GENERAL NOTES

1. The Regulations and Construction Standards of the City of Hilliard, together with the current Construction and Material Specifications of the City of Columbus (COCS) and the Ohio Department of Transportation (ODOT), including all supplements thereto, shall govern all construction items that are a part of this plan unless otherwise noted.

2. The City Engineer or his authorized representative all make inspection of the work. The City Engineer all require at least 48 hours written notice before any work takes place. Failure to request the necessary inspection may result in the rejection of the work and the project.

3. It is the intention of the plans to provide and require a completed project ready for operation. Any work items omitted from the plans, which are clearly necessary for completion of the work, and its appurtenances shall be considered a part of such work, though not directly specified or called for in the plans. This includes, but is not limited to such incidental items as relocation of mailboxes, saw cutting, and removal and/or relocation of signs, sprinklers, or other miscellaneous items.

4. All items of work called for on the plans for which no specific method of payment is provided shall be performed by the Contractor with the cost to be included in the unit price bid for the various related items.

5. The Contractor or Developer shall deposit the total estimated cost for inspections, as determined by the City Engineer, with the City of Hilliard prior to the start of construction.

6. The Contractor shall provide the City of Hilliard, a Surety, acceptable to the City of Hilliard, equal to 100% of construction costs. The Surety shall guarantee the work for one year after acceptance by the City.

7. The City Engineer will not be responsible for means, methods, procedures, techniques, or sequences of construction that are not specified herein. The City Engineer will not be responsible for safety on the work site, or the failure by the contractor to perform work according to plans.

8. Approval of these plans is contingent upon all easements required for construction of the work being secured and submitted to the City of Hilliard for recording prior to commencement of work. No work, which requires an easement, will be allowed to proceed until this is done.

9. The Contractor shall perform all work in accordance with all applicable Federal, State and Local safety requirements including the Occupational Safety and Health Act of 1970. The Contractor shall exercise precaution always for the protection of persons (including employees) and property. It shall also be the sole responsibility of the Contractor to initiate, maintain and supervise all safety requirements, precaution and programs in connection with the work, including the requirements for confined spaces per 29 CFR 1910.146.

10. The Contractor/Developer shall be responsible to obtain all necessary permits.

11. The Contractor shall confine his activities to the project site, existing right-of-ways, temporary and permanent easements, and shall not enter upon other properties without written permission of the owner.

12. The Contractor shall carefully preserve bench marks, property corners, reference points, stakes and other survey reference instruments or markers. In cases of willful or careless destruction, the Contractor shall be responsible. Resetting the markers shall be performed by an Ohio Professional Surveyor as approved by the City Engineer at the Contractor's expense.

13. Property boundaries, including property lines and road right-of-way, are shown from the best information available and are not necessarily complete or correct.

14. The Contractor shall be responsible for having the finished work conform to the lines, grades, elevations and dimensions noted for on the drawings and typical sections

15. Any device shall not be operated at any time in such a manner that the noise created substantially exceeds the noise customarily and necessarily attendant to the reasonable and efficient performance of such equipment.

16. Pavements shall be cut in neat, straight lines the full depth of the existing pavement, or as required by the City Engineer.

17. All soil subgrade shall be prepared and compacted in accordance with Item 204 to a depth of 12 inches below the subgrade surface. Subgrade shall be scarified and contain sufficient moisture to meet Item 204 composition requirements.

18. The Contractor is not permitted to use any reclaimed materials in Item 304.

19. Non-rubber tired vehicles shall not be moved on or across public streets or highways without the written permission of the City Engineer.

20. Tracking or spilling mud, dirt, or debris upon streets, residential or commercial drives, sidewalks or bike paths is prohibited per 905.12 of the Hilliard Codified Ordinances and any such occurrence shall be cleaned up immediately by the Contractor. If the Contractor fails to remove said mud, dirt, debris, or spillage, the City of Hilliard reserves the right to remove these materials and clean affected areas, the cost of which shall be paid by the Contractor/Developer per 905.12.

21. During construction the Contractor shall provide adequate drainage and proper soil erosion control measures for protection of all adjacent roads and lands, per COLS Item 207.

22. The Contractor shall restore all disturbed areas to equal or better than existed before construction. Drainage ditches or watercourses that are disturbed by construction shall be restored to the grades and cross-sections that existed before construction.

23. The Contractor shall conduct his operations so as to maintain at all times sewer, drain, and ditch flows through existing facilities to remain in place and through existing facilities to be replaced until new facilities are completed and put into service. The Contractor, to a condition satisfactory to the City Engineer, shall restore the flow of all sewers, drains, and other watercourses disturbed during the prosecution of the work.

24. Any modification of the work as shown on these drawings must have prior written approval by the Hilliard City Engineer.

25. The Contractor shall notify the owners of the following utilities who do not subscribe to the Ohio Utilities Protection Service at least forty-eight (48) hours in advance of the anticipated start of construction:

Utility	Owner	Telephone
Sanitary Sewer	City of Hilliard	(614) 876-7361
Storm Sewer	3800 Municipal Way	
Street Lighting	Hilliard, OH 43026	
Water Mains	City of Columbus Division of Water 910 Dublin Road Columbus, OH 43215	(614) 645-7677

26. The Contractor shall call toll free, the Ohio Utilities Protection Service (OUPS) at 1-800-362-2764 seventy-two (72) hours in advance of the anticipated start of construction, and shall notify all utility companies at least forty-eight (48) hours prior to work in the vicinity of their lines.

Utility	Owner	Telephone
Telephone (Contact person)	Ameritech 180 East Gay Street Columbus, OH 43215	(614) ___-____
Electric (Contact person)	American Electric Power 850 Tech Center Drive Gahanna, OH 43230-6605	(614) ___-____
Gas (Contact person)	Columbia Gas 920 West Goodale Blvd. Columbus, OH 43215	(614) ___-____
Cable Television (Contact person)	Time Warner Cable 1280 Dublin Road P.O. Box 2553 Columbus, OH 43216-2553	(614) ___-____

27. Existing utilities shown on the plan are from the best available records and field investigation and are not necessarily complete or correct. The Contractor is responsible for the investigation, location, support, protection and restoration of all existing utilities and appurtenances whether shown or not.

28. The Contractor shall expose and verify the location and elevation of any utilities within the limits of the proposed conduit path, prior to starting any excavation. In case of conflict, adjustments in location and elevation of the proposed utilities may be made if approved per General Note #24, or arrangements shall be made to move the existing utility to provide adequate clearance.

29. Maintain three (3) feet horizontal and one (1) foot vertical separation from all sewer and water lines.

30. Existing drain tiles encountered during construction SHALL be reconnected or connected to the storm sewer system by the Contractor, as directed by the City Engineer.

31. All trenches within pavement, berm, and shoulder limits shall be backfilled or securely plated during non-working hours.

32. Access to all adjoining properties shall be maintained at all times. Areas with multiple drives shall have at least half of the drives open at all times. Properties with a single access all require staged construction; short-term full closures of a single access all be permitted with the property owner and/or tenant's agreement. Such full closures shall be scheduled and coordinated with the property owner/tenant.

33. At all utility crossings the trench backfill shall consist of Compacted Granular Material, COLS Item 912, between the deeper and shallower pipe.

34. Item 912 Material shall consist of natural, broken or crushed rock. Synthetic or man-made materials are unacceptable.

35. Backfill for trenches under pavement and within the right-of-way shall be Compacted Granular Material, COLS Item 912. In the pavement areas, the Compacted Granular Material, COLS Item 912 shall extend the full width of the right-of-way, and to within 6 inches of finished grade where not under pavement.

36. Backfill for trenches parallel to the pavement, with the top of the trench 3 feet or closer to the back of curb or edge of pavement, shall be Compacted Granular Material, COLS Item 912, to within 6 inches of finished grade. Compacted Granular Material shall consist of crushed stone, crushed gravel, or crushed slag. Backfill for all other trenches within the right-of-way shall be Compacted Backfill, COLS Item 911, except that compaction shall be to a minimum 95 percent maximum dry density. Prior to construction of the streets, the City Engineer may require soil tests on the backfill. When test results indicate that the backfill does not meet compaction requirements the backfill shall be removed, replaced, and re-tested until meeting these requirements.

37. The Contractor shall install street lights at the locations shown on the plans, including all wiring and disconnects and provide a complete operating lighting system that complies with the City of Hilliard Specifications.

38. All areas for underground electric and street lighting electric, telephone, and cable TV installations shall be brought to finished grade, as shown on the grading plan, prior to their being installed. All fill required shall be compacted in accordance with COLS Item 203.12, Condition 1. This work shall be performed as part of this plan and the cost shall be included under Item 203.

39. All seeding and mulching shall be done hydraulically. No straw mulch shall be used.

40. All signs, landscaping, structures or other appurtenances disturbed or damaged during construction shall be replaced or repaired to the satisfaction of the City Engineer. The Contractor shall pay for the cost of this work.

GENERAL NOTES FOR STORM SEWERS

1. Any modification of the work as shown on these drawings must have prior written approval by the Hilliard City Engineer.

2. The proposed sanitary sewers and services are to be constructed under plan P_____ prior to street improvements.

3. Before the Contractor starts any work on the project and again before final acceptance of any work, representatives of the City and the Contractor shall make an inspection of all existing sewers that are to remain in service and which may be affected by the work. The condition of the existing manholes and their appurtenances shall be determined from field observations. The City shall keep records of the inspection in writing.

4. All existing sewers inspected initially by the above mentioned parties shall be maintained and left in a condition reasonably comparable to that determined by the original inspection. The Contractor, to the satisfaction of the City Engineer, shall correct any change in the condition resulting from the Contractor's operations.

5. Payment for all operations described above shall be included in the contract price for the pertinent contract items.

6. All storm sewers constructed under this plan shall meet the requirements of COLS Item 901, with a minimum inside diameter of 12 inches.

7. All new conduits, catch basins and manholes constructed, as a part of the project shall be free of all foreign matter and in a cleaned condition before the City will except the project.
8. All inlets, catch basins, and manholes shall be channelized.

9. Roadway underdrains shall be discharged into the nearest storm structure available along the line of flow unless shown otherwise on the plans.

10. The Contractor shall adjust all existing and proposed castings to match the surrounding finished grade. The cost of all casting adjustments shall be included in the various sewer items.

11. All drainage swales along rear lot lines, shown on the grading plan, shall be constructed to finished grade as part of this plan and the cost shall be included under COLS Item 203.

12. All storm water detention/retention areas shown on the grading plan shall be constructed to finished grade per COLS Item 203, hydro-seeded, and right-mulched per COLS Item 659, as part of this plan. The cost shall be included as a Lump Sum under Special, Detention/Retention Area Construction.

13. The Contractor shall provide two roof drain openings in the curb for each lot, located as directed by the Owner.

14. All catch basins are to be equipped with East Jordan #5110, Type M3 grates, or approved equal.

15. Upon completion of construction for each phase of storm sewer work, the Developer, through its Engineer, shall furnish the City Engineer a tabulation of structure numbers, the elevation of the top of casting as designed on the plans, and the elevation of the top of casting, as built. Further, a tabulation of inflections and top of curb elevation, as built, at the ends of all streets, that are to be extended in the future, shall be submitted. The City Engineer will determine requirements, if any, that are necessary and all necessary adjustments shall be done prior to submittal of "as built" drawings.

16. The original tracings, revised "as built", and two sets of prints shall be given to the City prior to any top permits being issued, or acceptance by the City for the one year maintenance period. The information shown on the "as built" plans shall be from field measurements. Water services and main line valves shall be located by street stationing. Top of casting elevations for all storm sewer structures and any variance in the horizontal location of the utilities from that shown on the approved plans, shall be shown.

GENERAL NOTES FOR WATER LINES

1. City of Columbus water division personnel are to operate all water valves.

2. Any modification of the work as shown on these drawings must have prior written approval by the Hilliard City Engineer and the Administrator, Division of Water, City of Columbus.

3. All water line materials and installations shall be in accordance with the current rules and regulations of the City of Columbus, Division of Water.

4. Approval of these plans is contingent upon the City of Hilliard securing an easement that will hold the City of Columbus harmless for damages resulting from maintenance work and/or water damages that could be associated with the water line.

5. All water meters associated with this project shall be installed inside of the proposed structure, unless the Administrator of the Division of Water approves a meter pit. All meter pits must be approved prior to the issuing of any service permits and must conform to Standard Drawing L-7103 ASB for 5/8 inch through 1 inch meters or L-6517 ASB for 1-1/2 inch or larger meters.

6. Water lines shall be laid with a minimum of 4 feet 0 inches from the finished surface grade to the top of the water line.

7. All bends, joints deflections and fittings shall be backed with concrete per City of Columbus standards.

8. All water lines shall be located at least ten (10) feet horizontally and one (1) foot vertically from sanitary sewers.

9. In case of conflict in grade between water lines and sewers, the water line shall be lowered during construction. Water lines shall be deflected around structures without the use of special fittings, where possible, without exceeding the manufacture's allowable deflection.

10. If the top of the operating nut of a valve is more than 36 inches below finished grade, an extension stem shall be furnished to bring the top of the operating nut to within 24 inches of finished grade.

11. At all points of crossing of water lines and sewers, the backfill shall be Compacted Granular Material, COLS Item 912, between the deeper and shallower pipe as directed by the City Engineer.

12. Water service boxes shall be located 6 inches inside the right-of-way.

13. Fire hydrants shall be installed per COLS Item 908, and shall meet City of Hilliard and Norwich Township Fire Department Specifications, copies of which are available at the City of Hilliard.

14. All water lines shall be cleaned and flushed in accordance with COLS Item 801.11 prior to hydrostatic testing.

15. The Contractor shall test all water lines in accordance with COLS Item 801.12. Testing shall be done under the supervision of the City Engineer or his authorized representative at the Contractor's expense.

16. All water lines shall be disinfected in accordance with COLS Item 801.13. Special attention is directed to applicable sections of A.W.W.A. C-651, particularly for flushing (Section 6) and for chlorinating valves and for fire hydrants (Section 7). Cost of work is to be included in price bid for Item 801.

17. When water lines are ready for disinfecting, the City of Hilliard, thru the Developer's Engineer, shall submit two (2) sets of "As Built" plans, and a letter stating that the water lines have been pressure tested and need to be disinfected, to the City of Columbus, Division of Water. The Contractor shall be solely responsible for all costs associated with the disinfecting of all water lines constructed under this plan.

18. No service connection permits shall be issued or connections made to any service tape until water lines have been disinfected by the City of Columbus, Division of Water.

19. A tap permit for each water service must be obtained from the City of Hilliard and the City of Columbus, Division of Water prior to making any taps into the water line.

20. The proposed water line shall be located a minimum distance of twenty (20) feet away from any structure, overhang, or footer.

21. On dead end lines in cul-de-sacs, two 3/4 inch taps shall be installed within two (2) feet of the end of the main.

22. All taps made in 2-inch pipe are to be made with Ford Service Saddle, Model S70-203 or approved equal.

23. Magnetic locator tape shall be placed in the trench (8 inches +/-) above all PVC water lines.

24. The Contractor shall imprint a "W", three inches high, in the curb at each water service location.

25. The City of Columbus, Division of Water will be responsible for the repair and maintenance of the water line within the easement area. Backfilling of any excavation caused by the maintenance, repair, or replacement of said water line shall be such that the surface is restored to its former elevation as near as is reasonably possible.

26. The Contractor shall give written notice to all affected property owners at least one (1) working day but not more than three (3) working days prior to any temporary interruption of water service. Interruption of water service shall be held to a minimum and shall be approved by the City Engineer.

SPECIAL NOTES

1. High Density Polyethylene (H.D.P.E.) corrugated pipe with internally formed smooth interior wall ADS N-12 or approved equal may be substituted for reinforced concrete pipe in non-paved areas.

2. H.D.P.E. pipe joints shall be made using watertight couplers with "O"-ring gasket. ADS Pro Link WT or approved equal where rubber "O"-ring gasket (ASTM C-361) pipe is required on the plans. All other pipe shall have a bell and spigot joint with rubber gasket. ADS N-12 Pro Link Ultra, or approved Equal.

3. Bedding shall be per Columbus Standard Drawing AA-5148.

4. Green warning tape 6 inches wide, marked "Caution Sewer Line Buried Below" shall be placed on top of the bedding material for the entire length of pipe.

5. Backfill within the right-of-way shall be Item 912 per General Note 35.

6. Backfill outside the right-of-way shall be per Columbus Standard Drawing AA-5135.

7. All H.D.P.E. pipe shall be mandrel tested per Columbus Item 801.21.

GENERLA NOTES

PROJECT NAME
PUBLIC/PRIVATE STREET, STORM SEWER & WATERLINE IMPROVEMENTS

X
XX

ORIGINALS TO BE 22"x34" MYLARS.

APPROVED

CITY ENGINEER DATE

SCALE: 1" = 4'

SAMPLE PLANS
GENERAL NOTES

CITY OF
HILLIARD, OHIO
STANDARD
CONSTRUCTION DRAWING

1/1

SP-3