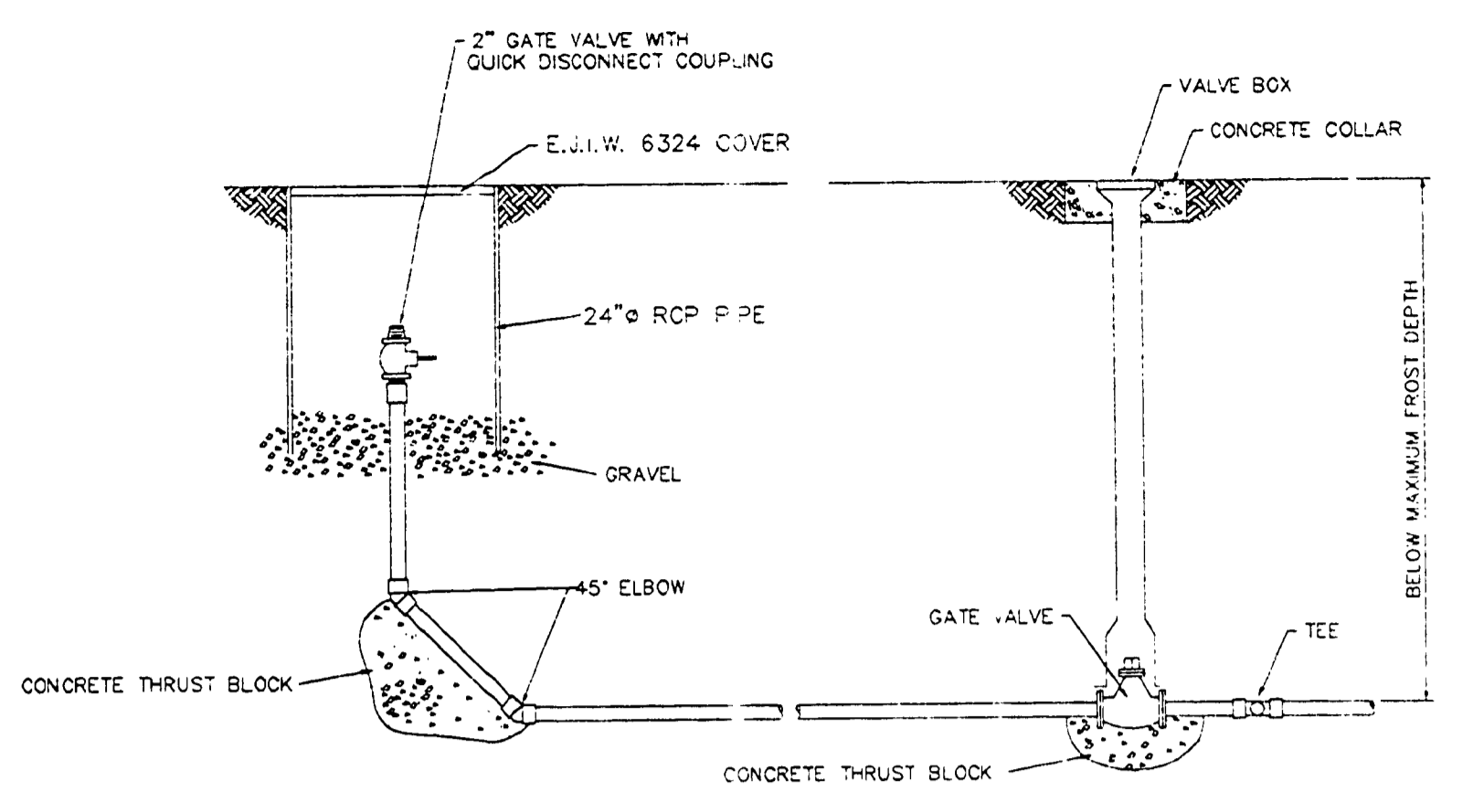


NOTE:  
 1. PUMP TANK CAPACITY SHALL BE 475 GALLONS.  
 2. PUMPS ARE TO BE 240 VOLT.  
 3. ACCESSWAY SHALL BE STANDARD 4' LENGTH.

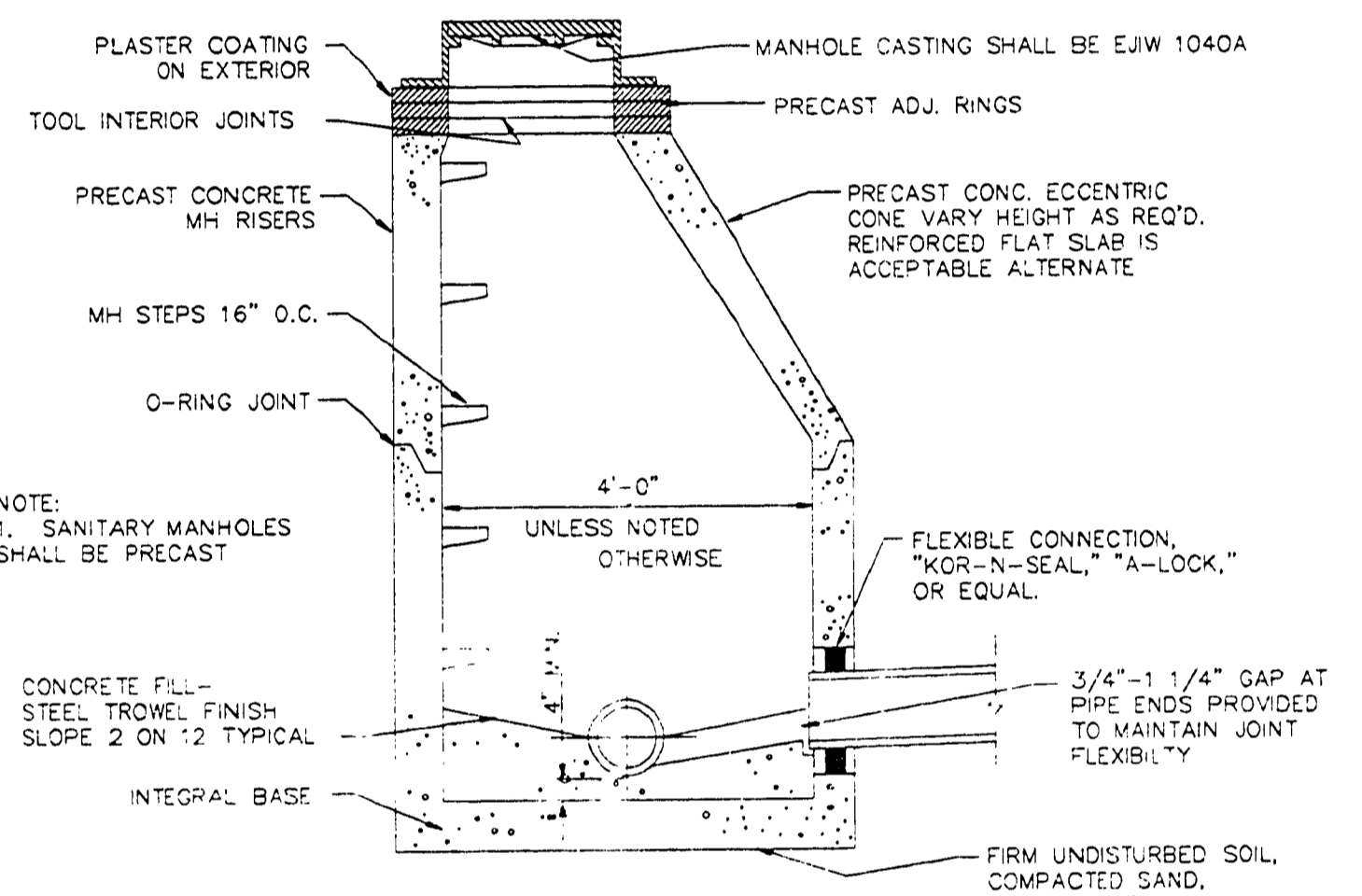
PUMP STATION INSTALLATION DETAIL



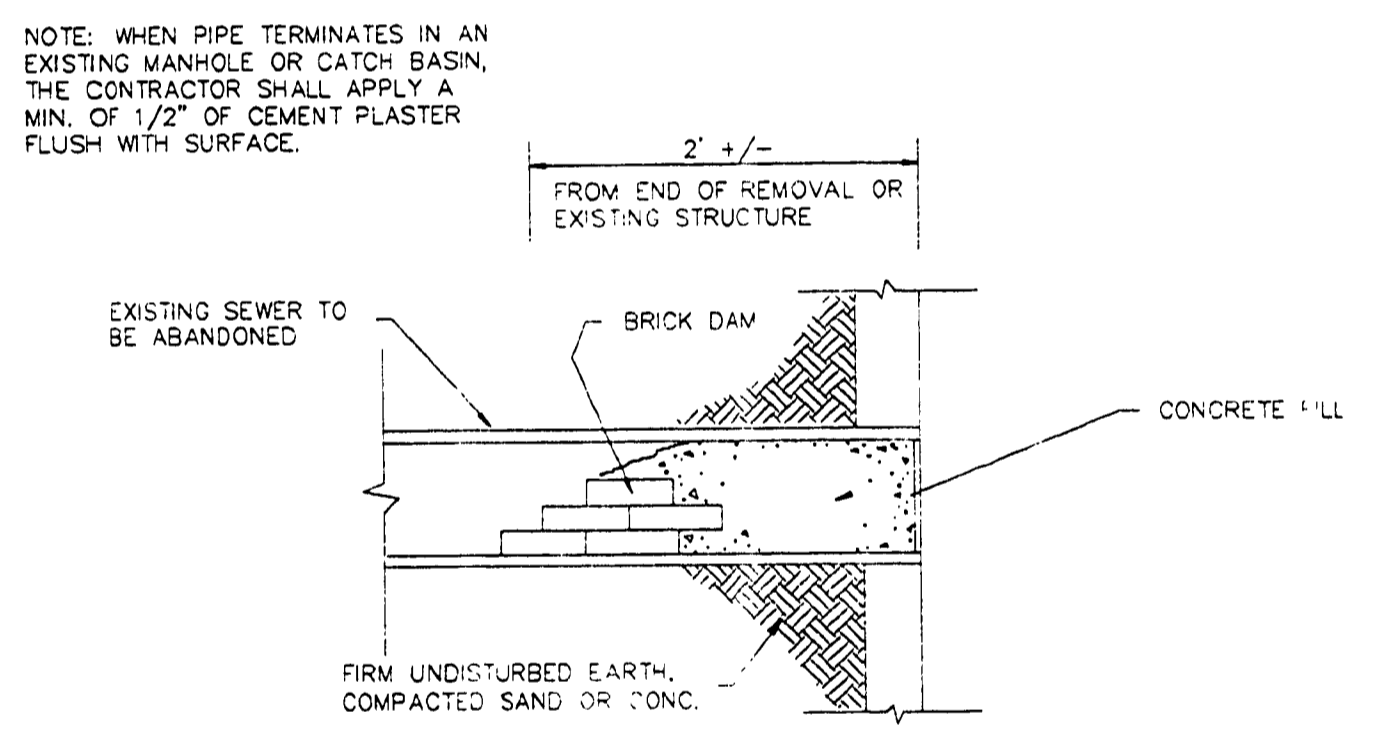
FLUSHING CONNECTION DETAIL

GENERAL DEMOLITION NOTES

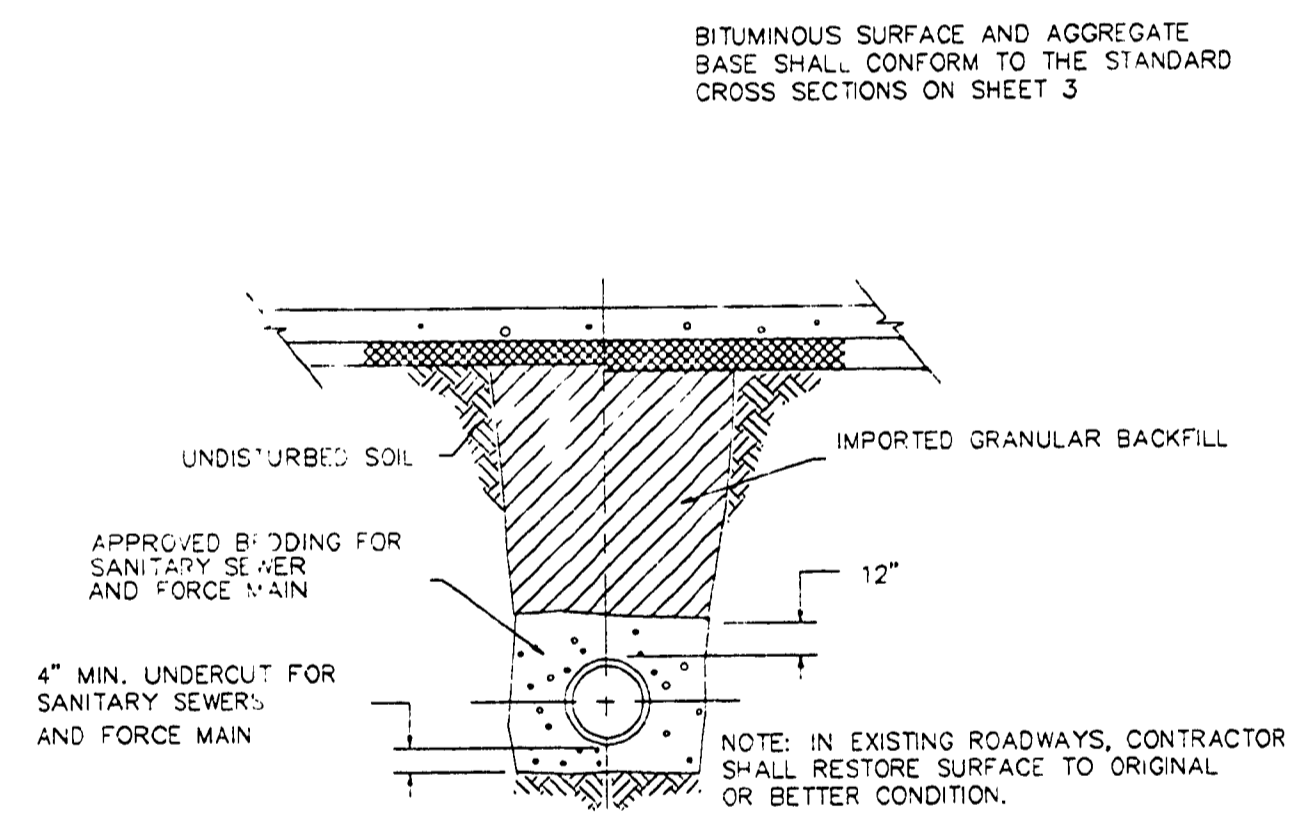
1. ALL FORCE MAIN SHALL BE POLYETHYLENE, GRADE PE3408 SDR 11.0. PIPE SHALL BE DRISCOPEIRE 8600, NPAK PE3408 OR EQUAL.
2. JOINTS AT VALVES SHALL BE MADE USING P.E. FLANGE PIECES AND STEEL SUP ON FLANGE PIECES BOLTED TO THE VALVE.
3. ALL DISTURBED AREAS SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING PRIOR TO CONSTRUCTION. TOPSOIL, SEEDING AND MULCHING SHALL BE IN ACCORDANCE WITH SECTION 02900 OF THE SPECIFICATIONS. ALL AREAS SHALL BE SEEDED WITH MOIST CLASS "A" SEED MIXTURE.
4. THE CONTRACTOR SHALL PROTECT AND/OR SUPPORT EXISTING UTILITY POLES ADJACENT TO FORCE MAIN IN A MANNER ACCEPTABLE TO THE UTILITY OWNER.
5. USE TWO BENCH MARKS FOR VERIFICATIONS OF GRADE FOR ALL CONSTRUCTION.
6. UNLESS SPECIFICALLY NOTED FOR REMOVAL ON THE CONSTRUCTION PLANS, ALL SIDEWALKS, DRIVES, CULVERTS, GUARDRAILS, AND ABOVE GROUND UTILITIES SHALL BE PROTECTED. ALL SUCH UTILITIES DAMAGED OR DESTROYED DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED INCIDENTAL TO CONSTRUCTION.
7. THE CONTRACTOR SHALL REMOVE ONLY THOSE TREES OR BUSHES SPECIFICALLY DESIGNATED ON THE PLANS TO BE REMOVED. ALL OTHER TREES OR BUSHES SHALL BE PROTECTED.
8. ALL GRADES AND ALIGNMENT OF THE EXISTING SEWERS ARE BASED ON THE ASSUMPTION THAT THE SEWER IS ON A STRAIGHT GRADE AND ALIGNMENT BETWEEN MANHOLES AND IS NOT TO BE CONSTRUCTED AS TO BE TRUE GRADE AND ALIGNMENT. THE GRADES AND ALIGNMENT HAVE BEEN SHOWN ONLY FOR THE CONTRACTOR'S REFERENCE.
9. EXISTING WATER MAINS, GAS MAINS AND UNDERGROUND TELEPHONE, ELECTRIC AND CABLE TELEVISION CONDUITS AND/OR LINES MAY BE SHOWN ONLY IN THE PLAN VIEW OF THE CONSTRUCTION DRAWINGS. THE EXACT DEPTH AND LOCATIONS OF THESE UTILITIES IS NOT KNOWN AND THEREFORE, NO ATTEMPT HAS BEEN MADE TO SHOW SUCH UTILITIES IN THE PLAN OR PROFILE OF THE CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THESE UTILITIES WHICH ARE NOT WITHIN THE SPACE OCCUPIED BY COMPLETED PIPES OR STRUCTURES THAT ARE PART OF THIS CONTRACT. DURING CONSTRUCTION, IF DAMAGED OR DESTROYED DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COSTS TO REPAIR OR REPLACE THEM AT NO ADDITIONAL EXPENSE TO THE OWNER.
10. CERTAIN ITEMS NOTED "REMOVE AND REPLACE" ON THE CONSTRUCTION DRAWINGS ARE NOTED AS SUCH BASED ON THE ENGINEER'S ASSUMPTION THAT SUCH ITEMS WILL BE WITHIN THE TRENCH INFLUENCE AND CANNOT BE PROTECTED. SHOULD THE CONTRACTOR DEEM IT IN HIS INTEREST TO PROTECT SUCH ITEMS THEREBY NEGATING NEED FOR REMOVAL AND REPLACEMENT, NO ADDITIONAL PAYMENT WILL BE MADE FOR SUCH PROTECTION AND POTENTIAL LOSS OF PROFIT FROM DELETION OF SUCH ITEMS.
11. THE OWNER WILL PROVIDE THE WATER REQUIRED FOR THE TESTING OF THE NEW FORCE MAIN FOR ALL PASSING TESTS. CONTRACTOR WILL BE RESPONSIBLE FOR PAYMENT OF WATER REQUIRED FOR ANY ADDITIONAL TESTS SHOULD THE FIRST TESTS FAIL OR NOT MEET THE SPECIFICATION REQUIREMENTS.
12. THE CONTRACTOR SHALL INCLUDE THE COST OF 10 L.F. OF 6" SANITARY SERVICE, NECESSARY BENDS AND FERNCO COUPLINGS AND REDUCERS IN THE COST OF INSTALLING EACH GRINDER PUMP STATION. PAYMENT FOR INSTALLATION OF ADDITIONAL SANITARY SERVICE LEAD SHALL BE PER THE 6" SANITARY SERVICE LEAD ALLOWANCE ITEM AND SHALL BE APPROVED BY THE PROJECT MANAGER PRIOR TO CONSTRUCTION.



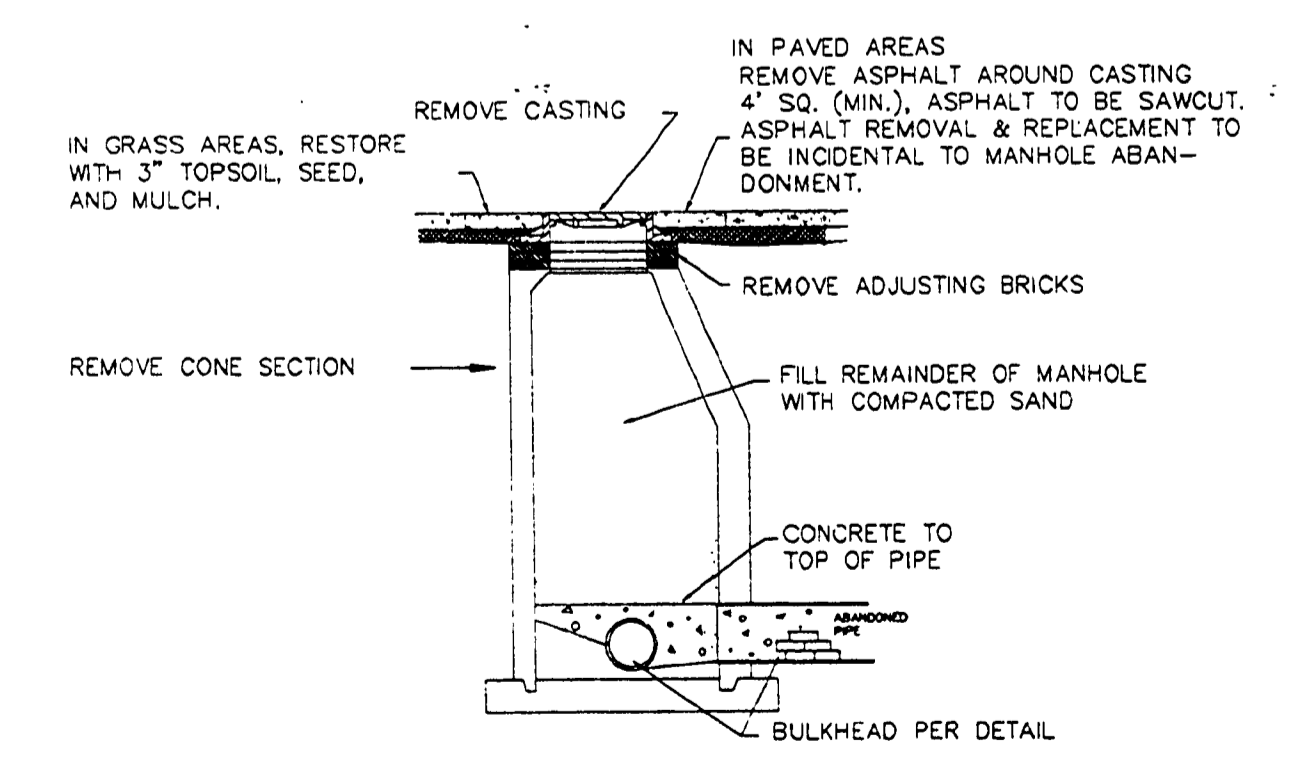
STANDARD SANITARY MANHOLE



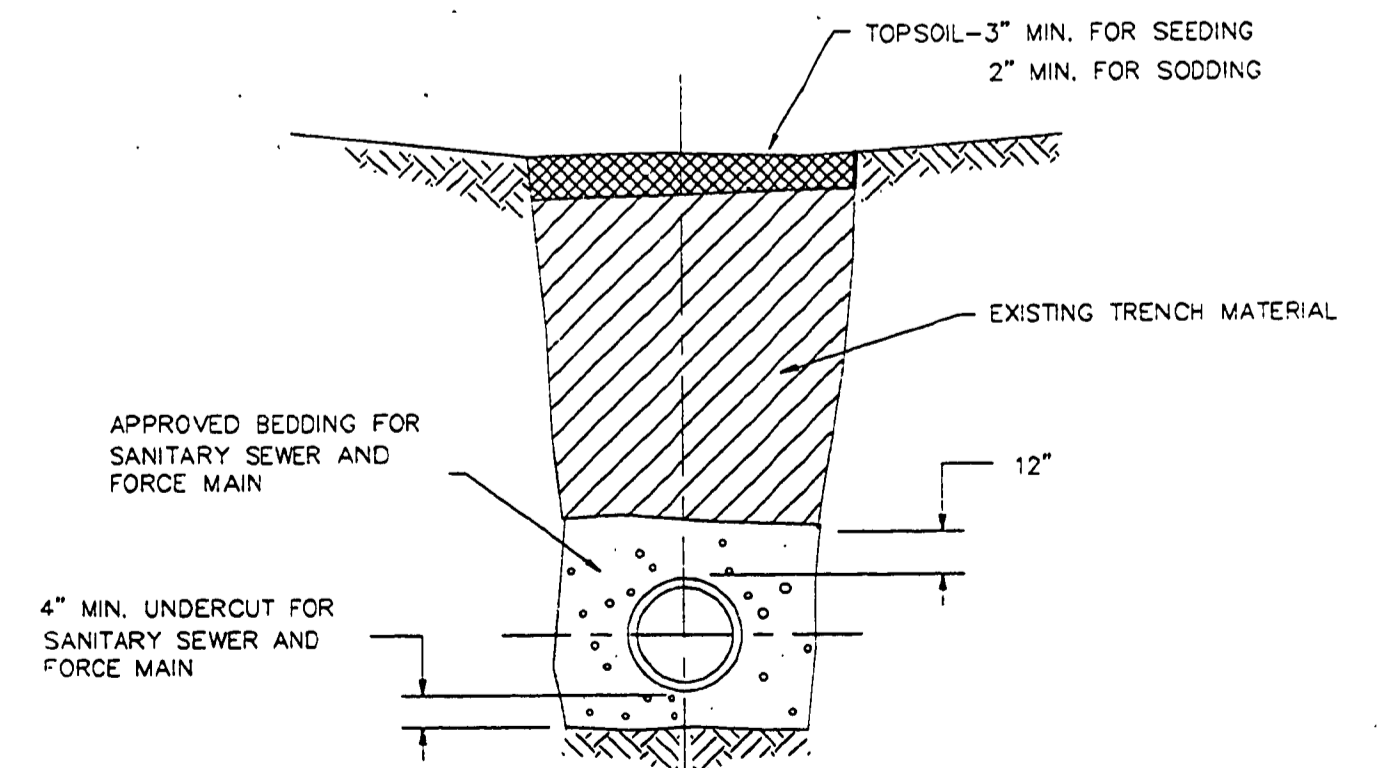
BULKHEAD DETAIL FOR ABANDONED SEWERS



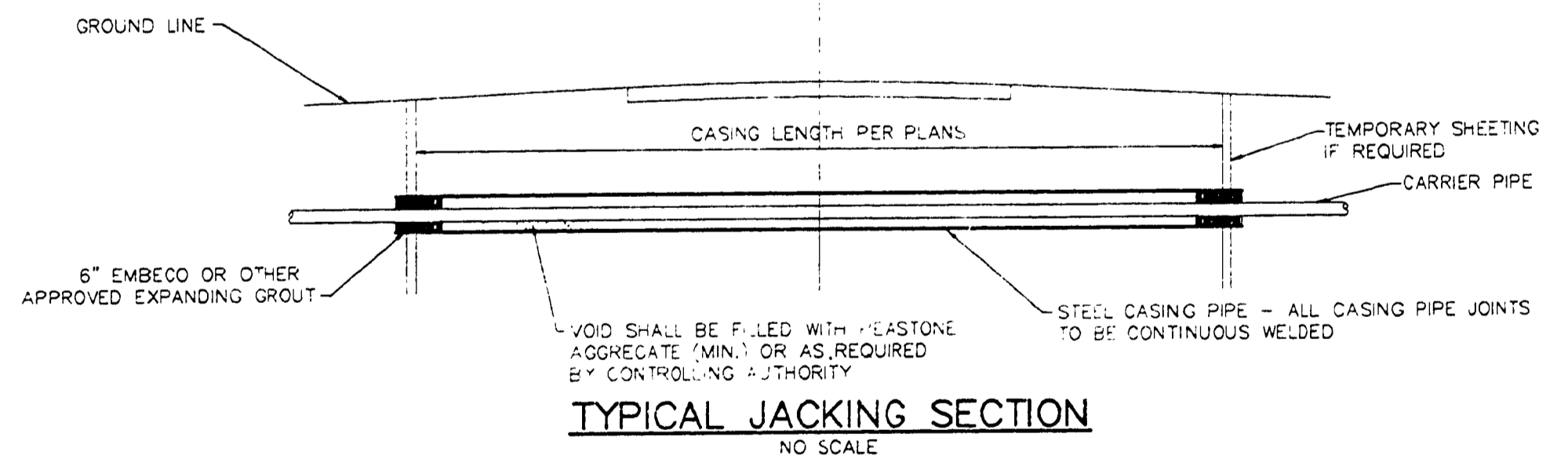
TRENCH BACKFILL UNDER ROADWAY



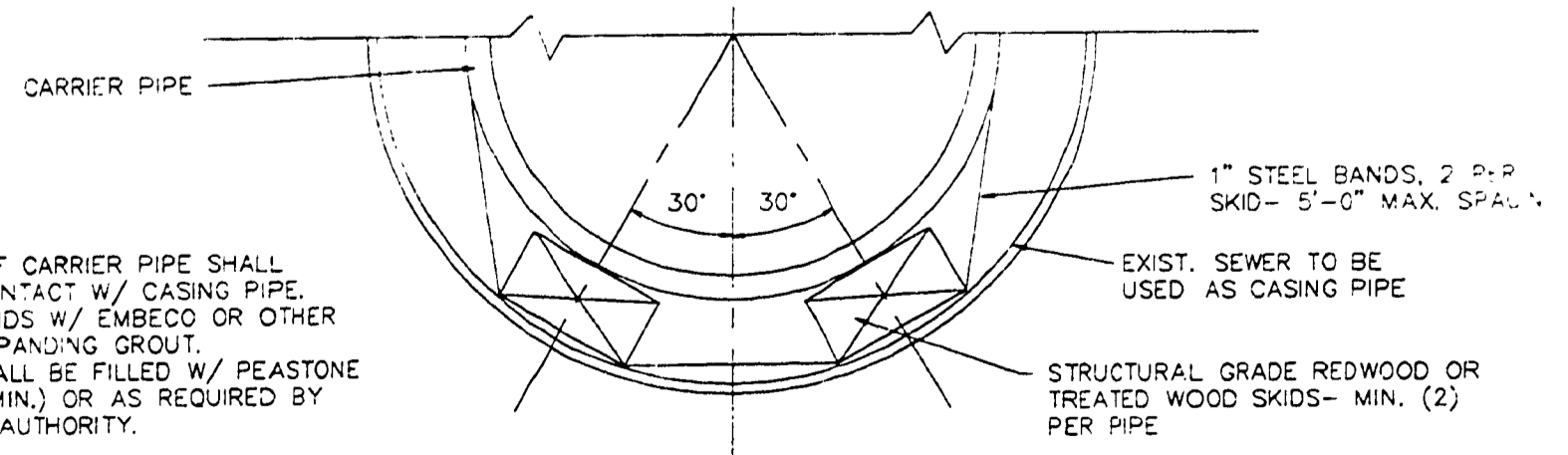
MANHOLE ABANDONMENT DETAIL



NORMAL TRENCH BACKFILL



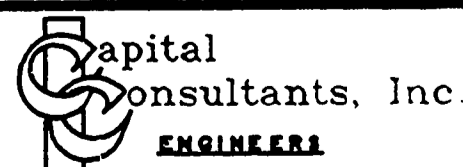
TYPICAL JACKING SECTION



SKID DETAIL FOR SANITARY SEWER

NOTES:  
 1. BELL ENDS OF CARRIER PIPE SHALL NOT BE IN CONTACT W/ CASING PIPE.  
 2. BULKHEAD ENDS W/ EMBECCO OR OTHER APPROVED EXPANDING GROUT.  
 3. THE VOID SHALL BE FILLED W/ PEASTONE AGGREGATE (MIN.) OR AS REQUIRED BY CONTROLLING AUTHORITY.

DRN BY:	GJF
DESIGN BY:	GJF
CHECK BY:	GDA
APP'D BY:	



STATE OF MICHIGAN  
 DEPARTMENT OF MANAGEMENT AND BUDGET  
 Office of Facilities

QUALITY OF LIFE RECREATION BOND  
 MICHIGAN DEPARTMENT OF NATURAL RESOURCES  
 PARKS DIVISION - STATE ACCT. NO. 607-75-2450-400

ALGONAC STATE PARK  
 STANDARD DETAILS AND GENERAL NOTES

SCALE: AS SHOWN  
 PROJ. NO.: 90103  
 SHEET 4 OF 17