are deer and disease resistant and appropriate to local growing conditions.

2. MULCHES

a. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:

1. Type: Shredded hardwood, Ground or shredded bark, Wood and bark chips, Pine straw Salt hay or threshed straw Pine needles Peanut, pecan, and cocoa-bean shells Insert mulch type.

2. Color: Natural.

3. Type: Rounded riverbed gravel or smooth-faced stone, Crushed stone or gravel, Marble chips Granite chips.

4. Size Range: 1-1/2 inches maximum, ¾ inch minimum.

5. Color: Readily available natural gravel color range.

3. PESTICIDES

a. General: Pesticide registered and approved by EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

b. Pre-Emergent Herbicide (Selective and Non-Selective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.

c. Post-Emergent Herbicide (Selective and Non-Selective): Effective for controlling weed growth that has already germinated.

C. EXECUTION

1. EXAMINATION

a. Examine areas to receive plants for compliance with requirements and conditions affecting installation and performance.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.

2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.

3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.

4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.

b. Proceed with installation only after unsatisfactory conditions have been corrected.

c. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Borough and replace with new planting soil.

2. PREPARATION

a. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.

b. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

c. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.

3. PLANTING AREA ESTABLISHMENT

a. Loosen subgrade of planting areas to a minimum depth of 6 inches. Remove stones larger than 2 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

1. Spread planting soil to a depth of 6 inches but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.

b. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

c. Before planting, obtain Borough's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

4. EXCAVATION FOR TREES AND SHRUBS

a. Planting Pits and Trenches: Excavate circular planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are not acceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.

1. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.

2. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.

3. Maintain required angles of repose of adjacent materials as shown on the Drawings. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.

4. Maintain supervision of excavations during working hours.

5. Keep excavations covered or otherwise protected when unattended by Installer's personnel.

b. Subsoil and topsoil removed from excavations may be used as planting soil.

c. Obstructions: Notify Borough if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.

5. TREE, SHRUB, AND VINE PLANTING

a. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.

b. Set balled and burlapped stock plumb and in center of planting pit or trench with root flare 2 inches above adjacent finish grades.

1. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.

2. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.

3. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.

4. Continue backfilling process. Water again after placing and tamping final layer of soil.

5. Carefully remove root ball from container without damaging root ball or plant.

6. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.

7. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.

8. Continue backfilling process. Water again after placing and tamping final layer of soil.

c. Set fabric bag-grown stock plumb and in center of planting pit or trench with root flare 1 inch above Insert dimension adjacent finish grades.

1. Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation.

2. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.

3. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.

4. Continue backfilling process. Water again after placing and tamping final layer of soil.

d. Set and support bare-root stock in center of planting pit or trench with root flare 2 inches above adjacent finish grade.

1. Spread roots without tangling or turning toward surface, and carefully work backfill around roots by hand. Puddle with water until backfill layers are completely saturated. Plumb before backfilling, and maintain plumb while working backfill around roots and placing layers above roots.

2. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside soil-covered roots about 1 inch from root tips; do not place tablets in bottom of the hole or touching the roots.

3. Continue backfilling process. Water again after placing and tamping final layer of soil.

e. When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

6. MECHANIZED TREE SPADE PLANTING

a. Trees may be planted with an approved mechanized tree spade at the designated locations. Do not use tree spade to move trees larger than the maximum size allowed for a similar field-grown, balled-and-burlapped root-ball diameter according to ANSI Z60.1, or larger than the manufacturer's maximum size recommendation for the tree spade being used, whichever is smaller.

b. When extracting the tree, center the trunk within the tree spade and move tree with a solid ball of earth.

c. Cut exposed roots cleanly during transplanting operations.

d. Use the same tree spade to excavate the planting hole as was used to extract and transport the tree.

e. Plant trees as shown on Drawings, following procedures in "Tree, Shrub, and Vine Planting" Article.

f. Where possible, orient the tree in the same direction as in its original location.

7. TREE STABILIZATION

a. Install trunk stabilization as follows unless otherwise indicated:

1. Upright Staking and Tying: Stake trees of 2- through 5-inch caliper. Stake trees of less than 2-inch caliper only as required to prevent wind tip out. Use a minimum of two stakes of length required to penetrate at least 18 inches below bottom of backfilled excavation and to extend to the dimension shown on Drawings above grade. Set vertical stakes and space to avoid penetrating root balls or root masses.

2. Support trees with two strands of tie wire, connected to the brass grommets of tree-tie webbing at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree.

b. Staking and Guying: Stake and guy trees more than 14 feet in height and more than 3 inches in caliper unless otherwise indicated. Securely attach no fewer than three guys to stakes 30 inches long, driven to grade.

1. Site-Fabricated Staking-and-Guying Method:
   a) For trees more than 6 inches in caliper, anchor guys to wood deadmen buried at least 36 inches below grade. Provide turnbuckle or compression spring for each guy wire and tighten securely.
   b) Support trees with bands of flexible ties at contact points with tree trunk and reaching to turnbuckle or compression spring. Allow enough slack to avoid rigid restraint of tree.
   c) Attach flags to each guy wire, 30 inches above finish grade.

2. Proprietary Staking and Guying Device: Install staking and guying system sized and positioned as recommended by manufacturer unless otherwise indicated and according to manufacturer's written instructions.

c. Root-Ball Stabilization: Install at- or below-grade stabilization system to secure each new planting by the root ball unless otherwise indicated.

1. Wood Hold-Down Method: Place vertical stakes against side of root ball and drive them into subsoil; place horizontal wood hold-down stake across top of root ball and screw at each end to one of the vertical stakes.
   a) Install stakes of length required to penetrate at least to the dimension shown on Drawings below bottom of backfilled excavation. Saw stakes off at horizontal stake.
   b) Install screws through horizontal hold-down and penetrating at least 1 inch into stakes. Predrill holes if necessary to prevent splitting wood.
   c) Install second set of stakes on other side of root trunk for larger trees as indicated.

2. Proprietary Root-Ball Stabilization Device: Install root-ball stabilization system sized and positioned as recommended by manufacturer unless otherwise indicated and according to manufacturer's written instructions.

8. GROUND COVER AND PLANT PLANTING

a. Set out and space ground cover and plants other than trees, shrubs, and vines as indicated in even rows with triangular spacing.

b. Dig holes large enough to allow spreading of roots.

c. For rooted cutting plants supplied in flats, plant each in a manner that will minimally disturb the root system but to a depth not less than two nodes.

d. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.

e. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

f. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

9. PLANTING AREA MULCHING

a. Install weed-control barriers before mulching according to manufacturer's written instructions. Completely cover area to be mulched, overlapping edges a minimum of 6 inches and secure seams with galvanized pins.

b. Mulch backfilled surfaces of planting areas and other areas indicated.

10. PLANT MAINTENANCE

a. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.

b. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.

c. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated past management practices whenever possible to minimize the use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

11. PESTICIDE APPLICATION

a. Apply pesticides and other chemical products and biological control agents in accordance with authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Borough's operations and others in proximity to the Work. Notify Borough before each application is performed.

b. Pre-Emergent Herbicides (Selective and Non-Selective): Apply to tree, shrub, and ground-cover areas in accordance with manufacturer's written recommendations. Do not apply to seeded areas.

c. Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written recommendations.

12. CLEANUP AND PROTECTION

a. During planting, keep adjacent paving and construction clean and work area in an orderly condition.

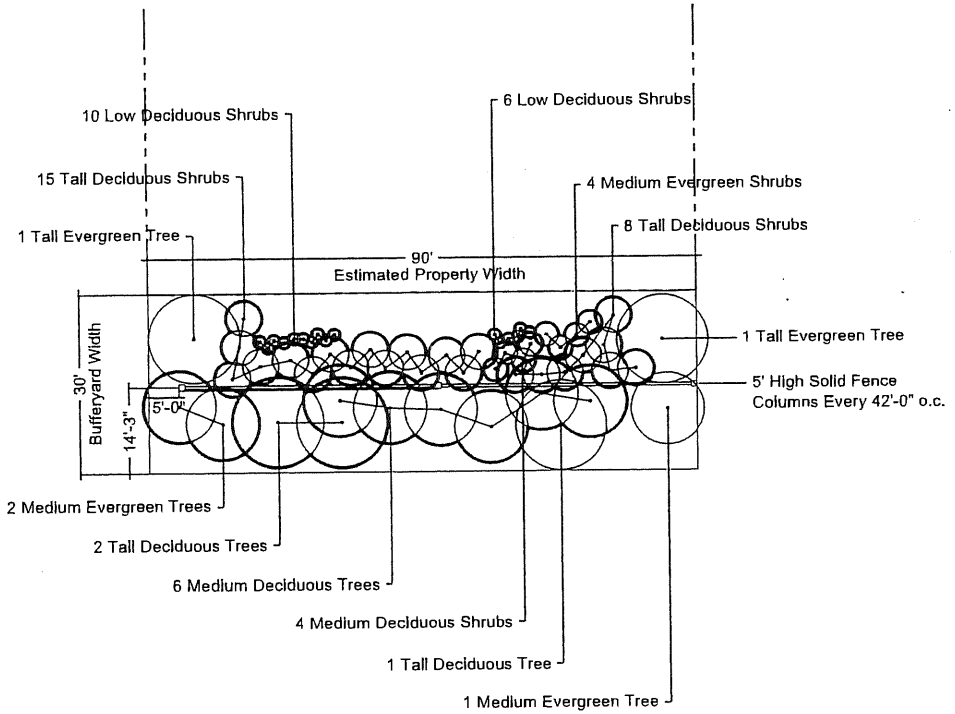
b. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

c. After installation and before Substantial Completion, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

13. DISPOSAL

a. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Borough's property.

\P\009\9797\CODE BFP\APPENDIX H rev

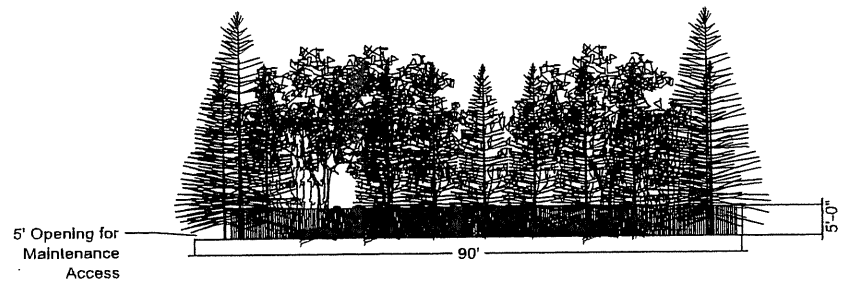


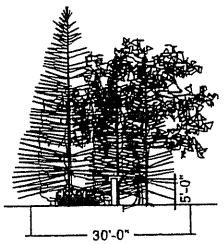
Plant Schedule

Tall Deciduous Trees	3
Tall Evergreen Trees	2
Medium Deciduous Trees	6
Medium Evergreen Trees	3
Tall Deciduous Shrubs	23
Medium Deciduous Shrubs	4
Medium Evergreen Shrubs	4
Low Deciduous Shrubs	16

Notes:

1. See plant list for specific plant options and minimum size requirements.
2. Prune only to allow mature size and natural habit.





Plant Type	Botanical name	Common name	Minimum size at planting
Tall Evergreen Tree (30' minimum height at maturity)	*Abies concolor*	White Fir	6'
	Abies koreana	Korean Fir	6'
	Abies procera	Noble Fir	6'
	Picea engelmannii	Engelman Spruce	6'
	Picea glauca	White Spruce	6'
	Picea mariana	Black Spruce	8'
	Picea omorika	Serbian Spruce	6'
	Picea orientalis	Oriental Spruce	6'
	Picea pungens	Colorado Spruce	6'
	Pinus flexilis	Limber Pine	6'
	Pseudotsuga menziesii	Douglasfir	6'
Medium Evergreen Tree (15' minimum height at maturity)	*Chamaecyparis pisifera* 'Boulevard'	Boulevard Falsecypress	4'
	Juniperus chinensis 'Hetzii Columnaris'	Columnar Hetz Chinese Juniper	4'
	Juniperus scopulorum	Rocky Mountain Juniper	4'
	Juniperus virginiana	Redcedar	4'
	Picea glauca 'Densata'	Black Hills Spruce	4'
Medium Evergreen Shrub (6' minimum height at maturity)	*Juniperus chinensis* 'Columnaris'	Chinese Juniper	3'
	Euonymus kiautschovicus	Spreading Euonymus	3'
	Ilex x meserveae cultivars	Blue Holly	3'
	Viburnum rhytidophyllum	Leatherleaf Viburnum	3'
Tall Deciduous Tree (30' minimum height at maturity)	*Acer x freemanii* 'Jeffsred' P.P.#4864	Autumn Blaze Maple	2 -1/2" cal.
	Acer rubrum and cultivars	Red Maple	2 -1/2" cal.
	Fagus grandifolia	American Beech	2-1/2" cal.
	Fagus sylvatica	European Beech	2-1/2" cal.
	Gleditsia triacanthos f. inermis cultivars	Thornless Honeylocust	2-1/2" cal.
	Nyssa sylvatica	Black Tupelo	2-1/2" cal.
	Quercus acutissima	Sawtooth Oak	2-1/2" cal.
	Quercus phellos	Willow Oak	2-1/2" cal.
	Quercus rubra	Red Oak	2-1/2" cal.
	Tilia cordata	Littleleaf Linden	2-1/2" cal.
Medium Deciduous Tree	*Acer campestre*	Hedge Maple	1-1/2" cal.

(15' minimum height at maturity)	*Crateagus phaenopyrum*	Washington Hawthorn	1-1/2" cal.
	Crateagus viridus 'Winter King'	Winter King Hawthorn	1-1/2" cal.
	Cercis canadensis and cultivars	Redbud	1-1/2" cal.
	Malus cultivars	Crabapple	1-1/2" cal.
	Syringa reticulata	Japanese Tree Lilac	1-1/2" cal.
Tall Deciduous Shrub (12' minimum height at maturity)	*Acer ginnala*	Amur maple	4'
	Cotinus coggygria	Smoketreee	4'
	Hibiscus syriacus cultivars	Rose of Sharon	4'
	Hydrangea paniculata cultivars	Panicle Hydrangea	4'
	Syringa vulgaris	Common Lilac	4'
	Viburnum x burkwoodii	Burkwood Viburnum	4'
	Viburnum prunifolium	Blackhaw Viburnum	4'
	Viburnum x rhytidophylloides	Lantanaphyllum Viburnum	4'
Medium Deciduous Shrub (6' minimum height at maturity)	*Aronia arbutifolia*	Red Chokeberry	3'
	Cornus alba	Tartarian Dogwood	3'
	Cornus sericea	Redosier Dogwood	3'
	Cytissus praecox	Warminster Broom	3'
	Euonymus alatus 'Compactus'	Compact Burning Bush	3'
	Forsythia x intermedia cultivars	Forsythia	3'
	Myrica pensylvanica	Northern Bayberry	3'
	Philadelphus coronarius and cultivars	Sweet Mock Orange	3'
	Spiraea x vanhoutei	Vanhoutte Spirea	3'
	Viburnum carlesii and cultivars	Koreanspice Viburnum	3'
	Viburnum dilitatum and cultivars	Linden Viburnum	3'
	Viburnum plicatum and cultivars	Doublefile Viburnum	3'
	Weigela florida and non-dwarf cultivars	Old-fashioned Weigela	3'
Small Deciduous Shrub (3' minimum height at maturity)	*Deutizia gracilis*	Slender Deutzia	24"
	Fothergilla gardenii and cultivars	Dwarf Fothergilla	24"
	Hydrangea arborescens and cultivars	Smooth Hydrangea	24"
	Itea virginica and cultivars	Virginia Sweetspire	24"
	Potentilla fruticosa cultivars	Bush Cinquefoil	24"
	Rosa spp. and cultivars	Shrub Roses	24"
	Spiraea x bumalda (S. *japonica*) cultivars	Bumald or Japanese Spirea	24"

APPENDIX I

EXTERNAL REVIEW AGENCIES

EXTERNAL REVIEW AGENCIES

Allegheny County Department of Economic Development
425 Sixth Avenue, suite 800
Pittsburgh, PA 15219
412-350-1030

Allegheny County Conservation District
Lexington Technology Park
Building 1, Suite 102
400 N. Lexington Street
Pittsburgh, PA 15208
412-241-7645

Allegheny County Health Department
3901 Penn Avenue
Building #5
Pittsburgh, PA 15224
412-578-8040

Allegheny County Department of Maintenance Road Permits
County Office Building
542 Forbes Avenue, Room 501
Pittsburgh, PA 15219
412-350-4005

Allegheny County Sanitary Authority (ALCOSAN)
3300 Preble Avenue
Pittsburgh, PA 15233-1025
412-766-1232

Pennsylvania Department of Transportation (PennDOT), District 11
45 Thoms Run Road
Bridgeville, PA 15017
412-429-6035

Department of Environmental Protection (DEP), Pittsburgh Offices
400 Waterfront Drive
Pittsburgh, PA 15222-4745
412-442-4000

McCandless Twp. Sanitary Authority (MTSA)
422 Arcadia Drive
Pittsburgh, PA 15237
412-364-2119

Ohio Twp. Sanitary Authority (OTSA)
1719 Roosevelt Road,
Pittsburgh, PA 15237-1099
412-364-4549

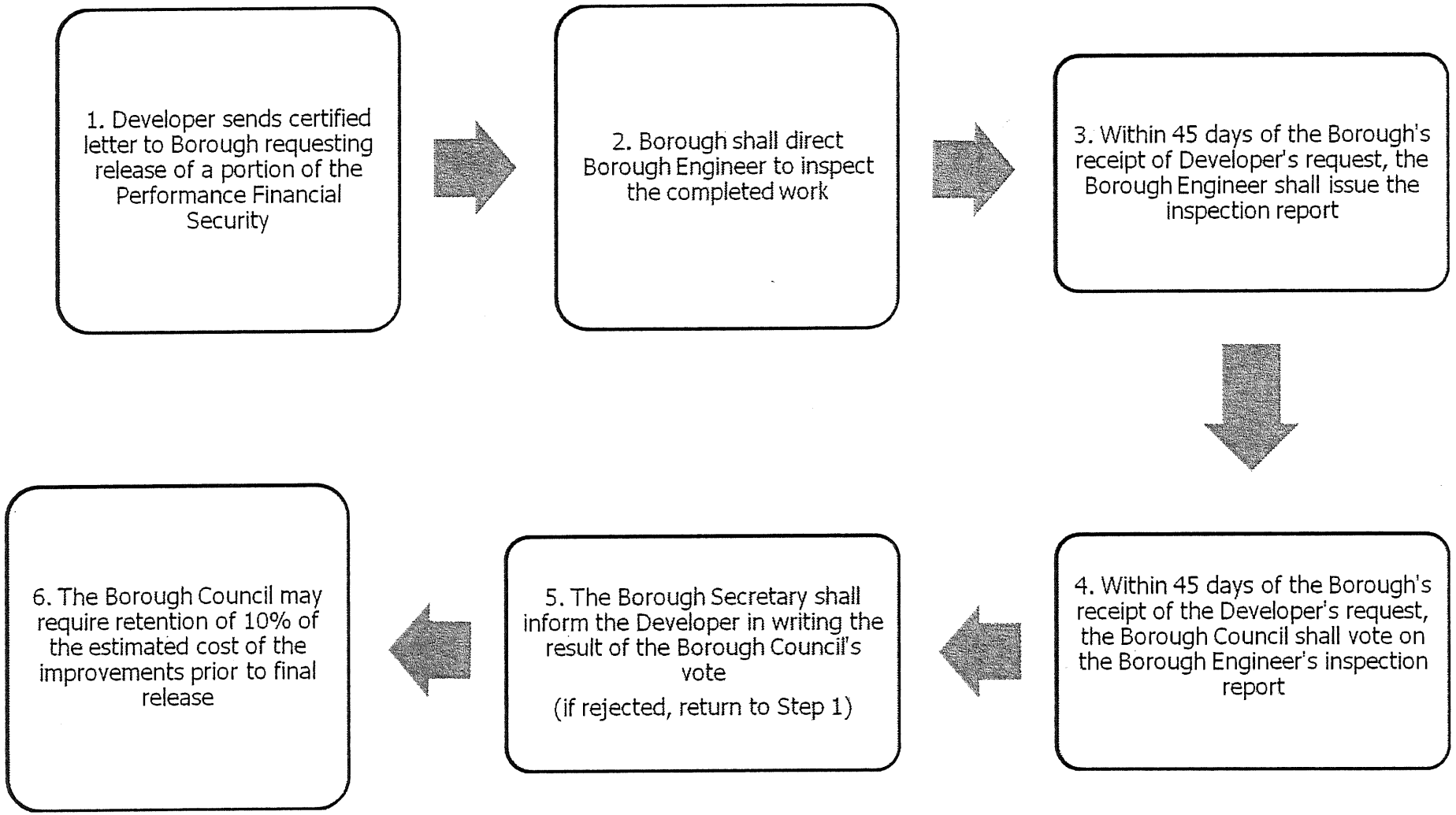
U.S. Army Corp of Engineers
2200 William S. Moorhead Federal Building
1000 Liberty Avenue
Pittsburgh, PA 15222-4186
412-395-7500

West View Water Authority
210 Perry Highway
Pittsburgh, PA 15229
712-931-3292

APPENDIX J

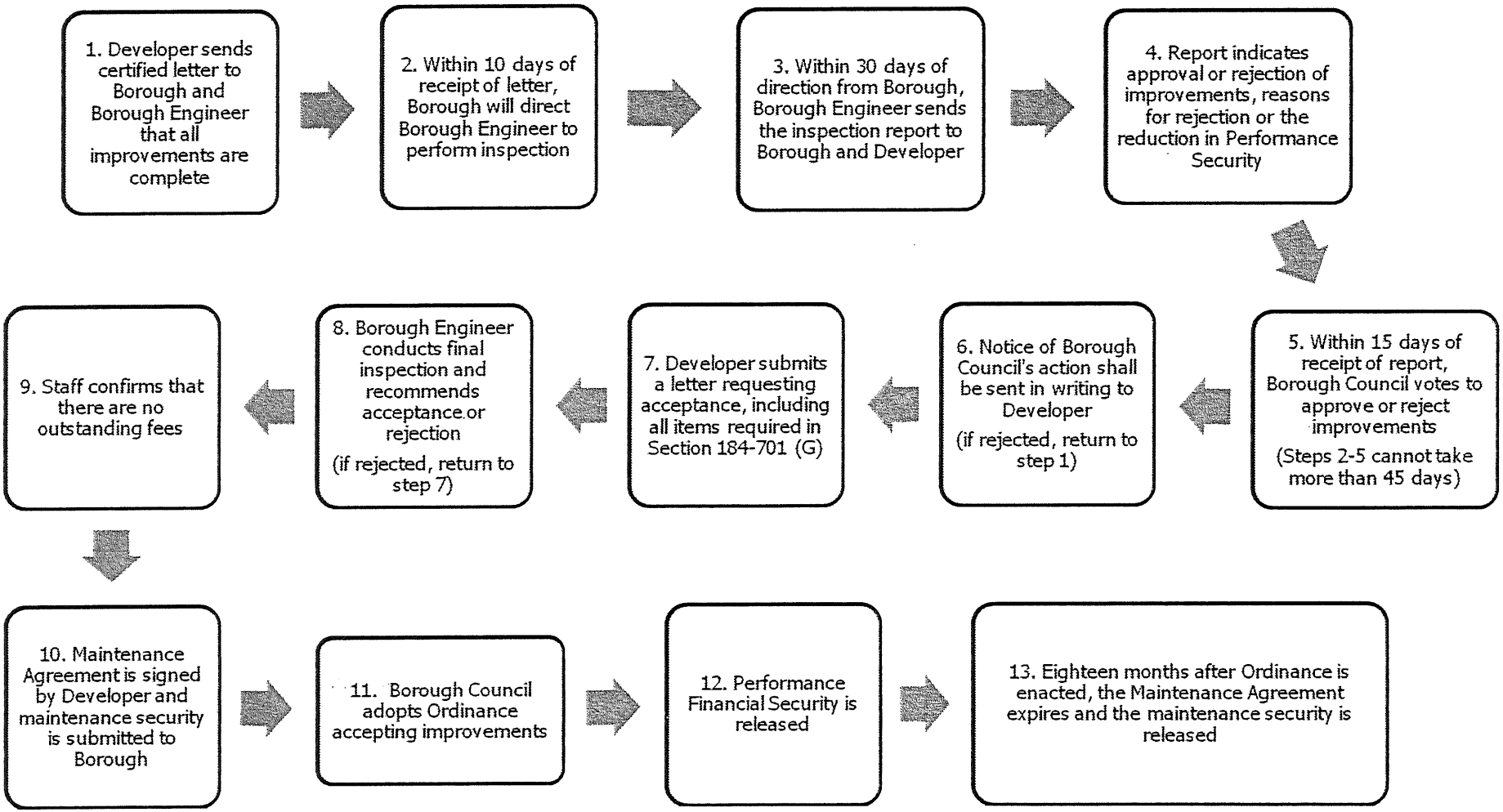
RELEASE OF FINANCIAL SECURITY

Partial Release of Financial Security for Public or Private Improvements



This graphic is intended for informational purposes only. In the event of conflict between this graphic and the ordinance text, the ordinance text shall prevail.

Acceptance of Public Improvements



This graphic is intended for informational purposes only. In the event of conflict between this graphic and the ordinance text, the ordinance text shall prevail.

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that _____

_____

(insert full name and address or legal title of DEVELOPER)

as Developer (hereinafter called "DEVELOPER"), and _____

_____

(insert full name, address or legal title of SURETY)

as Surety (hereinafter called "SURETY"), are held and firmly bound unto the Borough of Franklin Park, 2344 West Ingomar Road, Pittsburgh, Pennsylvania 15237 as Obligee (hereinafter called "OBLIGEE") in the sum of _____($_____) Dollars, lawful money of the United State of America to be paid to the OBLIGEE, its successors and assigns or its certain agent, to which payment well and truly to be made, we do bind ourselves, our heirs, executors, administrators, successors and assigns, and each and every one of them jointly and severally, firmly by these presents.

WHEREAS, OBLIGEE has authorized DEVELOPER'S development by _____

_____, dated _____, 20_____

("MUNICIPAL APPROVAL"); and

WHEREAS, MUNICIPAL APPROVAL requires DEVELOPER to maintain all necessary and appropriate improvements (the "IMPROVEMENTS") for the development.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH THAT if the DEVELOPER shall for a period of eighteen (18) months replace and make good all defective workmanship and materials in connection with the construction of the IMPROVEMENTS done under the MUNICIPAL APPROVAL, as referred to, then this obligation shall become void, otherwise it shall be and remain in full force and effect. If such defective materials or workmanship occur within said period OBLIGEE shall give DEVELOPER and SURETY

written notice thereof at the addresses supplied above within sixty (60) days after discovery. When each such replacement is made to the satisfaction of the OBLIGEE, the obligation of the DEVELOPER and SURETY shall be discharged as to such replacement. Any such repairs or replacements which are made pursuant hereto shall in like manner be subject to the terms and conditions herein.

Any suit under this BOND must be instituted before the expiration of twelve (12) months after the expiration of the maintenance period provided for herein.

SIGNED AND SEALED this _____ day of _____, 20_____.

ATTEST OR WITNESS:

_____ _____
(DEVELOPER)

_____
(Title)

_____ _____
(SURETY)

_____
(Title)

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that _____

of _____

as Principal, (hereinafter called "DEVELOPER"), and _____

of _____

as Surety, (hereinafter called "SURETY"), are held and firmly bound unto the Borough of Franklin Park, with offices at 2344 West Ingomar Road, Pittsburgh, Pennsylvania 15237 as Obligee, (hereinafter called "OBLIGEE"), in the amount of _____Dollars ($_____), for the payment whereof DEVELOPER and SURETY bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, OBLIGEE has authorized DEVELOPER'S development by _____

_____

dated _____, 20_____ ("MUNICIPAL APPROVAL"); and

WHEREAS, MUNICIPAL APPROVAL requires DEVELOPER to complete all the necessary and appropriate improvements (the "IMPROVEMENTS") for the Performance Bond development under and pursuant to the Subdivision and Land Development Ordinance of the Borough of Franklin Park and other applicable ordinances, collectively (the "ORDINANCES").

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if DEVELOPER complies with all of the provisions of the ORDINANCES, and the OBLIGEE accepts the, or approves the IMPROVEMENTS, and/or as the case may be, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

The SURETY hereby waives notice of any alteration or extension of time made by the OBLIGEE.

If DEVELOPER does not cause the appropriate and necessary IMPROVEMENTS to be installed, or if any portion of the IMPROVEMENTS shall not be accepted by OBLIGEE and/or approved by OBLIGEE, as the case may be, or if DEVELOPER fails to comply with the provisions of the ORDINANCES, the SURETY may promptly remedy the reasons for such nonapproval or rejection, or shall promptly:

1. Complete or cause the completion of the IMPROVEMENTS in accordance with the terms and conditions of MUNICIPAL APPROVAL, - or –
2. Pay to the OBLIGEE the amount of _____ Dollars ($_____) as full payment of SURETY'S obligation under this BOND.

Any suit under this BOND must be instituted before the expiration of two (2) years from the date on which the OBLIGEE notifies the DEVELOPER that the IMPROVEMENTS shall not be approved by OBLIGEE or have not been completed in accordance with the MUNICIPAL APPROVAL.

No right of action shall accrue on the BOND to or for the use of and person or corporation other than the OBLIGEE named herein or the heirs, executors, administrators or successors of the OBLIGEE.

SIGNED AND SEALED this _____ day of _____, 20_____.

ATTEST OR WITNESS:

_____ _____
(Principal)

_____
(Title)

_____ _____
(Surety)

_____
(Title)

IRREVOCABLE STANDBY LETTER OF CREDIT No. _____
(FORM AND NAME OF ISSUER)

BENEFICIARY:
BOROUGH OF FRANKLIN PARK
2344 West Ingomar Road
Pittsburgh, Pennsylvania 15237

ISSUE DATE: _____

AMOUNT: $_____

TERM: Two Years

Gentlemen:

We hereby issue our Irrevocable Standby Letter of Credit No. ____ (the "Letter of Credit") in your favor for the account of (DEVELOPER), having an address of (ADDRESS, CITY, ZIP), up to the aggregate amount of (WORDS) and 00/100 U.S. DOLLARS ($_____) (the "Stated Amount") available by your drafts at sight drawn on "(NAME OF ISSUER) Irrevocable Standby Letter of Credit No. ___" at (ISSUER ADDRESS) and accompanied by the following:

> A written statement from the BOROUGH that the account customer has not performed in accordance the applicable Borough ordinances, the recorded plan of property, or the Developer's Agreement dated (_____) between the (DEVELOPER) and the BOROUGH secured by this Credit.

This Letter of Credit expires at this office on ____ Day of _____, 20____.

This Letter of Credit shall be automatically extended for the same term of the original letter of credit without amendment from the present or any further expiration date hereof, unless, at least ninety (90) days prior to such date, we notify you in writing at the above address, by certified mail, that we elect not to renew this Letter of Credit for such additional period. Upon receipt of that notice, you have the right to draw against the amount remaining available under this Letter of Credit by presentation of your signed draft upon us, accompanied by your statement as aforesaid.

Multiple draws are permitted under this Letter of Credit.

Drafts presented to us under this Letter of Credit may not exceed, in the aggregate, the Stated Amount available to you hereunder, as such amount may be reduced from time to time upon receipt by the (NAME OF ISSUER) of a written statement from the BOROUGH authorizing such reduction. Upon the payment of each such draft the maximum amount of our commitment hereunder will be reduced by the amount of such payment.

This Letter of Credit shall be governed by, and construed in accordance with, the laws of the Commonwealth of Pennsylvania, including the Uniform Commercial Code as in effect in said Commonwealth. This Letter of Credit shall be supplemented by the provisions (to the

extent that such provisions are consistent with this Letter of Credit) of the International Standby Practices 1998, International Chamber of Commerce Publication No. 590.

We hereby agree with you that drafts drawn under and in compliance with the terms of this Letter of Credit will be duly honored if presented to us on or before the above mentioned Expiration Date.

(NAME OF ISSUER)

By:_____

Name: _____

Title: _____

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APPENDIX K

TYPES & CLASSES OF APPLICATIONS & SUBMISSION REQUIREMENTS

A. **Application to the Zoning Hearing Board**

1. Applications must be submitted 25 days prior to the zoning hearing date.

2. Zoning hearings are scheduled for the second Thursday of each month.

3. Zoning applications must consist of the following information:

   a. A completed application to the Zoning Hearing Board (available from the Borough)

   b. 20 copies of any submitted items such as site plans, pictures, documents, studies, etc.

   c. 20 copies of a narrative explaining in detail the request being made to the Zoning Hearing Board.

   d. A list of names and addresses of property owners within 200 feet of the property boundary where the application is being applied for.

   e. Fee (fee costs are available in the current Franklin Park Borough Fee Schedule).

B. The applicant will be notified by letter of the date and time of the hearing after the application is submitted.

Application for Conditional Use Approval

A. Applications must be submitted 20 days prior to a Planning Commission meeting.

B. Planning Commission meetings are scheduled on the third Tuesday of each month.

C. Conditional Use Applications must consist of the following information:

1. A completed application for Conditional Use approval (available from the Borough).

2. 20 copies of any submitted items such as site plans, pictures, documents, studies, etc.

3. 20 copies of a narrative explaining in detail the request that is being made for Conditional Use approval.

4. A list of names and addressed of the property owners within 200 feet of the property boundary where the application is being applied for.

5. Fee (fee costs are available in the current Franklin Park Borough Fee Schedule).

D. If the application is tabled by the Planning Commission, any requested, required or revised materials must be submitted 20 days prior to the next Planning Commission meeting.

E. If the application is being recommended for approval by the Planning Commission and revisions or additions to the submitted plans and/or details are required, 13 sets must be delivered to the borough 13 days prior to the Council agenda meeting. Council agenda meetings are scheduled on the first Wednesday of each month.

Application for Minor Subdivision & Minor Land Development Approval

A. Applications must be submitted 15 days prior to a Council agenda meeting.

B. Borough Council agenda meetings are scheduled on the first Wednesday of each month.

C. Applications for minor subdivisions or minor land developments must consist of the following information:

1. A completed application for Subdivision or Land Development (available from the Borough).

2. 5 full size and 10 half size drawings or drawing sets as required by Chapter 184.

3. Fee (fee costs are available in the current Franklin Park Borough Fee Schedule.)

D. The applicant or a representative of the applicant must be in attendance at the regular Franklin Park Borough Council meeting to address any questions that may occur from the application. Regular Franklin Park Borough Council meetings are held on the third Wednesday of each month.

Application for Major Subdivisions & Land Development Approval

A. Applications must be submitted 20 days prior to a Planning Commission meeting.

B. Planning Commission meetings are scheduled on the third Tuesday of each month.

C. Major Subdivision & Land Development applications must consist of the following information:

1. A completed application for Subdivision or Land Development approval (available from the Borough).

2. 5 full size and 10 half size copies of any submitted items such as site plans, pictures, documents, etc.

3. Three copies of any studies.

4. Fee (fee costs are available in the current Franklin Park Borough Fee Schedule).

D. If the application is tabled by the Planning Commission, any requested, required or revised materials in the amounts specified above, must be submitted 20 days prior to the next Planning Commission meeting.

If the application is being recommended for approval by the Planning Commission, 3 full size and 10 half size sets with any revisions must be delivered to the borough 13 days prior to the Council agenda meeting. Council agenda meetings are scheduled on the first Wednesday of each month.

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APPENDIX L

DRAFTING STANDARDS FOR PLANS FOR RECORDING

A. General Requirements

The Allegheny County Department of Real Estate (ACDRE) will only accept plans for recording drawn on paper. Transparencies (mylars) of plans will not be accepted. The drafting standards listed below are the minimum required standards for subdivisions, planned residential developments, and site plans to be recorded in Allegheny County:

1. The paper copy of a plan of subdivision that will be presented to ACDRE for recording must have **both the embossed seal and the ink seal** of the PA licensed land surveyor who prepared the plan. **No plan of subdivision will be accepted that is not sealed as hereby required.**

    a. In the case of site plan not prepared by a surveyor, the name shall apply in regard to seal of the registered professional engineer, landscape architect who prepared the plan.

2. All plans presented to ACDRE for recording must be original drawings made on good quality white paper. If requested, the County will also sign and seal one (1) mylar copy of the plan for the applicant's use.

3. The minimum acceptable size for record plans is 17"x 22" (reproducible area dimensions), and the maximum accepted size is 22"x 34" (reproducible area dimensions).

4. All signatures, dates and seals on the copy of the plan presented to ACDRE for recording must be made with permanent **navy blue** ink or felt-tipped pen.

5. All declarations, certifications, notations, areas, lot line descriptions and other information on the plan shall be in permanent black and shall be typed or plotted on the plan. The minimum acceptable font size shall be 1/8" (or 10 points).

6. Required certifications for record plans are in Section C of this Appendix (Appendix L). All required certifications, declarations, and other clauses must be provided, and must be signed, witnessed, dated and sealed as required.

7. The minimum acceptable drawing scale for the plat of the actual subdivision is 1" = 100".

8. All boundary lines in the subdivision must be completely described as specified in Section D of this Appendix (Appendix L). All such descriptions must be completely legible. Missing, illegible or incorrect information shall be cause for rejection of the plan.

    a. Screening, opaque backgrounds, cross-hatching and the like should not be used as they may cause the plan to be rejected if a clear, legible image of the subdivision cannot be obtained.

9. A total plan area, and areas for all of the lots, parcels and other units of land in the subdivision must be provided. All areas must be given both acres and square feet.

10. All subdivision record plans shall have a title block prepared in accordance with (§780-402A.2 of the Allegheny County Subdivision and Land Development Ordinance, latest edition), and a site location map drawn to scale. Color reproductions of USGS Quad maps may not be used, however, as they are not legible on the plan book record.

B. Allegheny County Department of Real Estate Rules and Regulations

Subdivision record plans must meet minimum standards and requirements in order for the Allegheny County Department of Real Estate (ACDRE) to affect the transfer of real property shown on the subdivision record plan. Applicants are advised that ACDRE may have additional requirements not included herein. ACDRE will from time to time make available guidelines and other helpful information on the website.

1. **Recording a plan of subdivision does not, in and of itself, effect a transfer of title to property.** After the plan of subdivision has been recorded, the landowner(s) must record the deed(s) of conveyance in order for the title to the property to be transferred from one landowner to another.

2. The plat of the proposed subdivision must include the entire property regardless of the size (area) of configuration of the property.

3. The term "parcel" as used by ACDRE means a unit of land assigned a tax parcel identification number. A designated tax parcel may include one or more lots of record.

4. The current deed(s) of the record for a property in a proposed subdivision must be cited in the title clause on the plan of subdivision.

5. All landowners named in the deed(s) of record to a property in a proposed subdivision must be identified on the plan of subdivision and must sign the required landowner declarations.

    a. If a landowner named in a deed of record is deceased, the name of that landowner must be included in the landowner declarations with the word "deceased" following the owner's name.

6. If the party signing as landowner is the executor/executrix of an estate they must be clearly identified as such and the Will Book and Page/Estate File Number provided on the plan.

7. The name of a landowner on a plan of subdivision must be cited exactly as it appears in the landowner's deed(s) to the property.

8. If a plan of subdivision includes more than one property all owners of record of the properties in the subdivision must be identified on the plan of subdivision. All owners of record must be provided with, and must sign, the required landowner declarations.

9. Property may only be subdivided by the landowner or the beneficial landowner of record. If a plan of subdivision is signed by a "beneficial landowner" (see §780-11 Definitions) the appropriate documentation must be recorded with ACDRE and referenced on the plan.

10. If a party with power of attorney signs on behalf of a landowner, the power of attorney instrument must be recorded in the County's Power of Attorney Books and the volume and page numbers (POA book vl /pg #) cited on the plan of subdivision.

    a. Out of state power of attorney instruments must likewise be recorded in Allegheny County.

11. If a plan of subdivision includes property within a right-of-way vacated by ordinance of the municipality, the ordinance of vacation must be recorded with ACDRE and referenced on the plan.

C. Required Certifications

Note: The information enclosed in parenthesis is information that the applicant must provide on the final plan, as appropriate.

The certification shown below must be placed on the plan for recording:

1. OWNER'S ADOPTION AND DEDICATION. Slightly different forms are required for individual owners, partnerships, and corporations. If an individual with power of attorney signs on behalf of an owner, the volume and page number in which the power of attorney is recorded must be shown, Signatures must be witnessed.

    a. To be Used for Individual Owner or Owners. All owners must sign or the certification may be repeated for multiple owners.

    (I/we), Owner(s) or beneficial owner(s) of the land shown on the (Name of plan), hereby adopt this plan as (my/our) (Plan of lots or land development) and irrevocably dedicate all streets and other property identified for dedication on the plan to the Borough of Franklin Park. This adoption and dedication shall be binding upon (my/our) heirs, executors, and assigns.*

IN WITNESS OF WHICH, to this (I/we) set (my/our) hand and seal this_____day of _____, 20____.

ATTEST:

_____ _____

Notary Public *Signature of owner(s)*

b. To be Used for Partnerships. A general partner must sign.

The (Name of partnership), (owner or beneficial owner) of the land shown on the (name of plan) hereby adopts this plan as its (plan of lots or land development) and irrevocably dedicates all streets and other property identified for dedication on the plan of the Borough of Franklin Park. This adoption and dedication shall be binding upon the partnership and upon its heirs, executors and assigns.*

IN WITNESS OF WHICH, to this (I/we) set (my/our) hand and seal this____ day of_____, 20____.

ATTEST:

_____ _____

Notary Public *Signature of general partner*

c. To be Used for Corporations. A corporate officer must sign, and another officer must witness. The corporate seal must be affixed.

By a resolution approved on the ____day of _____, 20___, the Board of Directors of the (Name of corporation), Incorporated in the state of (Name of the state), (owner or beneficial owner) of the land shown on the (Name of plan) adopted this plan as its)plan of lots or land development) and irrevocably dedicated all streets and other property identified for dedication on the plan to the Borough of Franklin Park. This adoption and dedication shall be binding upon the corporation and upon its successors and assigns.*

(Seal) _____

Name of Corporation

_____ _____

Signature and title of officer *Signature and title of authorized officer*

Witnessing

_____

Date

*Landowner is defined in the Municipalities Planning Code as "the legal or beneficial owner or owners of land including the holder of an option or contract to purchase (whether or not such option or contract is subject to any condition), a lessee if he is authorized under the lease to exercise the rights of the landowner, or other person having a proprietary interest in land." Developer is defined as "any landowner, agent of such landowner, or tenant with the permission of such landowner, who makes or causes to be made a subdivision of land or a land development." An applicant is a "landowner or developer...who has filed an application for development, including his heirs, successors, and assigns." Thus, the adoption for development clause may be executed by any person or entity who falls within the MPC definition of landowner or developer.

2. ACKNOWLEDGEMENT OF NOTARY PUBLIC. The owner's adoption and dedication must be acknowledged by a notary public. The black notary stamp must be affixed. The following certifications indicate the slightly different language that may be used to acknowledge individual, partnership, and corporate adoptions and dedications.

a. Acknowledgement of Individual Owner's Adoption and Dedication.

Before me, the undersigned Notary Public in and for the Commonwealth of Pennsylvania and County of Allegheny, personally appeared the above named (Name of owner(s), and acknowledged the foregoing adoption and dedication to be (his, her, their) act.

Witness my hand and notarial seal this ___ day of _____ 20 ___.

My commission expires the _____day of _____ 20_____.

(Seal) _____

Notary Public

b. Acknowledgement of Partnership Adoption and Dedication.

Before me, the undersigned Notary Public in and for the Commonwealth of Pennsylvania and County of Allegheny, personally appeared the above named (Name of general partner), a partner in the firm of (name of firm), and acknowledged the foregoing adoption and dedication to be the act of the partnership.

Witness my hand and notarial seal this ____day of _____ 20___.

My commission expires the _____ day of _____ 20 _____.

(Seal) _____

Notary Public

c. Acknowledgement of Corporate Adoption and Dedication.

Before me, the undersigned Notary Public in and for the Commonwealth of Pennsylvania and County of Allegheny, personally appeared (Name and title of officer) of the (Name of corporation), who stated that (he/she) is authorized to execute the above adoption and dedication on behalf of the corporation and was present at the meeting at which the action of the corporation was taken to adopt the plan and dedicate public property contained therein to the Borough of Franklin Park.

Witness my hand and notarial seal this ____day of_____ 20___.

My commission expires the _____ day of _____ 20 _____.

(Seal) _____

Notary Public

3. CERTIFICATION OF TITLE AND CONCURRENCE OF MORTGAGEE WHERE APPLICABLE. The deed book volume and page numbers in which the title to all the property contained in the plan is recorded must be noted on the plan for recording and certified by the signature of the owner. If there is no mortgage or encumbrance against the property, a statement to that effect is included. If there is a mortgage or encumbrance, the mortgagee must consent to the recording of the plan. Signatures must be witnessed.

a. Certification of Title and No Mortgage.

(I/we) hereby certify that the title to the property contained in the (Name of subdivision or land development) is in the name of _____and is recorded in the deed book volume_____, page _____.

_____ _____

Witness Owner

b. Certification of Title with Mortgage and Consent of Mortgage.

(I/we) hereby certify that the title to the property contained in the (Name of subdivision or land development) is in the name of _____and is recorded in deed book volume _____, page _____.

_____ _____

Witness Owner

(Name of mortgagee), mortgagee of the property contained in the (Name of subdivision or land development) consents to the recording of said plan and to the dedications and all other matters appearing on the plan.

_____ _____

Witness Name, title, and mortgagee

4. SURVEYOR'S CERTIFICATION. Every plan for recording must be prepared by or under the supervision of a registered surveyor, who must certify that accuracy of the survey and affix his seal.

I certify that, to the best of my information, knowledge and belief the survey and plan shown here on are correct and accurate to the standards required.

_____ _____

Date *Name*

(Seal)

_____

Registration number

Where further certification by a registered professional is required, in addition to the surveyor's certification, the certification shall state the portion of the plan for which the signatory is responsible.

5. MUNICIPAL ENGINEER'S CERTIFICATION. The engineer for the municipality in which the plan is located must certify that the plan meets the engineering and design requirements of all applicable municipal ordinances. This is required whether the plan is located in a municipality in which the County has approval authority. In the latter case, the "applicable" ordinances will not include subdivision and land development regulations, but may include zoning, stormwater management, floodplain, grading, etc.

I certify that this plan meets all engineering and design requirements of the applicable ordinances of the Borough of Franklin Park, except as departures have been authorized by the appropriate officials of the municipality.

_____ _____

Date *Name*

(Seal)

_____

Registration number

6. MUNICIPAL DECLARATIONS

a. No Acceptance of Dedication. A declaration must be placed on any plan that shows dedication of streets or other property to the municipality that the dedication imposes no responsibility upon municipality for acceptance of the dedication, or for the improvement or maintenance of any dedicated facility until the dedication in accepted by ordinance.

The Borough Council of the Borough of Franklin Park gives notice that, in approving this plan for recording, the Borough of Franklin Park assumes no obligation to accept the dedication of any street, land or public facilities and has no obligation to improve or maintain such street, land or facilities.

_____ _____

Secretary or Manager *Head of governing body*

b. No Building Permits Without Approved Sewage Facilities. Although sewage facilities should be approved by the time of recording, this declaration clarifies that buildings may not be constructed without approval of sewage facilities. The municipal secretary or manager may sign this declaration.

The Borough of Franklin Park agrees not to issue building permits until the "Planning Module for Land Development" has been approved in accordance with the regulations of the Pennsylvania Department of Environmental Protection.

_____ _____

Date *Authorized municipal official*

7. OTHER REQUIRED STATEMENTS

a. For Plans Where Sewage Facilities are not Required. If a non-building waiver of sewage facilities requirements has been approved, the following statement must be placed on the plan for recording.

As of the date of this plan's approval by the approving authority, no development of any land contained in this subdivision or land development for any purpose requiring sanitary sewage facilities is planned. No portion of this property has been approved by the municipality or the Department of Environmental Protection for the installation of sewage disposal facilities. No sewage permit will be issued for the installation, construction, connection to or use of any sewage collection, conveyance, treatment or disposal system unless the municipality and the DEP have both approved sewage facilities planning for the property included in this

plan in accordance with the Pennsylvania Sewage Facilities Act (35 P.S. § 750.1 et seq.) and regulations promulgated thereunder. Prior to the transfer of any lot or property included in this plan, any purchaser should contact appropriate officials of the municipality, which is charged with administering the Sewage Facilities Act, to determine what sewage facilities planning is required and the procedure and requirements for obtaining appropriate permits or approval.

b. For Plans Requiring Access to State Highways. Section 508(6) of the Municipalities Planning code requires that no plat requiring access to a highway under the jurisdiction of the Department of Transportation shall be finally approved unless the plat contains the following statement:

A highway occupancy permit is required pursuant to § 420 of the Act of June 1, 1945 (P.L. 1242, No. 428), known as the "State Highway Law" before driveway access to a State highway is permitted.

8. REQUIRED MUNICIPAL AND COUNTY REVIEW AND APPROVAL STATEMENTS. The number and wording of required review and approval statements will vary based on whether a municipal subdivision and land development ordinance has been enacted, and on whom the ordinance designates as the approval authority for subdivision and land developments. The following situations are possible:

a. Municipal Ordinance is in Effect. Governing body is designated as approval authority. Municipal planning agency reviews. County planning agency reviews.

Reviewed by the Planning Commission of the Borough of Franklin Park, this ___ day of _____, 20 ___.

_____ _____

Secretary Chairperson

Approved by the Borough Council of the Borough of Franklin Park, by resolution, this _____ day of _____, 20 ___.

_____ _____

Secretary Chairperson/President

(Seal) _____

Director

Reviewed by the Allegheny County Department of Economic Development on this _____ day of _____, 20 ___.

(Seal)

_____
Director

b. Time Limits for Recording of Plans

The time limits for recording finally approved plats (plans) are established by the PA Municipalities Planning Code (MPC), §513 Recording of Plats, as follows:

> Upon the approval of a final plat, the developer shall within 90 days of such final approval *or 90 days after the date of delivery of an approved plat signed by the governing body, following completion of conditions imposed for such approval*, whichever is later, record such plat in the office of the recorder of deeds of the county in which the municipality is located [emphasis added].

When the date of delivery of the plan is different that the date of approval by the municipality, both dates must be clearly noted on the plan. Otherwise, the County will count the 90 days from the date of final approval.

The *Municipalities Planning Code* is available at http://www.newpa.com/default.aspx?id=132.

Below is the certification which can be used to note a date of delivery on a plan. This certification must be signed by the head of the governing body of the municipality.

Approved by the [name of governing body] of the Borough of Franklin Park by resolution, this _____ day of _____, 20 ___.

Signed and noted as approved this __ day of _____, 20 ___.

(Seal)

_____ _____
Secretary Chairperson/President

c. Expired Municipal Approvals

When a plan hasn't been recorded within 90 days of the date of final approval, but not because additional time was required to satisfy

conditions attached to approval, the applicant must take the plan back to the municipality. The municipality can grant an extension of the original approval date. The applicant may then resubmit the plan to the Allegheny County Department of Economic Development for signing.

Do not alter the original certification of final approval by the municipality that is already on the plan. **An additional certification must be added to the plan for the Municipality to sign.** The applicant shall use the following certification.

To **extend** a plan:

Extension approved by the [governing body] of the Borough of Franklin Park [by resolution] this ____ day of _____, 20 __.

_____ _____

Secretary [head of governing body]

Note: Extension approval requires a public meeting and formal action by the governing body. The certification must therefore be signed by the head of governing body, whose signature must be witnessed appropriately.

9. PROOF OF RECORDING. The plan must include a signature space for the Department of Real Estate as follows:

Recorded in the office of the Department of Real Estate of the County of Allegheny, Commonwealth of Pennsylvania, In Plan Book Volume _____, Page(s) _____.
Given under my hand and seal this _____ day of _____ 20 _____.

(Seal) _____

Department of Real Estate

D. Standards for Surveys

Surveys shall be performed generally in accordance with standards set forth in the most recent standards published by the Pennsylvania Society of Land Surveyors. Closure requirements, in terms of angular closure and/or lineal ratios of 1/x, shall relate to the closure of the original random traverse performed to create the outer boundary of the subdivision or site in question. If the survey was performed by survey measurements taken on the actual property lines with no random traversing created, then closure accuracies shall relate to the raw, unadjusted closure of the surveys thus performed. All subsequent survey data created from this field survey shall indicate closures of not less than 1/100,000 or better.

All care and diligence will be extended to assure that any survey correctly reflects the property or right-of-way lines as originally established, and honors to the largest degree possible, all rights of adjoiners and the parent tract. **All surveys shall be performed in the field, and no office developed subdivisions will be accepted.** Copies of field data and calculations may be requested at the option of the Department. All bearing notations should show degrees, minutes and seconds with the appropriate quadrant, such as northeast, southwest, etc. Linear dimensions shall be shown to not less than 1/100 of a foot on all measurements. Full centerline and right-of-way geometry shall be shown. Curve data in the form of arc, delta, radius, cord and tangent should be provided on all streets. In the case of redundant arc segments within a fully defined arc length on a right-of-way only, such arc segments may be limited to arc, delta and radius.

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