

CITY OF NORTH RIDGEVILLE STANDARD GENERAL NOTES

GENERAL

1. ALL WORK AND MATERIALS SHALL MEET THE RULES, LAWS & CODES OF THE CITY OF NORTH RIDGEVILLE.
2. THE FOLLOWING UTILITIES MAY BE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

PAVEMENTS	CITY OF NORTH RIDGEVILLE	(440) 353-0842
STORM SEWERS	CITY OF NORTH RIDGEVILLE	(440) 353-0842
SANITARY SEWERS	CITY OF NORTH RIDGEVILLE	(440) 353-0842
WATERLINES	CITY OF NORTH RIDGEVILLE	(440) 353-0842
GAS-COLUMBIAS GAS	DAN BUREN	(440) 891-2428
TELEPHONE-WINDSTREAM	GEORFF HAMM	(440) 329-4247
ELECTRIC-OHIO EDISON	MIKE ZANNI	(440) 326-3271
CABLE-SPECTRUM	RON HIRBAL	(440) 368-0416 (EXT. 825)
WATER TRANSMISSION	AVON LAKE MUNICIPAL UTILITIES	(440) 933-6226

THE CONTRACTOR SHALL VERIFY THE ABOVE INFORMATION WITH CUPS WHEN HE CONTACTS THEM BEFORE CONSTRUCTION BEGINS.
3. THE CONTRACTOR SHALL LOCATE ALL UTILITIES OR UNDERGROUND STRUCTURES PRIOR TO CONSTRUCTION AND NOTIFY EACH RESPECTIVE UTILITY OWNER FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. WHERE IN ANY CASE THE PLANS AND SPECIFICATIONS DO NOT ENTIRELY COVER MATERIALS AND/OR WORKMANSHIP, THE "STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS" CURRENT EDITION WILL APPLY. ODOT REFERENCES MAY BE INDICATED THROUGHOUT THE PLANS, MATERIAL AND WORKMANSHIP SHALL ALSO CONFORM TO THE SPECIFICATIONS, RULES AND ORDINANCES OF THE CITY OF NORTH RIDGEVILLE. WHERE CONFLICTS OCCUR IN THE ABOVE, THE CITY ENGINEER SHALL DETERMINE THE GOVERNING AUTHORITY. ANY DEFECTS IN THE CONSTRUCTION INCLUDING MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE CITY ENGINEER. REFERENCES THROUGHOUT THESE PLANS TO "THE ENGINEER" SHALL BE THE CITY ENGINEER.
5. ALL WORK SHALL BE DONE IN A SAFE MANNER AND AS A MINIMUM SHALL COMPLY WITH THE SPECIFIC SAFETY REQUIREMENTS OF THE OSHA AS DEFINED IN 29 CFR 1926.
6. AT LEAST FIVE DAYS PRIOR TO THE START OF ACTUAL CONSTRUCTION WORK, A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD AT THE DIRECTION OF THE CITY OF NORTH RIDGEVILLE ENGINEER AND APPROPRIATE CITY OFFICIALS, AND THE OWNER'S ENGINEER. THE CONTRACTOR OR HIS AUTHORIZED SUPERINTENDENT SHALL BE PRESENT, ALONG WITH ANY AND ALL PRIVATE UTILITY COMPANY REPRESENTATIVES. THIS MEETING WILL BE FOR COORDINATION AND PROCEDURE REVIEW PRIOR TO COMMENCING ANY PHYSICAL WORK.
7. THE CONTRACTOR SHALL NOT COMMENCE WITH ANY FORM OF CONSTRUCTION WITHOUT GIVING 24 HOUR NOTICE TO THE OFFICE OF THE CITY ENGINEER TO ARRANGE FOR INSPECTION. IF ANY CHANGE IN THE WORK SCHEDULE BECOMES NECESSARY, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE INSPECTOR TO AVOID NECESSARY INSPECTION COSTS. IF NO NOTIFICATION IS MADE IN REGARDS TO CANCELLATION OF WORK, THE CONTRACTOR WILL BE CHARGED A MINIMUM OF FOUR (4) HOURS.
8. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY, SUCH AS CALCIUM CHLORIDE, WATER, OR A MOTORIZED DUST-FREE STREET SWEEEPING DEVICE, AS DIRECTED BY THE ENGINEER, TO MAINTAIN ALL ROADWAYS BEING USED FOR ACCESS TO THE CONSTRUCTION SITE.
9. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY SAFEGUARDS SUCH AS BARRICADES, SATISFACTORY BARRIERS, LIGHTING, FLAGMEN, TEMPORARY GUARDRAIL, AND SUCH OTHER TRAFFIC CONTROL DEVICES AS PROVIDED IN "ITEM 814 - MAINTAINING TRAFFIC" SO AS TO AVOID DAMAGE AND/OR INJURY TO VEHICLES AND PERSONS USING THE ROADWAY DURING CONSTRUCTION. ALL AREAS OF PAVEMENT REMOVAL WHICH HAVE NOT BEEN FULLY RESTORED SHALL BE PROTECTED WITH CONES OR DRUMS DURING DAYLIGHT HOURS. THESE AREAS SHALL BE PROTECTED WITH FLASHING BARRICADES OR DRUMS WITH STEADY BURNING LIGHTS AT NIGHT. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AS TO THE PROPOSED WORK WITH MINIMUM HAZARD, DELAY, AND INCONVENIENCE TO THE MOTORISTS USING THE STREETS AFFECTED BY THE WORK DONE UNDER THE CONTRACT AND HE SHALL COORDINATE ALL CLOSING OF STREETS WITH THE CITY ENGINEER AND THE POLICE CHIEF OF THE CITY OF NORTH RIDGEVILLE.
10. ACCESS ROADS SHALL BE KEPT FREE OF MUD, DEBRIS, DIRT, ETC, AND SHALL BE CLEANED EVERY DAY AT THE END OF WORK OR MORE FREQUENTLY IF SO ORDERED BY THE CITY OF NORTH RIDGEVILLE.
11. THE CONTRACTOR AND ANY SUBCONTRACTOR SHALL HAVE A COMPETENT SUPERVISOR ON THE PROJECT AT ALL TIMES WHEN WORK IS BEING DONE.
12. NO SLAG OR OTHER SULFUROUS MATERIAL WILL BE USED ON THE PROJECT.

12. FOR RESIDENTIAL SUBDIVISIONS, THE TRAFFIC CONTROL SIGNS WILL BE ERRECTED BY THE CITY OF NORTH RIDGEVILLE, AND THE COST OF THIS INSTALLATION WILL BE PAID BY THE DEVELOPER. THE INSTALLATION AND COST OF THE STREET MARKING SIGNS AND STREET LIGHTS WILL BE DONE BY THE DEVELOPER AT HIS EXPENSE.
13. THE CITY ENGINEER SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING THE ACTUAL CONSTRUCTION.

EARTHWORK

1. ALL EXCAVATION AND FILL WORK SHALL BE DONE IN ACCORDANCE WITH ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS.
2. THE SUBGRADE IN THE STREET SHALL BE LEFT TWO INCHES HIGH FOR THE PAVEMENT CONTRACTOR TO TRIM DOWN TO FINAL GRADE. THE CONTRACTOR SHALL PROOF ROLL THE GRADE WITH A FULLY LOADED (MAXIMUM LEGAL WEIGHT) TRAXLE DUMP TRUCK. ANY "SOFT" SPOTS SHALL BE REMOVED AND REPLACED WITH COMPACTED EARTH.
3. EARTHWORK SHALL BE DONE IN SUCH A FASHION AS TO NOT TRAP WATER DURING CONSTRUCTION.
4. TREE AND BRUSH CLEARING/DISPOSAL SHALL BE DONE IN A MANNER ACCEPTABLE TO THE CITY OF NORTH RIDGEVILLE.
5. ALL PAVEMENT AREAS SHALL HAVE ALL ORGANICS AND TOPSOIL REMOVED FROM THE AREA.
6. AT ALL TIMES DURING THE PROGRESS OF THE WORK AND UNTIL RELEASE OF THE CONTRACTOR FROM HIS GUARANTEE BY THE OWNER, THE CONTRACTOR SHALL MAINTAIN THE BACKFILLED TRENCHES AND OTHER EXCAVATIONS. IN PARTICULAR, THOSE TRENCHES OR EXCAVATIONS WHICH ARE WITHIN FIFTEEN (15) FEET OF TRAVELWAYS OR THE EDGE OF TRAVELED ROADWAYS, SHALL BE KEPT FILLED UP TO FULL GROUND LEVEL AS THE ADJACENT UNDISTURBED GROUND, ANY SETTLEMENT WHICH OCCURS DURING THIS PERIOD SHALL BE IMMEDIATELY FILLED IN TO PREVENT THE POSSIBILITY OF ACCIDENTS.
7. WHERE EXISTING SEWERS ARE ENCOUNTERED AND ARE INTERFERED WITH, FLOWS SHALL BE MAINTAINED. SEWAGE OR OTHER LIQUID MUST BE HANDLED BY THE CONTRACTOR EITHER BY CONNECTION INTO OTHER SEWERS (WITH THE APPROVAL OF THE CITY ENGINEER) OR BY TEMPORARY PUMPING TO A SATISFACTORY OUTLET. SEWAGE OR OTHER LIQUID SHALL NOT BE PUMPED, BAVED OR FLUMED OVER THE STREET.
9. BACKFILL SHALL INCLUDE THE MATERIAL PLACED ABOVE THE BEDDING AND SHALL CONSIST OF FINELY DIVIDED SOIL FREE FROM STONES, RUBBISH, LARGE CLUMPS OR OTHER HARMFUL DEBRIS. THE BACKFILL SHALL BE TAMPED IN SIX (6) INCH LAYERS.
10. BACKFILL WITHIN EXISTING OR PROPOSED PAVED OR STONE STREETS, ALLEYS, DRIVEWAYS, PARKING AREA AND PROPOSED SIDEWALKS, OR WITHIN FIVE (5) FEET OF THESE AREAS SHALL CONSIST OF A DURABLE GRAVEL OR CRUSHED STONE MEETING THE REQUIREMENTS OF ITEM 304 OF THE CURRENT ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE USE OF A 304 RECYCLED CONCRETE EQUIVALENT AND SLAG IS PROHIBITED. THE GRANULAR BACKFILL SHALL BE MECHANICALLY TAMPED IN SIX (6) INCH LAYERS SO THAT THE BACKFILL WILL HAVE A DENSITY EQUAL TO A MINIMUM OF 95% OF THAT POSSIBLE UNDER OPTIMUM MOISTURE CONTENT AS DETERMINED BY STANDARD PROCTOR TEST.

ROADWAY

1. ALL TREES AND BRUSH, AND ANY OTHER VEGETATION WITHIN THE LIMITS OF THIS PROJECT THAT INTERFERE WITH THE CONSTRUCTION SHALL BE REMOVED FROM THE SITE. STUMPS MAY BE GROUND OUT OR REMOVED FROM THE SITE.
2. ALL EARTHWORK SHALL HAVE INSPECTION AND TESTING AS DEEMED NECESSARY BY THE CITY OF NORTH RIDGEVILLE. SUCH INSPECTION WILL BE COORDINATED BY THE "CONTRACTOR", WHO SHALL USE A SOILS TESTING LABORATORY TO MAKE THE TESTS INCIDENTIAL TO THE QUALITY CONTROL OF THE EARTHWORK OPERATION. SOIL TESTING AND CLASSIFICATION SHALL BE PERFORMED BY THE SOILS TESTING LABORATORY TO DETERMINE THE PROPER MOISTURE CONTENT AND SOIL DENSITY BEFORE BEGINNING EARTHWORK CONSTRUCTION. THE COST OF THIS INSPECTION AND TESTING WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR SHALL PRESENT HIS PLAN AND SCHEDULE FOR EARTHWORK OPERATIONS AT THE PRE-CONSTRUCTION CONFERENCE.
3. WHERE SOFT SUBGRADE IS ENCOUNTERED, DUE TO NO FAULT OR NEGLECT OF THE CONTRACTOR, IN WHICH SATISFACTORY STABILITY CANNOT BE OBTAINED BY MOISTURE CONTROL AND COMPACTION, THE UNSTABLE MATERIAL SHALL BE EXCAVATED TO THE DEPTH REQUIRED BY THE ENGINEER. BACKFILLING OF THESE EXCAVATED AREAS SHALL BE WITH EXAMNKMENT MATERIAL BASE (ODOT ITEM 304) OR "AS DIRECTED BY THE ENGINEER."
4. CONCRETE WILL BE TESTED BY AN ODOT QUALIFIED LABORATORY DURING CONSTRUCTION FOR AIR ENTRAINMENT AND SLUMP. CONCRETE TEST CYLINDERS WILL BE PREPARED FOR EACH 50 YARDS OR FRACTION THEREOF. CONCRETE BEAMS MAY BE PREPARED AT THE CONTRACTOR'S OPTION. THE CONCRETE MIX DESIGN SHALL BE APPROVED BY THE SAME TESTING LABORATORY DESIGNATED TO PERFORM THE ON-SITE INSPECTION PRIOR TO CONSTRUCTION.
5. CONCRETE PAVEMENT CURING COMPOUND SHALL BE SILENCURE A FROM CHEMMASTERS, 300 EDWARDS ST., MADISON, OHIO, 44057.

6. IN AREAS OF HIGH GROUNDWATER OR WHERE SURFACE SEEPAGE HAS BEEN OBSERVED IT MAY BE NECESSARY TO CONSTRUCT DRAINS PERPENDICULAR TO THE PROPOSED PAVEMENT. THESE DRAINS UNDERDRAINS, CONSTRUCTED IN ACCORDANCE WITH ODOT ITEM 806, SHALL BE 3 FEET BELOW PAVEMENT GRADE AND CONNECTED INTO THE APPROPRIATE STORM CONDUIT OR OUTLET. CONDUIT SHALL BE 6" DIAMETER PERFORATED PVC TYPE PS-46 PIPE CONFORMING TO ASTM F-758 OR 6" DIAMETER PERFORATED PSN POLYVINYL CHLORIDE (PVC) PIPE CONFORMING TO ASTM D-3034 SDR 35, WITH GEOTEXTILE OSMAN SLEEVE MEETING THE REQUIREMENTS OF ODOT 712.09, TYPE A, AND WITH NO. 8 STONE OR GRAVEL AGGREGATE.

UNDERGROUND INSTALLATIONS - GENERAL

1. THE VARIOUS UNDERGROUND INSTALLATION ITEMS SHALL INCLUDE, BUT NOT BE LIMITED TO, ALL EXCAVATION, MATERIAL, LABOR, BEDDING, BACKFILL, COMPACTION, EQUIPMENT, UTILITY PROTECTION, MAINTENANCE OF ROADWAYS AND DRIVES UNTIL FINAL REPLACEMENT, PUMPING AND/OR DEWATERING, CONSTRUCTION AND REMOVAL OF ALL NECESSARY TRENCH PROTECTION AND ALL OTHER INCIDENTAL ITEMS NECESSARY TO INSTALL SUCH UTILITY. THE CONTRACTOR IS TO TOTALLY FAMILIARIZE HIMSELF WITH THE GROUND CONDITIONS THAT NOW DO OR MAY EXIST DURING THE CONSTRUCTION SO AS NOT TO ADVERSELY AFFECT THE INTEGRITY OF ANY UTILITY INSTALLATION OR STRUCTURE ON THE CONSTRUCTION SITE OR ADJACENT PROPERTIES.
2. ALL SANITARY SEWER AND STORM SEWER CONSTRUCTION SHALL CONFORM WITH ODOT ITEM 611.
3. ANY UNSUITABLE MATERIAL, MATERIAL NOT APPROVED BY THE ENGINEER FOR BACKFILL AND MATERIAL IN EXCESS OF THAT REQUIRED FOR BACKFILLING SHALL BE DISPOSED OF BY THE CONTRACTOR ON THE SITE.
4. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PREVENT ANY CAVING OR SETTLING OF EXCAVATION OR TRENCH WALLS WHICH COULD ENDANGER THE SAFETY OF ANY PERSON ENGAGED IN THE WORK OR IN ANY WAY DAMAGE THE UNDERGROUND INSTALLATIONS OF ADJACENT UTILITY OR PROPERTY; OR DIMINISH THE TRENCH WIDTH NECESSARY FOR THE PROPER CONSTRUCTION OF THE UNDERGROUND INSTALLATION OR OTHERWISE INJURE OR DELAY THE WORK. THE TYPE AND AMOUNT OF SUCH PROTECTION, SUCH AS TRENCH BOXES, SHEETING, SHORING, OR BRACING SHALL BE CONSISTENT WITH THE DEPTH AND WIDTH OF EXCAVATION. THE COMPOSITION AND WATER CONTENT OF THE SOIL IN THE PROXIMITY OF STRUCTURES OR OTHER UTILITIES, THE VIBRATION FROM EQUIPMENT AND THE EXPOSURE, PLACEMENT, AND SHALL BE IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS.
5. IN ORDER TO REDUCE GROUND WATER SEEPAGE AND PROVIDE A STABLE TRENCH IT MAY BE NECESSARY TO DEWATER PRIOR TO EXCAVATION OF THE SEWER TRENCH AND/OR PROVIDE TEMPORARY SUMPS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT STRUCTURES, PAVEMENTS, OR UTILITIES, OR LOSS OF PRIVATE WELL WATER RESULTING FROM DEWATERING, LOSS OF GROUND, HEAVE, TRENCH CONSTRUCTION, AND ANY OTHER CONSTRUCTION METHODS. THE CONTRACTOR SHALL PROTECT ALL EXISTING SEWERS AND UTILITIES THAT THE PROPOSED INSTALLATION CROSSES BY COMPACTING THE BACKFILL UNDER SUCH EXISTING FACILITIES OR SHALL PROTECT THE EXISTING FACILITY IN A MANNER AS APPROVED BY THE ENGINEER. IF SHEETING IS USED, IT MAY BE NECESSARY TO DRIVE THE SHEETING SEVERAL FEET BELOW THE BOTTOM OF THE PIPE. WHEN USING MOVABLE TRENCH SUPPORTS OR PIPE LOCATION, JOINTING OR BEDDING MATERIAL, IF STEEL SHEETING IS USED IT SHALL BE HELD IN PLACE BY LONGITUDINAL BEAMS AND CROSS BRACES OR STUBS AS REQUIRED TO RESTRAIN THE TOP OF THE SHEETING. IF TIMBER SHEETING AND BRACING IS USED, IT MUST BE OF GOOD QUALITY AND OF HARDWOOD CONSTRUCTION. AFTER THE PIPE HAS BEEN INSTALLED AND THE BALANCE OF THE BEDDING MATERIAL HAS BEEN PLACED OVER THE PIPE, THE REMOVAL OF ANY TRENCH PROTECTION SHALL BE CAREFULLY CONTROLLED. THE CONTRACTOR SHALL DEMONSTRATE THAT THE REMOVAL OF THE TRENCH PROTECTION WILL NOT ADVERSELY AFFECT THE PIPE LOCATION AND BEDDING. IF SHEETING CANNOT BE REMOVED WITHOUT ADVERSELY AFFECTING THE PIPE AND BEDDING LOCATION, THE ENGINEER MAY ORDER THE SHEETING CUT OFF AT SOME POINT, AT LEAST ONE FOOT ABOVE THE TOP OF THE PIPE AND LEFT IN PLACE.
6. PRIOR TO ANY CONNECTION INTO AN EXISTING SEWER MANHOLE OR CONDUIT THE CONTRACTOR SHALL TAKE SUCH MEASURES AS NECESSARY, "AS APPROVED BY THE ENGINEER" (I.E. TEMPORARY PLUGS, SAND BAGS, ETC.) DURING THE COURSE OF THE CONSTRUCTION OF THE PROPOSED SEWERS, TO GUARD AGAINST ANY DRAINAGE FROM ENTERING THE EXISTING SYSTEM AND POSSIBLY CONTAMINATING SUCH SYSTEM WITH SLT.

7. WHERE THE PROPOSED IMPROVEMENTS CROSS EXISTING OR PROPOSED PAVEMENTS, INCLUDING A POINT FIVE (5) FEET BEYOND SUCH CROSSINGS, OR WHERE THE CONSTRUCTION METHODS USED BY THE CONTRACTOR RESULT IN THE TRENCH WALL BEING LESS THAN 3 FEET FROM THE EDGE OF THE PAVEMENT, THE ENTIRE TRENCH BACKFILL SHALL BE COMPACTED LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS WITH MECHANICAL TAMPERS MEETING NINETY-EIGHT (98) PERCENT OF MAXIMUM LABORATORY DRY WEIGHT.
8. THE LINE AND GRADE OF SEWER MAINS SHALL BE CONTROLLED DURING THE SEWER CONSTRUCTION BY USE OF AN APPROVED LASER DEVICE.
9. AT ALL STORM SEWER MAIN AND SANITARY SEWER MAIN INTERSECTIONS (CROSSINGS) WHEN PIPE CLEARANCE IS LESS THAN 18", THE LOWER PIPE SHALL BE ENCASED AND THE UPPER PIPE SHALL BE MONOLITHICALLY CRADLED IN 2800 PSI CONCRETE FOR THE WIDTH OF THE TRENCH. AT PIPE CROSSINGS GREATER THEN 18" THE BACKFILL BELOW THE UPPER PIPE SHALL BE COMPACTED IN PLACE TO THE SATISFACTION OF THE ENGINEER.

STORM SEWERS

1. STORM SEWER CONDUIT SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
STORM CONDUIT BETWEEN STREET BASINS AND CONNECTING TO MANHOLE SHALL BE (A.) ONLY IF COVER IS LESS THAN OR EQUAL TO ONE FOOT MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE SUBGRADE, OR MAY BE (E.) IF COVER IS GREATER THAN ONE FOOT MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE SUBGRADE. ALL FOOTING DRAIN CONNECTIONS SHALL BE (B.) ONLY.
 - A. REINFORCED CONCRETE PIPE ASTM C-76, "B" OR "C" WALL, 8 FOOT LENGTHS, WITH AN "O" RING CONFINED GASKET JOINT PER ASTM C-443; (A) 12" & LARGER DIA. CLASS IV.
 - B. POLYVINYL CHLORIDE (PVC) ASTM D-3034 (SDR 35) (ODOT 707.45) WITH GASKET MATERIAL CONFORMING TO ASTM F-477 AND JOINTS PER ASTM D-3212 OR SOLVENT CEMENT JOINTS PER ASTM D-2584.
 - C. PERMA-LOC (PVC) AASHTO SPECIFICATION IN M-304H (ODOT 707.43) WITH INTEGRAL BELL GASKET JOINTS IN ACCORDANCE WITH ASTM D-3212 AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
 - D. ULTRA-RIB (PVC) ASTM F 794 (ODOT 707.43) WITH INTEGRAL BELL AND SPIGOT JOINT IN ACCORDANCE WITH ASTM D-3212 AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
 - E. SMOOTH INTERIOR, CORRUGATED, HIGH DENSITY POLYETHYLENE PIPE (HDPE) CONFORMING TO AASHTO SPECIFICATIONS M252 TYPE S AND M-284 TYPE S, (OFOT 707.33) ADS N-12, HANCOR HI-Q, OR APPROVED EQUAL. THE JOINTS SHALL BE SILT-TIGHT AND THE GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477 (NOT PRESSURE RATED), INSTALLED IN ACCORDANCE WITH ASTM D-3212 AND MANUFACTURER'S RECOMMENDATIONS.
2. OTHER OPTIONAL MATERIALS MAY BE USED WHEN APPROVED BY THE CITY ENGINEER.
3. UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ODOT ITEM 805. CONDUIT SHALL BE 6" DIAMETER PVC TYPE PS-46 PIPE CONFORMING TO ASTM F-758, OR 6" DIAMETER PSM POLYVINYLCHLORIDE (PVC) PIPE CONFORMING TO ASTM D-3034 SDR 35, WITH A GEOTEXTILE SLEEVE MEETING THE REQUIREMENTS OF ODOT ITEM 712.09, TYPE A, AND WITH THE GRANULAR MATERIAL BEING NO. 57 AGGREGATE (NO SLAG)
4. ROOF DRAINS ARE TO BE DISCHARGED ONTO SPLASH BLOCKS. NO CONNECTION TO STORM SEWER.
5. AT LEAST 60 DAYS PRIOR TO THE END OF THE PERIOD FOR WHICH IMPROVEMENTS ARE COVERED BY MAINTENANCE BONDS, THE DEVELOPER SHALL CLEAN AND VIDEO TAPE THE STORM SEWER, SANITARY SEWER AND MANHOLES, OR CAUSE THIS TO BE DONE BY A SUBCONTRACTOR OR BUILDER(S) WHO THE DEVELOPER HOLDS RESPONSIBLE PRIOR TO RELEASE OF THE MAINTENANCE BONDS COVERING THE IMPROVEMENTS. TWO (2) COPIES OF THE VIDEO TAPE(S) AND A WRITTEN REPORT OF THE RESULTS SHALL BE FURNISHED TO THE DEVELOPER AND THE CITY ENGINEER, BOTH THE TAPING AND THE WRITTEN REPORT SHALL BE DONE TO THE SATISFACTION OF THE DEVELOPER AND THE CITY ENGINEER OR THEIR DESIGNERES. ANY AND ALL PROBLEMS DISCOVERED SHALL BE REMEDIATED WITHIN TEN (10) WORKING DAYS BY THE DEVELOPER OR BY THE PARTY THE DEVELOPER SHALL CAUSE TO REMEDIATE THE PROBLEMS, IF ANY

6. ALL MAIN LINE STORM SEWERS SHALL BE CLEANED AND VIDEOTAPE IMMEDIATELY AFTER CONSTRUCTION AND THE VIDEOTAPE SUBMITTED TO THE CITY ENGINEER FOR REVIEW AND APPROVAL. ALL DEFECTS SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR.