

# IMPROVEMENTS PLANS FOR CHARBONNEAU ALLOTMENT

## SAGAMORE HILLS TWP., SUMMIT COUNTY, OHIO

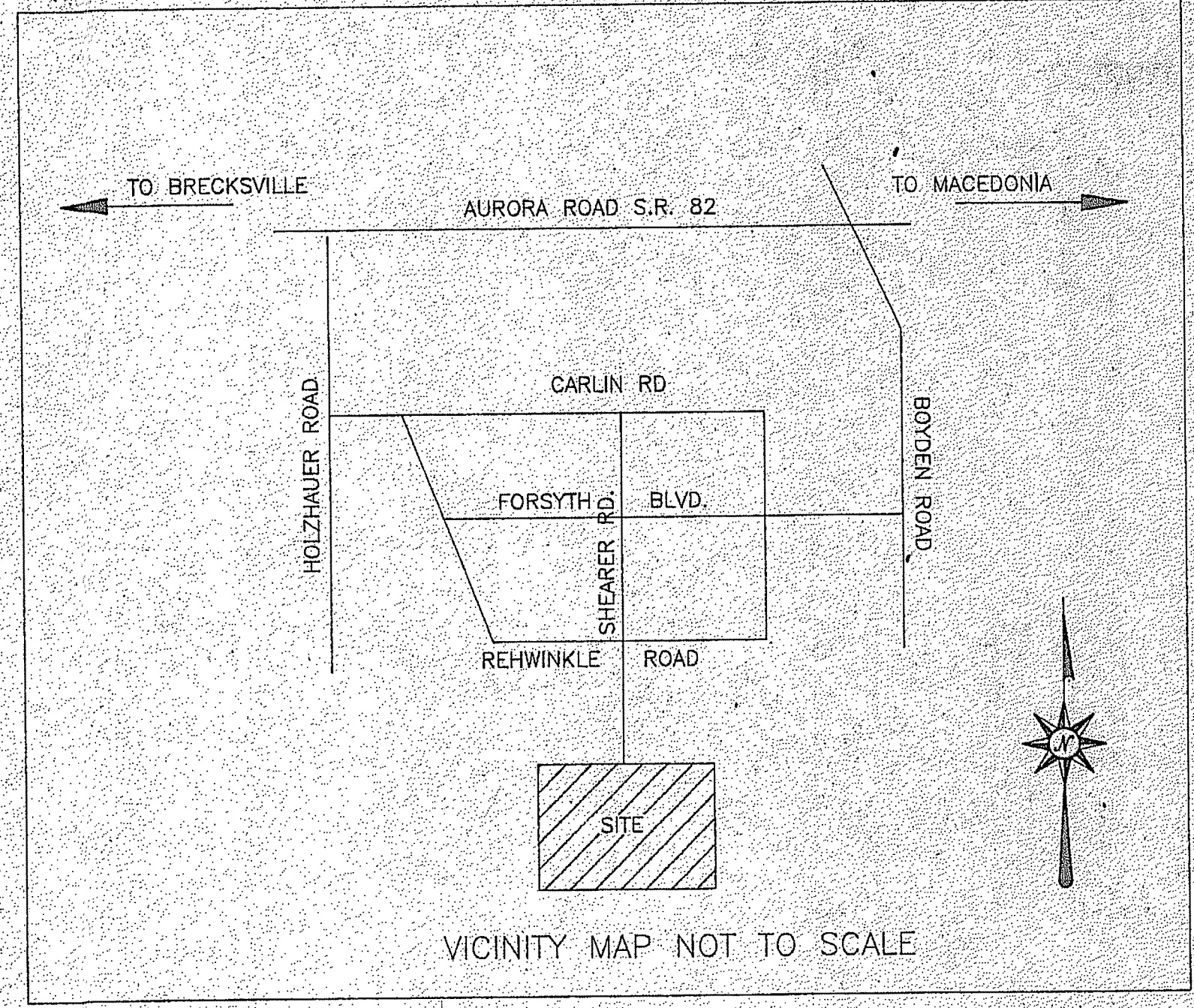
### CALL BEFORE YOU DIG 1-800-362-2764

**STANDARD NOTES**

- The construction of this project shall be governed by the State of Ohio Department of Transportation and Material Specifications (current edition) supplemented where applicable by the County of Summit Subdivision Regulations and The City of Cleveland, Division Of Water.
- The County of Summit Engineer, in approving these plans and dedicating them, does not, in any way, relieve the Owner's Engineer of his responsibility for accurate and complete engineering design relative to the plans.
- The County of Summit Engineer shall not be held liable for damages of any type that may occur as a result of error and/or omissions in the engineering design data presented by the Owner's Engineer. Neither shall the County of Summit Engineer be liable for damages resulting from the Owner's Contractor not complying with approved plan or by using construction methods or materials not approved by the County of Summit Engineer.
- Temporary Water Pollution, Soil Erosion and Siltation Control may be required in accordance with Item 207 of the Ohio Department of Transportation Construction and Material Specifications (current edition) as directed by the County of Summit Engineer.
- Before acceptance of the sub-grade by the County Engineer, proof-rolling shall be required on all areas to be paved per items 203.13 and 203.14 of the State of Ohio Department of Transportation Construction and Material Specifications (current edition). The requirements for the proof roll is a tandem dump truck with a gross weight of 60,000 lbs. or a 40' ton proof roll.
- For items 301, 402, 403 and 404, the Contractor shall provide the County Engineer a job mix formula for review and approval prior to the pre-construction meeting. All materials used must be obtained from a source approved by the Ohio Department of Transportation. For items 403 and 404, the coarse aggregate in the mix shall be crushed limestone.

**Summit Soil & Water Conservation District's General Notes**

- Sediment Ponds/Traps and Perimeter Controls shall be implemented as a first step of grading and within 7 days from the start of grubbing and shall continue to function until upland areas are stabilized.
- Disturbed areas which will remain unworked for a period of 45 days or more shall be stabilized with seeding and mulching or other appropriate means within 7 days.
- Erosion control blankets with matting will be used on ditches greater than 1.5% and all other slopes greater than 6% grade.
- Builder is responsible for erosion control on individual lot. Builder must file individual lot Notice of Intent (NOI) with Ohio EPA.
- No solid or liquid waste shall be discharged into storm water runoff.
- Off-site vehicle tracking sediment shall be minimized. Construction vehicles are limited to the construction access road(s) noted on the plan.
- All erosion and sediment control practices must meet the standards and specifications of the Ohio Rainwater and Land Development Handbook (1996).
- Other erosion and sediment control items may be necessary due to environmental conditions.
- Regular inspection and maintenance will be provided for all erosion and sediment control practices. Permanent records of maintenance and inspections must be kept throughout the construction period. Inspections must be made a minimum of once every 7 days and immediately after storm events greater than 0.5 inches of rain in a 24-hour period. Provide name of inspector, major observations, date of inspection and corrective measures taken.



**COUNTY SUMMIT ENGINEER'S CONSTRUCTION NOTES**

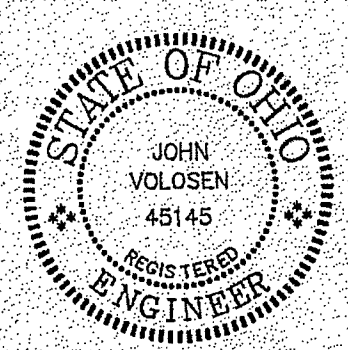
- Topsoil shall be stripped over the areas affected by grading and disposed of or stock piled as approved by the County prior to initiation of earthwork activities.
- Backfill Requirements are as follows:  
Under proposed pavement 98-100% depending on the standard proctor test results, within a 45-degree influence line from the pavement edge, 95% compaction, elsewhere in the right-of-way, 85% compaction. These compaction requirements must be 98%, 95% or 85% of the maximum laboratory dry density for cohesive soils +2% of the optimum moisture content. Additionally, ODOT item 603.0B must be adhered to.  
  
The Developer, his agent or contractor, must use only item 304 material for backfilling operations under proposed pavement or within the 45-degree influence line. If material other than item 304 is used for fill within the right-of-way, it is subject to the following requirements:  
A. Proctors must be obtained and compaction methods submitted to this office prior to any filling operations being permitted.  
B. New proctor must be obtained as often as the soil material changes.  
C. No proctor's from previous year's construction will be accepted.  
  
Regardless of the type of backfill used on the development, the developer or his agent must provide the testing services necessary to check the density of the materials placed in the trenches or fill areas, as directed by this office. The Developer will be responsible for payment for the testing services.  
  
Any materials that cannot be compacted to the required compaction will need to be removed and replaced with materials that can achieve the required compaction. If the proper compaction is not attained and the material is not removed and replaced properly the Escrow Account or Bond Amount will not be allowed to be drawn upon. This will prevent the release of the Performance Bonds for the project.
- The Stormwater Pollution Prevention Plan must be implemented prior to the start of construction.
- The Developer will be billed quarterly for inspection services. If there are any changes in the work schedule, it is the responsibility of the Contractor to notify the inspector to avoid unnecessary inspection costs. If no notification is given in regards to the cancellation of work, the Developer will be charged for two hours of show up time.
- All catch basins and storm sewer manholes shall conform to Summit County Engineer Standards. All catch basins having a pipe inlet and outlet shall have a sump, as detailed in the standard drawings. For the catch basins, two forty-five (45) degree four (4) inch bend or a tee out of the back shall be installed on the curb side structure for the connection of underdrains. Adjustment of the catch basin casting to grade shall be by the use of cast-in-place concrete, precast concrete adjusting collars or new solid clay or shale brick per ASTM C-32.
- All storm sewers constructed within the right-of-way limits shall conform with ODOT item 603. Conduit may be concrete or polyethylene pipe. Reinforced concrete pipe with bituminous joints shall meet the pipe requirements of ASTM C-76, Class III minimum per Section 706.02 as specified in the ODOT Construction and Material Specifications unless otherwise noted on the plans. Plastic pipe shall be smooth lined corrugated polyethylene pipe per ODOT item 707.33.
- The contractor shall maintain positive drainage at all times and shall backfill and grade excavated areas so as to eliminate ponding on the site.
- No asphaltic pavement course and/or concrete curbing shall be laid on frozen pavement, base or subbase.
- A road-opening permit from the County Township will be required on all subdivisions before access is granted for construction purposes from the public roadway. There will be no exceptions granted. We will not inspect any work that is done without a road-opening permit being available on the construction site.
- All monument boxes shall be ODOT MC-1 adjustable boxes.
- The contractor shall maintain local traffic at all times.
- All lawn areas removed or disturbed shall be replaced by seeding and mulching, including topsoil where needed, in accordance with item 659 of ODOT specifications, and shall be reseeded and mulched, when requested. If satisfactory re-establishment of the lawn does not occur.
- Any defects in the construction including material or workmanship shall be replaced or corrected by removal and replacement or other approved method prior to acceptance by the County of Summit engineer.
- All road surfaces, easements or right-of-ways disturbed by construction of any part of this improvement are to be restored completely to the before construction condition or better when ordered by the County of Summit Engineer.
- Whenever unstable soil conditions are encountered that are not indicated on the plans, the work shall be discontinued until the County of Summit Engineer approves the method and material to be incorporated into the work.
- All disturbed signs, guardrail, mail and/or paper boxes, drives and drive culverts shall be repaired and/or replaced, as directed by the County of Summit Engineer.
- All disturbed and/or damaged storm sewer pipes, storm sewer appurtenances, pavements, berms and ditches shall be repaired and/or replaced, as directed by the County of Summit Engineer.
- All filled areas, excluding trenches, within the right-of-way areas shall be compacted in accordance with ODOT item 203. In addition for any fill in excess of two (2) feet, nuclear compaction tests shall be performed by an approved testing company in accordance with ODOT item 203. The requirement for fill underneath proposed pavement is 98% of the maximum laboratory dry density for cohesive soils + 2% of the optimum moisture content. These tests shall be approved by the County of Summit Engineer before any pavement construction commences.
- A pre-construction meeting shall be scheduled with the County of Summit Engineer prior to any construction activities. Call (330)643-2850.
- The developer's engineer certifies that all design data and calculations pertaining to these improvement plans, where applicable, are correct and do conform to the current design criteria.
- The final lot grades should be +/- one foot of the grades/elevations listed on Sheet 2 of the Grading Plan.
- All disturbed and/or damaged storm sewer pipes, storm sewer appurtenances, pavements, berms and ditches shall be repaired and/or replaced, as directed by the County of Summit Engineer.
- All storm sewers must be flushed and have color television inspection in accordance with the County of Summit specifications prior to the release of the Performance Bond. If the installation fails to meet the requirement of these tests and inspections, the contractor/developer shall repair or replace the defects and retest the installation.
- Whenever Summit Co. Standards are in conflict with Cleveland Division of Water Standards, the more restrictive shall apply.

OWNER/DEVELOPER:  
**JAMES CHARBONNEAU**  
 7315 BOYDEN ROAD  
 SAGAMORE HILLS, OHIO

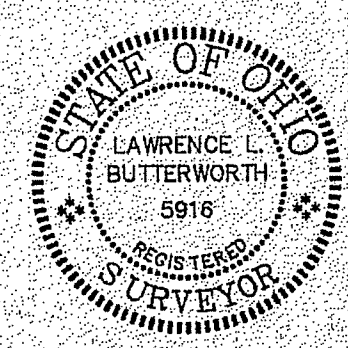
*James Charbonneau*  
**JAMES CHARBONNEAU** DATE

APPROVED BY  
*Gene Esser* 7/1/2000  
**GENE ESSER, SUMMIT COUNTY ENGINEER** DATE

WE DO HEREBY CERTIFY THAT ALL DESIGN DATA AND CALCULATIONS PRESENTED TO THE COUNTY ENGINEER AND/OR THE DEPARTMENT OF ENVIRONMENTAL SERVICES, WHERE APPLICABLE, ARE CORRECT AND DO CONFORM TO THE DESIGN CRITERIA CURRENTLY ACCEPTABLE.



*John Volosen* July 19/2000  
**JOHN VOLOSEN, P.E.**



*Lawrence L. Butterworth* 7-19-2000  
**LAWRENCE L. BUTTERWORTH, P.S.**

**NORTH HILLS WATER DISTRICT  
 ADDITIONAL WATER WORK NOTES**

**GENERAL**  
 ALL WATER WORK SHALL BE IN ACCORDANCE WITH THE STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE CITY OF CLEVELAND, DEPARTMENT OF PUBLIC UTILITIES, DIVISION OF WATER AND HEAT, 1201 LAKESIDE AVENUE, CLEVELAND, OHIO 44113, AND THE NORTH HILLS WATER DISTRICT. ALL PERMITS AND FEES ASSOCIATED WITH THE VARIOUS WATER WORK ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**WATER MAINS**  
 ALL WATER MAIN TRENCHES UNDER EXISTING OR PROPOSED PAVEMENTS SHALL BE BACKFILLED AS PER THE PLAN DETAILS. ALL WATER MAIN PIPE SHALL BE ASA CLASS 52 CEMENT LINED DUCTILE IRON PIPE WITH A RUBBER RING GASKET, COMPRESSION TYPE JOINT UNLESS OTHERWISE NOTED. ALL WATER MAINS IN EASEMENTS SHALL BE POLYETHYLENE WRAPPED PER THE NORTH HILLS WATER DISTRICT REQUIREMENTS.

**HYDRANTS**  
 ALL HYDRANTS SHALL BE OF THE "BREAKAWAY" TYPE, KENNEDY X81A AS PER THE CITY OF CLEVELAND'S STANDARDS. HYDRANTS SHALL BE SUPPLIED WITH NATIONAL STANDARD THREADS, ONE (1) 1/2" STEAMER NOZZLE, TWO (2) 1" HOSE NOZZLES, PER THE NORTH HILLS WATER DISTRICT STANDARDS. A SIX (6) INCH HYDRANT ASSEMBLY SHALL INCLUDE THE TEE OR REDUCER AS APPLICABLE, VALVE, VALVE BOX, PIPE, AND A STANDARD 6" HYDRANT SET TO THE PROPER GRADE.

**INDEX OF SHEETS**

- TITLE SHEET
- STORM WATER POLLUTION PREVENTION PLAN, GRADING PLAN AND GENERAL PLAN
- SHEARER ROAD PLAN & PROFILE, STA. 0+0 TO 3+82.5
- DRAINAGE SWALE PLAN & PROFILE, STA. 0-19.31 TO STA. 5+30
- SHEARER ROAD X-SECTIONS, STA. 0+25 TO 2+25
- SHEARER ROAD X-SECTIONS, STA. 2+50 TO STA. 3+50
- DETAIL SHEET

**CLEVELAND DIVISION OF WATER NOTES FOR NEW WATER MAIN INSTALLATION**

- GENERAL**
- ALL WATER WORK REQUIRED, WHETHER SHOWN ON THE PLANS OR AS DIRECTED BY THE CLEVELAND DIVISION OF WATER, SHALL BE AT THE EXPENSE OF THE PROJECT.
  - THE INFORMATION SHOWN ON THE CLEVELAND DIVISION OF WATER'S SUMMARY OF WORK/CHARGE LETTER AND STRIP MAPS ARE TAKEN FROM EXISTING AVAILABLE RECORDS, AND THEIR ACCURACY IS NOT GUARANTEED.
  - CALL MR. RICHARD KACZ, SUPERVISOR OF THE INSPECTION AND ENFORCEMENT UNIT AT 216-664-2346 TO SCHEDULE A PRECONSTRUCTION MEETING. THE OPERATION OF ANY VALVE OR ALTERATION OF ANY PART OF THE WATER SYSTEM BY CONTRACTORS OR THEIR EMPLOYEES IS PROHIBITED WITHOUT THE SUPERVISION OF THE CLEVELAND DIVISION OF WATER INSPECTOR.
  - THE MUNICIPALITY SHALL REQUIRE THAT THE PROJECT'S PROFESSIONAL ENGINEER OBTAIN ACTUAL FIELD MEASUREMENTS OF THE MAIN DURING INSTALLATION AND SHALL FURNISH THE CUP INSPECTOR WITH RECORDED PRINTS IN A FORM ACCEPTABLE TO THE DIVISION OF WATER. THE CLEVELAND DIVISION OF WATER WILL REQUIRE THE DELIVERY AND ACCEPTANCE OF TWO COPIES OF RECORDED (AS BUILT) PRINTS BEFORE THE PRESSURE TEST AND CHLORINATION OF THE MAIN.
  - FOR THE PURPOSES OF COLONIZATION AND BACTERIOLOGICAL TESTING OF THE WATER MAINS THE CONTRACTOR SHALL PROVIDE AND INSTALL, AT EACH OF THE CHLORINATION PIT LOCATIONS SHOWN AND AT OTHER LOCATIONS DETERMINED BY THE DIVISION OF WATER, FLUSHING/SAMPLING TAPS OF SIZES TO BE DETERMINED BY THE DIVISION OF WATER. CHLORINATION PITS SHALL BE SIX (6) FOOT SQUARE MEETING OSHA STANDARDS.
  - A TWO YEAR WARRANTY, COMMENCING FROM THE DATE OF ACCEPTANCE OF THE FINAL CHLORINATION OF THE WATER MAIN INSTALLATION, SHALL BE PROVIDED BY THE BUILDER/DEVELOPER AND/OR CONTRACTOR FOR ALL WATER MAINS AND SERVICE CONNECTION WORK PERFORMED BY THE CONTRACTOR, INCLUDING REPAIRS, SHOULD ANY LEAKS OCCUR AND REPAIRS BE REQUIRED DUE TO DEFECTIVE MATERIAL OR POOR WORKMANSHIP.
  - USE BACKFILL MATERIAL AS SPECIFIED AND COMPACT SUFFICIENTLY IN THOSE AREAS WHERE EXISTING MAINS AND WATER SERVICE CONNECTIONS ARE EXPOSED. (SEE DIVISION OF WATER STANDARD DETAIL STD-002)
  - ALL WATER MAINS AND APPURTENANCES THEREOF SHALL CONFORM WITH THE LATEST MATERIAL SPECIFICATIONS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION AND STANDARD DETAILS OF THE CITY OF CLEVELAND, DIVISION OF WATER.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING WATER MAINS AND APPURTENANCES THEREOF WHEN CONDUCTING THE NEW WATER MAIN FOR THE HYDROSTATIC TEST. ALL REPAIRS TO DAMAGED EXISTING FACILITIES SHALL BE MADE BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE DIVISION OF WATER. REFER TO THE ALTERNATE TEST DETAIL STD-002 AS NEEDED.

10. ALL HYDROSTATIC PRESSURE TESTING SHALL BE DONE BY THE CONTRACTOR IN THE PRESENCE OF THE DIVISION OF WATER'S INSPECTOR. THE HYDROSTATIC TEST PRESSURE SHALL BE 75 PSI ABOVE THE STATIC PRESSURE PREVAILING AT THE SITE, BUT IN NO CASE LESS THAN 150 PSI. THE PRESSURE TEST SHALL BE FOR A DURATION OF TWO (2) HOURS WITH THE PRESSURE BEING MAINTAINED WITHIN 5 PSI OF THE REQUIRED TEST PRESSURE. SHOULD THE PRESSURE TEST FAIL THE CONTRACTOR SHALL FIND AND CORRECT THE DEFICIENCIES TO THE SATISFACTION OF THE DIVISION OF WATER AND REPEAT THE TWO (2) HOUR PRESSURE TEST.

**WATER MAINS**

11A. ALL PIPE, UNLESS OTHERWISE CALLED FOR, SHALL BE DUCTILE IRON MINIMUM CLASS 52, CEMENT LINED HAVING PUSH-ON JOINTS WITH RADIALLY COMPRESSED RUBBER RING GASKET.

11B. ALL FITTINGS, UNLESS OTHERWISE CALLED FOR, SHALL BE DUCTILE IRON CLASS 520 CEMENT LINED ALL FITTINGS AND PIPE CONNECTED TO FITTINGS SHALL BE RESTRAINED USING A "RETAINED" MECHANICAL JOINT IN ACCORDANCE WITH ANSI/AWWA C-100/A201 AND ANSI/AWWA C-114/A201 OR "COMPACT" FITTINGS IN ACCORDANCE WITH ANSI/AWWA C-105/A203, EXCEPT FOR ANCHOR TEES, REDUCERS OR OTHER SPECIAL CIRCUMSTANCES WHEN DIRECTED BY CLEVELAND DIVISION OF WATER. ALL FITTINGS ARE TO HAVE BELL ENDS.

11C. ALL BOLTS AND NUTS ON ALL "RETAINED" MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING FOLLOWED BY AN ENCASMENT OF POLYETHYLENE WRAPPING IN ACCORDANCE WITH ANSI/AWWA C-105/A203-86, CLASS "C", METHOD "B".

11D. WHERE SHOWN ON THE PLANS OR WHEN OTHERWISE CALLED FOR, PIPE AND FITTINGS SHALL HAVE AN APPROVED "TYPE I" OR "TYPE II" BOLTLESS RESTRAINED PUSH-ON JOINTS TO THE LIMITS SHOWN ON THE DRAWINGS.

**HYDRANTS**

12. IN ALL HYDRANT INSTALLATIONS THE CONTRACTOR SHALL FACE ALL HYDRANTS 4" STEAMER NOZZLE TOWARD THE PAVEMENT PRIOR TO TESTING AND CHLORINATION OF WATER MAINS. CONTRACTOR SHALL CONSULT WITH THE LOCAL MUNICIPALITY'S ENGINEERING OR SERVICE DEPARTMENT TO OBTAIN HYDRANT MODEL AND NOZZLE THREAD REQUIREMENTS IF NOT INDICATED ON THE APPROVED PLANS.

**CONNECTIONS**

13. THE CONTRACTOR SHALL ARRANGE FOR A PERMIT WITH THE DIVISION OF WATER FOR ALL SIZE WATER SERVICE CONNECTIONS. THE CONTRACTOR SHALL PAY THE DIVISION OF WATER BEFORE THE WORK IS PERFORMED. THE AMOUNT OF CHARGES CAN BE OBTAINED FROM THE PERMITS AND SALES SECTION, DIVISION OF WATER AT 216-664-2444 EXT. 5203.

14. ALL WATER MAIN CURB VALVE BOXES & METER VAULTS WILL BE INSTALL IN GRASS AREAS WHEN POSSIBLE.

DATE: 5-21-99 BY: RSK

APPROVED BY THE ENGINEER FOR THE NORTH HILLS WATER DISTRICT THIS  
 SEPTEMBER, 2000

ENGINEER FOR THE DISTRICT

PLANS PREPARED BY:  
 GRESSING & BUTTERWORTH, SURVEYORS  
 990 NORTH MAIN STREET  
 AKRON, OHIO 44310

SHEARER ROAD EXTENSION

TITLE SHEET

