

GENERAL NOTES	EROSION CONTROL NOTES	PAVING NOTES	SANITARY SEWER NOTES	WATERMAIN NOTES								
<p>1. THE MUNICIPALITY REQUIREMENTS AND THE LATEST INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS INCLUDING CHANGES SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN UNLESS OTHERWISE NOTED. WHEN CONFLICTS ARISE BETWEEN ABOVE LISTED SPECIFICATIONS, THE MORE STRINGENT SHALL TAKE PRECEDENCE.</p> <p>2. STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND RECURRING SPECIAL PROVISIONS, CONSTRUCTION PLANS, AND SUBSEQUENT DETAILS ARE TO BE CONSIDERED AS PART OF THE CONTRACT. INCIDENTAL ITEMS SPECIFIC TO COMPLETE THIS PROJECT AND WHICH WORK MAY NOT BE SPECIFICALLY NOTED ARE CONSIDERED A PART OF THIS CONTRACT.</p> <p>3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE ENGINEER DOES NOT WARRANT THE LOCATION OF ANY EXISTING UTILITIES SHOWN ON THE PLAN. THE CONTRACTOR SHALL CALL INDIANA UTILITIES PROTECTION SERVICE (811 OR 1.800.562.2764) AND THE MUNICIPALITY FOR UTILITY LOCATIONS.</p> <p>4. NO CONSTRUCTION PLANS SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION" PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THE WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES WITH WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE/SHE MUST IMMEDIATELY REPORT THEM TO THE SURVEYOR OR ENGINEER BEFORE DOING ANY WORK. THEREAFTER, THE CONTRACTOR ASSUMES ALL RESPONSIBILITY IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, SPECIFICATIONS, AND/OR SPECIAL DETAILS. THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILURE TO OBTAIN SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT THE CONTRACTOR'S OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTIONS ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.</p> <p>5. NOTIFICATION OF COMMENCING CONSTRUCTION:</p> <p>5.1. THE CONTRACTOR SHALL NOTIFY AFFECTED GOVERNMENTAL AGENCIES IN WRITING AT LEAST THREE (3) WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL NOTIFY AS NECESSARY, ALL TESTING AGENCIES, THE MUNICIPALITY, AND THE OWNER SUFFICIENTLY IN ADVANCE OF CONSTRUCTION.</p> <p>5.2. FAILURE OF THE CONTRACTOR TO ALLOW PROPER NOTIFICATION TIME WHICH RESULTS IN THE TESTING COMPANIES BEING UNABLE TO VISIT THE SITE AND PERFORM TESTING WILL CAUSE THE CONTRACTOR TO SUSPEND THE OPERATION TO BE TESTED UNTIL THE TESTING AGENCY CAN SCHEDULE THE TESTING OPERATIONS. COST OF SUSPENSION OF WORK SHALL BE BORNE BY THE CONTRACTOR.</p> <p>6. ALL CONTRACTORS SHALL KEEP ACCESS AVAILABLE AT ALL TIMES FOR ALL EMERGENCY TRAFFIC, AS DIRECTED BY THE MUNICIPALITY.</p> <p>7. ALL PROPOSED GRADES SHOWN ON PLANS ARE FINISHED SURFACE ELEVATIONS, UNLESS NOTED OTHERWISE.</p> <p>8. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES UNTIL THEY ARE NO LONGER NEEDED, ANY STAKES DESTROYED OR DISTURBED BY THE CONTRACTOR PRIOR TO THEIR USE SHALL BE RESET BY THE SURVEYOR AT THE CONTRACTOR'S EXPENSE.</p> <p>9. ALL FRAMES AND LIDS FOR STORM AND SANITARY SEWERS, VALVE VAULT COVERS, FIRE HYDRANTS, AND B-BOXES ARE TO BE ADJUSTED TO MEET FINISHED GRADE. THIS ADJUSTMENT IS TO BE MADE BY THE SEWER AND WATER CONTRACTOR, AND THE COST IS TO BE CONSIDERED INCIDENTAL TO THESE ADJUSTMENTS. THE CONTRACTOR SHALL ALLEVIATE THE CONTRACTOR FROM ANY ADDITIONAL ADJUSTMENTS AS REQUIRED BY THE MUNICIPALITY UPON FINAL INSPECTION OF THE PROJECT. FINAL GRADES MAY BE DETERMINED BY THE MUNICIPALITY AND MAY VARY FROM PLAN GRADE.</p> <p>10. ANY EXISTING SIGNS, LIGHT STANDARDS, AND UTILITY POLES THAT INTERFERE WITH CONSTRUCTION OPERATIONS AND ARE SHOWN ON THE PLANS FOR REMOVAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT HIS/HER OWN EXPENSE, AS DIRECTED BY THE ENGINEER. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS/HER OWN EXPENSE. THE CONTRACTOR SHALL PROTECT ALL SIGNS NOT REQUIRED TO BE RESET SHALL BE DELIVERED TO THE RESPECTIVE OWNERS.</p> <p>11. REMOVAL OF SPECIFIED ITEMS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALK, CURB, CURB AND GUTTER, CURBVERTS, ETC., SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR ANY PERMITS REQUIRED FOR SUCH DISPOSAL.</p> <p>12. ANY FIELD TIES ENCOUNTERED SHALL BE INSPECTED BY THE MUNICIPALITY. THE DRAIN TILE SHALL BE CONNECTED TO THE STORM SEWER SYSTEM AND A RECORD KEPT BY THE CONTRACTOR. ALL EXISTING UTILITIES AND STRUCTURES SHALL REMAIN UNLESS OTHERWISE NOTED ON THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT, AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.</p> <p>13. BEFORE ACCEPTANCE, ALL WORK SHALL BE INSPECTED BY THE MUNICIPALITY, AS NECESSARY.</p> <p>14. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHT-OF-WAYS ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF THESE UTILITIES LINES AND FOR PROTECTING THE UTILITIES FROM CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH LOCATIONS OF THE NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.</p> <p>15. OWNER SHALL OBTAIN EASEMENTS AND APPROVAL OF PERMITS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITIES. THE CONTRACTOR, HOWEVER, SHALL FURTHER ALL REQUIRED BOND AND EVIDENCE OF INSURANCE NECESSARY TO SECURE THESE PERMITS AND EASEMENTS.</p> <p>16. THE CONTRACTORS SHALL PLAN THEIR WORK BASED ON THEIR OWN BORINGS, EXPLORATIONS, AND OBSERVATIONS TO DETERMINE SOIL CONDITIONS AT THE LOCATION OF THE PROPOSED WORK.</p> <p>17. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY ON THE JOB PER OSHA REGULATIONS.</p> <p>18. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE PROPER BARRICADING, WARNING DEVICES, AND THE SAFE MANAGEMENT OF TRAFFIC WITHIN THE AREA OF CONSTRUCTION. ALL SUCH DEVICES AND THEIR INSTALLATION SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS, LATEST EDITION, AND IN ACCORDANCE WITH THE MUNICIPAL ORDINANCES.</p> <p>19. THE CONTRACTOR SHALL COLLECT AND REMOVE ALL CONSTRUCTION DEBRIS, EXCESS MATERIALS, TRASH, RESIDUES, MACHINERY TOOLS, AND OTHER MISCELLANEOUS ITEMS WHICH WERE NOT PRESENT PRIOR TO PROJECT COMMENCEMENT AT NO ADDITIONAL EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY AND ALL PERMITS NECESSARY FOR HAULING AND DISPOSAL OF MATERIALS FOR CLEANUP, AS DIRECTED BY THE ENGINEER OR OWNER. BURNING ON THE SITE IS NOT PERMITTED.</p> <p>20. NO UNDERGROUND WORK SHALL BE COVERED UNTIL IT HAS BEEN APPROVED BY THE MUNICIPALITY. APPROVAL TO PROCEED MUST BE OBTAINED FROM THE MUNICIPALITY PRIOR TO INSTALLING PAVEMENT BASE, BINDER, AND SURFACE, AND PRIOR TO POURING ANY CONCRETE AFTER FORMS HAVE BEEN SET, AS NECESSARY.</p> <p>21. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT, AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS A PAY ITEM IS LISTED ON THE BID LIST.</p> <p>22. AT THE CLOSE OF EACH WORKING DAY AND AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS.</p> <p>23. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED, AS PER MUNICIPAL STANDARDS.</p> <p>24. LIMB PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF AN APPROVED LANDSCAPE ARCHITECT, FORESTER, OR ARBORIST AND SHALL BE UNDERTAKEN IN A TIMELY FASHION SO AS NOT TO INTERFERE WITH CONSTRUCTION. ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS WORK SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS/HER OWN EXPENSE. ALL CUTS OVER ONE (1) INCH IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE PAINT.</p> <p>25. WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, EXISTING DRAINAGE STRUCTURES AND PIPE SHALL BE CLEANED OF DEBRIS AND MATERIALS AND BE PROMPTLY RESTORED TO ASSURE INTEGRITY OF THE STRUCTURE. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE MERGED INTO THE CONTRACT UNIT PRICE EACH FOR STRUCTURES AND CONTRACT UNIT PRICE PER LINEAL FOOT FOR STORM SEWERS, WHICH SHALL BE PAYMENT IN FULL FOR CLEANING, PATCHING, REMOVAL, AND DISPOSAL OF DEBRIS AND DIRT. DRAINAGE STRUCTURES AND STORM SEWERS CONSTRUCTED AS PART OF THIS PROJECT SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS CONSTRUCTION. NO EXTRA PAYMENT WILL BE MADE FOR CLEANING STRUCTURES OR STORM SEWERS CONSTRUCTED AS PART OF THIS PROJECT.</p> <p>26. HYDRANTS SHALL NOT BE FLUSHED DIRECTLY ONTO THE ROAD SUBGRADES. WHENEVER POSSIBLE, HOSES SHALL BE USED TO DIRECT THE WATER INTO DRAINAGE AREAS OR TO THE STORM SEWER SYSTEM. IF AVAILABLE, DAMAGE TO THE ROAD SUBGRADE OR LOT GRADING DUE TO EXCESSIVE WATER SATURATION AND/OR EROSION FROM HYDRANT FLUSHING, OR FROM LEAKS IN THE WATER DISTRIBUTION SYSTEM, WILL BE REPAIRED BY THE CONTRACTOR AT HIS/HER OWN EXPENSE. THE HYDRANT AT THE WATER MAIN OR THE CONTRACTOR'S OWN EXPENSE. LEAKS IN THE WATER DISTRIBUTION SYSTEM SHALL BE THE RESPONSIBILITY OF THE WATER MAIN CONTRACTOR AND SHALL BE REPAIRED AT HIS EXPENSE.</p> <p>27. AFTER THE STORM SEWER SYSTEM HAS BEEN CONSTRUCTED, THE CONTRACTOR SHALL PLACE EROSION CONTROL AT LOCATIONS INDICATED BY THE ENGINEER. THE PURPOSE OF THE EROSION CONTROL WILL BE TO MINIMIZE THE AMOUNT OF SILTATION THAT NORMALLY WOULD ENTER THE STORM SEWER SYSTEM FROM ADJACENT AND/OR UPSTREAM DRAINAGE AREAS.</p> <p>28. THE TRENCHES FOR PIPE INSTALLATION SHALL BE KEPT DRY AT ALL TIMES DURING PIPE PLACEMENT. APPROPRIATE FACILITIES TO MAINTAIN THE DRY TRENCH SHALL BE PROVIDED BY THE CONTRACTOR, AND THE COST OF SUCH SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE ITEM. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING CONSTRUCTION UNLESS APPROVED IN WRITING BY THE OWNER.</p> <p>29. EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH IDEM REGULATIONS AND STANDARDS FOR SOIL EROSION AND SEDIMENTATION CONTROL AND SHALL BE MAINTAINED BY THE CONTRACTOR AND REMAIN IN PLACE UNTIL A SUITABLE GROWTH OF GRASS, ACCEPTABLE TO THE ENGINEER, HAS DEVELOPED.</p>	<p>1. CONSTRUCTION ENTRANCE SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, CONSTRUCTION ENTRANCE SHALL BE LOCATED TO CONDUCE WITH THE PHASING OF THE PAVEMENT REPLACEMENT.</p> <p>2. POST CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES INCLUDE STABILIZATION BY PERMANENT PAVING, DRAINAGE SYSTEM STRUCTURE, OR LANDSCAPING.</p> <p>3. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CURE AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.</p> <p>4. BMP'S HAVE BEEN LOCATED AS INDICATED IN THESE PLANS IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.</p>	<p>5.2. SCAFFRY, DISC, AERATE, AND COMPACT, TO THE DEGREE SPECIFIED, THE UPPER TWELVE (12) INCHES OF THE SUITABLE SUBGRADE MATERIAL IN ALL AREAS THAT MAY BE SOFT DUE TO EXCESS MOISTURE CONTENT. THIS APPLIES TO CUT AREAS AS WELL AS FILL AREAS.</p> <p>5.3. PROVIDE WATER TO ADD TO DRY MATERIAL IN ORDER TO ADJUST THE MOISTURE CONTENT FOR THE PURPOSE OF ACHIEVING THE SPECIFIED COMPACTION.</p> <p>5.4. BACKFILL THE CURB AND GUTTER AFTER ITS CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE MATERIAL.</p> <p>6. TESTING AND FINAL ACCEPTANCE</p> <p>6.1. THE CONTRACTOR SHALL PROVIDE AS A MINIMUM A FULLY LOADED SIX-WHEEL TANDEM AXLE TRUCK FOR TESTING THE SUITABLE SUBGRADE MATERIALS PRIOR TO THE PLACEMENT OF THE CURB AND GUTTER AND THE BASE MATERIAL. THIS SHALL BE WITNESSED BY THE GEOTECHNICAL ENGINEER OR SOILS TESTING AGENCY AND THE OWNER. (SEE PAVING SPECIFICATION.)</p> <p>6.2. ANY UNSUITABLE AREA ENCOUNTERED AS A RESULT OF PROOF ROLLING SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE CORRECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER OR SOILS TESTING AGENCY.</p>	<p>1. ALL UNSUITABLE MATERIALS SHALL BE REMOVED BELOW THE PROPOSED SANITARY SEWER AND REPLACED WITH COMPACTED CRUSHED GRAVEL OR STONE, AS PER INDOT STANDARDS.</p> <p>2. ALL TRENCHES BENEATH PROPOSED OR EXISTING UTILITIES, PAVEMENTS, ROADWAYS, SIDEWALKS, AND FOR A DISTANCE OF THREE (3) FEET ON EITHER SIDE OF SAME, AND/OR WHERE SHOWN ON THE PLANS, SHALL BE BACKFILLED WITH MATERIAL THAT HAS BEEN TREATED AND COMPACTED TO 95% OF STD. PROCTOR MAXIMUM DRY DENSITY.</p> <p>3. ALL SANITARY SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE.</p> <p>4. CONNECTIONS TO EXISTING SANITARY SEWER SYSTEM SHALL NOT BE DONE UNTIL AUTHORIZED BY THE MUNICIPALITY.</p> <p>5. WATERMANS SHALL BE SEPARATED FROM SANITARY SEWERS AND STORM SEWERS IN ACCORDANCE WITH INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT REQUIREMENTS, AS SPECIFIED IN THE STANDARDS FOR WATER AND SEWER CONSTRUCTION IN INDIANA.</p> <p>6. NO WATER LINE SHALL BE PLACED IN THE SAME TRENCH AS A SEWER LINE, EXCEPT UNDER SPECIAL CIRCUMSTANCES AND THEN ONLY UNDER THE FOLLOWING RULES:</p> <p>6.1. IF NECESSARY PERMISSION SHALL BE OBTAINED FROM THE MUNICIPALITY IN WRITING PRIOR TO BEGINNING CONSTRUCTION.</p> <p>6.2. THE BOTTOM OF A WATER LINE SHALL BE INSTALLED ON A SHELF A MINIMUM OF 18 INCHES ABOVE THE TOP OF THE SEWER AND 18 INCHES HORIZONTALLY AWAY FROM THE EDGE OF THE SEWER.</p> <p>7. ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WIGG-TIGHT SLEEVES. THE BOTTOM OF THE MANHOLE SHALL HAVE A CONCRETE BENCH POURED TO FACILITATE SMOOTH FLOWS.</p> <p>8. FRAMES AND LIDS: ALL SANITARY SEWER MANHOLE FRAMES AND LIDS SHALL BE PER DETAIL SHEET, UNLESS OTHERWISE NOTED ON THE PLANS AND DETAILS. THE LIDS SHALL HAVE RECESSED (CONCEALED) PICK HOLE AND BE SELF-SEALING WITH AN "O" RING GASKET. THE JOINTS BETWEEN THE FRAME AND CONCRETE SECTION SHALL BE SEALED WITH A BUTYL ROPE.</p> <p>9. A MAXIMUM OF TWELVE (12) INCHES OF CONCRETE-ADJUSTING RINGS SHALL BE USED TO ADJUST FRAME ELEVATIONS. RINGS SHALL BE SEALED TOGETHER WITH BUTYL ROPE.</p> <p>10. CLEANING: ALL MANHOLES AND PIPES SHALL BE THOROUGHLY CLEANED OF DIRT AND DEBRIS, AND ALL VISIBLE LEAKAGE ELIMINATED, BEFORE FINAL INSPECTION AND ACCEPTANCE.</p> <p>11. TESTING DEFLECTION, AIR, AND LEAKAGE TESTING WILL BE REQUIRED. THE PROCEDURE AND ALLOWABLE TESTING LIMITS SHALL BE IN ACCORDANCE WITH THE TEN STATE STANDARDS AND THE FOLLOWING:</p> <p>11.1. 3/27 IAC 3-6-19 states that (a) a deflection test shall be performed on each flexible pipe following the slope of thirty (30) days after the placement of the final backfill; (b) No pipe shall exceed a deflection of five percent (5%) or greater; (c) The diameter of the rigid ball or mandrel used for a deflection test shall be no less than ninety-five (95%) of the base inside diameter of the pipe to be tested dependent on what is specified in the corresponding ASTM standard. The best shall not be performed with the aid of a mechanical pulling device.</p> <p>11.2. 3/27 IAC 3-6-19 (d) All gravity sewer pipe shall be tested using one of the following leakage test types: (1) A hydrostatic test shall be performed with a minimum of two feet of positive head. The rate of exfiltration or infiltration shall not exceed two hundred (200) gallons per inch of pipe diameter per linear mile per day; (2) An air test shall conform to one of the following methods: ASTM C828-90, ASTM C924, or ASTM F1417-92.</p> <p>12. TESTING THE ALIGNMENT/STRAIGHTNESS SHALL BE IN ACCORDANCE WITH MUNICIPAL STANDARDS.</p> <p>13. TELEVISION: IF REQUIRED BY THE MUNICIPALITY, ALL SANITARY SEWERS SHALL BE TELEVISIONED, AND A COPY OF THE TELEVISION REPORT SHALL BE SUBMITTED AND REVIEWED BY THE MUNICIPALITY BEFORE FINAL ACCEPTANCE. THE REPORT SHALL INCLUDE STUB LOCATION AS WELL AS A DESCRIPTION OF ALL DEFECTS, WATER LEVEL, LEAKS, AND LENGTHS. IDENTIFY MANHOLE TO MANHOLE BOTH VERBALLY AND ON-SCREEN USING MANHOLE NUMBERS FROM APPROVED PLANS. ORDER OF WRITEN REPORT SHALL BE THE SAME AS THE VIDEO TAPES.</p> <p>14. TEST RESULTS: IF THE SANITARY SEWER INSTALLATION FAILS TO MEET THE TEST REQUIREMENTS OF THIS SECTION, THE CONTRACTOR SHALL DETERMINE THE CAUSE OR CAUSES OF THE DEFECT AND REPAIR, OR REPLACE ALL MATERIALS AND WORKMANSHIP, AS MAY BE NECESSARY TO COMPLY WITH THE TEST REQUIREMENTS.</p> <p>15. CERTIFICATION: CONTRACTOR SHALL SUBMIT CERTIFIED COPIES OF ALL REPORTS OF TESTS CONDUCTED BY AN INDEPENDENT LABORATORY BEFORE INSTALLATION OF P.V.C PLASTIC PIPE. TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH STANDARD METHOD OF TEST FOR "EXTERNAL LOADING PROPERTIES OF PLASTIC PIPE BY PARALLEL PLATE LOADING." ASTM STANDARDS D-2241, AS APPROPRIATE FOR THE PIPE, TO BE USED. TESTS SHALL ALSO BE CONDUCTED TO DEMONSTRATE JOINT PERFORMANCE AT FIVE (5) PERCENT MAXIMUM DIAMETRIC DEFLECTION OF THE JOINT.</p> <p>16. IF CONFLICT ARISES BETWEEN MUNICIPAL STANDARDS AND SANITARY SEWER NOTES, THE MORE STRINGENT SHALL APPLY.</p> <p>17. ALL SANITARY SEWER LINES SHALL BE P.V.C MEETING ASTM D-3034 STANDARDS AND JOINTS SPECIFIED ASTM D-3212. ALL SANITARY MANHOLES TO BE CONCRETE AND MEET MANHOLE DESIGN SPECIFICATION OF ASTM C-478 AND JOINT SPECIFICATIONS OF ASTM C-443.</p>	<p>1. ALL WATER LINE MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE MUNICIPALITY UTILITIES DEPARTMENT.</p> <p>2. PIPE MATERIALS: WATERMANS SHALL BE CONSTRUCTED OF AWWA C900 OR AWWA C905 PLASTIC PIPE AND SHALL BE CLASS 150 UNLESS OTHERWISE INDICATED ON THE PLANS. ONE COUPLING WITH TWO RUBBER GASKETS SHALL BE FURNISHED WITH EACH LENGTH OF PIPE. IT SHALL BE THE SAME MATERIAL AND BY THE SAME MANUFACTURER AS THE PIPE AND CONFORM TO ASTM D3139. RUBBER GASKETS SHALL CONFORM TO ASTM F477.</p> <p>3. TESTING OF THE PIPE AND COUPLINGS SHALL BE MADE IN ACCORDANCE WITH AWWA C900. REGARDLESS OF THE PLACE OF MANUFACTURE, ALL PIPE SHALL BE TESTED WITHIN THE CONTINENTAL UNITED STATES.</p> <p>4. PRESSURE RATING: THE PIPE SHALL BE DR 14 FOR FIRE PROTECTION MAINS AND DR 18 FOR WATER MAINS.</p> <p>5. JOINTS: JOINTS SHALL BE BELL END OR COUPLING PUSH-ON TYPE. THE PUSH-ON JOINT AND JOINT COMPONENTS SHALL MEET THE REQUIREMENTS FOR ASTM D-3139. JOINT FOR PLASTIC PRESSURE PIPE, USING RUBBER GASKETS SHALL BE DESIGNED SO AS TO PROVIDE FOR THE THERMAL EXPANSION AND CONTRACTION EXPERIENCED WITH A TOTAL TEMPERATURE CHANGE OF 75 DEGREES F IN EACH JOINT OF PIPE. THE LUBRICANT SHALL HAVE NO DETERIORATING EFFECTS ON THE GASKET ON THE PIPE. GASKETS SHALL MEET ALL APPLICABLE REQUIREMENTS OF ANSI STANDARD A21.11.</p> <p>6. FITTINGS: ALL FITTINGS SHALL BE OF DUCTILE IRON WITH GASKETS, GLANDS AND T-HEAD BOLTS WITH NUTS. DUCTILE IRON FITTINGS SHALL CONFORM TO ANSI/AWWA C110/A21.10, 350 POUNDS PER SQUARE INCH (PSI) PRESSURE RATING REQUIREMENTS. ALL FITTINGS SHALL BE CEMENT MORTAR LINED CONFORMING TO ANSI/AWWA C104/A21.4 AND SHALL BE COATED OUTSIDE WITH A BITUMINOUS COATING OR FUSION-BONDED EPOXY. FITTINGS SHALL HAVE DISTINCTLY CAST INTO THE PIPE EXTERIOR THE PRESSURE RATING AND LETTERS "DI" OR "DUCTILE". ALL DUCTILE IRON FITTINGS ACCEPTABLE TO THE UTILITY SHALL BE RATED AT A MINIMUM OF 70-50-05 (KSI) TEST STRENGTH (KSI MINIMUM STRENGTH PER UNIT LENGTH) IN ACCORDANCE WITH ANSI/AWWA C110 STANDARDS REGARDING STRENGTH OF MATERIALS.</p> <p>7. FITTING JOINTS SHALL BE OF THE STANDARD MECHANICAL JOINT TYPE CONFORMING TO ANSI/AWWA C111/A21.11 OR PUSH JOINT TYPE CONFORMING TO ANSI/AWWA C111/A21.11. ALL GASKETS, GLANDS AND T-HEAD BOLTS SHALL BE IN ACCORDANCE WITH AWWA C111/A21.11.</p> <p>8. POLYETHYLENE ENCASEMENT: HIGH DENSITY CROSS-LAMINATED POLYETHYLENE ENCASEMENT MATERIALS SHALL BE USED FOR DUCTILE IRON PIPE AND FITTINGS. THE HIGH DENSITY CROSS-LAMINATED POLYETHYLENE TUBE MATERIAL SHALL CONFORM TO ANSI/AWWA C105 WITH A MINIMUM THICKNESS OF 4 INCHES.</p> <p>9. VALVES: GATE VALVES SHALL BE USED ON ALL WATERMANS. ALL VALVES SHALL TURN COUNTER-CLOCKWISE TO OPEN. VALVES SHALL BE IRON BODY RESILIENT WEDGE GATE VALVES WITH BRONZE-MOUNTED SEATS AND NON-RISING STEMS CONFORMING TO AWWA C-509. THE VALVES SHALL HAVE MECHANICAL JOINTS.</p> <p>10. WHERE WATERMANS AND SERVICES CROSS PROPOSED OR EXISTING STREETS, BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL EXTENDING AT LEAST 5 FEET BEYOND THE BACK OF CURB OR EDGE OF PAVEMENT.</p> <p>11. PROVIDE AND INSTALL FOUR MEGALUG JOINT RESTRAINTS AT EACH JOINT FROM THE MAINLINE TEE TO THE AUXILIARY VALVE AND BETWEEN THE AUXILIARY VALVE AND THE HYDRANT BARREL.</p> <p>12. THE BREAK FLANGE AND ALL BELOW-GRADE FITTING SHALL HAVE STAINLESS STEEL NUTS AND BOLTS.</p> <p>13. CORPORATION STOPS: CORPORATION STOPS SHALL BE BRONZE BODY KEY STOPS CONFORMING TO AWWA C-800 AND SHALL INCLUDE "J" BEND, TAILPIECE, AND COMPRESSION FITTINGS. SIZE AND LOCATION AS SHOWN ON THE PLANS.</p> <p>14. MAXIMUM DEFLECTION AT PIPE JOINTS SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURER'S CURRENT RECOMMENDATIONS AND AWWA SPECIFICATIONS.</p> <p>15. BEDDING: ALL WATERMANS SHALL BE BEDDED ON FIRM GROUND, WITH BELLHOLES EXCAVATED SO THAT THE PIPE HAS AN EVEN BEDDING FOR ITS ENTIRE LENGTH.</p> <p>16. GRANULAR BEDDING MATERIAL OR GRANULAR BACKFILL MATERIAL SHALL BE CAREFULLY PLACED TO THE FULL (12) INCHES OVER THE TOP OF THE PIPE BEFORE FINAL BACKFILLING AND COMPACTION.</p> <p>17. A MINIMUM DEPTH OF COVER OF FIFTY-FOUR (54) INCHES SHALL BE MAINTAINED OVER THE WATER LINES. THE MAXIMUM COVER SHALL BE SEVENTY-TWO (72) INCHES, EXCEPT AT SPECIAL CROSSINGS.</p> <p>18. "MEGA-LUG" RETAINER GLANDS AND THRUST BLOCKING SHALL BE INSTALLED ON WATERMANS AT ALL BENDS, FITTINGS, TEES, ELBOWS, ETC. "MEGA-LUG" RESTRAINED JOINTS ARE REQUIRED ON ALL VALVES AND ALL FITTINGS.</p> <p>19. HORIZONTAL SEPARATION</p> <p>19.1. WATERMANS SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED DRAIN, STORM SEWER, SANITARY SEWER, OR SEWER SERVICES CONNECTION.</p> <p>19.2. WATERMANS MAY BE LAID CLOSER THAN TEN (10) FEET TO A SEWER LINE WHEN:</p> <p>19.2.1. LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF TEN (10) FEET;</p> <p>19.2.2. THE WATERMAIN INVERT IS AT LEAST EIGHTEEN (18) INCHES ABOVE THE CROWN OF THE SEWER;</p> <p>19.2.3. THE WATERMAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER.</p> <p>19.3. BOTH THE WATERMAIN AND DRAIN OR SEWER SHALL BE CONSTRUCTED WITH PIPE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION WHEN IT IS IMPOSSIBLE TO MEET (1) OR (2) ABOVE, THE DRAIN OR SEWER SHALL BE PRESSURE-TESTED TO THE MAXIMUM EXPECTED SURCHARGE HEAD BEFORE BACKFILLING.</p> <p>20. VERTICAL SEPARATION</p> <p>20.1. ALL SERVICE PIPES SHALL BE BURIED AT LEAST FIFTY-FOUR (54) INCHES DEEP IN THE GROUND.</p> <p>20.2. A WATERMAIN SHALL BE LAID SO THAT ITS INVERT IS EIGHTEEN (18) INCHES ABOVE THE CROWN OF THE DRAIN OR SEWER WHENEVER WATERMANS CROSS STORM SEWERS, SANITARY SEWERS, OR SEWER SERVICE CONNECTIONS. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATERMAIN LOCATED WITHIN TEN (10) FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSING. A LENGTH OF WATERMAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANT FROM THE SEWER OR DRAIN.</p> <p>20.3. BOTH THE WATERMANS AND SEWER SHALL BE CONSTRUCTED WITH PIPE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION WHEN:</p> <p>20.3.1. IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION, AS DESCRIBED IN (1) ABOVE;</p> <p>20.3.2. OR THE WATERMAIN PASSES UNDER A SEWER OR DRAIN.</p> <p>20.4. A VERTICAL SEPARATION OF EIGHTEEN (18) INCHES BETWEEN THE INVERT OF THE SEWER OR DRAIN AND THE CROWN OF THE WATERMAIN SHALL BE MAINTAINED WHERE A WATERMAIN CROSSES UNDER A SEWER. SUPPORT THE SEWER OR DRAIN LINES TO PREVENT SETTLING AND BREAKING OF THE WATERMAIN.</p> <p>20.5. CONSTRUCTION SHALL EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WATERMAIN TO THE SEWER OR DRAIN LINE IS AT LEAST TEN (10) FEET.</p> <p>21. ALL WATERMANS SHALL BE PRESSURE-TESTED FOR A MIN. OF 2 HOURS AT 150 PSI, FLUSHED, AND DISINFECTED IN ACCORDANCE WITH AWWA AND MUNICIPAL SPECIFICATIONS. EACH VALVE SECTION SHALL BE PRESSURE-TESTED FOR A MINIMUM OF ONE (1) HOUR. ALLOWABLE LEAKAGE IS PER THE MUNICIPAL STANDARDS. AT NO TIME IS THERE TO BE ANY VISIBLE LEAKAGE FROM THE WATERMAIN.</p> <p>22. IDEM WATERMAIN NOTES</p> <p>22.1. ALL WATERLINES SHALL BE AWWA APPROVED.</p> <p>22.2. THE NORMAL WORKING PRESSURE IN THE WATERLINES WILL NOT BE LESS THAN 35 PSI.</p> <p>22.3. INDIVIDUAL BOOSTER PUMPS WILL NOT BE ALLOWED FOR ANY INDIVIDUAL SERVICE.</p> <p>22.4. ALL FIRE HYDRANTS SHALL BE AWWA APPROVED.</p>								
<p>29. EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH IDEM REGULATIONS AND STANDARDS FOR SOIL EROSION AND SEDIMENTATION CONTROL AND SHALL BE MAINTAINED BY THE CONTRACTOR AND REMAIN IN PLACE UNTIL A SUITABLE GROWTH OF GRASS, ACCEPTABLE TO THE ENGINEER, HAS DEVELOPED.</p>	<p>DEMOLITION NOTES</p> <p>1. THE INTENT OF THE DEMOLITION PLAN IS TO DEPICT EXISTING FEATURES THAT ENCOMBER THE PROPOSED CONSTRUCTION AREA AND ARE SCHEDULED FOR REMOVAL. SOME INCIDENTAL ITEMS MAY HAVE BEEN INADVERTENTLY OMITTED FROM THE PLAN. THE CONTRACTOR IS ENCOURAGED TO THOROUGHLY INSPECT THE SITE AS WELL AS REVIEW THE PLANS AND SPECIFICATIONS PRIOR TO SUBMITTING PRICING. CONTRACTOR WILL NOT RECEIVE ADDITIONAL COMPENSATION FOR INCIDENTAL ITEMS NOT SHOWN ON THE DEMOLITION PLAN.</p> <p>2. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO COMMENCING ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ON-SITE LOCATIONS OF EXISTING UTILITIES AND FIELD VERIFY ALL UNDERGROUND UTILITIES.</p> <p>3. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO THE EXISTING BUILDING AT ALL TIMES. UTILITY SERVICES SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM THE CONSTRUCTION MANAGER.</p> <p>4. CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY DEMOLITION PERMITS.</p> <p>5. THE CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE TRUCKS AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.</p> <p>6. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED TO ANY OF THE SURROUNDING PAVEMENT, ETC., THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.</p> <p>7. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES OR PRIOR TO ANY FURTHER DEMOLITION. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.</p> <p>8. THE CONTRACTOR SHALL USE DUE CARE IN HAULING DEBRIS FROM SITE TO ENSURE THE SAFETY OF THE PUBLIC.</p> <p>9. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.</p> <p>10. CONTRACTOR SHALL LIMIT ALL DEMOLITION ACTIVITIES TO THOSE AREAS DELINEATED ON THE CONSTRUCTION DRAWINGS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.</p> <p>11. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING AIRBORNE DUST AND POLLUTANTS BY USING WATER SPRINKLING OR OTHER SUITABLE MEANS OF CONTROL.</p> <p>12. CONTRACTOR TO USE CARE IN HANDLING DEBRIS FROM SITE TO ENSURE THE SAFETY OF THE PUBLIC. ALL DEBRIS SHALL BE HAULING AND DISPOSAL OF DEBRIS OR MATERIALS TRACKED ONTO ADJOINING ROADWAYS, ETC. ROADWAYS AND WALKWAYS TO BE CLEARED DAILY OR AS NECESSARY TO MAINTAIN PUBLIC SAFETY.</p> <p>13. DEWATERING SHOULD BE ANTICIPATED AND INCLUDED. DEWATERING SHALL BE DONE IN ACCORDANCE WITH LOCAL AND REGIONAL REQUIREMENTS.</p>	<p>EARTHWORK NOTES</p> <p>1. GENERAL</p> <p>1.1. ALL EARTHWORK OPERATIONS TO CONFORM TO GEOTECHNICAL RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.</p> <p>1.2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE.</p> <p>1.3. ANY QUANTITIES IN THE BID PROPOSAL ARE INTENDED AS A GUIDE FOR THE CONTRACTOR'S USE IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND APPRIZE HIMSELF/HERSELF OF ALL SITE CONDITIONS. THE CONTRACT PRICE SUBMITTED BY THE CONTRACTOR SHALL BE CONSIDERED AS LUMP SUM FOR THE COMPLETE PROJECT. NO CLAIMS FOR EXTRA WORK WILL BE RECOGNIZED.</p> <p>1.4. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARE FINISHED GRADE AND SUBGRADE ELEVATIONS (AS NOTED) AND THAT PAVEMENT THICKNESS, TOPSOIL, ETC., MUST BE ACCOUNTED FOR.</p> <p>1.5. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION AND PREVENT STORMWATER FROM INTRUDING OR STANDING IN EXCAVATED AREAS. THE FAILURE TO PROVIDE PROPER DRAINAGE WILL NEGATE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION, AND TRAFFIC.</p> <p>1.6. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED AND APPROVED PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING CONSTRUCTION.</p> <p>1.7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC., TO PROTECT ADJACENT PROPERTY, ETC., SHALL OCCUR BEFORE GRADING BEGINS.</p> <p>1.8. PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL ERECT A CONSTRUCTION FENCE AROUND ANY TREE DESIGNATED TO BE PRESERVED. SAID FENCE SHALL BE PLACED IN A CIRCLE CENTERED AROUND THE TREE. THE DIAMETER OF WHICH SHALL BE SUCH THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL NOT BE DISTURBED.</p> <p>1.9. IF LANDSCAPE PLANTINGS ARE WITHIN OR ADJACENT TO AREAS WHERE LIME STABILIZATION OCCURS, CONTRACTOR SHALL FULLY REMOVE SOIL CONTAINING LIME STABILIZATION AND REPLACE WITH HIGH QUALITY PLANTING SOIL.</p> <p>2. TOPSOIL EXCAVATION INCLUDES:</p> <p>2.1. EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS WITHIN THOSE AREAS THAT WILL REQUIRE EARTH EXCAVATION OR COMPACTED EARTH FILL MATERIAL. EXISTING VEGETATION SHALL BE REMOVED PRIOR TO STRIPPING TOPSOIL OR FILLING AREAS.</p> <p>2.2. PLACEMENT OF EXCAVATED MATERIAL IN OWNER-DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL. PROVIDE NECESSARY EROSION CONTROL MEASURES FOR STOCKPILE.</p> <p>2.3. TOPSOIL STOCKPILED FOR RESPREAD SHALL BE FREE OF CLAY AND SHALL NOT CONTAIN ANY OF THE TRANSITIONAL MATERIAL BETWEEN THE TOPSOIL AND CLAY. THE TRANSITIONAL MATERIAL SHALL BE USED IN NON-STRUCTURAL FILL AREAS OR DISPOSED OF OFF-SITE.</p> <p>2.4. TOPSOIL RESPREAD SHALL INCLUDE HAULING AND SPREADING OF TOPSOIL DIRECTLY OVER AREAS TO BE LANDSCAPED WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER.</p> <p>3. EARTH EXCAVATION INCLUDES:</p> <p>3.1. EXCAVATION OF SUBSURFACE MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.1 FEET OF THE PLAN SUBGRADE ELEVATIONS WHILE MAINTAINING PROPER DRAINAGE. THE TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIALS SHALL "BALANCE" DURING THE FINE GRADING OPERATION.</p> <p>3.2. PLACEMENT OF SUITABLE MATERIALS SHALL BE WITHIN THOSE AREAS REQUIRING STRUCTURAL FILL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATION AND WITHIN A TOLERANCE OF 0.1 FEET. THE FILL MATERIALS SHALL BE PLACED IN LOOSE LIFTS THAT SHALL NOT EXCEED EIGHT (8) INCHES IN THICKNESS, AND THE WATER CONTENT SHALL BE ADJUSTED IN ORDER TO ACHIEVE REQUIRED COMPACTION.</p> <p>3.3. STRUCTURAL FILL MATERIAL MAY BE PLACED WITHIN THOSE PORTIONS OF THE SITE NOT REQUIRING STRUCTURAL FILL, WITHIN SIX (6) INCHES OF THE PLAN FINISHED GRADE ELEVATION IN AREAS REQUIRING STRUCTURAL FILL. HOWEVER, THIS MATERIAL SHALL NOT BE PLACED OVER TOPSOIL OR OTHER UNSUITABLE MATERIALS UNLESS SPECIFICALLY DIRECTED BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.</p> <p>3.4. COMPACTION OF SUITABLE MATERIALS SHALL BE TO AT LEAST 93% OF THE MODIFIED PROCTOR DRY DENSITY WITHIN PROPOSED PAVEMENT AREAS, SIDEWALK, ETC. COMPACTION SHALL BE AT LEAST 98% OF THE MODIFIED PROCTOR WITHIN PROPOSED BUILDING PAD AREAS OR AS RECOMMENDED BY THE GEOTECHNICAL REPORT.</p> <p>4. UNSUITABLE MATERIAL: UNSUITABLE MATERIALS SHALL BE CONSIDERED MATERIAL THAT IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT AND BUILDING CONSTRUCTION, AND IS ENCOUNTERED BELOW NORMAL TOPSOIL DEPTHS AND THE PROPOSED SUBGRADE ELEVATION. THE DECISION TO REMOVE SAID MATERIAL AND TO WHAT EXTENT SHALL BE MADE BY THE GEOTECHNICAL ENGINEER OR SOILS TESTING AGENCY WITH THE CONCURRENCE OF THE OWNER.</p> <p>5. MISCELLANEOUS. THE CONTRACTOR SHALL:</p> <p>5.1. SPREAD AND COMPACT UNIFORMLY TO THE DEGREE SPECIFIED ALL EXCESS TRENCH SPOIL AFTER COMPLETION OF THE UNDERGROUND IMPROVEMENTS.</p>	<p>SIGNING AND PAVEMENT MARKING NOTES</p> <p>1. ALL SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARDS.</p> <p>2. SIGNS: SIGNS SHALL BE CONSTRUCTED OF 0.080-INCH THICK FLAT ALUMINUM PANELS WITH REFLECTORIZED LEGEND ON THE FACE. LEGEND SHALL BE IN ACCORDANCE WITH THE MUTCD.</p> <p>3. POSTS: SIGN POSTS SHALL BE NEW GALVANIZED STEEL PIPE IN ACCORDANCE WITH ASTM A 53 OR ASTM F 1083. USE STANDARD WEIGHT, SCHEDULE 40 PIPE PER THE INDOT STANDARDS.</p> <p>4. SIGNS AND POSTS SHALL BE INSTALLED IN ACCORDANCE WITH INDOT STANDARDS.</p> <p>5. PAVEMENT MARKINGS: ALL PAVEMENT MARKINGS IN THE PUBLIC ROADWAY LIMITS, SUCH AS STOP LINES, CENTERLINES, CROSSWALKS, AND DIRECTIONAL ARROWS, SHALL BE REFLECTORIZED THERMOPLASTIC HOT ROLLED INTO PAVEMENT PER INDOT STANDARDS.</p> <p>6. PAVEMENT MARKINGS ON BIKE PATHS, PARKING LOT STALLS, AND SIMILAR "LOW-WEAR" APPLICATIONS, SHALL BE PAINT IN ACCORDANCE WITH INDOT STANDARDS.</p> <p>7. COLOR, WIDTH, STYLE, AND SIZE OF ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND MUNICIPAL CODE.</p> <p>8. THERMOPLASTIC MARKINGS SHALL BE INSTALLED WHEN THE PAVEMENT TEMPERATURE IS 55 DEGREES FAHRENHEIT AND RISING. PAINT MARKINGS MAY BE INSTALLED WHEN THE AIR TEMPERATURE IS 50 DEGREES FAHRENHEIT AND RISING.</p>	<p>STORM SEWER NOTES</p> <p>1. STORM SEWER PIPE: ALL STORM SEWER PIPE SHALL BE RCP, UNLESS OTHERWISE NOTED ON THE PLANS, IN ACCORDANCE WITH THE FOLLOWING:</p> <table border="1"><thead><tr><th>PLAN CODE</th><th>MATERIAL</th></tr></thead><tbody><tr><td>12"-66"</td><td>RCP REINFORCED CONCRETE PIPE (ASTM C-78)</td></tr><tr><td>< 12"-66"</td><td>PVC S935, ASTM D-3034</td></tr><tr><td colspan="2">REFER TO PLANS FOR PIPE SIZES.</td></tr></tbody></table> <p>FOR PIPE SIZES 12" TO 54" WITH COVER BETWEEN 1'-3", USE SEWER CLASS III CONCRETE PIPE. FOR COVER GREATER THAN 3' BUT LESS THAN 9', USE CLASS II CONCRETE PIPE. FOR COVER BETWEEN 9'-13', USE CLASS II CONCRETE PIPE. FOR PIPE SIZES GREATER THAN 54" WITH COVER BETWEEN 1'-9', USE CLASS II CONCRETE PIPE. FOR COVER GREATER THAN 9' BUT LESS THAN 13', USE CLASS III CONCRETE PIPE.</p> <p>2. BAND-SEAL OR SIMILAR COUPLING SHALL BE USED WHEN JOINING STORM SEWER PIPES OF DISSIMILAR MATERIALS.</p> <p>3. ALL FOOTING DRAIN DISCHARGE PIPES AND DOWN SPOUTS SHALL DISCHARGE TO THE GROUND/STORM SEWER SYSTEM.</p> <p>4. CONSTRUCTION: ALL STORM SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE.</p> <p>5. COVER: THE CONTRACTOR SHALL MAINTAIN AT LEAST TWO (2) FEET OF COVER OVER THE TOP OF SHALLOW PIPES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL MOUND OVER ANY PIPES THAT HAVE LESS THAN TWO (2) FEET OF COVER DURING CONSTRUCTION UNTIL THE AREA IS FINAL GRADED OR PAVED.</p> <p>6. STRUCTURES: MANHOLE, CATCH BASIN, AND INLET BOTTOMS SHALL BE PRECAST CONCRETE SECTIONAL UNITS OR MONOLITHIC CONCRETE. MANHOLES AND CATCH BASINS SHALL BE A MINIMUM OF FOUR (4) FEET IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS. STRUCTURE JOINTS SHALL BE SEALED WITH "O" RING OR BUTYL ROPE. A MAXIMUM OF TWELVE (12) INCHES OF ADJUSTING RINGS SHALL BE USED.</p> <p>7. A CONCRETE BENCH TO DIRECT FLOWS SHALL BE CONSTRUCTED IN THE BOTTOM OF ALL INLETS AND MANHOLES.</p> <p>8. THE FRAME, GRATE, AND/OR CLOSED LID SHALL BE CAST IRON OF THE STYLE SHOWN ON THE PLANS.</p> <p>9. CLEANING: THE STORM SEWER SYSTEM SHALL BE THOROUGHLY CLEANED PRIOR TO FINAL INSPECTION AND TESTING.</p> <p>10. MANHOLES, CATCH BASINS, INLETS, FRAMES, GRATES, AND OTHER STRUCTURES SHALL BE CONSTRUCTED OF THE TYPE, STYLE, AND SIZE AS SET FORTH WITH THE ORDINANCES AND STANDARDS OF THE MUNICIPALITY.</p> <p>11. ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE MUNICIPAL CODE. WHEN CONFLICTS ARISE BETWEEN MUNICIPAL CODE AND GENERAL NOTES, THE MORE STRINGENT SHALL TAKE PRECEDENCE.</p> <p>12. WHEN NOTED ON PLANS OR APPROVED BY ENGINEER, HIGH-DENSITY POLYETHYLENE PIPE (HDPE) IN GENERAL CONFORMANCE WITH ASTM F2648 / F2648M MAY BE UTILIZED.</p>	PLAN CODE	MATERIAL	12"-66"	RCP REINFORCED CONCRETE PIPE (ASTM C-78)	< 12"-66"	PVC S935, ASTM D-3034	REFER TO PLANS FOR PIPE SIZES.	
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