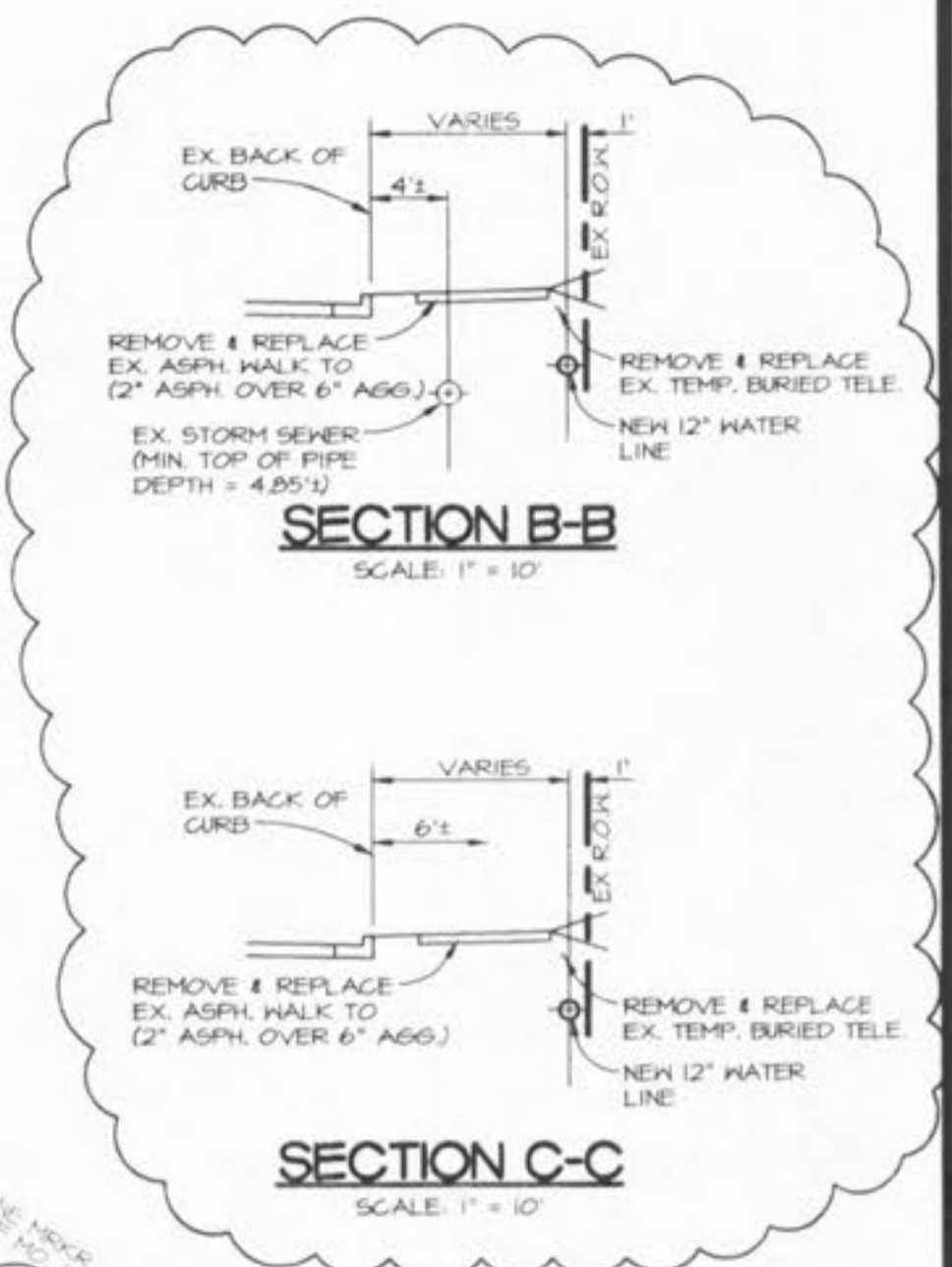
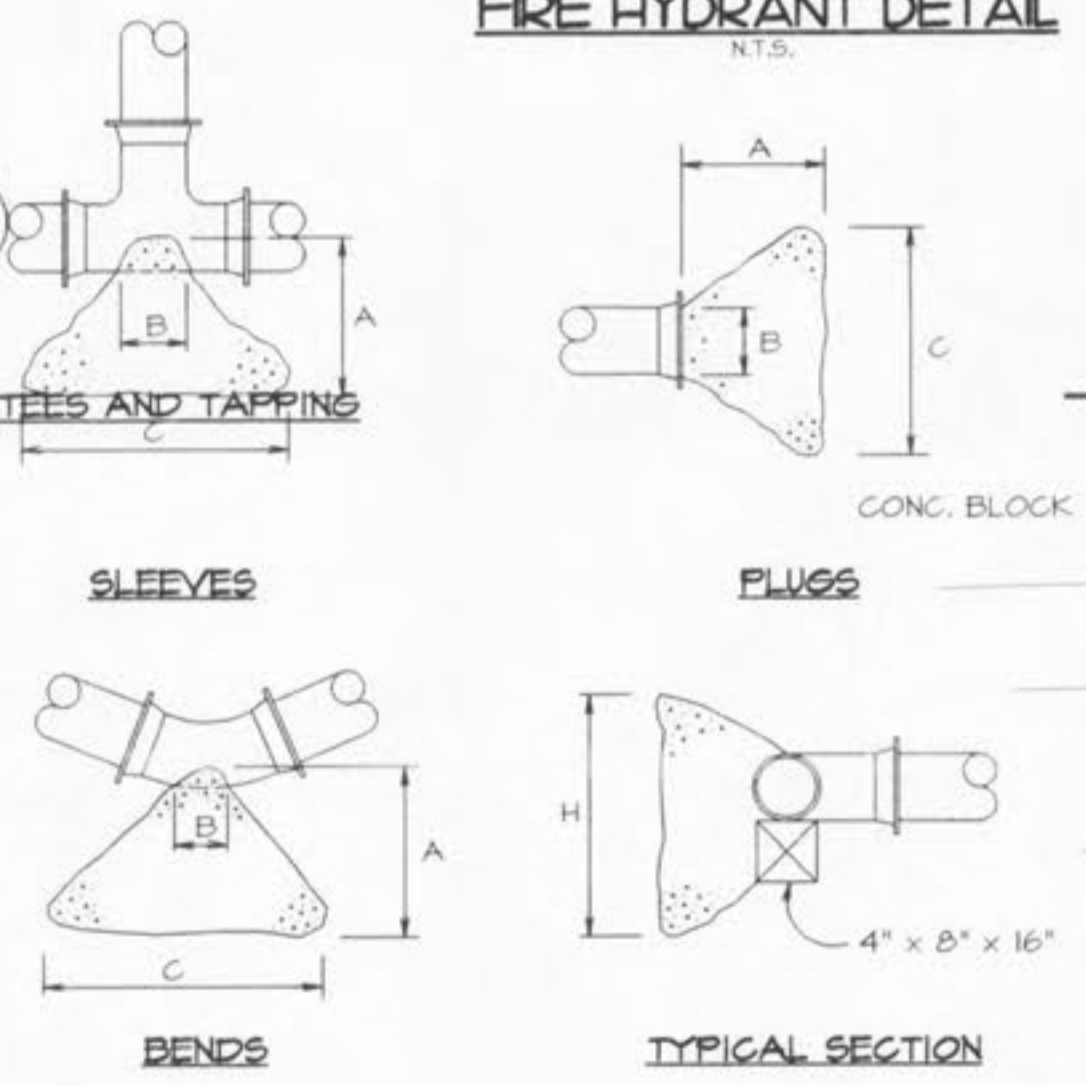
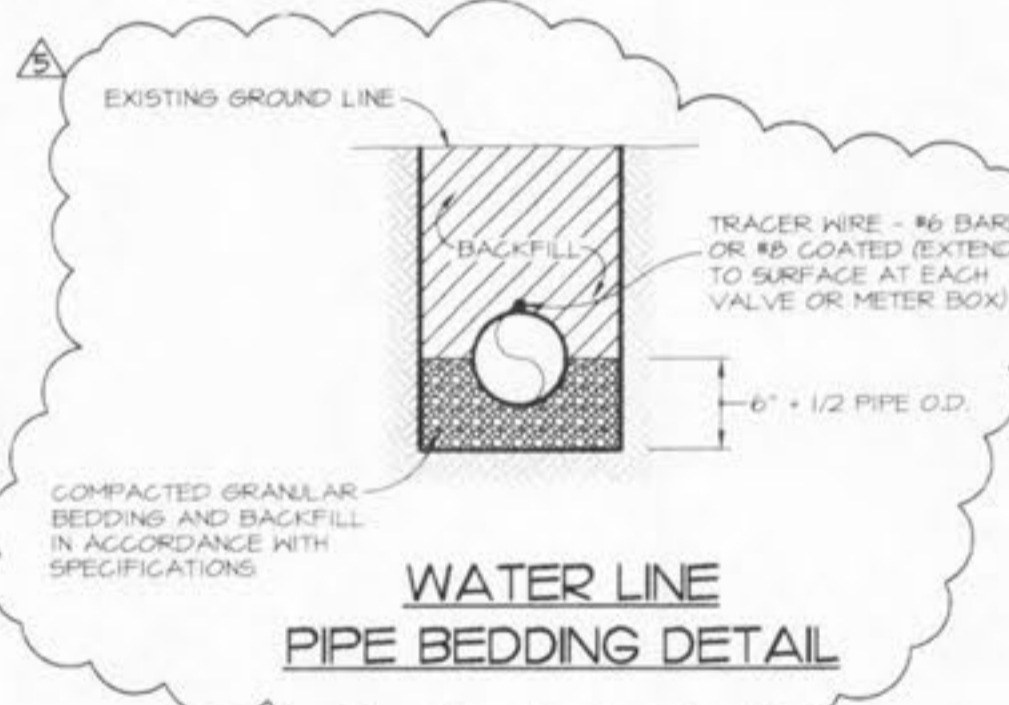
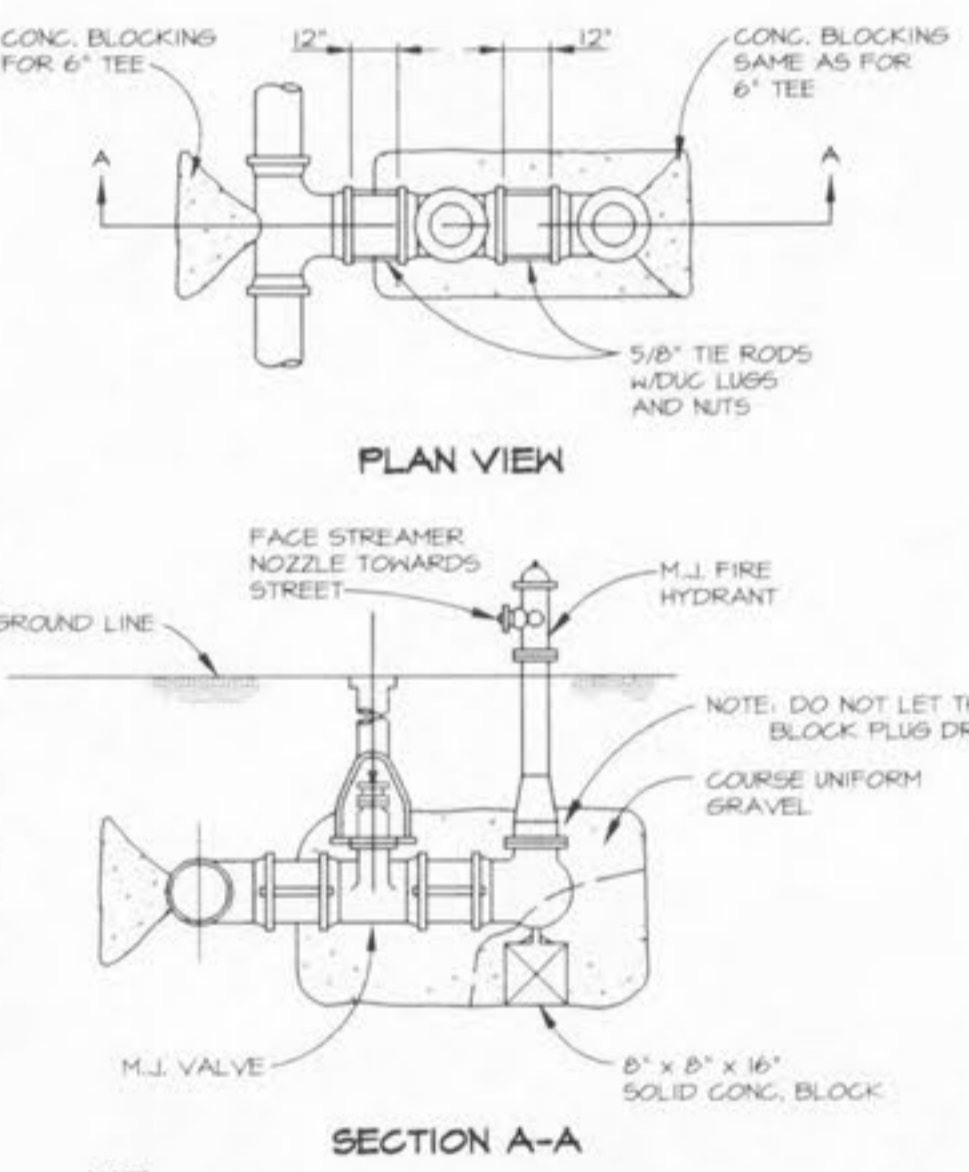
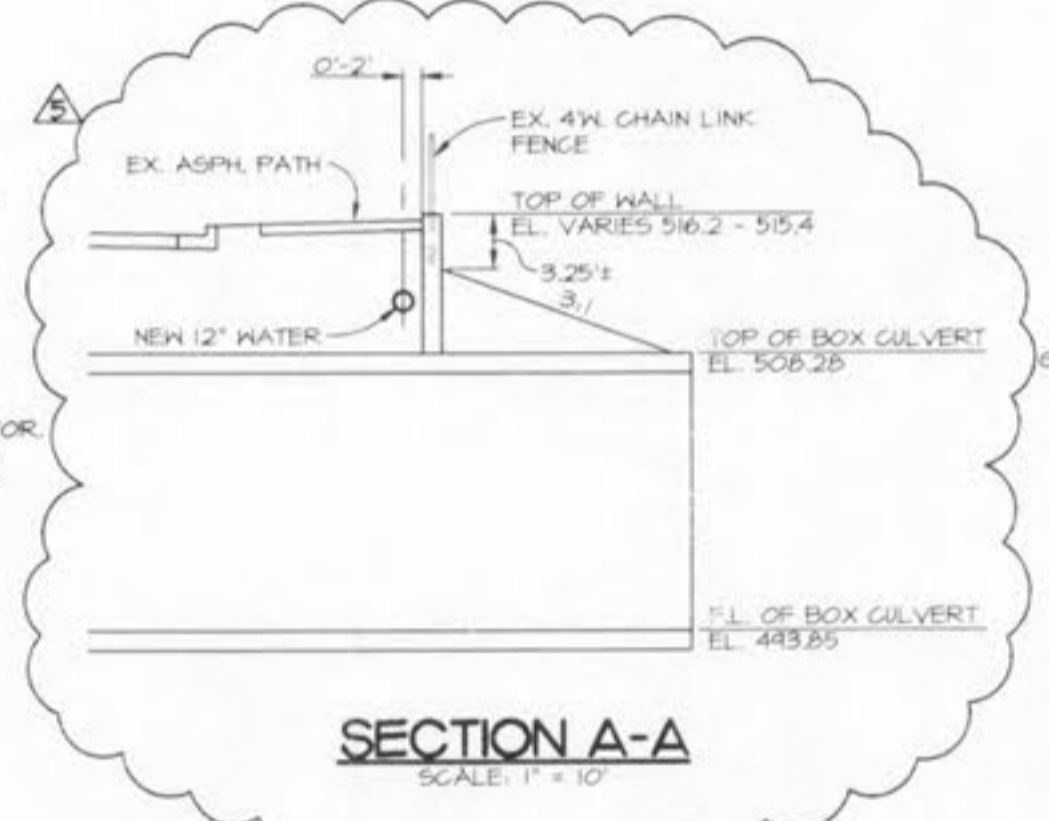


B.M. STATE HIGHWAY JOB NO. 6-U-K-562  
 PROJECT NO. RS-457 (SHEET 5)  
 ON SOUTHEAST CORNER OF HEADWALL  
 HIGHWAY ROUTE "K" AT STATION 34+35.62' LEFT.  
 ELEV. = 510.64



- SITE UTILITY NOTES**
1. LOCATION OF SITE UTILITIES SHALL BE VERIFIED WITH PROPER UTILITY COMPANY PROVIDING SERVICE.
  2. UTILITY CONTRACTOR SHALL PROVIDE 2' x 2' x 8" THICK CONCRETE APRON AT ALL SEWERLINE CLEANOUTS OUTSIDE OF BUILDING.
  3. UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE ON PIPES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
  4. ELECTRICAL SERVICE TO PAD MOUNTED TRANSFORMER SHALL BE RUN UNDERGROUND, FROM ROAD RIGHT-OF-WAY TO TRANSFORMER LOCATION. ASSOCIATED COST BY UTILITY CONTRACTOR.
  5. UTILITY CONTRACTOR SHALL FURNISH (2) - 3" TELEPHONE CONDUITS AS SHOWN ON PLAN, VERIFY LOCATION OF TIE IN AT TELEPHONE COMPANIES SERVICE LINE. PROVIDE NYLON PULL CORD INSIDE CONDUIT.

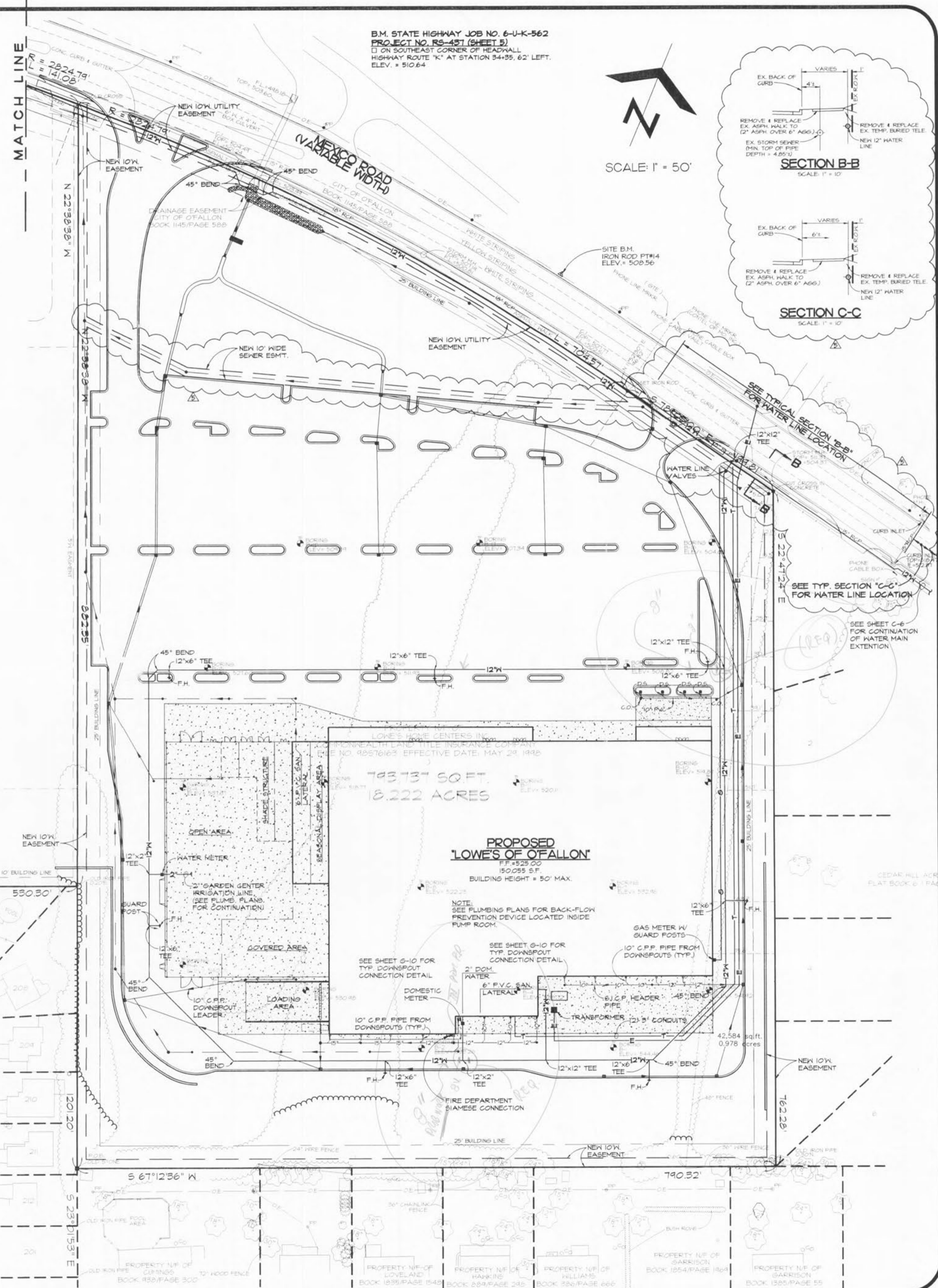


- ON-SITE WATERLINE NOTES**
1. FOR GENERAL SITE WORK NOTES, SEE DRAWING C-5.
  2. ALL PIPE 4" AND LARGER SHALL BE C900, CLASS 200, P.V.C. WATER PIPE WITH 200 P.S.I. PRESSURE RATING. WATER LINE PIPE SHALL CONFORM TO ASTM D2241 AND SDR 21.
  3. FITTINGS 4" AND LARGER SHALL BE CAST IRON MECHANICAL JOINT, CONFORMING TO ANSI AND AWWA STANDARD SPECIFICATIONS.
  4. PIPE AND FITTINGS 3" AND SMALLER TO BE EITHER P.V.C. SCH. 40 W/ SOLVENT WELD JOINTS OR SOFT K-COPPER.
  5. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 3'-6" ABOVE TOP OF PIPE.
  6. THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER LINE IS TEN FEET (10'). THE MINIMUM VERTICAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER LINE IS EIGHTEEN INCHES (18").
  7. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
  8. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
  9. ALL SPRINKLER, DOMESTIC AND SANITARY LEADS TO BUILDING SHALL END AS SHOWN ON PLAN AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT END (FOR OTHERS TO REMOVE AND EXTEND AS NECESSARY).
  10. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE A MAXIMUM OF 3'-0" FROM HYDRANT.
  11. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED AND DISINFECTED BEFORE ACCEPTANCE. SEE SITE WORK SPECIFICATIONS.
  12. ALL GATE VALVES SHALL BE PROVIDED WITH A ROADWAY SCREEN TYPE CAST IRON VALVE BOX. BOXES FOR VALVES 3" AND SMALLER SHALL HAVE ARCH BASE.
  13. VALVES 3/4" THROUGH 3" SHALL BE BRONZE HEDSE TYPE GATE VALVE. VALVES SHALL HAVE NON-RISING STEM WITH SOLID TEE HEAD OPERATING NUT.
  14. VALVES 4" AND LARGER SHALL BE CAST IRON WITH PARALLEL DOUBLE DISC GATE VALVE. VALVES SHALL HAVE MECHANICAL JOINT ENDS AND NON-RISING STEM WITH SQUARE OPERATING NUT.
  15. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
  16. SEE SITE SPECIFICATIONS "SITE UTILITIES" FOR BACKFILLING AND COMPACTION REQUIREMENTS.
  17. UTILITY CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.
  18. ALL WORK OF THIS PLAN SHALL BE DONE IN STRICT ACCORDANCE WITH SITE WORK SPECIFICATIONS.
  19. REFER TO SHEETS FP-1 & FP-2 FOR LOCATION AND DETAIL OF FIRE LINE LEAD IN.

**HORIZONTAL BENDS**

| PIPE DIA. | TEE, PLUG TAPPING SLEEVE |    |    |    | 90° BEND |    | 45° BEND |    | 22 1/2° BEND |    | 11 1/2° BEND |    |
|-----------|--------------------------|----|----|----|----------|----|----------|----|--------------|----|--------------|----|
|           | A                        | B  | C  | H  | C        | H  | C        | H  | C            | H  | C            | H  |
| 4"        | 14                       | 4  | 24 | 12 | 26       | 15 | 18       | 12 | 12           | 12 | 12           | 12 |
| 6"        | 16                       | 6  | 30 | 18 | 36       | 24 | 30       | 18 | 24           | 12 | 12           | 12 |
| 8"        | 20                       | 8  | 36 | 30 | 42       | 36 | 36       | 24 | 24           | 18 | 18           | 12 |
| 10"       | 24                       | 10 | 40 | 36 | 66       | 36 | 36       | 28 | 24           | 18 | 18           | 18 |
| 12"       | 24                       | 12 | 60 | 36 | 62       | 42 | 52       | 36 | 40           | 24 | 28           | 18 |

THE SEAL OF STANLEY F. VISNOVSKIE ON THIS DRAWING APPLIES ONLY TO THE CIVIL/SITE ENGINEERING SHOWN. IT DOES NOT APPLY, NOR IS ANY RESPONSIBILITY TAKEN FOR GEOTECHNICAL (INCLUDING BUT NOT LIMITED TO SOILS STABILITY), STRUCTURAL, HVAC, PLUMBING, ELECTRICAL, FIRE PROTECTION, TRAFFIC ENGINEERING, SURVEYING (BOUNDARY AND TOPOGRAPHIC), OR ARCHITECTURAL (BUILDING OR LANDSCAPE).



**Heideman & Associates, Inc.**  
 Consulting Civil Surveying Electrical Mechanical Engineers  
 13545 Barrett Parkway Drive  
 Suite 200  
 St. Louis, Missouri 63021  
 Phone: 314-822-2217  
 Fax: 314-822-7858

Utility Plan  
**LOWE'S OF OFFALLON**  
 O'Fallon, Missouri

**REVISIONS**

| DATE     | DESCRIPTION       |
|----------|-------------------|
| 12/23/98 | REVISED           |
| 01/07/99 | REVISED           |
| 3/1/99   | REVISED RET. WALL |
| 4/6/99   | REV. ENTRANCES    |
| 5/28/99  | COMPLETED         |

DATE: 11-10-98  
 CHECKED BY: [Signature]  
 SHEET NO.: C-5  
 JOB NO.: 98293