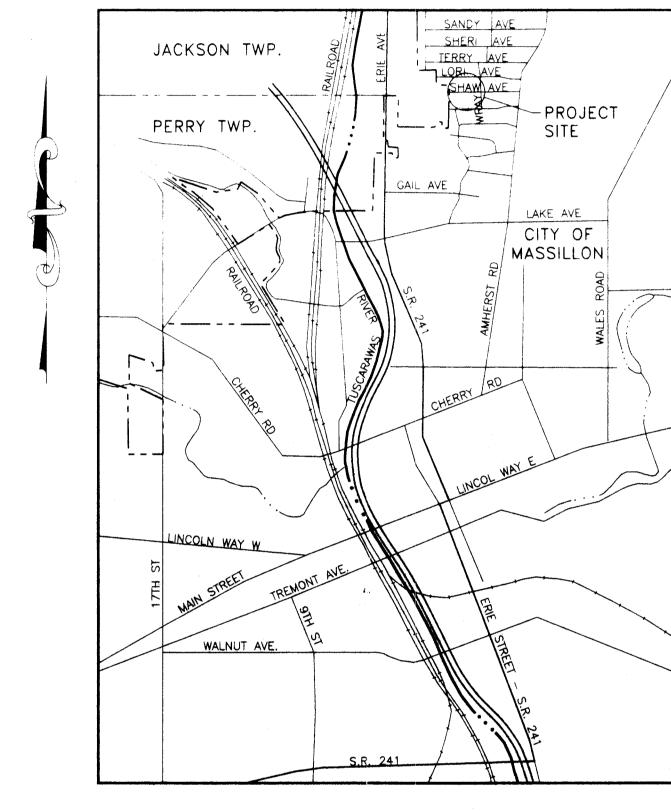
SHAW VIEW ESTATES Phase 1

CITY OF MASSILLON, STARK COUNTY, OHIO PERRY TWP. N.W. QTR. SEC. 5



LOCATION MAP

DEVELOPER:

AJ. DIANA SONS, INC. 1916 ERIE AVENUE NW MASSILLON, OHIO 44646

ENGINEERING BY:

HETTLER ENGINEERING SERVICES 1225 NORTH MAIN STREET NORTH CANTON, OHIO 44720 (330) 966-1776

OWNER OF SANITARY SEWER:

CITY OF MASSILLON ONE JAMES DUNCAN PLAZA MASSILLON, OHIO 44646 (330) 830-1722

SURVEYING BY:

BUCKEYE SURVEYING SERVICES, INC. 2223 FULTON DRIVE N.W. CANTON, OHIO 44709 (330) 453-8339

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-362-2764
OHIO UTILITIES PROTECTION SERVICE

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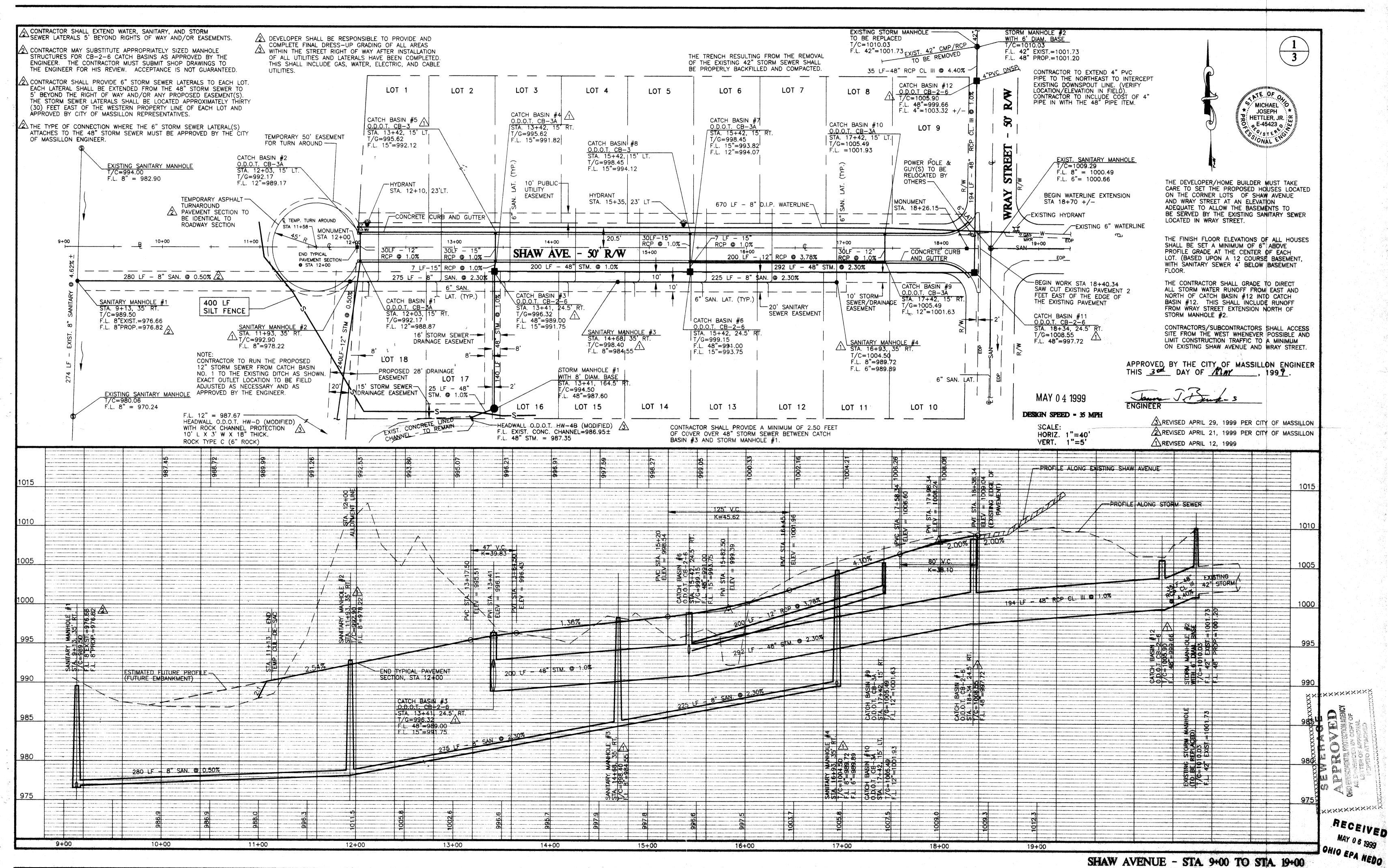
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ALL WORK REQUIRED TO COMPLETE THIS IMPROVEMENT (OTHER THAN THAT ASSOCIATED WITH THE COMPLETION OF THE PROPOSED WATERLINES) SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, EXCEPT AS HEREIN AMENDED, AND PER THE CITY OF MASSILLON ENGINEERING DEPARTMENT STANDARDS. IN CASE OF A CONFLICT BETWEEN THE CITY OF MASSILLON ENGINEERING DEPARTMENT AND THE OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS/REQUIREMENTS, THE MORE STRICT OF THE TWO SPECIFICATIONS WILL GOVERN, AS DETERMINED BY THE DESIGN ENGINEER.

STATE OF OHIO, DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS SHALL APPLY TO THIS IMPROVEMENT, INCLUDING MC-11, MC-1, MH-3, BP-4.1, CB-2-6, CB-3A, CB-3, HW-4B, HW-D, MC-4.

PROJECT SAFETY

THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR SHALL PROPERLY SUPPORT AND/OR MAINTAIN ALL EXCAVATIONS PER APPLICABLE SAFETY REQUIREMENTS AND COMPLY WITH ALL O.S.H.A. REGULATIONS. THIS SHALL INCLUDE STRICT COMPLIANCE WITH ALL APPLICABLE REGULATIONS/REQUIREMENTS REGARDING TRENCH SAFETY. ADEQUATE BARRICADES, WARNING LIGHTS, SIGNS, FENCING, ETC. SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL NON-WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION AS WELL AS TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL TO THE CONSTRUCTION SITE/AREA. TRENCHES SHALL BE BACKFILLED AT THE END OF EACH WORK DAY OR PROPERLY SECURED AS APPROVED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE SAFETY OF THE GENERAL PUBLIC AS WELL AS ALL CONSTRUCTION PERSONNEL. PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE OF DEBRIS (MUD, STONE, ETC.) AT ALL TIMES. THE CONTRACTOR SHALL ALERT ALL LOCAL EMERGENCY AGENCIES (FIRE, POLICE, AMBULANCE, ETC.) OF THE NATURE OF THE PROPOSED PROJECT PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. ACCESS FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

UNDERGROUND UTILITIES

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS WERE OBTAINED BY FIELD OBSERVATIONS, FROM EXISTING RECORDS, AND/OR FROM THE OWNERS OF THE RESPECTIVE UTILITIES. THE INFORMATION AS SHOWN IS BELIEVED TO BE CORRECT, HOWEVER, THE COMPLETENESS AND ACCURACY OF THIS INFORMATION CANNOT BE GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL THE VARIOUS UTILITY COMPANIES (PUBLIC AND PRIVATE) TO VERIFY THE EXISTENCE, LIMITS AND/OR LOCATION OF ANY UTILITIES WHICH MAY BE ALONG THE ROUTE OR WITHIN THE VICINITY OF THIS IMPROVEMENT.

UTILITY NOTIFICATION

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING OPERATIONS ON THIS PROJECT THE CONTRACTOR(S) SHALL NOTIFY THE ENGINEER, THE REGISTERED UTILITY PROTECTION AGENCY/SERVICE, AND THE OWNERS OF ANY OTHER UTILITIES (PUBLIC AND/OR PRIVATE) THAT MAY HAVE UTILITY LINES OR FACILITIES WITHIN THE VICINITY OF THIS PROJECT BUT WHO ARE NOT MEMBERS OF THE REGISTERED UTILITY PROTECTION SERVICE OF HIS/HER INTENTION TO BEGIN CONSTRUCTION ACTIVITY ON THIS PROJECT. THE OWNERS OF ANY UNDERGROUND UTILITY FACILITY SHALL, WITHIN 48 HOURS AFTER NOTICE IS RECEIVED. EXCLUDING SATURDAYS, SUNDAYS, AND OTHER LEGAL HOLIDAYS; STAKE. MARK OR OTHERWISE DESIGNATE THE EXISTENCE AND/OR LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING AND/OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO WORKING DAYS AHEAD OF THE PLANNED CONSTRUCTION. OHIO UTILITIES PROTECTION SERVICE: 1-800-362-2764 (CONTACT NON-MEMBERS DIRECTLY).

VERIFICATION OF UNDERGROUND UTILITIES

THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXISTENCE AS WELL AS THE ACTUAL LOCATION, ALIGNMENT, AND ELEVATIONS OF ALL EXISTING UTILITIES INCLUDING WATERLINES, SANITARY AND STORM SEWERS, GAS LINES, COMMUNICATION LINES/BANKS, ELECTRIC LINES, ETC. PRIOR TO ORDERING MATERIALS OR BEGINNING WORK. THE CONTRACTOR SHALL NOT PROCEED WITH WORK UNTIL THE PLAN LOCATIONS/ELEVATIONS HAVE BEEN VERIFIED. THIS WILL LIKELY REQUIRE EXPLORATORY EXCAVATIONS TO BE PERFORMED BY THE CONTRACTOR FOR WHICH HE WILL NOT BE DIRECTLY REIMBURSED. THE CONTRACTOR SHALL NOT ASSUME THAT EXISTING UTILITIES/CONDUITS WERE INSTALLED AT TYPICAL/STANDARD DEPTHS OR AT UNIFORM SLOPES/GRADES/DEPTHS BETWEEN ACCESS POINTS (CATCH BASINS, MANHOLES, JUNCTION CHAMBERS, ETC.). ANY DISCREPANCIES FROM THE PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER SO THAT THE APPROPRIATE ADJUSTMENTS IN ALIGNMENT AND/OR GRADE MAY BE MADE PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO VERIFY AND/OR DETERMINE EXISTING INFORMATION AS INDICATED WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ANY CHANGES NECESSARY TO COMPLETE THE WORK SPECIFIED WITHOUT ADDITIONAL COMPENSATION.

PROTECTION OF UTILITIES

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT AND SUPPORT ANY EXISTING UTILITIES ENCOUNTERED DURING THE COMPLETION OF THE PROPOSED IMPROVEMENTS AS DIRECTED BY THE OWNERS OF THE RESPECTIVE UTILITIES AND APPROVED BY THE ENGINEER. UTILITIES MUST BE KEPT IN SERVICE AT ALL TIMES.

MAINTAINING TRAFFIC

THE CONTRACTOR SHALL MAINTAIN TRAFFIC ADJACENT TO THE PROJECT AS DESCRIBED BELOW AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION MANUAL OF CONSTRUCTION AND MATERIALS SPECIFICATIONS ITEM 614 MAINTAINING TRAFFIC. THE CONTRACTOR SHALL FURNISH, MAINTAIN, AND REMOVE ALL SIGNS, FLAGS, FLAGMEN, WATCHMEN, BARRICADES, SIGN SUPPORTS, CONES, BARRELS, AND INCIDENTALS IN CONFORMANCE WITH THE MOST RECENT REVISIONS OF THE CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. INTERFERENCE WITH VEHICULAR TRAFFIC SHALL BE KEPT TO A MINIMUM AT ALL TIMES. ALL OPEN TRENCHES AND EXCAVATIONS SHALL BE PROTECTED WITH DRUMS, BARRICADES, OR BARRIERS. ACCESS SHALL BE MAINTAINED AT ALL TIMES FOR EMERGENCY AND FIRE DEPARTMENT VEHICLES. ANY TEMPORARY ROADWAY CLOSING MUST BE APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICTION OF THE ROADWAY WITH PRIOR WRITTEN NOTIFICATION GIVEN TO FIRE, POLICE AND OTHER EMERGENCY AGENCIES.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE CONTRACTOR SHALL PREVENT AND/OR REDUCE AND CONTROL SOIL EROSION RESULTING FROM THE PROPOSED IMPROVEMENTS. THE USE OF SILT FENCING, JUTE MATING, TEMPORARY SEEDING, SOD, SILT CHECKS, INLET PROTECTION AROUND ALL CATCH BASINS, STABILIZED CONSTRUCTION ENTRANCE(S), ETC. WILL BE REQUIRED. SEDIMENT CONTROL STRUCTURES/DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL RAINWATER AND LAND DEVELOPMENT - OHIO'S STANDARDS FOR STORMWATER MANAGEMENT LAND DEVELOPMENT AND URBAN STREAM PROTECTION, SECOND EDITION DATED 1996. SEDIMENT CONTROL DEVICES MUST INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS SET FORTH ON THE APPROVED STORM WATER POLLUTION PREVENTION PLAN, IF APPLICABLE, OR ON THE DETAILED CONSTRUCTION PLANS.

MAINTENANCE OF UTILITY SERVICES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UTILITY SERVICE AT ALL TIMES. WATER SERVICE MAY BE INTERRUPTED FOR LIMITED PERIODS OF TIME (2) HOURS MAXIMUM) DURING CONNECTION BETWEEN EXISTING WATER LINES AND RELOCATED/NEW WATER MAINS WHICH CANNOT BE COMPLETED OTHERWISE. NO SHUT DOWN SHALL OCCUR WITHOUT PRIOR WRITTEN PERMISSION OF THE ENGINEER AND THE CONSUMERS OHIO WATER COMPANY. FORTY-EIGHT HOURS NOTICE TO THE OWNER AND ENGINEER IS REQUIRED. STORM AND SANITARY SERVICES SHALL BE MAINTAINED WITHOUT INTERRUPTION.

RESTORATION OF DISTURBED AREAS

EXISTING DRIVES, BERMS, LAWNS, PAVEMENTS, CURBS, SIDEWALKS, SIGNS, MAILBOXES OR OTHER APPURTENANCES DISTURBED DURING CONSTRUCTION BUT NOT SPECIFICALLY DESIGNATED FOR REMOVAL/REPLACEMENT SHALL BE RESTORED TO A CONDITION EQUAL TO THAT WHICH EXISTED PRIOR TO CONSTRUCTION AND TO THE COMPLETE SATISFACTION OF THE ENGINEER. RESTORATION OF EXISTING ROADWAYS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY, AND/OR OTHER AGENCIES HAVING AUTHORITY. COST FOR THE RESTORATION OF THESE ITEMS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO PUBLIC ROADWAY SHALL BE DISTURBED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER AND ACQUISITION OF ANY AND ALL NECESSARY PERMITS.

EASEMENTS AND RIGHTS-OF-WAY

THE CONTRACTOR SHALL STAY WITHIN THE PROPERTY LIMITS, EASEMENTS, AND RIGHTS-OF-WAY PROVIDED AT ALL TIMES. NO MATERIAL SHALL BE STORED NOR ANY WORK PERFORMED ON PRIVATE PROPERTY.

ALL WORK REQUIRED FOR THIS IMPROVEMENT SHALL BE INSPECTED BY THE CITY OF MASSILLON OR THEIR DESIGNATED REPRESENTATIVE. THE CONTRACTOR SHALL GIVE A 48 HOUR NOTICE BEFORE STARTING ANY WORK ON THIS PROJECT AND SHALL KEEP THE CITY INFORMED OF HIS/HER CONSTRUCTION SCHEDULE. NO WORK SHALL BE PERFORMED UNLESS AN AUTHORIZED INSPECTOR IS PRESENT.

PRECONSTRUCTION MEETING

A PRECONSTRUCTION MEETING WITH THE DEVELOPER, CONTRACTOR AND THE CITY OF MASSILLON IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL CONTACT MR. GREG McCUE TO SETUP A MEETING AT (330) 830-1722.

SUBSURFACE INVESTIGATIONS

SUBSURFACE INVESTIGATIONS HAVE NOT BEEN PERFORMED FOR THIS PROJECT THE CONTRACTOR MAY PERFORM SUCH SUBSURFACE INVESTIGATIONS AT HIS OWN RISK, EXPENSE, AND RESPONSIBILITY. THE CONTRACTOR MUST CONTACT THE OWNER, ENGINEER, AND ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, WHICH MAY HAVE FACILITIES WITHIN THE PROJECT LIMITS, 48 HOURS PRIOR TO PERFORMING ANY SUBSURFACE INVESTIGATIONS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE RESTORATION OF AREAS DISTURBED BY TEST HOLES OR BORINGS, TO THE SATISFACTION OF THE ENGINEER.

THE ENGINEER/DEVELOPER WILL NOT BE RESPONSIBLE FOR THE TYPE AND/OR SUITABILITY OF THE MATERIAL UNDERLYING THE PROJECT SITE. THE CONTRACTOR MUST APPRAISE HIMSELF OF ANY EXISTING SITE CONDITIONS WHICH MAY EFFECT HIS/HER BID OR PERFORMANCE OF THE REQUIRED WORK.

ALL WORK ASSOCIATED WITH THE FURNISHING AND INSTALLATION OF THE REQUIRED PERMANENT TRAFFIC/STREET SIGNS WILL BE PERFORMED BY THE CITY OF MASSILLON AND PAID FOR BY THE DEVELOPER.

THE DEVELOPER AND REPRESENTATIVES OF THE CITY OF MASSILLON SHALL MEET WITH REPRESENTATIVES OF THE VARIOUS PUBLIC UTILITY COMPANIES (COLUMBIA /EAST OHIO GAS, OHIO EDISON/AEP, AMERITECH, WARNER CABLE, ETC.) TO DETERMINE THE APPROPRIATE LOCATION FOR THESE UTILITIES WITHIN THE PROPOSED DEVELOPMENT. ONCE AN AGREEMENT HAS BEEN REACHED. IT SHALL BE THE RESPONSIBILITY OF THE CITY OF MASSILLON TO INSPECT THE INSTALLATION OF THE VARIOUS PUBLIC UTILITY LINES TO ENSURE THAT CONFLICTS ARE AVOIDED AND ADEQUATE CLEARANCE AND OFFSETS WITH OTHER UTILITIES ARE MAINTAINED.

PROHIBITED CONNECTIONS TO SANITARY SEWERS

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO SANITARY SEWER ARE PROHIBITED.

STORM SEWERS

ALL PROPOSED STORM SEWERS SHALL MEET THE REQUIREMENTS OF O.D.O.T. ITEM 603 FOR TYPE B OR TYPE C CONDUITS. STORM SEWERS LOCATED WITHIN THE LIMITS OF OR WITHIN A 1/2 TO 1 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, SIDEWALKS, AND/OR DRIVES SHALL BE INSTALLED AS TYPE B CONDUITS. ALL OTHER STORM SEWERS MAY BE INSTALLED AS TYPE C CONDUITS. STORM SEWER PIPE MATERIALS SHALL MEET THE REQUIREMENTS OF O.D.O.T. 706.02 (REINFORCED CONCRETE CIRCULAR PIPE), OR 707.33 (SMOOTH LINED CORRUGATED POLYETHYLENE). PIPE MEETING 707.33 SHALL BE HI-Q SUR-LOK OR APPROVED EQUAL. ALL PIPE USED FOR DOWNSPOUT LINES SHALL MEET O.D.O.T. 707.45 (POLYVINYL CHLORIDE PIPE, SDR-35) OR APPROVED EQUAL. BEDDING SHALL BE AS SPECIFIED.

CATCH BASINS & STORM MANHOLES

ALL STORM SEWER CATCH BASINS AND MANHOLES SHALL MEET THE REQUIREMENTS OF O.D.O.T. ITEM 604. PIPE OPENINGS SHALL BE PRECAST INTO ALL CATCH BASINS AND MANHOLES. KNOCKOUT PANELS/SIDES ARE UNACCEPTABLE. CATCH BASINS SHALL BE TYPE CB-3A, CB-3, OR CB-2-6. STORM MANHOLES SHALL BE TYPE MH-3. CATCH BASIN STATION AND OFFSET, AND ELEVATION (TOP OF GRATE, T/G) ARE MEASURED TO/AT THE FACE OF CURB PER O.D.O.T. STANDARD CONSTRUCTION DRAWINGS.

SANITARY SEWERS

ALL SANITARY SEWERS AND LATERALS SHALL BE PVC SDR-35, ASTM D-3034 WITH JOINTS MEETING ASTM D-3212. MINIMUM COVER OVER SANITARY SEWERS SHALL BE 4 FEET.

SANITARY SEWERS AND LATERALS SHALL BE INSTALLED PER O.D.O.T. ITEM 603 AS TYPE B OR TYPE C CONDUITS. SANITARY SEWERS AND LATERALS LOCATED WITHIN THE LIMITS OF OR WITHIN A 1/2 TO 1 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, SIDEWALKS, AND/OR DRIVES SHALL BE INSTALLED AS TYPE B CONDUITS. ALL OTHER SANITARY SEWERS MAY BE INSTALLED AS TYPE C CONDUITS. BEDDING SHALL BE AS SPECIFIED.

DEFLECTION TESTING SHALL BE CONDUCTED ON ALL FLEXIBLE CONDUIT 30 DAYS AFTER INSTALLATION AND BACKFILLING OF THE PIPE OR AS OTHERWISE DIRECTED BY THE ENGINEER. THE ALLOWABLE DEFLECTION RATE SHALL NOT EXCEED FIVE (5%) PERCENT.

EXFILTRATION TESTING (OR INFILTRATION IF APPLICABLE) SHALL NOT EXCEED A MAXIMUM ALLOWABLE LEAKAGE OF 100 GALLON/INCH OF PIPE DIAMETER/MILE/DAY IN LIEU OF SAID WATER TESTS, A LOW PRESSURE AIR TEST MAY BE CONDUCTED PER RECOMMENDED STANDARDS FOR SEWAGE WORKS (TEN STATE STANDARDS). THE PROPOSED SANITARY SEWER SYSTEMS SHALL BE TESTED, APPROVED, AND ACCEPTED PRIOR TO BEING PUT INTO SERVICE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY MAINTAINING ANY EXISTING SANITARY FLOW DURING THE COMPLETION AND/OR TESTING OF THE PROPOSED IMPROVEMENTS.

A BULKHEAD SHALL BE PLACED IN THE UPSTREAM (NEW) SEWER LINE WITHIN THE PROPOSED SANITARY MANHOLE NO. 1 LOCATED AT STA. 9+14. 35' RT. THIS BULKHEAD MUST REMAIN IN PLACE UNTIL THE SANITARY SEWER AND LATERALS HAVE BEEN COMPLETED, TESTED AND APPROVED.

THE CONTRACTOR SHALL CAREFULLY AND ACCURATELY CORE DRILL ANY REQUIRED OPENING INTO EXISTING MANHOLES AND PROVIDE A WATERTIGHT CONNECTION.

MANHOLES SHALL BE LEAKAGE TESTED IN ACCORDANCE WITH ASTM C-1244.

THE CONTRACTOR SHALL NOTIFY ALL PROPERTY OWNERS ALONG THE ROUTE OF THE SANITARY SEWER AT LEAST TWO DAYS PRIOR TO THE START OF CONSTRUCTION.

LOCATION OF SANITARY SEWER LATERALS/WYES

THE ACTUAL LOCATION OF EACH SANITARY SEWER WYE AND LATERAL SHALL BE VERIFIED IN THE FIELD AND APPROVED BY A REPRESENTATIVE OF THE CITY OF MASSILLON OR THE ENGINEER. ADDITIONAL WYES MAY BE ORDERED IN THE FIELD BY THE ENGINEER FOR POSSIBLE FUTURE TIE-INS.

WATER MAINS SHALL BE PRESSURE CLASS 350, DUCTILE IRON MEETING AWWA C-151 WITH PUSH ON JOINTS. THE MINIMUM COVER OVER WATER MAINS SHALL BE 4'-0" FROM THE GROUND SURFACE TO THE BARREL OF THE PIPE. THE OUTSIDE SURFACE OF ALL DUCTILE IRON PIPE, FITTINGS, AND APPURTENANCES SHALL BE SHOP COATED WITH EITHER A COAL TAR OR ASPHALT BASE BITUMINOUS MATERIAL IF THIS COATING MATERIAL IS FOUND TO BE DAMAGED PRIOR TO THE PIPE TRENCH BEING BACKFILLED, THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL APPROVED MATERIAL AS REQUIRED TO REPAIR THE DAMAGES. THE CONTRACTOR SHALL HAVE SUFFICIENT COATING MATERIAL AVAILABLE AT THE JOB SITE PRIOR TO LAYING THE PIPE. THE INTERIOR OF ALL PIPES AND FITTINGS SHALL BE LINED WITH CEMENT MORTAR AND SEAL COATED IN COMPLETE CONFORMANCE WITH AWWA C-104, OR THE LATEST REVISION. FITTINGS SHALL BE RATED FOR 350 PSI WORKING PRESSURE IN ACCORDANCE WITH AWWA C-110. PIPE LENGTHS MAY BE DEFLECTED AT THE JOINT IF REQUIRED, AT ONE-HALF THE DEGREE RECOMMENDED BY THE MANUFACTURER. WATER SERVICES SHALL BE 1" DIAMETER COPPER, TYPE K INSTALLED PER THE CONSUMER OHIO WATER COMPANY STANDARDS. DISINFECTION OF WATER MAINS SHALL BE IN ACCORDANCE WITH AWWA C-651. ALL WATERLINE PRESSURE TESTING SHALL CONFORM TO AWWA C-600. POLYWRAP

WATER MAINS SHALL BE INSTALLED PER O.D.O.T. ITEM 603 AS TYPE B OR TYPE C CONDUITS. WATERLINES LOCATED WITHIN THE LIMITS OF OR WITHIN A 1/2 TO 1 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, SIDEWALKS, AND/OR DRIVES SHALL BE INSTALLED AS TYPE B CONDUITS. ALL OTHER WATER MAINS MAY BE INSTALLED AS TYPE C CONDUITS. BEDDING SHALL

ALL PIPE JOINTS WITHIN 40 LF OF ANY DEAD END SHALL BE RESTRAINED USING MECHANICAL JOINTS, MEGALUG OR APPROVED EQUAL. ALL PIPE JOINTS WITHIN 40 LF OF ANY BEND, FITTING, VALVE, AND/OR TEE SHALL ALSO BE RESTRAINED USING RESTRAINED MECHANICAL JOINTS, MEGALUG OR APPROVED EQUAL. IN ADDITION, POURED-IN-PLACE CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, ETC. TO PREVENT MOVEMENT OF THE WATERLINE. BLOCKING SHALL BE CAREFULLY PLACED TO ENSURE IT IS POSITIONED PROPERLY TO WITHSTAND THE RESULTANT FORCES AT EACH BEND, FITTING, ETC., AND SHALL BEAR ON STABLE UNDISTURBED GROUND CAPABLE OF WITHSTANDING THE POTENTIAL LOADING. OAK WEDGES SHALL BE PROVIDED BEHIND HYDRANT TEES.

THE CONTRACTOR SHALL PROVIDE 18" VERTICAL CLEARANCE BETWEEN PROPOSED WATERLINES AND ANY STORM/SANITARY SEWERS. WHEN 18" CLEARANCE BETWEEN A WATERLINE AND SANITARY SEWER OR STORM SEWER CANNOT BE OBTAINED, THE CONTRACTOR SHALL PROVIDE CONCRETE ENCASEMENT AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL MAINTAIN TEN (10) FOOT HORIZONTAL CLEARANCE BETWEEN WATERLINES/SERVICES AND SANITARY AND/OR STORM SEWERS.

FIRE HYDRANTS SHALL BE MUELLER CENTURIAN, 3-WAY OR EQUAL AND AS

THE PROPOSED FACILITIES SHALL MAINTAIN A MINIMUM PRESSURE OF 35 PSI

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING, BRACING AND RESTRAINING ALL EXISTING WATERLINES DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.

TESTING OF UTILITIES

INSTALLED AND TESTED IN ACCORDANCE WITH APPLICABLE STANDARDS (AWWA, ETC.), PER THE OHIO ENVIRONMENTAL PROTECTION AGENCY, AND PER THE REQUIREMENTS OF THE LOCAL AGENCY (TOWNSHIP, CITY, VILLAGE AND/OR COUNTY) HAVING AUTHORITY BEFORE THEY CAN BE ACCEPTED. THIS WILL INCLUDE DISINFECTION AND PRESSURE TESTING OF WATERLINES. SANITARY SEWERS SHALL BE SUBJECTED TO LEAKAGE TESTING WHICH WOULD INCLUDE APPROPRIATE WATER (EXFILTRATION/INFILTRATION) OR LOW PRESSURE AIR TESTING. DEFLECTION TESTING WILL BE REQUIRED OF ALL FLEXIBLE CONDUIT/PIPE (PVC) AND SHALL BE PERFORMED THIRTY (30) DAYS AFTER INSTALLATION OF THE PIPE. DEFLECTION TESTING AND LEAKAGE TESTING MUST BE PERFORMED PERIODICALLY AS WORK PROGRESSES AND AS SOON AS TIME RESTRAINTS ALLOW (DEFLECTION TESTING) AND AT THE DIRECTION OF THE

DEFLECTION TESTING OF FLEXIBLE CONDUIT SHALL BE CONDUCTED THIRTY (30) DAYS AFTER INSTALLATION AND BACKFILLING OF THE PIPE OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ALL NECESSARY EQUIPMENT INCLUDING AN APPROVABLE MANDREL OR OTHER APPROVED DEVICE AND CONDUCT THE DEFLECTION TESTS AT THE DIRECTION OF THE ENGINEER. THE ALLOWABLE DEFLECTION RATE SHALL NOT EXCEED FIVE (5) PERCENT. THE ENGINEER HAS THE OPTION TO REQUIRE A SECOND TEST ANYTIME BETWEEN INITIAL TESTING AND RELEASE OF THE MAINTENANCE BOND. ANY SECTIONS FOUND TO HAVE A DEFLECTION IN EXCESS OF THE SPECIFIED RATE SHALL BE EXCAVATED AND CORRECTED EITHER BY RE-BEDDING, PIPE REPLACEMENT OR BOTH AS DIRECTED/ APPROVED BY THE ENGINEER. THESE CORRECTIONS SHALL BE REQUIRED IF

COST FOR ALL TESTING SHALL BE INCLUDED IN THE SANITARY SEWER PIPE PAY

ALL SANITARY SEWERS, 8" DIAMETER AND LARGER, MUST PASS INTERNAL TELEVISION INSPECTION. THE CONTRACTOR SHALL PROVIDE COMPLETE INTERNAL INSPECTION VIDEOTAPE TO THE CITY OF MASSILLON ENGINEERING DEPARTMENT. THE VIDEO TAPING PROCEDURE MUST BE IN ACCORDANCE WITH THE CITY OF MASSILLON ENGINEERING DEPARTMENT SPECIFICATIONS.

ROCK CHANNEL PROTECTION

ROCK CHANNEL PROTECTION SHALL MEET THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS ITEM 601. FABRIC FILTER CLOTH SHALL BE PLACED UNDER ALL ROCK CHANNEL PROTECTION IN ACCORDANCE WITH O.D.O.T. ITEM 712.09 GEOTEXILE FABRICS, TYPE B (FILTER BLANKETS FOR ROCK CHANNEL PROTECTION).

EARTHWORK

ALL SITE PREPARATION AND EARTHWORK ACTIVITIES SHALL BE PERFORMED IN STRICT ACCORDANCE WITH O.D.O.T. ITEM 203 AND THE RECOMMENDATIONS AND TOPSOIL STRIP, REMOVAL OF UNSUITABLE MATERIAL, SUBGRADE PREPARATION, AND APPROVAL, EXCAVATION AND PLACEMENT OF EMBANKMENT, BACKFILL, COMPACTION, SLOPE STABILITY, SUITABILITY OF MATERIAL, ETC. ALL EARTHWORK ACTIVITY SHALL BE PERFORMED IN THE PRESENCE OF A QUALIFIED GEOTECHNICAL REPRESENTATIVE FURNISHED BY THE OWNER. IN CASE OF A CONFLICT BETWEEN THE O.D.O.T. SPECIFICATIONS AND THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS/REQUIREMENTS, THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS/REQUIREMENTS SHALL GOVERN.

THE DEVELOPER WILL BE RESPONSIBLE TO PROVIDE ACCURATE AS-BUILT DRAWINGS TO THE CITY OF MASSILLON.

WATER MAINS/SERVICES

SHALL BE INSTALLED ON ALL PIPE AND FITTINGS.

BE AS SPECIFIED.

APPROVED BY CONSUMERS OHIO WATER COMPANY.

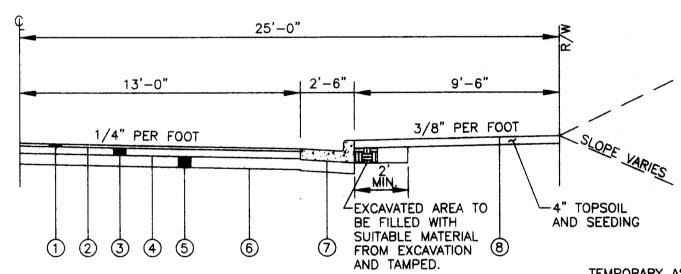
DELIVERED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.

ALL WATERLINES AND SANITARY SEWERS (INCLUDING LATERALS) MUST BE

WARRANTED BY EITHER INITIAL OR SECONDARY TESTING.

REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEER. THIS SHALL INCLUDE

ESTIMATED QUANTITIES ITEM QUANT UNIT DESCRIPTION 201 | LUMP | SUM | CLEARING AND GRUBBING LUMP SUM EXCAVATION — INCLUDING EMBANKMENT CONSTRUCTION 203 | 2968 | S.Y. | SUBGRADE COMPACTION LUMP | SUM | PROOF ROLLING 207 400 | L.F. | FILTER FABRIC FENCE | EACH | STRAW OR HAY BALES 50 LUMP S.Y. TEMPORARY SEEDING AND MULCHING 301 287 C.Y. BITUMINOUS AGGREGATE BASE 304 | 495 | C.Y. | AGGREGATE BASE 109 C.Y. ASPHALT CONCRETE 1.67 C.Y. ROCK CHANNEL PROTECTION (TYPE C) WITH FILTER FABRIC EACH | HEADWALL (TYPE HW-D) 1 | EACH | HEADWALL (TYPE HW-4B) 603 | 260 | L.F. | 12" CONDUIT, RCP CLASS III TYPE B (706.02) 240 | L.F. | 12" CONDUIT, TYPE B OR C (706.02 OR 707.33) 74 L.F. 15" CONDUIT, RCP CLASS III TYPE B (706.02) 229 | L.F. | 48" CONDUIT, RCP CL. III TYPE B OR C (706.02) 657 L.F. 48" CONDUIT, TYPE B OR C (706.02 OR 707.33) EACH | MODIFIED TYPE 3A CATCH BASIN WITH 2' X 3' BASE EACH | MODIFIED TYPE 3 CATCH BASIN 604 | 4 EACH | CATCH BASIN CB-2-6 | EACH | STORM MANHOLE 6' DIAMETER BASE EACH STORM MANHOLE 8' DIAMETER BASE CONCRETE CURB AND GUTTER 1264 LUMP SUM | CONSTRUCTION LAYOUT LUMP | SUM | MOBILIZATION LUMP | SUM | SEEDING AND MULCHING L.F. 8" CONDUIT, PVC SDR-35 SAN | 780 L.F. 6" CONDUIT (FOR LATERALS), PVC SDR-35 SAN 792 SAN 15 EACH | 8"X6" WYES EACH 4' DIAMETER SANITARY MANHOLE 4 814 670 L.F. 8" D.I.P. WATERLINE EACH FIRE HYDRANT ASSEMBLY(CONSUMERS OHIO WATER COMPANY STANDARD) EACH WATER SERVICE 814 | 18 EACH MONUMENT ASSEMBLY



TEMPORARY ASPHALT TURNAROUND PAVEMENT SECTION TO BE THE SAME AS TYPICAL ROADWAY SECTION.

(1) O.D.O.T. ITEM 404 - 1-1/2" ASPHALT CONCRETE

 $\sqrt{1}$ (2) O.D.O.T. ITEM 407 - TACK COAT

(3) O.D.O.T. ITEM 301 - 4" BITUMINOUS AGGREGATE BASE 1 (4) O.D.O.T. ITEM 408 - PRIME COAT

(5) O.D.O.T. ITEM 304 - 6" AGGREGATE BASE (2 - 3" COURSES)

(6) O.D.O.T. ITEM 203.13 - COMPACTED SUBGRADE

(7) CITY OF MASSILLON STANDARDS CONCRETE CURB & GUTTER

SCALE: 1/4" = 1'-0"

(8) O.D.O.T. ITEM 659 - SEEDING AND MULCHING

SEWERAGE APPROVED as evidenced by copy of

LETTER OF APPROVAL

Hereto attached

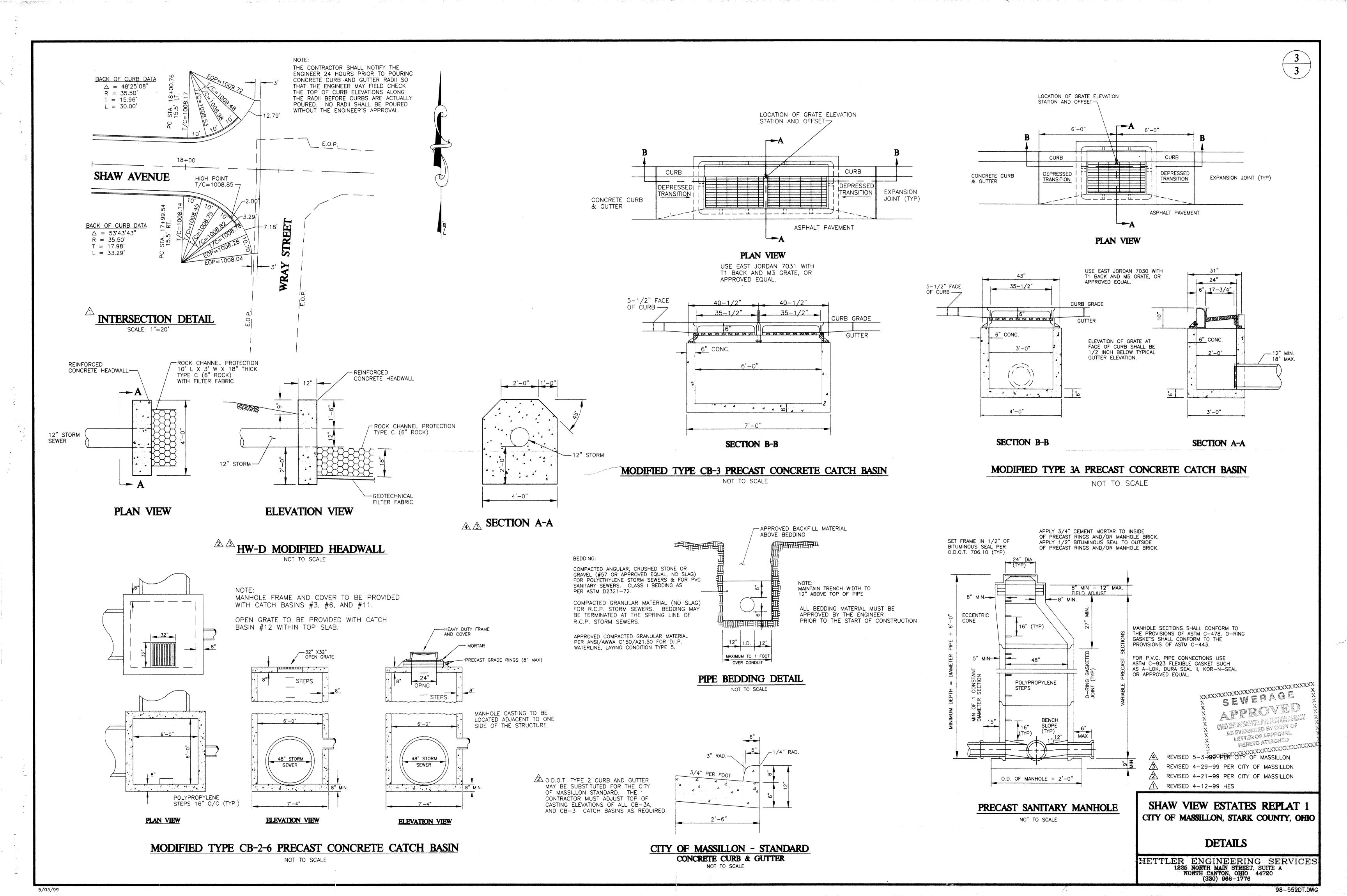
11 CITY OF MASSILLON - TYPICAL ROADWAY SECTION - 50 R/W

> 2 REVISED 4/29/99 - PER CITY OF MASSILLON: REVISED 4/21/99 - PER CITY OF MASSILLON

SHAW VIEW ESTATES REPLAT CITY MASSILLON, STARK COUNTY, OHIO NOTES, QUANTITIES, AND TYPICAL SECTION

HETTLER ENGINEERING SERVICES 1225 NORTH MAIN STREET, SUITE A NORTH CANTON, OHIO 44720 (330) 966-1776

98-552NT DWG



IMPROVEMENT PLANS FOR

SHAW VIEW ESTATES NO. 2

CITY OF MASSILLON, OHIO

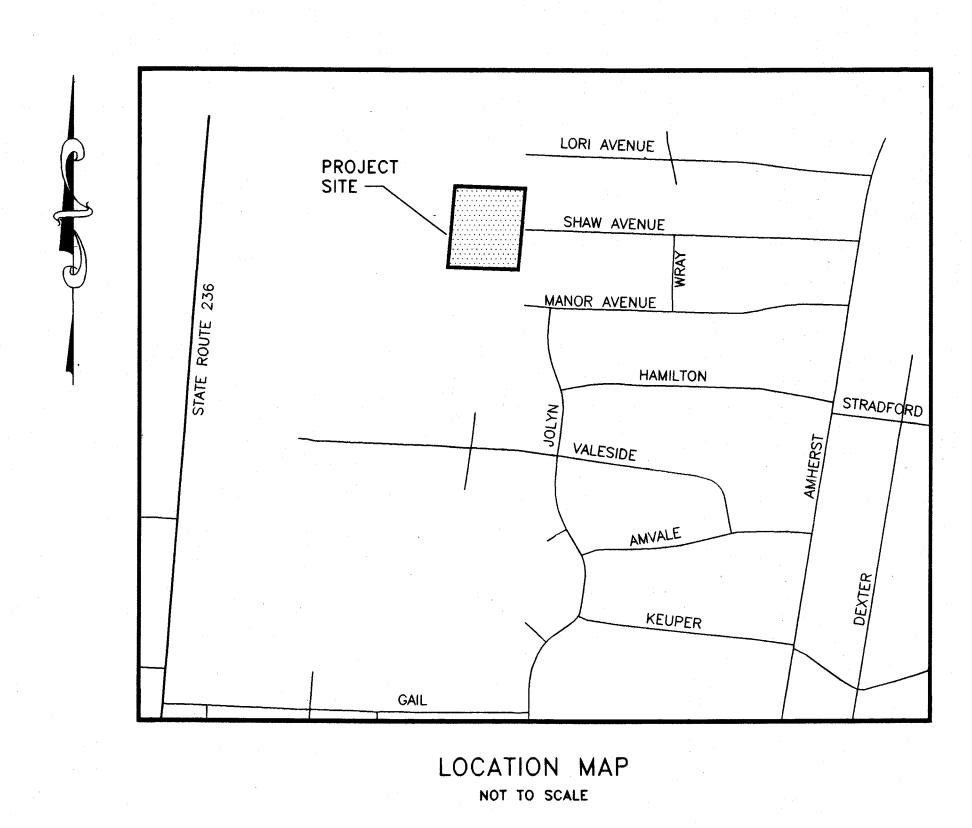
AUGUST 2003

OWNER/DEVELOPER:

A.J. DIANA SONS, INC. 1916 ERIE AVENUE NW MASSILLON, OHIO 44648 330-832-5904

SURVEYING SERVICES BY:

BUCKEYE SURVEYING SERVICES, INC. 2223 FULTON DRIVE NW CANTON, OHIO 44718 330-453-8339

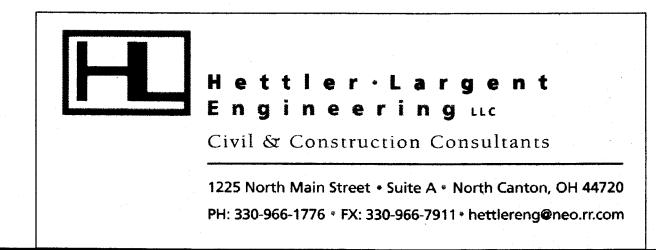


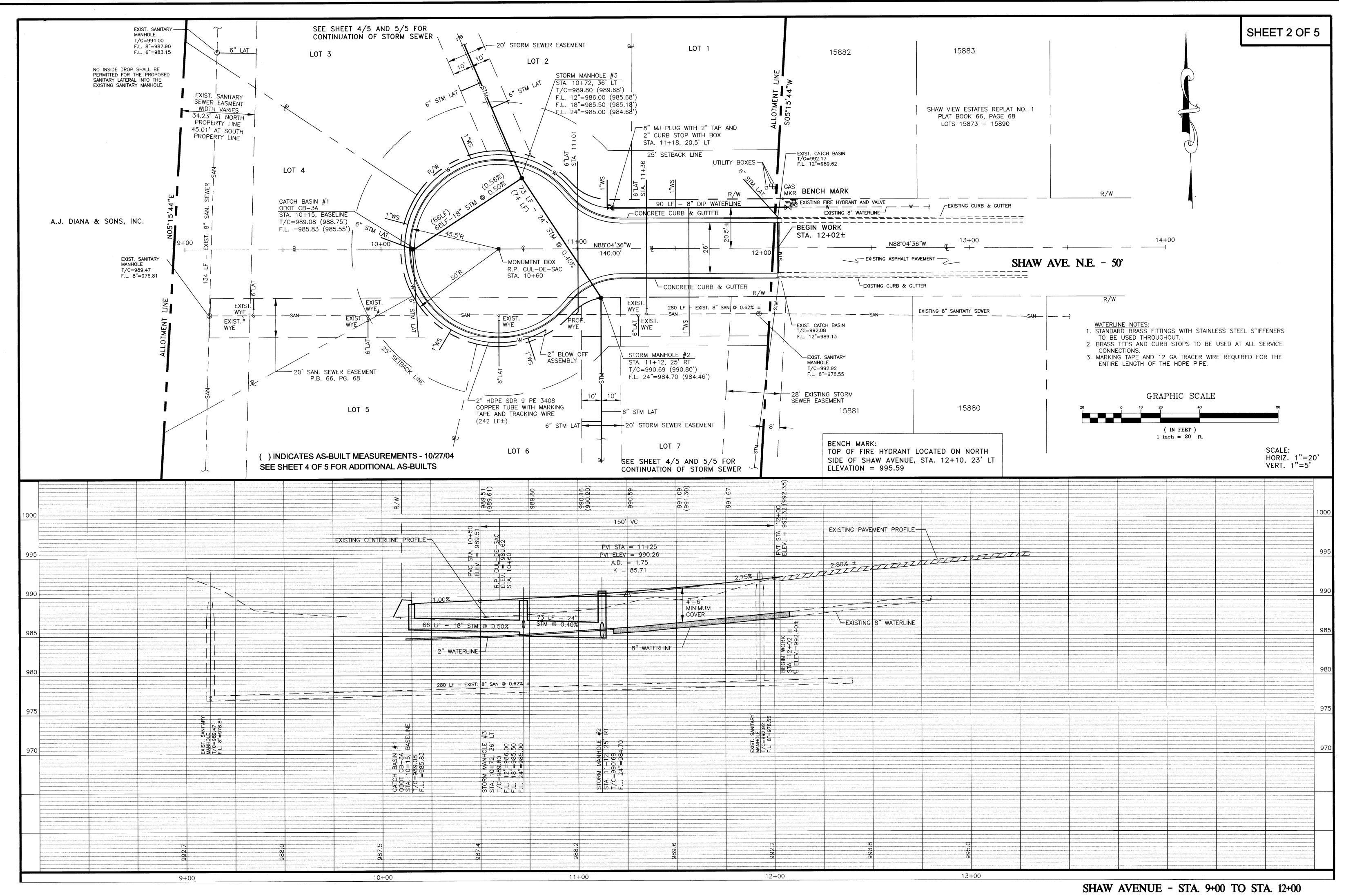
INDEX OF SHEETS

TITLE SHEET
SHAW AVENUE - STA. 9+00 TO STA. 12+00
NOTES AND QUANTITIES
DETAILS
STORM WATER POLLUTION PREVENTION PLAN
& STORM SEWER PLAN

CALL 2 WORKING DAYS
BEFORE YOU DIG
1-800-362-2764
OHIO UTILITIES PROTECTION SERVICE

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PROJECT SPECIFICATIONS

ALL WORK REQUIRED TO COMPLETE THIS IMPROVEMENT SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE DETAILED CONSTRUCTION DRAWINGS. THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS. EXCEPT AS HEREIN AMENDED, AND PER THE CITY OF MASSILLON SPECIFICATIONS/REQUIREMENTS/STANDARDS. THE CONSTRUCTION DRAWINGS WILL TAKE PRECEDENCE OVER THE OTHER REQUIREMENTS. IN THE CASE OF A CONFLICT BETWEEN THE CITY OF MASSILLON AND THE OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS/REQUIREMENTS, THE MORE STRICT OF THE TWO SPECIFICATIONS WILL GOVERN, AS DÉTERMINED BY THE CITY ENGINEER. STATE OF OHIO, DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS SHALL APPLY TO THIS IMPROVEMENT.

PROJECT SAFETY

THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR SHALL PROPERLY SUPPORT AND/OR MAINTAIN ALL EXCAVATIONS PER APPLICABLE SAFETY REQUIREMENTS AND COMPLY WITH ALL O.S.H.A. REGULATIONS. THIS SHALL INCLUDE STRICT COMPLIANCE WITH ALL APPLICABLE REGULATIONS/REQUIREMENTS REGARDING TRENCH SAFETY. ADEQUATE BARRICADES. WARNING LIGHTS, SIGNS, FENCING, ETC. SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL NON-WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION AS WELL AS TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL TO THE CONSTRUCTION SITE/AREA. TRENCHES SHALL BE BACKFILLED AT THE END OF EACH WORK DAY OR PROPERLY SECURED AS APPROVED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE SAFETY OF THE GENERAL PUBLIC AS WELL AS ALL CONSTRUCTION PERSONNEL. PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE OF DEBRIS (MUD, STONE, ETC.) AT ALL TIMES. THE CONTRACTOR SHALL ALERT ALL LOCAL EMERGENCY AGENCIES/SERVICES (FIRE, POLICE, AMBULANCE, ETC.) OF THE NATURE OF THE PROPOSED PROJECT PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. ACCESS FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL

AT NO TIME SHALL ANY PERSONNEL ENTER EXISTING STRUCTURES/CHAMBERS WITHOUT PROPER SAFETY EQUIPMENT, INCLUDING BUT NOT LIMITED TO AIR PACKS, AIR MONITORS AND/OR AIR SENSORS, PROTECTIVE CLOTHING, BODY HARNESS WITH POSITIVE MEANS OF REMOVING A PERSON FROM THE STRUCTURE/CHAMBER ETC. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH APPLICABLE O.S.H.A. REQUIREMENTS INCLUDING THOSE SPECIFIED FOR ENTERING CONFINED SPACES.

UNDERGROUND UTILITIES

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS WERE OBTAINED BY FIELD OBSERVATIONS, FROM EXISTING RECORDS, AND/OR FROM THE OWNERS OF THE RESPECTIVE UTILITIES. THE INFORMATION AS SHOWN IS BELIEVED TO BE CORRECT. HOWEVER THE COMPLETENESS AND ACCURACY OF THIS INFORMATION CANNOT BE GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL THE VARIOUS UTILITY COMPANIES (PUBLIC AND PRIVATE) TO VERIFY THE EXISTENCE, LIMITS AND/OR LOCATION OF ANY UTILITIES WHICH MAY BE ALONG THE ROUTE OR WITHIN THE VICINITY OF THIS IMPROVEMENT.

UTILITY NOTIFICATION

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING OPERATIONS ON THIS PROJECT THE CONTRACTOR(S) SHALL NOTIFY THE ENGINEER, THE REGISTERED UTILITY PROTECTION AGENCY/SERVICE. AND THE OWNERS OF ANY OTHER UTILITIES (PUBLIC AND/OR PRIVATE) THAT MAY HAVE UTILITY LINES OR FACILITIES WITHIN THE VICINITY OF THIS PROJECT BUT WHO ARE NOT MEMBERS OF THE REGISTERED UTILITY PROTECTION SERVICE OF HIS/HER INTENTION TO BEGIN CONSTRUCTION ACTIVITY ON THIS PROJECT. THE OWNERS OF ANY UNDERGROUND UTILITY FACILITY SHALL, WITHIN 48 HOURS AFTER NOTICE IS RECEIVED, EXCLUDING SATURDAYS, SUNDAYS, AND OTHER LEGAL HOLIDAYS; STAKE, MARK OR OTHERWISE DESIGNATE THE EXISTENCE AND/OR LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING AND/OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO WORKING DAYS AHEAD OF THE PLANNED CONSTRUCTION. OHIO UTILITIES PROTECTION SERVICE: 1-800-362-2764 (CONTACT NON-MEMBERS DIRECTLY).

VERIFICATION OF UNDERGROUND UTILITIES

THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXISTENCE AS WELL AS THE ACTUAL LOCATION, ALIGNMENT, AND ELEVATIONS OF ALL EXISTING UTILITIES/FACILITIES WITHIN AND/OR ADJACENT TO THE GENERAL LIMITS OF THESE IMPROVEMENTS INCLUDING WATERLINES, SANITARY AND STORM SEWERS, GAS LINES, COMMUNICATION LINES/BANKS. ELECTRIC LINES, ETC. PRIOR TO ORDERING MATERIALS OR BEGINNING WORK. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK UNTIL THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES WHICH COULD EFFECT COMPLETION OF THIS IMPROVEMENT HAVE BEEN FIELD CHECKED AND VERIFIED. THIS WILL LIKELY REQUIRE EXPLORATORY EXCAVATIONS TO BE PERFORMED BY THE CONTRACTOR FOR WHICH HE WILL NOT BE DIRECTLY REIMBURSED. THE CONTRACTOR SHALL NOT ASSUME THAT EXISTING UTILITIES/CONDUITS WERE INSTALLED AT TYPICAL/STANDARD DEPTHS OR AT UNIFORM SLOPES/GRADES/DEPTHS BETWEEN ACCESS POINTS (CATCH BASINS, MANHOLES, JUNCTION CHAMBERS, ETC.). WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO INSTALL THE PROPOSED CONDUIT. ANY CONFLICTS AND/OR DISCREPANCIES FROM THE PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER SO THAT THE APPROPRIATE ADJUSTMENTS IN ALIGNMENT AND/OR GRADE MAY BE MADE PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO VERIFY AND/OR DETERMINE EXISTING INFORMATION AS INDICATED / REQUIRED WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ANY CHANGES NECESSARY TO COMPLETE THE WORK SPECIFIED WITHOUT

PROTECTION OF UTILITIES

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS/MEASURES NECESSARY TO PROTECT AND SUPPORT ANY EXISTING UTILITIES/FACILITIES LOCATED ALONG THE ROUTE OF THE PROPOSED IMPROVEMENTS, WITHIN THE GENERAL PROJECT LIMITS, AND/OR ENCOUNTERED DURING THE COMPLETION OF THE PROPOSED IMPROVEMENTS AS DIRECTED/APPROVED BY THE OWNERS OF THE RESPECTIVE UTILITIES AND THE ENGINEER. UTILITIES MUST BE KEPT IN SERVICE AT ALL TIMES.

THE CONTRACTOR SHALL BE RESPONSIBLE TO CLOSELY COORDINATE THEIR WORK WITH ALL UTILITY COMPANIES TO MINIMIZE/AVOID POSSIBLE DELAYS IN THE COMPLETION OF THE REQUIRED IMPROVEMENTS. DELAYS WILL NOT BE THE RESPONSIBILITY OF THE CITY NOR THE ENGINEER.

DISPOSAL OF EXCESS OR UNSUITABLE MATERIALS

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DISPOSE OF ANY EXCESS, UNSUITABLE AND/OR UNUSABLE MATERIALS RESULTING FROM THE COMPLETION OF THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN WRITTEN PERMISSION FROM ANY PROPERTY OWNER PRIOR TO PLACEMENT OF ANY MATERIALS FROM THIS PROJECT ONTO OTHER PROPERTIES AND SHALL FURNISH THE OWNER/ENGINEER WITH COPIES OF THESE WRITTEN AGREEMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL CLAIMS RESULTING FROM THE PLACEMENT/DISPOSAL OF EXCESS, UNSUITABLE, AND/OR UNUSABLE MATERIALS ONTO OTHER PROPERTIES, INCLUDING BUT NOT LIMITED TO ENVIRONMENTAL ISSUES.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE CONTRACTOR SHALL PREVENT AND/OR REDUCE AND CONTROL SOIL EROSION RESULTING FROM THE PROPOSED IMPROVEMENTS. THE USE OF SILT FENCING, JUTE MATING, TEMPORARY SEEDING, SOD, SILT CHECKS, INLET PROTECTION AROUND ALL CATCH BASINS, STABILIZED CONSTRUCTION ENTRANCE(S), ETC. WILL BE REQUIRED. SEDIMENT CONTROL STRUCTURES/DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL RAINWATER AND LAND DEVELOPMENT - OHIO'S STANDARDS FOR STORMWATER MANAGEMENT LAND DEVELOPMENT AND URBAN STREAM PROTECTION, SECOND EDITION DATED 1996.
SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS SET FORTH ON THE APPROVED STORM WATER POLLUTION PREVENTION PLAN IF APPLICABLE, OR ON THE DETAILED CONSTRUCTION PLANS.

THE CONTRACTOR SHALL SAFELY AND PROPERLY MAINTAIN TRAFFIC ADJACENT TO, THROUGH, AND/OR ALONG THE PROJECT ROUTE/SITE AS DESCRIBED BELOW AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION MANUAL OF CONSTRUCTION AND MATERIALS SPECIFICATIONS ITEM 614 MAINTAINING TRAFFIC. THE CONTRACTOR SHALL FURNISH, MAINTAIN, AND REMOVE ALL SIGNS, FLAGS, FLAGMEN. WATCHMEN, BARRICADES, SIGN SUPPORTS, CONES, BARRELS, AND INCIDENTALS IN CONFORMANCE WITH THE MOST RECENT REVISIONS OF THE CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. INTERFERENCE WITH VEHICULAR TRAFFIC SHALL BE KEPT TO A MINIMUM AT ALL TIMES. ALL OPEN TRENCHES AND EXCAVATIONS SHALL BE PROTECTED WITH DRUMS, BARRICADES, BARRIERS, ETC. ACCESS SHALL BE MAINTAINED AT ALL TIMES FOR EMERGENCY AND FIRE DEPARTMENT VEHICLES. ANY TEMPORARY ROADWAY CLOSING MUST BE APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICTION OF THE ROADWAY IN WRITING WITH PRIOR NOTIFICATION GIVEN TO FIRE, POLICE AND OTHER EMERGENCY AGENCIES. EMERGENCY AND LOCAL TRAFFIC MUST BE MAINTAINED AT ALL TIMES IN A SAFE MANNER.

MAINTENANCE OF UTILITY SERVICES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UTILITY SERVICES AT ALL TIMES. WATER SERVICE MAY BE INTERRUPTED FOR LIMITED PERIODS OF TIME (4 HOURS MAXIMUM) DURING CONNECTION BETWEEN EXISTING WATER LINES AND RELOCATED/NEW WATER MAINS WHICH CANNOT BE COMPLETED OTHERWISE. SHUTDOWN/DISRUPTION OF WATER SERVICE TO BUSINESSES, SCHOOLS, CHURCHES, OR OTHER COMMERCIAL USERS SHALL BE SCHEDULED TO MINIMIZE OR AVOID DISRUPTION DURING OPERATING HOURS OF BUSINESS. NO SHUT DOWN SHALL OCCUR WITHOUT PRIOR WRITTEN PERMISSION OF THE CITY OF MASSILLON AND CONSUMERS OHIO WATER COMPANY. PROPERTY OWNERS/BUSINESSES AFFECTED BY THE APPROVED INTERRUPTION OF SERVICE SHALL BE NOTIFIED 48 HOURS IN ADVANCE BY THE CONTRACTOR. STORM AND SANITARY SERVICES SHALL BE MAINTAINED/PROVIDED WITHOUT INTERRUPTION.

RESTORATION OF DISTURBED AREAS

EXISTING DRIVES, BERMS, LAWNS, TELEPHONE/POWER POLES. PAVEMENTS. RETAINING WALLS, CURBS, SIDEWALKS, SIGNS, MAILBOXES, FENCING, PAPER BOXES, LANDSCAPING ITEMS/AREAS OR OTHER APPURTENANCES DISTURBED/DAMAGED DURING CONSTRUCTION BUT NOT SPECIFICALLY DESIGNATED FOR REMOVAL AND/OR REPLACEMENT SHALL BE RESTORED TO A CONDITION EQUAL TO THAT WHICH EXISTED PRIOR TO CONSTRUCTION AND TO THE COMPLETE SATISFACTION OF THE ENGINEER/OWNER. COST FOR THE RESTORATION OF THESE ITEMS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE IN THE PLANS/SPECIFICATIONS.

WORK IN THE RIGHT-OF-WAY

A PERMIT MAY BE REQUIRED FROM THE CITY PRIOR TO ANY WORK BEING PERFORMED INSIDE THE CITY'S RIGHT-OF-WAY. THE CONTRACTOR MUST NOTIFY THE CITY ENGINEER'S OFFICE 48 HOURS PRIOR TO ANY CONSTRUCTION INSIDE THE CITY'S RIGHT-OF-WAY OR WITHIN THE CITY UTILITY EASEMENTS IN ORDER TO COORDINATE INSPECTION.

EASEMENTS AND RIGHTS-OF-WAY

THE CONTRACTOR SHALL STAY WITHIN THE PROPERTIES, EASEMENTS, AND RIGHTS-OF-WAY PROVIDED AT ALL TIMES. NO MATERIAL SHALL BE STORED NOR ANY WORK PERFORMED ON PRIVATE PROPERTY. DISTURBANCE OF EXISTING FEATURES AND/OR IMPROVEMENTS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND AS APPROVED BY THE ENGINEER/OWNER.

ALL WORK REQUIRED/ASSOCIATED WITH THE CONNECTION OF PROPOSED UTILITIES TO EXISTING PUBLIC UTILITIES OR OTHER WORK REQUIRED WITHIN THE RIGHTS OF WAY OF BETHANN AVENUE, MARGILLE STREET, OR WITHIN PUBLIC UTILITY EASEMENTS SHALL BE INSPECTED BY THE CITY OF MASSILLON OR THEIR DESIGNATED REPRESENTATIVE. THE CONTRACTOR SHALL GIVE A 48 HOUR NOTICE BEFORE STARTING ANY WORK ON THIS PROJECT AND SHALL KEEP THE CITY INFORMED OF HIS/HER CONSTRUCTION SCHEDULE. NO WORK AS SPECIFIED ABOVE SHALL BE PERFORMED UNLESS AN AUTHORIZED INSPECTOR IS PRESENT.

SUBSURFACE INVESTIGATIONS

SUBSURFACE INVESTIGATIONS HAVE NOT BEEN PERFORMED FOR THIS PROJECT. THE CONTRACTOR MAY PERFORM SUCH SUBSURFACE INVESTIGATIONS AT HIS OWN RISK. EXPENSE, AND RESPONSIBILITY. THE CONTRACTOR MUST CONTACT THE OWNER. FINGINFER AND ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, WHICH MAY HAVE FACILITIES WITHIN THE PROJECT LIMITS, 48 HOURS PRIOR TO PERFORMING ANY SUBSURFACE INVESTIGATIONS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE RESTORATION OF AREAS DISTURBED BY TEST HOLES OR BORINGS, TO THE SATISFACTION OF THE ENGINEER.

SUITABILITY OF SITE

THE DESIGN ENGINEER/OWNER WILL NOT BE RESPONSIBLE FOR THE TYPE AND/OR SUITABILITY OF THE MATERIAL UNDERLYING THE PROJECT SITE. THE CONTRACTOR MUST APPRAISE HIMSELF OF ANY EXISTING SITE CONDITIONS WHICH MAY EFFECT HIS/HER BID OR PERFORMANCE OF THE REQUIRED WORK. THE CONTRACTOR SHALL PERFORM WHATEVER INVESTIGATIONS AND/OR TESTING WHICH MAY BE NECESSARY TO ADEQUATELY DETERMINE/ESTIMATE TO THE SATISFACTION OF THE CONTRACTOR HIMSELF ANY AND ALL SITE CONDITIONS WHICH COULD EFFECT THE PERFORMANCE OF THE PROPOSED IMPROVEMENTS. THIS COULD INCLUDE BUT NOT BE LIMITED TO UNSUITABLE AND/OR UNSTABLE SOIL/SUBSURFACE CONDITIONS, ROCK, WATER (PERCHED OR FREE), SPRINGS, ETC. IF THE CONTRACTOR IS UNSURE OR UNABLE TO DETERMINE THE NATURE OF THE SUBSURFACE CONDITIONS, HE SHALL ASSUME THE WORST CASE. NO ADDITIONAL COMPENSATION WILL BE GIVEN FOR UNANTICIPATED AND/OR UNFORESEEN CONDITIONS.

PRECONSTRUCTION MEETING

A PRECONSTRUCTION MEETING WITH THE DEVELOPER/CONTRACTOR AND THE MASSILLON CITY ENGINEER IS REQUIRED FOR THIS PROJECT PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL CONTACT THE CITY ENGINEER AT (330) 830-1722 SEVENTY-TWO (72) HOURS PRIOR TO THE ANTICIPATED MEETING DATE.

ALL WORK ASSOCIATED WITH THE FURNISHING AND INSTALLATION OF THE REQUIRED PERMANENT TRAFFIC/STREET SIGNS WILL BE PERFORMED BY THE CITY OF MASSILLON AND PAID FOR BY THE DEVELOPER.

THE CONTRACTOR SHALL BE RESPONSIBLE TO PROPERLY CONTROL DUST FROM THE PROJECT SITE AS NECESSARY/REQUIRED TO MAINTAIN SAFE VISIBILITY WITHIN AND/OR ADJACENT TO THE SITE AND TO AVOID IMPACT ON ADJACENT PROPERTIES. METHODS FOR DUST CONTROL MUST BE APPROVED BY THE ENGINEER.

CLEAN UP AT END OF PROJECT

PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL SWALES, DITCHES, STORM SEWERS, CATCH BASINS, STORM MANHOLES, SANITARY SEWERS, SANITARY MANHOLES, GUTTERS, AND OTHER IMPROVEMENTS ARE CLEAN AND FREE OF ANY AND ALL DEBRIS.

PUBLIC UTILITY LOCATION

THE DEVELOPER AND REPRESENTATIVES OF THE CITY OF MASSILLON SHALL MEET WITH REPRESENTATIVES OF THE VARIOUS PUBLIC UTILITY COMPANIES (COLUMBIA /EAST OHIO GAS, OHIO EDISON/AEP, AMERITECH, WARNER CABLE, ETC.) TO DETERMINE THE APPROPRIATE LOCATION FOR THESE UTILITIES WITHIN THE PROPOSED DEVELOPMENT. ONCE AN AGREEMENT HAS BEEN REACHED, IT SHALL BE THE RESPONSIBILITY OF THE CITY OF MASSILLON TO INSPECT THE INSTALLATION OF THE VARIOUS PUBLIC UTILITY LINES TO ENSURE THAT CONFLICTS ARE AVOIDED AND ADEQUATE CLEARANCE AND OFFSETS WITH OTHER UTILITIES ARE MAINTAINED.

PROHIBITED CONNECTIONS TO SANITARY SEWERS

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO SANITARY SEWER ARE PROHIBITED.

ALL PROPOSED STORM SEWERS SHALL MEET THE REQUIREMENTS OF O.D.O.T. ITEM 603 FOR TYPE B OR TYPE C CONDUITS. STORM SEWERS LOCATED WITHIN THE LIMITS OF OR WITHIN A 1/2 TO 1 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, SIDEWALKS, AND/OR DRIVES SHALL BE INSTALLED AS TYPE B CONDUITS. ALL OTHER STORM SEWERS MAY BE INSTALLED AS TYPE C CONDUITS. STORM SEWER PIPE MATERIALS (EXCEPT AS SPECIFICALLY NOTED OTHERWISE) SHALL MEET THE REQUIREMENTS OF O.D.O.T. 706.02 (REINFORCED CONCRETE CIRCULAR PIPE), OR 707.33 (SMOOTH LINED CORRUGATED POLYETHYLENE). PIPE MEETING 707.33 SHALL BE HI-Q, SUR-LOK OR APPROVED EQUAL.

ALL DOWNSPOUT LINES AND/OR EXTENSIONS OF INTERIOR ROOF DRAINS/DOWNSPOUT LINES TO THE HEADER LINE OR DRAINAGE STRUCTURES (CATCH BASIN OR MANHOLE) SHALL BE POLYVINYL CHLORIDE PIPE, (PVC) SDR-35 MEETING THE REQUIREMENTS OF O.D.O.T. 707.45. STANDARD BENDS AND FITTINGS SHALL BE USED FOR CHANGES IN DIRECTION AND/OR ELEVATION OF THE DOWNSPOUT/INTERIOR ROOF DRAIN LINES AND FOR THE CONNECTION OF DOWNSPOUT LINES TO THE HEADER LINE.

BEDDING MATERIAL SHALL MEET THE REQUIREMENTS/SPECIFICATIONS OF THE PIPE MANUFACTURER AND SHALL BE AS SPECIFIED.

CATCH BASINS & STORM MANHOLES

ALL STORM SEWER CATCH BASINS AND MANHOLES SHALL MEET THE REQUIREMENTS OF O.D.O.T. ITEM 604. PIPE OPENINGS SHALL BE PRECAST INTO ALL CATCH BASINS AND MANHOLES. KNOCKOUT PANELS/SIDES ARE UNACCEPTABLE. CATCH BASIN SHALL BE TYPE CB-3A. STORM MANHOLES SHALL BE TYPE MH-3.

MAINTAINING TYPICAL SECTION

THE ENTIRE RIGHT-OF-WAY SHALL BE GRADED AS SHOWN ON THE TYPICAL SECTION, DURING THE LOT DEVELOPMENT PHASE, THE DEVELOPER SHALL BE RESPONSIBLE FOR MAINTAINING THE TYPICAL SECTION BETWEEN THE BACK OF CONCRETE CURB AND THE RIGHT-OF-WAY LINE.

ESTIMATED QUANTITIES

ESTIMATED QUANTITIES ARE SHOWN TO INDICATE APPROXIMATE QUANTITIES FOR THE VARIOUS WORK/PAYMENT ITEMS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM ALL QUANTITIES PRIOR TO SUBMITTING A BID AND ALERT THE OWNER/ENGINEER OF ANY DISCREPANCIES. WORK/PAYMENT ITEMS NOT SPECIFICALLY LISTED AND/OR REFERENCED BUT REQUIRED TO PROPERLY COMPLETE THE IMPROVEMENTS SHALL BE PERFORMED AND THE COST INCLUDED IN THE VARIOUS OTHER ASSOCIATED PAY ITEMS.

DAMAGE TO EXISTING UTILITIES/SERVICES

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE AND/OR DISRUPTION TO EXISTING UTILITY LINES/MAINS AND SERVICES. ALL COSTS ASSOCIATED WITH THE REPAIR, REPLACEMENT, AND/OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE PROVIDED BY THE CITY OR THE ENGINEER. ALL LIABILITY SHALL BE BORNE BY THE CONTRACTOR.

CONSTRUCTION LAYOUT

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, PLACING, AND MAINTAINING CONSTRUCTION LAYOUT STAKES NECESSARY FOR THE PROPER COMPLETION OF THE WORK ASSOCIATED WITH THIS PROJECT. THE OWNER AND/OR ENGINEER WILL NOT BE RESPONSIBLE FOR STAKING HORIZONTAL OR VERTICAL CONTROL. BENCH MARKS WILL BE PROVIDED WITHIN AND/OR ADJACENT TO THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE A BENCH CIRCUIT BETWEEN AT LEAST TWO (2) SEPARATE BENCH MARKS WHENEVER ELEVATIONS ARE BEING TRANSFERRED AND/OR SET. ANY DISCREPANCIES OUTSIDE NORMAL SURVEYING STANDARDS/LIMITS WITH THE BENCH MARK ELEVATIONS SHOWN SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.

EXAMINATION OF SITE

THE CONTRACTOR SHALL BE RESPONSIBLE TO CLOSELY EXAMINE THE PROJECT SITE AND ALL ADJACENT AREA(S) AND APPRAISE HIMSELF OF ANY ITEMS AND/OR CONDITIONS THAT COULD AFFECT HIS/HER BID AND/OR ABILITY TO COMPLETE THE PROPOSED IMROVEMENTS. THIS SITE INSPECTION/EVALUATION SHALL BE COMPLETED PRIOR TO SUBMITTING A PROPOSAL OR BID.

WATER MAINS/SERVICES - CONSUMERS OHIO WATER COMPANY

WATER MAINS SHALL BE PRESSURE CLASS 350, DUCTILE IRON MEETING AWWA C-151 WITH PUSH ON JOINTS. THE MINIMUM COVER OVER WATER MAINS SHALL BE 4'-6" FROM THE GROUND SURFACE TO THE BARREL OF THE PIPE. THE OUTSIDE SURFACE OF ALL DUCTILE IRON PIPE, FITTINGS, AND APPURTENANCES SHALL BE SHOP COATED WITH EITHER A COAL TAR OR ASPHALT BASE BITUMINOUS MATERIAL. IF THIS COATING MATERIAL IS FOUND TO BE DAMAGED PRIOR TO THE PIPE TRENCH BEING BACKFILLED, THE CONTRACTOR SHALL PROVIDE AN ADDITIONAL APPROVED MATERIAL AS REQUIRED TO REPAIR THE DAMAGES. THE CONTRACTOR SHALL HAVE SUFFICIENT COATING MATERIAL AVAILABLE AT THE JOB SITE PRIOR TO LAYING THE PIPE. THE INTERIOR OF ALL PIPES AND FITTINGS SHALL BE LINED WITH CEMENT MORTAR AND SEAL COATED IN COMPLETE CONFORMANCE WITH AWWA C-104, OR THE LATEST REVISION. FITTINGS SHALL BE RATED FOR 350 PSI WORKING PRESSURE IN ACCORDANCE WITH AWWA C-110. PIPE LENGTHS MAY BE DEFLECTED AT THE JOINT IF REQUIRED, AT ONE-HALF THE DEGREE RECOMMENDED BY THE MANUFACTURER. WATER SERVICES SHALL BE 1" DIAMETER COPPER, TYPE K INSTALLED PER THE CONSUMERS OHIO WATER COMPANY STANDARDS. DISINFECTION OF WATER MAINS SHALL BE IN ACCORDANCE WITH AWWA C-651. ALL WATERLINE PRESSURE TESTING SHALL CONFORM TO AWWA C-600. POLYWRAP SHALL BE INSTALLED ON ALL PIPE AND FITTINGS.

WATER MAINS SHALL BE INSTALLED PER ODOT ITEM 603 AS TYPE B OR TYPE C CONDUITS. WATERLINES LOCATED WITHIN THE LIMITS OF OR WITHIN A 1 TO 1 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, FOOTERS/FOUNDATIONS SIDEWALKS, AND/OR DRIVES SHALL BE INSTALLED AS TYPE B. CONDUITS. ALL OTHER WATER MAINS MAY BE INSTALLED AS TYPE C CONDUITS. BEDDING

ALL PIPE JOINTS WITHIN 40 LF OF ANY DEAD END SHALL BE RESTRAINED USING MECHANICAL JOINTS, MEGALUG OR APPROVED EQUAL. ALL PIPE JOINTS WITHIN 40 LF OF ANY BEND, FITTING, VALVE AND/OR TEE SHALL ALSO BE RESTRAINED USING RESTRAINED MECHANICAL JOINTS, MEGALUG OR APPROVED EQUAL. IN ADDITION, POURED-IN-PLACE CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, ETC. TO PREVENT MOVEMENT OF THE WATERLINE. BLOCKING SHALL BE CAREFULLY PLACED TO ENSURE IT IS POSITIONED PROPERLY TO WITHSTAND THE RESULTANT FORCES AT EACH BEND. FITTING. ETC.. AND SHALL BEAR ON STABLE UNDISTURBED GROUND CAPABLE OF WITHSTANDING HE POTENTIAL LOADING. OAK WEDGES SHALL BE PROVIDED BEHIND HYDRANT TEES.

A TEN FEET MINIMUM HORIZONTAL SEPARATION (OUT-TO-OUT, CLEAR) WILL BE MAINTAINED BETWEEN THE WATER LINE AND SANITARY SEWER. AN 18-INCH MINIMUM VERTICAL SEPARATION (OUT-TO-OUT, CLEAR) WILL BE MAINTAINED BETWEEN THE WATER LINE AND SANITARY SEWER AT ALL CROSSINGS. A FOUR FEET MINIMUM HORIZONTAL SEPARATION (OUT-TO-OUT, CLEAR) WILL BE MAINTAINED BETWEEN THE WATER LINE AND STORM SEWER. A TWELVE-INCH MINIMUM VERTICAL SEPARATION (OUT-TO-OUT, CLEAR) WILL BE MAINTAINED BETWEEN THE WATER LINE AND STORM SEWER AT ALL CROSSINGS.

FIRE HYDRANTS SHALL BE MUELLER CENTURIAN 200 WITH 4-1/2 INCH NOZZLES WITH ALL VALVES OPENING RIGHT. (CITY OF MASSILLON STANDARDS)

THE PROPOSED FACILITIES WILL MAINTAIN A MINIMUM PRESSURE OF 35 PSI DELIVERED TO THE CURB STOP DURING NORMAL OPERATING CONDITIONS.

BOOSTER PUMPS ARE NOT PERMITTED ON SERVICE CONNECTIONS. THE WATER SYSTEM MAY GRANT SPECIAL PERMISSION FOR BUILDINGS SIX STORIES AND HIGHER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING, BRACING AND RESTRAINING ALL EXISTING WATERLINES DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.

ALL WATERLINES AND SANITARY SEWERS (INCLUDING LATERALS) MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH APPLICABLE STANDARDS (AWWA, ETC.), PER THE OHIO ENVIRONMENTAL PROTECTION AGENCY, AND PER THE REQUIREMENTS OF THE LOCAL AGENCY (TOWNSHIP, CITY, VILLAGE AND/OR COUNTY) HAVING AUTHORITY BEFORE THEY CAN BE ÀCCEPTED. THIS WILL INCLUDE DISINFECTION AND PRESSURE TESTING OF WATERLINES. SANITARY SEWERS SHALL BE SUBJECTED TO LEAKAGE TESTING WHICH WOULD INCLUDE APPROPRIATE WATER (EXFILTRATION/INFILTRATION) OR LOW PRESSURE AIR TESTING. DEFLECTION TESTING WILL BE REQUIRED OF ALL FLEXIBLE CONDUIT/PIPE (PVC) AND SHALL BE PERFORMED THIRTY (30) DAYS AFTER INSTALLATION OF THE PIPE. DEFLECTION TESTING AND LEAKAGE TESTING MUST BE PERFORMED PERIODICALLY AS WORK PROGRESSES AND AS SOON AS TIME RESTRAINTS ALLOW (DEFLECTION TESTING) AND AT THE DIRECTION OF THE ENGINEER.

DEFLECTION TESTING OF FLEXIBLE CONDUIT SHALL BE CONDUCTED THIRTY (30) DAYS AFTER INSTALLATION AND BACKFILLING OF THE PIPE OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ALL NECESSARY EQUIPMENT INCLUDING AN APPROVABLE MANDREL OR OTHER APPROVED DEVICE AND CONDUCT THE DEFLECTION TESTS AT THE DIRECTION OF THE ENGINEER. THE ALLOWABLE DEFLECTION RATE SHALL NOT EXCEED FIVE (5) PERCENT. THE ENGINEER HAS THE OPTION TO REQUIRE A SECOND TEST ANYTIME BÉTWEEN INITIAL TESTING AND RELEASE OF THE MAINTENANCE BOND. ANY SECTIONS FOUND TO HAVE A DEFLECTION IN EXCESS OF THE SPECIFIED RATE SHALL BE EXCAVATED AND CORRECTED EITHER BY RE-BEDDING, PIPE REPLACEMENT OR BOTH AS DIRECTED/ APPROVED BY THE ENGINEER. THESE CORRECTIONS SHALL BE REQUIRED IF WARRANTED BY EITHER INITIAL OR SECONDARY TESTING.

ALL AREAS DISTURBED DURING CONSTRUCTION (INCLUDING EXPOSED SURFACES OF THE EMBANKMENT, EXCAVATION, SPOIL AND BORROW AREAS, BERMS, ETC.), SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING, MULCHING, ETC. IN ACCORDANCE WITH O.D.O.T. ITEM 659, SEEDING AND MULCHING AND AS SPECIFIED ON THE STORM WATER POLLUTION PREVENTION PLAN. STABILIZATION SHALL OCCUR WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF THE IMPROVEMENTS.

ALL SITE PREPARATION AND EARTHWORK ACTIVITIES INCLUDING THOSE REQUIRED TO COMPLETE THE PROPER CONSTRUCTION OF THE DETENTION BASIN(S) SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, INCLUDING DIVISION 200 EARTHWORK (WHICH INCLUDES ITEMS 201, 202, 203, 205, 206, AND 207) AND THE RECOMMENDATIONS AND REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEER AS OUTLINED IN THE SUBSURFACE INVESTIGATION REPORT. THIS SHALL INCLUDE ALL REMOVALS, CLEARING AND GRUBBING, TOPSOIL REMOVAL/STRIP, PROOF ROLLING, SUBGRADE PREPARATION, SUITABILITY OF MATERIALS, PERFORMANCE OF ALL EXCAVATION(S), PLACEMENT OF EMBANKMENT AND BACKFILL, COMPACTION, SLOPE STABILITY, CORE TRENCH CONSTRUCTION, AND ALL OTHER RELATED AND/OR NECESSARY OPERATIONS/PROCEDURES. ALL EXCAVATION SHALL BE CONSIDERED AS UNCLASSIFIED EXCAVATION. ALL FARTHWORK ACTIVITY SHALL BE PERFORMED IN THE PRESENCE OF A QUALIFIED GEOTECHNICAL REPRESENTATIVE FURNISHED BY THE OWNER WHO WILL BE RESPONSIBLE TO DETERMINE COMPLIANCE WITH O.D.O.T. SPECIFICATIONS AND/OR THE GEOTECHNICAL RECOMMENDATIONS/REQUIREMENTS. IN CASE OF A CONFLICT BETWEEN THE O.D.O.T. SPECIFICATIONS AND THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS/REQUIREMENTS, THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS/REQUIREMENTS SHALL GOVERN.

COMPACTION REQUIREMENTS MAY VARY THROUGHOUT THE PROJECT SITE DEPENDENT UPON THE INTENDED USE/AREA (BUILDING AREA, ROADWAY, LAWN, ETC.).

ITEM 203 - PROOF ROLLING

PROOF ROLLING SHALL BE PERFORMED IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS INCLUDING ITEM 203.14 ON THE PREPARED COMPACTED SUBGRADE OF THE PROPOSED ROADWAY PRIOR TO PLACEMENT OF ANY PAVEMENT IN THE PRESENCE OF THE SITE GEOTECHNICAL ENGINEER AND THE CITY OF MASSILLON ENGINEER USING A FULLY LOADED TANDEM AXLE DUMP TRUCK. THE PROOF ROLLING OPERATION SHALL COVER THE ENTIRE WIDTH AND LENGTH OF THE PROPOSED ROADWAY. THE PROOF ROLLING SHALL EXTEND 1 FOOT BEYOND THE BACK OF CURB. THE PROPOSED PROCEDURE IS TO DETECT SOFT, YIELDING, AND/OR UNSTABLE ZONES WITHIN THE SUBGRADE. ANY SUCH ZONES THAT ARE FOUND SHALL BE CORRECTED. THE UNSATISFACTORY AREAS SHALL BE UNDERCUT AND REPLACED WITH CLEAN APPROVED MATERIAL, OR OTHERWISE STABILIZED/CORRECTED AS APPROVED/DIRECTED BY THE GEOTECHNICAL ENGINEER AND THE CITY OF MASSILLON ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE TO THE CONTRACTOR FOR CORRECTION OF UNSUITABLE/UNACCEPTABLE AREAS LOCATED WITHIN CONSTRUCTED FMBANKMENTS.

<u>AS-BUILTS</u>

THE DEVELOPER WILL BE RESPONSIBLE TO PROVIDE ACCURATE AS-BUILT DRAWINGS TO THE CITY OF MASSILLON.

ROCK CHANNEL PROTECTION

ROCK CHANNEL PROTECTION SHALL MEET THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS ITEM 601. FILTER FABRIC CLOTH SHALL BE PLACED UNDER ALL ROCK CHANNEL PROTECTION IN ACCORDANCE WITH O.D.O.T. ITEM 712.09 GEOTEXILE FABRICS, TYPE B (FILTER BLANKETS FOR ROCK CHANNEL PROTECTION).

SANITARY SEWERS

ALL SANITARY SEWERS AND LATERALS SHALL BE PVC SDR-35 MEETING REQUIREMENTS OF ASTM D-3034 WITH JOINTS MEETING ASTM D-3212. MINIMUM COVER OVER SANITARY SEWERS AND LATERALS SHALL BE 4 FEET.

SANITARY SEWERS AND LATERALS SHALL BE INSTALLED PER O.D.O.T. ITEM 603 AS TYPE B OR TYPE C CONDUITS. SANITARY SEWERS AND LATERALS LOCATED WITHIN THE LIMITS OF OR WITHIN A 1 TO 1 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, FOOTERS/FOUNDATIONS, SIDEWALKS, AND/OR DRIVES SHALL BE INSTALLED AS TYPE B CONDUITS. ALL OTHER SANITARY SEWERS MAY BE INSTALLED AS TYPE C CONDUITS. BEDDING SHALL BE AS SPECIFIED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY MAINTAINING ANY EXISTING SANITARY FLOW DURING THE COMPLETION AND/OR TESTING OF THE PROPOSED IMPROVEMENTS.

THE ACTUAL LOCATION OF EACH SANITARY SEWER LATERAL SHALL BE DETERMINED IN THE FIELD AND APPROVED BY A REPRESENTATIVE OF THE OWNER.

THE CONTRACTOR SHALL CAREFULLY AND ACCURATELY CORE DRILL ANY REQUIRED OPENING INTO EXISTING MANHOLES AND PROVIDE A WATERTIGHT CONNECTION.

> TOTAL LF OF PUBLIC ROADWAY TOTAL LF PUBLIC SANITARY SEWER TOTAL LF PUBLIC STORM SEWER

ESTIMATED QUANTITIES			
TEM	QUANT.	UNIT	DESCRIPTION
201	LUMP	SUM	CLEARING AND GRUBBING
203	LUMP	SUM	EXCAVATION - INCLUDING EMBANKMENT CONSTRUCTION
203	1071	S.Y.	SUBGRADE COMPACTION
203	LUMP	SUM	PROOF ROLLING
207	280	L.F.	FILTER FABRIC FENCE
207	20	EACH	STRAW OR HAY BALES
207	LUMP	SUM	TEMPORARY SEEDING AND MULCHING
301	104	C.Y.	BITUMINOUS AGGREGATE BASE
304	179	C.Y.	AGGREGATE BASE
404	39	C.Y.	ASPHALT CONCRETE
407	71	GAL	TACK COAT (0.075 GAL/SY)
408	379	GAL	PRIME COAT (0.40 GAL/SY)
601	3.33	C.Y.	ROCK CHANNEL PROTECTION (TYPE B) WITH FILTER FABRIC
602	1	EACH	HEADWALL
603	163	L,F.	12" CONDUIT, TYPE B OR C (706.02 OR 707.33)
603	66	L.F.	18" CONDUIT, TYPE B OR C (706.02 OR 707.33)
603	308	L.F.	24" CONDUIT, TYPE B OR C (706.02 OR 707.33)
603	125	L.F.	6" STORM LATERAL (CITY OF MASSILLON STANDARD)
604	1 1	EACH	MODIFIED TYPE 3A CATCH BASIN WITH 2' X 3' BASE
604	3	EACH	STORM MANHOLE
609	447	L.F.	CONCRETE CURB AND GUTTER (CITY OF MASSILLON STANDARD)
623	LUMP	SUM	CONSTRUCTION LAYOUT
624	LUMP	SUM	MOBILIZATION
659	LUMP	SUM	SEEDING AND MULCHING
SAN	212	L.F.	6" CONDUIT (FOR LATERALS), PVC SDR-35
814	90	L.F.	8" D.I.P. WATERLINE
814	7	EACH	WATER SERVICE
PECIAL	242	L.F.	2" HDPE SDR 9 P 3408 COPPER TUBE PIPE
PECIAL	1	EACH	MONUMENT ASSEMBLY
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