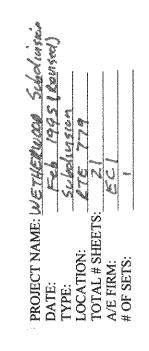
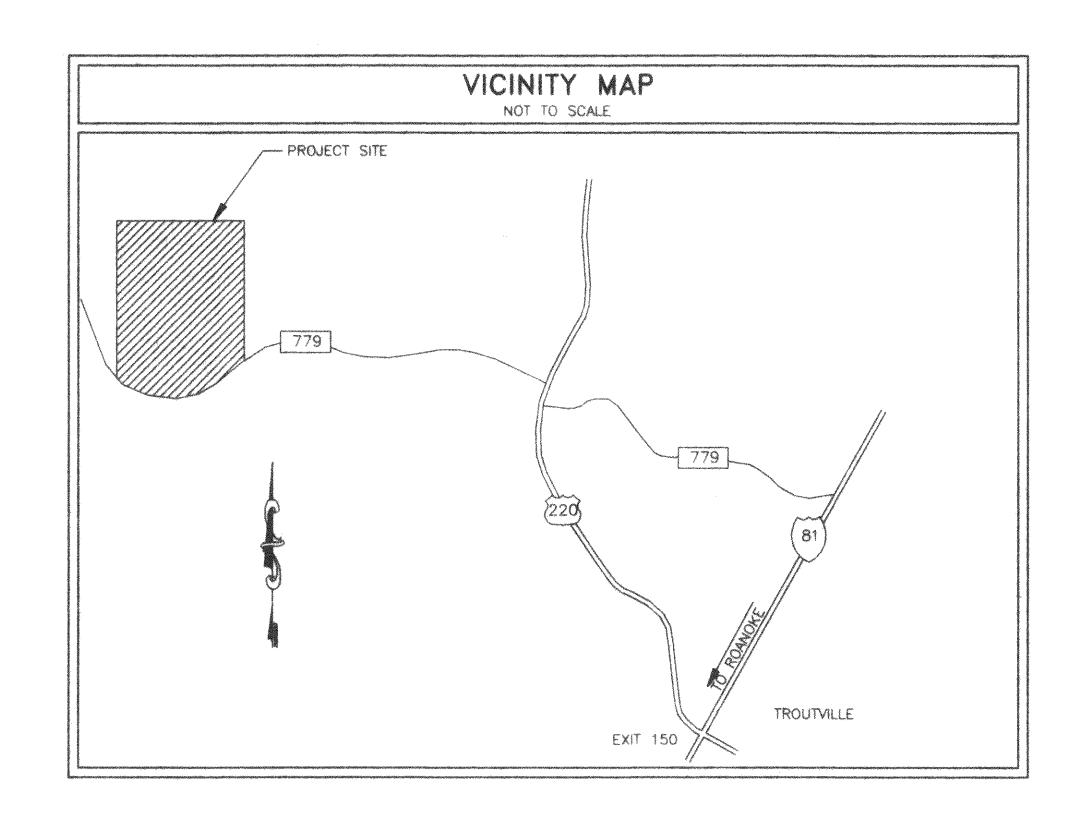
WETHERWOOD SUBDIVISION

DEVELOPMENT PLANS
AMSTERDAM MAGISTERIAL DISTRICT
BOTETOURT COUNTY, VIRGINIA



DEVELOPER:

WETHERWOOD DEVELOPMENT, INC. P.O. BOX 591 DALEVILLE, VIRGINIA 24083 (703) 992-5443



TAX ID#: TRACT SIZE: PRESENT ZONING: PROPOSED USE:

SEWER:

WATER:

100-1 47.3 ACRES

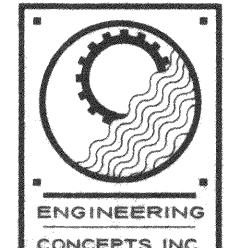
R-1

SINGLE FAMILY HOMES
BOTETOURT COUNTY

DEPARTMENT OF PUBLIC WORKS
BOTETOURT COUNTY

DEPARTMENT OF PUBLIC WORKS

ENGINEER:



ENGINEERING CONCEPTS, INC.

20 S. ROANOKE ST., SUITE 201 FINCASTLE, VIRGINIA 24090 703-473-1253 DATE: FEBRUARY, 1994

REVISED: FEBRUARY, 1995

PROJECT: 93024

REVISIONS: 95011, 95012

VIRGINIA DEPARTMENT OF TRANSPORTATION GENERAL NOTES

1. QUALITY CONTROL

STREETS TO BE GRADED, PAVED, AND ALL STRUCTURAL COMPONENTS ERECTED IN ACCORDANCE WITH THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS AND ROAD DESIGN STANDARDS DATED JANUARY 1991. ALL MATERIALS USED SHALL BE TESTED IN ACCORDANCE WITH STANDARD POLICIES. THE DEVELOPER MUST CONTACT THE OFFICE OF THE RESIDENT ENGINEER PRIOR TO BEGINNING ANY CONSTRUCTION AT WHICH TIME AN INSPECTION AND TESTING PROCEDURE POLICY WILL BE DRAWN. THE DEVELOPER WILL PRODUCE TEST REPORTS FROM APPROVED INDEPENDENT LABORATORIES AT THE DEVELOPER'S EXPENSE.

THE PAVEMENT DESIGNS SHOWN ARE BASED ON A SUBGRADE RATING OF CBR10 OR GREATER. THE SUBGRADE SOIL IS TO BE TESTED BY AN INDEPENDENT LABORATORY AND THE RESULTS SUBMITTED TO THE VIRGINIA DEPARTMENT OF TRANSPORTATION PRIOR TO PAVEMENT CONSTRUCTION. SHOULD THE CBR VALUES BE LESS THAN CBR10, THEN ADDITIONAL BASE MATERIAL WILL BE REQUIRED IN ACCORDANCE WITH DEPARTMENTAL SPECIFICATIONS.

THE SUBGRADE MUST BE APPROVED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION PRIOR TO PLACEMENT OF BASE MATERIAL. BASE MUST BE APPROVED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION FOR DEPTH, TEMPLATE, AND COMPACTION BEFORE SURFACE IS APPLIED.

2. UTILITIES

ALL NECESSARY LATERALS WILL BE PLACED PRIOR TO PAVEMENT BASE AND CONDUIT PROVISIONS MADE FOR THE SAME (I.E. WATER, SEWER, GAS, AND TELEPHONE).

PERMITS WILL BE REQUIRED FOR ALL UTILITIES WITHIN THE STREET RIGHT-OF-WAY PRIOR TO ACCEPTANCE INTO THE SECONDARY HIGHWAY

ANY EASEMENT GRANTED TO A UTILITY FOR PLACEMENT OF POWER, TELEPHONE, WATER, SEWER, ETC..., MUST BE RELEASED PRIOR TO ACCEPTANCE.

3. PRIVATE ENTRANCES

PERMITS WILL BE REQUIRED FOR ALL PRIVATE ENTRANCES CONSTRUCTED ON STREET RIGHT-OF-WAY PRIOR TO ACCEPTANCE INTO THE SECONDARY HIGHWAY SYSTEM.

4. EROSION CONTROL AND LANDSCAPING

CARE MUST BE TAKEN DURING CONSTRUCTION TO PREVENT EROSION, DUST, AND MUD FROM DAMAGING ADJACENT PROPERTY, CLOGGING DITCHES, TRACKING PUBLIC STREETS, AND OTHERWISE CREATING A PUBLIC NUISANCE TO SURROUNDING AREAS.

THE ENTIRE CONSTRUCTION AREA BACK OF THE PAVEMENT SHALL BE BACKFILLED AND SEEDED TOGETHER WITH THE DITCHES AND CHANNELS, AT THE EARLIEST POSSIBLE TIME AFTER FINAL GRADING.

DRAINAGE EASEMENTS MUST BE DEFINED BY EXCAVATED DITCHES OR CHANNELS FOR THEIR FULL LENGTH TO WELL DEFINED EXISTING NATURAL WATERCOURSES.

ALL VEGETATION AND OVERBURDEN TO BE REMOVED FROM SHOULDER TO SHOULDER PRIOR TO CONDITIONING (CUTTING AND/OR PREPARATION) OF THE SUBGRADE.

MINIMUM PAVEMENT RADIUS OF 25 FEET REQUIRED AT ALL STREET INTERSECTIONS.

WHILE THESE PLANS HAVE BEEN APPROVED, SUCH APPROVAL DOES NOT EXEMPT CONNECTIONS WITH EXISTING STATE MAINTAINED ROADS FROM CRITICAL REVIEW AT THE TIME PERMIT APPLICATIONS ARE MADE. THIS IS NECESSARY IN ORDER THAT THE PREVAILING CONDITIONS BE TAKEN INTO CONSIDERATION REGARDING SAFETY ACCOMPANIMENTS SUCH AS TURNING LANES.

STANDARD GUARDRAIL WITH SAFETY END SECTIONS MAY BE REQUIRED ON FILLS AS DEEMED NECESSARY BY THE VDOT ENGINEER. AFTER COMPLETION OF ROUGH GRADING OPERATIONS, THE VDOT ENGINEER SHALL BE NOTIFIED SO THAT A FIELD REVIEW MAY BE MADE OF THE PROPOSED LOCATIONS.

FIELD REVIEW WILL BE MADE DURING CONSTRUCTION TO DETERMINE THE NEED AND LIMITS OF PAVED GUTTER AND/OR DITCH STABILIZATION TREATMENTS, TO DETERMINE THE NEED AND LIMITS OF ADDITIONAL DRAINAGE EASEMENTS. ALL DRAINAGE EASEMENTS MUST BE CUT AND MADE TO FUNCTION TO A NATURAL WATERCOURSE. ANY EROSION PROBLEMS ENCOUNTERED IN AN EASEMENT MUST BE CORRECTED BY WHATEVER MEANS NECESSARY PRIOR TO SUBDIVISION ACCEPTANCE.

CONTRACTOR SHALL OBTAIN ENTRANCE PERMIT TO THE EXISTING VIRGINIA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY FROM THE RESIDENT ENGINEER PRIOR TO ROAD CONSTRUCTION.

AN INSPECTOR WILL NOT BE FURNISHED EXCEPT FOR PERIODIC PROGRESS INSPECTION, THE ABOVE MENTIONED FIELD REVIEWS, AND CHECKING THE REQUIRED STONE DEPTHS. THE DEVELOPER WILL BE REQUIRED TO POST A SURETY TO GUARANTEE THE ROAD FREE OF DEFECTS FOR ONE YEAR AFTER ACCEPTANCE BY THE VIRGINIA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION.

THE STREETS MUST BE PROPERLY MAINTAINED UNTIL ACCEPTANCE. AT SUCH TIME AS ALL REQUIREMENTS HAVE BEEN MET FOR ACCEPTANCE, ANOTHER INSPECTION WILL BE MADE TO DETERMINE THAT THE STREET HAS BEEN PROPERLY MAINTAINED.

IN ORDER TO MEET PUBLIC SERVICE REQUIREMENTS, ALL STREETS MUST SERVE A MINIMUM OF THREE OCCUPIED DWELLINGS PRIOR TO ACCEPTANCE.

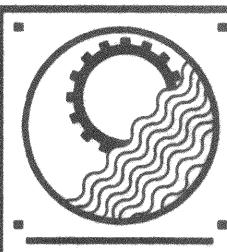
THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON THE PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT THE ENGINEER IMMEDIATELY IF THE LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLAN. IF THERE APPEARS TO BE A CONFLICT, AND UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THIS PLAN, CONTACT "MISS UTILITY" OF CENTRAL VIRGINIA AT 1-800-552-7001.

APPROVAL OF THESE PLANS WILL BE BASED ON SPECIFICATIONS AND STANDARDS IN EFFECT AT THE TIME OF APPROVAL AND WILL BE SUBJECT, UNTIL COMPLETION OF THE ROADWAY AND ACCEPTANCE BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION, TO FUTURE REVISIONS OF THE SPECIFICATIONS AND STANDARDS.

GENERAL NOTES

- 1. INFORMATION ON THESE DRAWINGS CONCERNING THE LOCATION AND ELEVATION OF EXISTING UTILITIES, STRUCTURES, AND OBSTRUCTIONS HAS BEEN PREPARED FROM THE MOST RELIABLE INFORMATION AVAILABLE TO THE ENGINEER. THE ACCURACY AND COMPLETENESS OF THIS INFORMATION ARE NOT GUARANTEED, HOWEVER, NOR DOES THE ENGINEER ACCEPT ANY RESPONSIBILITY WHATSOEVER FOR DEVIATIONS OF THE EXISTING UTILITIES, STRUCTURES, OTHER FACILITIES, AND OBSTRUCTIONS FROM THE LOCATIONS AND ELEVATIONS INDICATED OR FOR THE EXISTENCE OF UTILITIES, STRUCTURES, OTHER FACILITIES, AND OBSTRUCTIONS NOT INDICATED ON THESE DRAWINGS.
- 2. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION TO ELIMINATE ANY POSSIBILITY OF ANY DISTURBANCE OF OR DAMAGE TO PUBLIC AND PRIVATELY-OWNED UTILITIES, STRUCTURES, OTHER FACILITIES. AND OBSTRUCTION RESULTING FROM HIS ACTIVITIES. TO THIS END. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, TAKE ALL MEASURES NECESSARY TO PROVIDE, AND SHALL BE SOLELY RESPONSIBLE FOR, TEMPORARY SUPPORT AND SHORING, ADEQUATE PROTECTION. AND MAINTENANCE OF CONTINUOUS OPERATION OF ALL UNDERGROUND AND ABOVEGROUND WATER, SEWER, AND GAS MAINS AND SERVICE LINES; PETROLEUM LINES; TELEPHONE, TELEVISION, AND ELECTRICAL LINES, CABLES, AND POLES, EQUIPMENT CABLES AND CONDUITS; STORM SEWERS; BUILDINGS; TANKS; FENCES: AND ALL OTHER UTILITIES, STRUCTURES, FACILITIES, AND OBSTRUCTIONS. WHETHER OR NOT INDICATED ON THESE DRAWINGS. ALL DISTURBED OR DAMAGED UTILITIES, STRUCTURES, OTHER FACILITIES, AND OBSTRUCTIONS SHALL BE IMMEDIATELY REPAIRED. REPLACED. OR COMPENSATED FOR BY THE CONTRACTOR TO OWNER'S SATISFACTION. AND AT NO ADDITIONAL COST TO THE OWNER.
- 3. THE CONTRACTOR SHALL BEAR SOLE RESPONSIBILITY FOR THE CHARACTER AND ACTUAL LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES, STRUCTURES, OTHER FACILITIES, AND OBSTRUCTIONS WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONTACT THE OWNERS/OPERATORS OF ALL UTILITIES AND ARRANGE FOR THE VERIFICATION AND MARKING OF UTILITY LOCATIONS BY SAID OWNERS/OPERATORS. THE CONTRACTOR SHALL ASSIST THE UTILITY OWNERS/OPERATORS BY EVERY MEANS POSSIBLE TO DETERMINE THE LOCATION OF UTILITIES. THE CONTRACTOR SHALL BEAR SOLE RESPONSIBILITY FOR ALL DISTURBANCE OF ANY DAMAGE TO UTILITIES RESULTING FROM THE CONTRACTOR'S FAILURE TO ARRANGE FOR THE LOCATION OF UTILITIES BY THE OWNERS/OPERATORS OF THE UTILITIES.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL NEW ABOVE AND BELOW GRADE PIPING, STRUCTURES, ELECTRICAL EQUIPMENT AND CONDUIT, AND OTHER FACILITIES AT THE PROJECT SITE, FROM ALL DISTURBANCE OR DAMAGE WHICH MAY RESULT FROM THE PERFORMANCE OF WORK ON THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REPAIR OR REPLACEMENT OF ALL NEW ABOVE AND BELOW GRADE PIPING STRUCTURES, ELECTRICAL EQUIPMENT AND CONDUIT, AND OTHER FACILITIES AT THE PROJECT SITE WHICH MAY BE DISTURBED OR DAMAGED AS A RESULT OF THE PERFORMANCE OF WORK ON THIS PROJECT.
- 5. SITE CONDITIONS MAY NECESSITATE SLIGHT DEVIATIONS IN ALIGNMENT, GRADE, AND/OR LOCATION OF NEW FACILITIES FROM THE ALIGNMENT, GRADE, AND/OR LOCATION INDICATED ON THESE DRAWINGS. THE CONTRACTOR SHALL CONSTRUCT THE NEW FACILITIES TO SUCH DEVIATIONS AS DIRECTED BY THE ENGINEER WITHOUT INCREASE IN THE CONTRACT PRICE OR FINE.
- 6. THE CONTRACTOR SHALL MAINTAIN A CLEAR FLOW PATH TO AND THROUGH ALL SURFACE WATER AND STORM WATER DRAINAGE FACILITIES AT ALL TIMES.
- 7. THE CONTRACTOR SHALL GRADE, SEED, AND/OR SOD, AND MULCH THE ENTIRE AREA(S) DISTURBED BY CONSTRUCTION ACTIVITIES.
- 8. CONSTRUCTION AND START-UP OF ALL WORK SHALL NOT INTERFERE WITH THE OPERATION OF WATER AND SEWERAGE FACILITIES. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WORK WITH THE OWNERS AS REQUIRED.
- 9. MINIMUM COVER ON ALL PIPE SHALL BE 3 FEET, UNLESS OTHERWISE SPECIFICALLY INDICATED ON THESE DRAWINGS. ALL PVC PIPE SHALL BE INSTALLED WITH COATED TRACER WIRE TO FACILITATE FUTURE LOCATION OF PIPE AFTER CONSTRUCTION IS COMPLETED.
- 10. WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE JOINT DEFLECTION OR BARREL BEND RADIUS SHALL NOT EXCEED 75% OF THE MANUFACTURER'S RECOMMENDED DEFLECTION ANGLE OR BEND RADIUS.
- 11. ALL PIPING SHALL BE PROPERLY SUPPORTED. ALL PIPING WHICH WILL BE PRESSURIZED DURING OPERATION SHALL BE PROPERLY RESTRAINED.
- 12. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE CURRENT BOCA AND/OR STATE AND LOCAL BUILDING CODES.
- 13. CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION AREA
 IN A MANNER ACCEPTABLE TO OWNER AND SHALL BE RESPONSIBLE FOR
 REMEDIATING ANY DAMAGES RESULTING FROM FAILURE TO DO SO.
- 14. ALL EXCAVATION SHALL BE UNCLASSIFIED. NO ADDITIONAL PAYMENT WILL BE CONSIDERED FOR ROCK EXCAVATION.
- 15. CONTRACTOR SHALL MAINTAIN LIMITS OF CONSTRUCTION WITHIN THE BOUNDARIES OF THE PROPERTY AS INDICATED ON THE SITE PLAN.

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2	SITE PLAN REVISIONS	
3	SITE PLAN REVISIONS	
4	EROSION AND SEDIMENT CONTROL PLAN	
5	EROSION AND SEDIMENT CONTROL PLAN	
6	PROFILE - ROAD/WATER/SEWER	
7	PROFILE - ROAD/WATER/SEWER	
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9	PROFILE - ROAD/WATER/SEWER	
10	PUMP STATION - SITE PLAN	
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12	WATER SYSTEM - SITE PLAN	
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138	WATER SYSTEM - MISC. DETAILS	
14	ELECTRICAL PLAN - WATER SYSTEM AND PUMP STATION	
15	SEWER DETAILS	
16	SEWER DETAILS	
17	WATER DETAILS	
18	EROSION AND SEDIMENT CONTROL DETAILS	
19	MISCELLANEOUS DETAILS	
20	MISCELLANEOUS DETAILS	

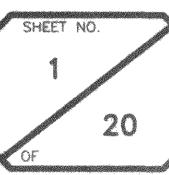


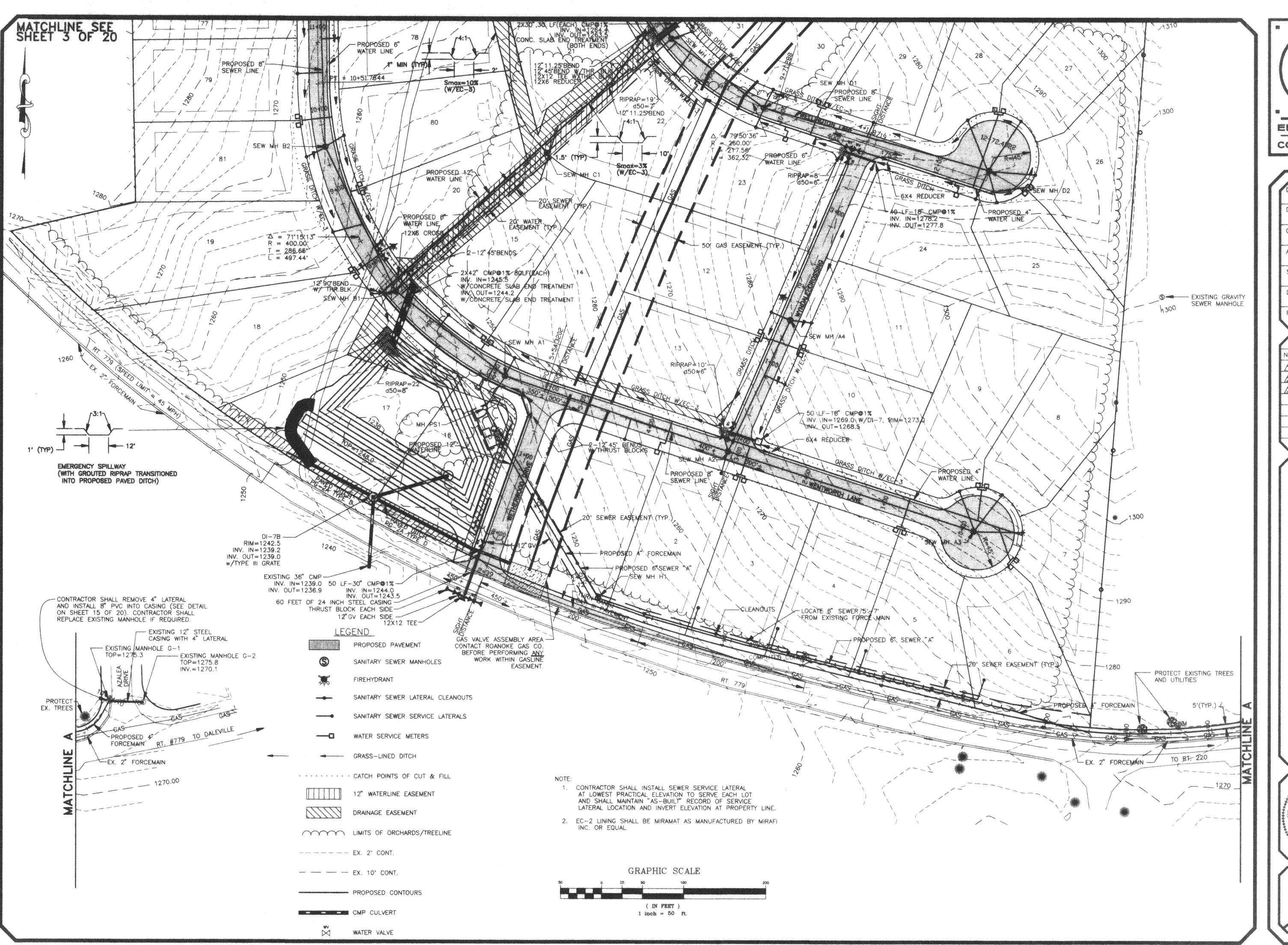
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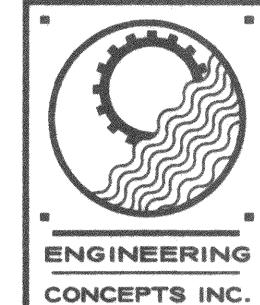
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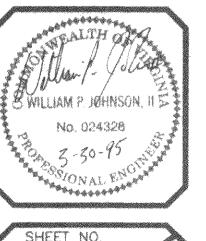




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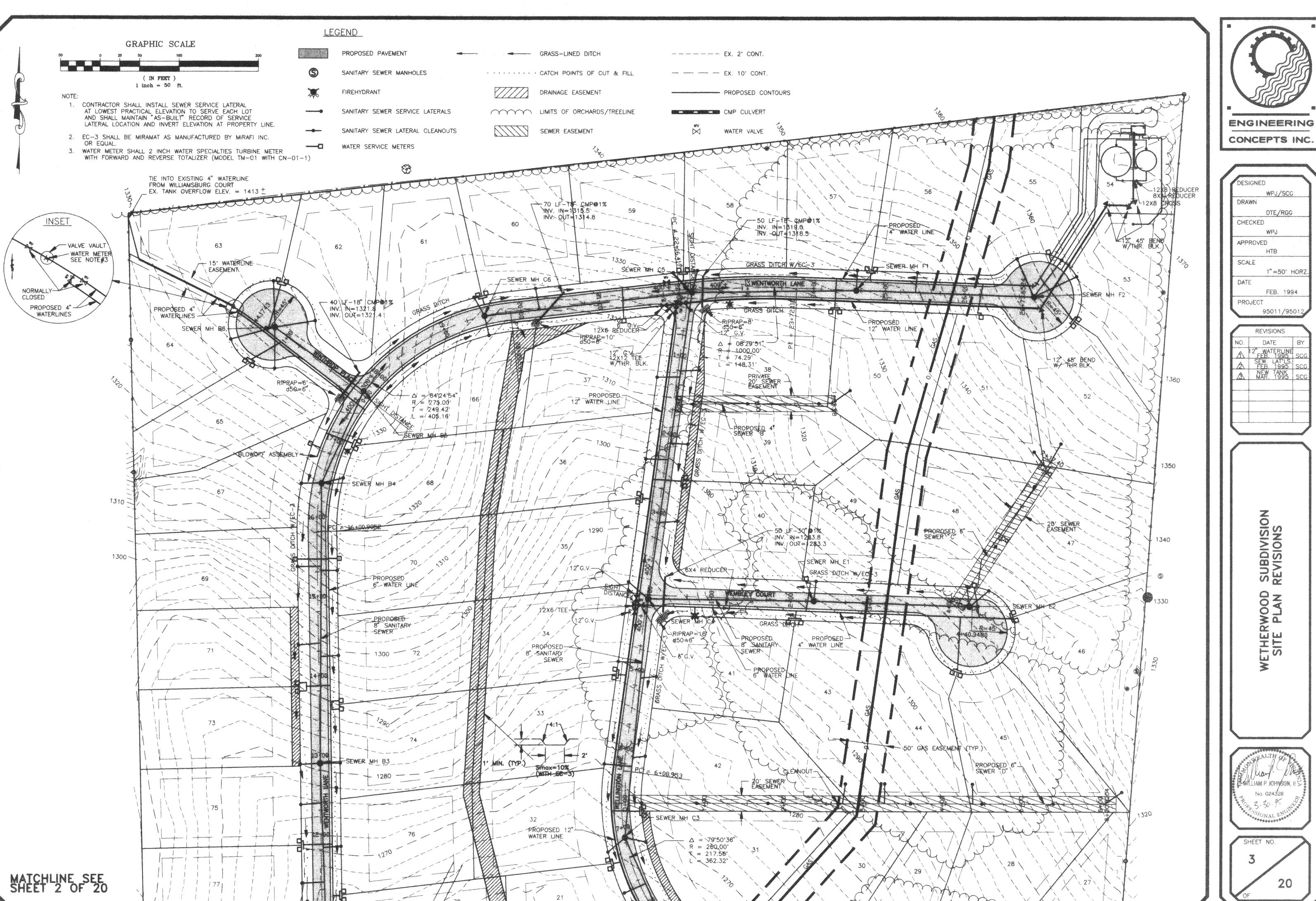


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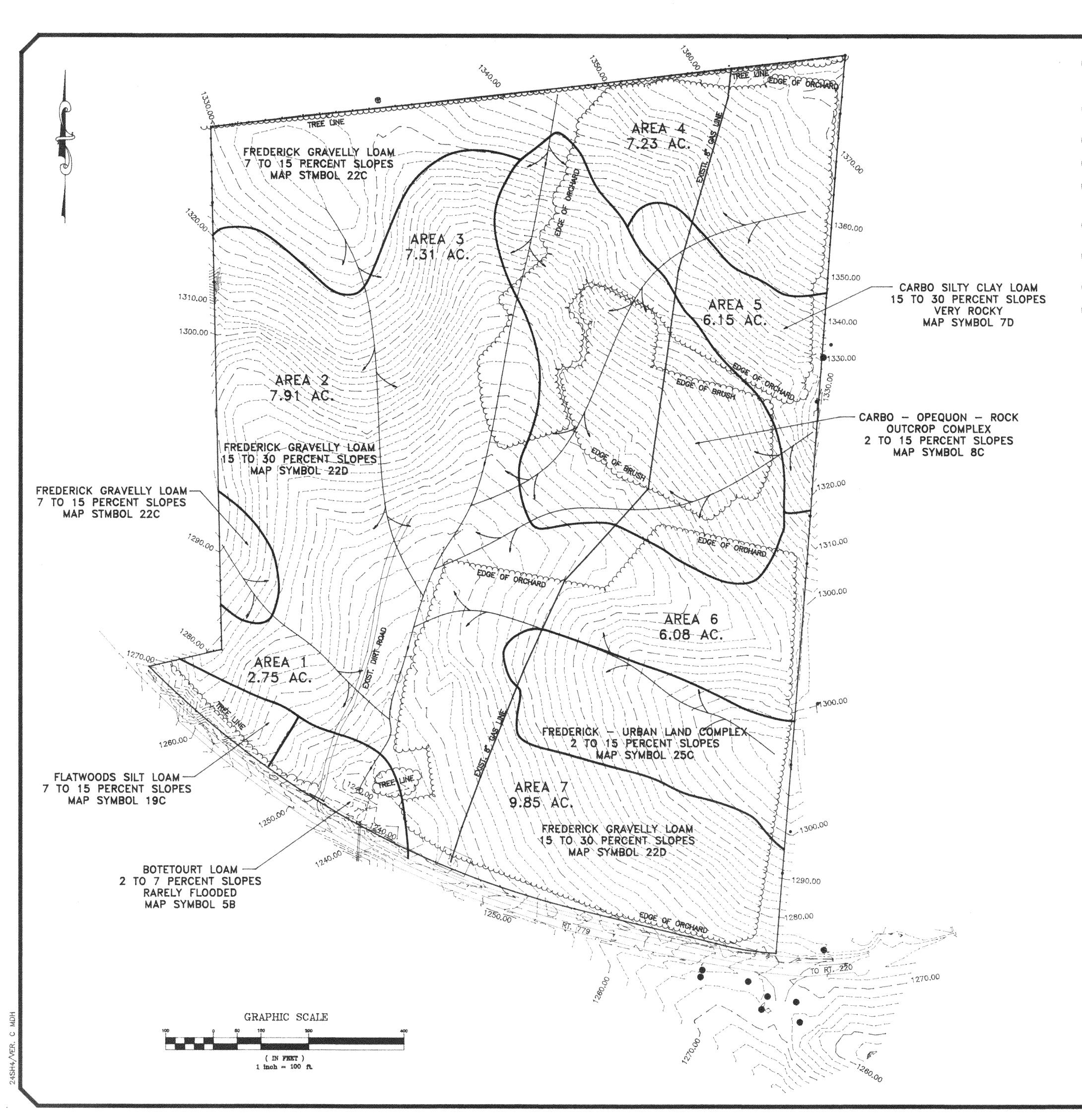
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GENERAL NOTES

- ES-1 UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR 625-02-00 EROSION AND SEDIMENT CONTROL REGULATIONS.
- ES-2 THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ES-3 ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING
- ES-4 A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- ES-5 PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- ES-6 THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- ES-7 ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- ES-8 DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- ES-9 THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

NOTES

- ALL TREES INSIDE OF PROPERTY LINE SHALL BE REMOVED UNLESS OTHERWISE SPECIFIED.
- SOIL CLASSIFICATION TYPES INDICATE THAT THE SOIL CONDITIONS
 ON THE SITE ARE HIGHLY ERODIBLE. CONTRACTOR SHOULD USE ALL AVAILABLE RESOURCES TO MINIMIZE SOIL EROSION.
- AN APPROVED E&S CONTROL PLAN MAY BE AMENDED BY THE PLAN APPROVING AUTHORITY IF ON-SITE INSPECTION INDICATES THAT THE APPROVED CONTROL MEASURES ARE NOT EFFECTIVE IN CONTROLLING EROSION AND SEDIMENTATION, OR IF, BECAUSE OF CHANGED CIRCUMSTANCES, THE APPROVED PLAN CAN NOT BE CARRIED OUT.
- TOPOGRAPHIC SURVEY PROVIDED BY CHARLES R. McMURRY, CLS, DALEVILLE, VA.
- REF. 1992 VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, DIVISION OF SOIL AND WATER CONSERVATION.
- 6. REF: SOIL SURVEY OF BOTETOURT COUNTY, VA., SHEET #38.

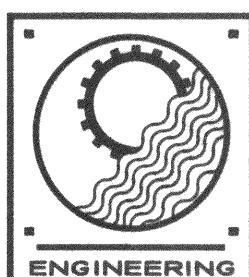
PLANTING DATES	SPECIES	RATE (LBS./ACRE)
SEPT.1-FEB.15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI—FLORUM) AND CEREAL (WINTER) RYE (SECALE CEREALE)	50-100
FEB.16-APR.30	ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM)	60-100
MAY1-AUG.31	GERMAN MILLET (SETARIA ITALICA)	50

PERMANENT SEEDING MIXTURES FOR APPALACHIAN/MOUNTAIN AREA MINIMUM CARE LAWN PER ACRE COMMERCIAL OR RESIDENTIAL 200-250 LBS. - KENTUCKY 31 OR TURF-TYPE TALL FESCUE 90-100% - IMPROVED PERENNIAL RYEGRASS* 0-10% - KENTUCKY BLUEGRASS 0-10% HIGH MAINTENENACE LAWN MINIMUM OF 3 UP TO FIVE VARIETIES 125 LBS. OF BLUEGRASS FROM APPROVED LIST FOR USE IN VIRGINIA GENERAL SLOPE (3:1 OR LESS) - KENTUCKY 31 FESCUE 128 LBS. - RED TOP GRASS 2 LBS. 20 LBS. 150 LBS. - SEASONAL NURSE CROP** LOW-MAINTENANCE SLOPE (STEEPER THAN 3:1) - KENTUCKY 31 FESCUE 108 LBS. - RED TOP GRASS 2 LBS. - SEASONAL NURSE CROP** 20 LBS. 20 LBS. 150 LBS. · CROWNVETCH***

* PERENNIAL RYEGRASS WILL GERMINATE FASTER AND AT LOWER SOIL TEMPERATURES THAN FESCUE, THEREBY PROVIDING COVER AND EROSION RESISTANCE FOR SEEDBED.

** USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES STATED BELOW:

*** IF FLATPEA IS USED, INCREASE TO 30 LBS./ACRE. ALL LEGUME SEED MUST BE PROPERLY INNOCULATED. WEEPING LOVEGRASS MAY ALSO BE INCLUDED IN ANY SLOPE OR LOW MAINTENANCE MIXTURE DURING WARMER SEEDING PERIODS; ADD 10-20 LBS./ACRE IN MIXES.



CONCEPTS INC.

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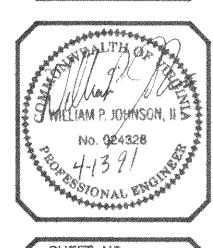
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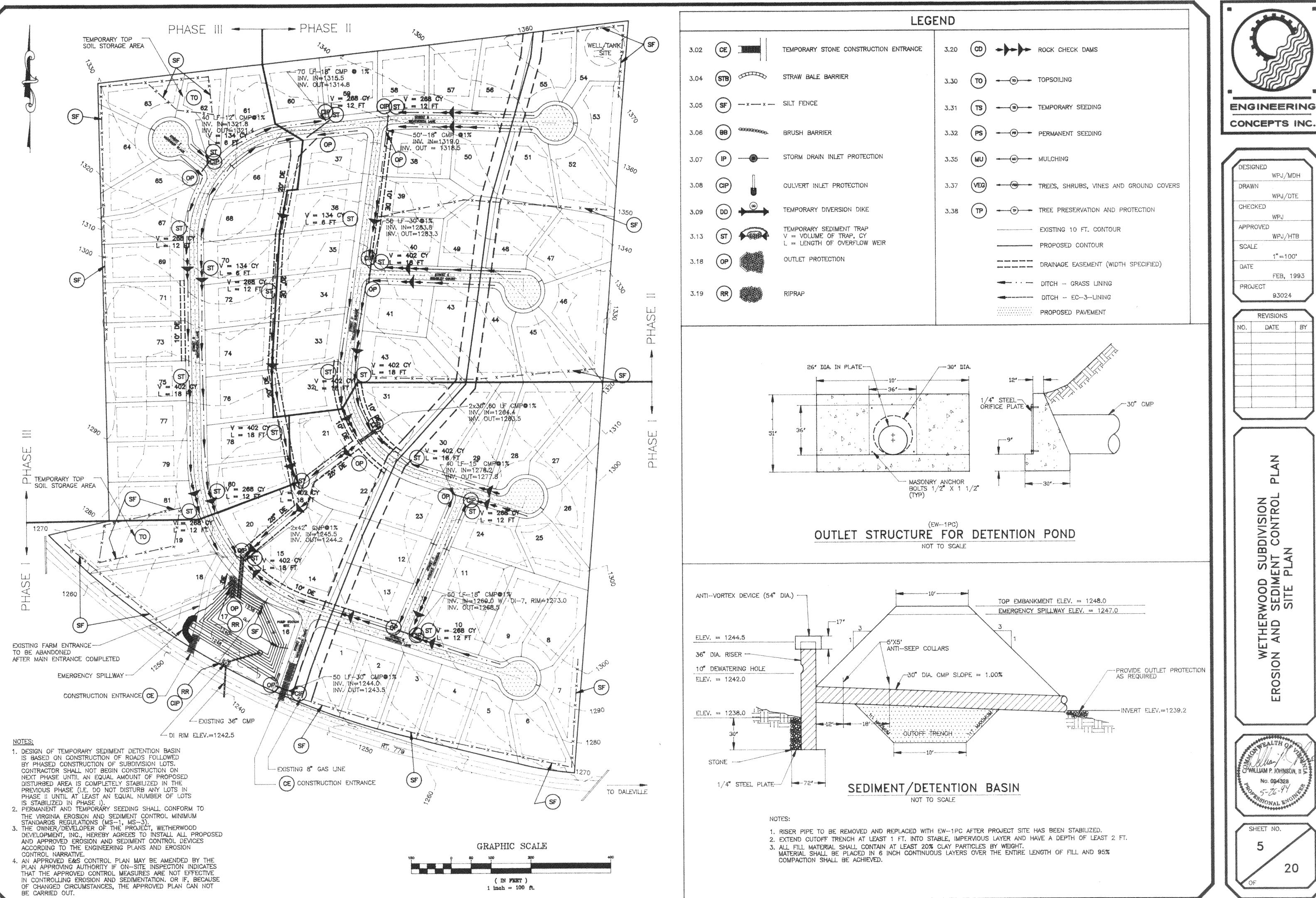
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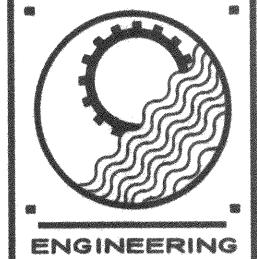
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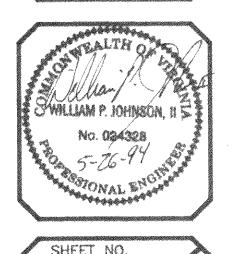


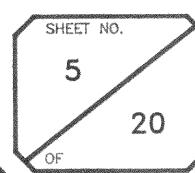


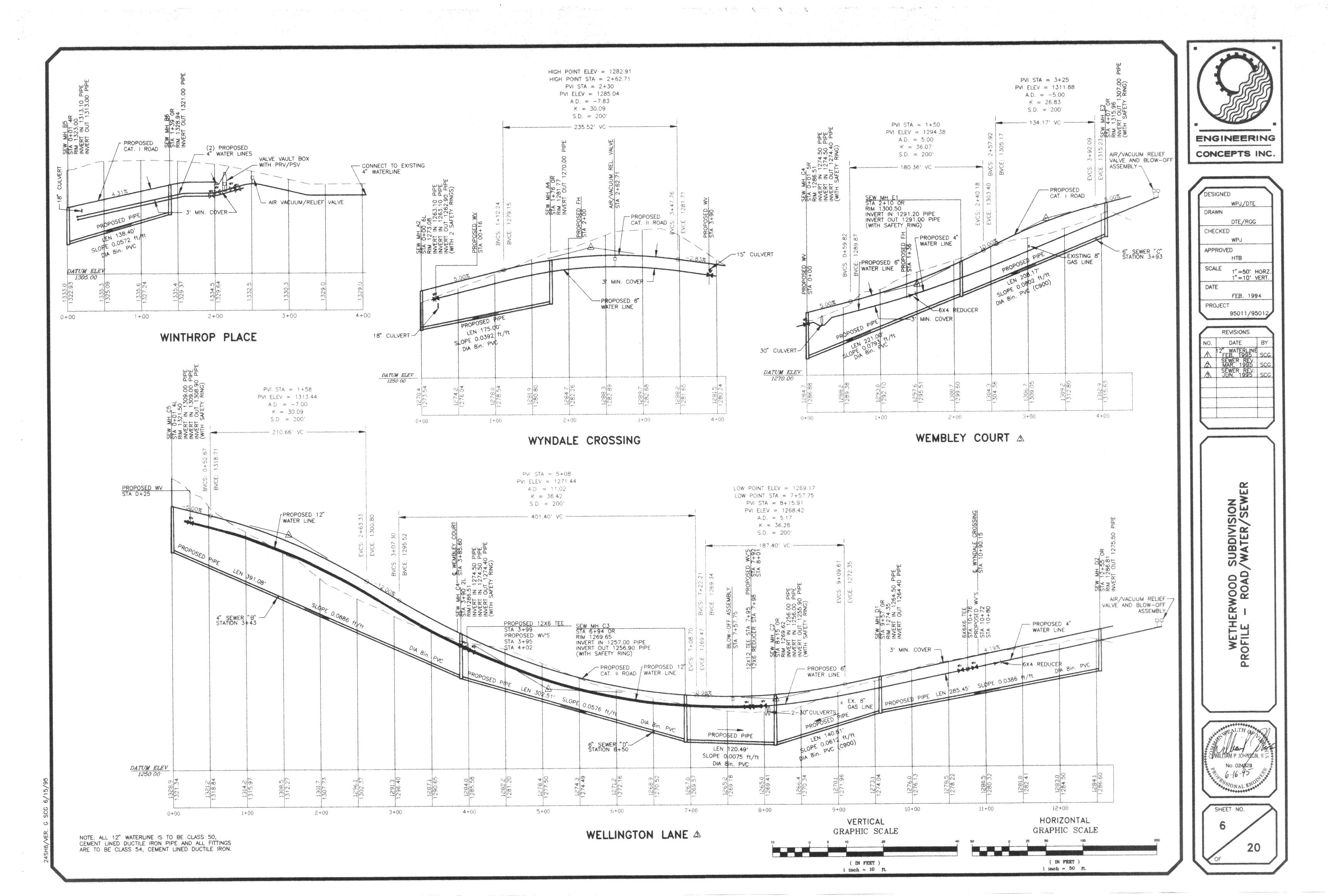
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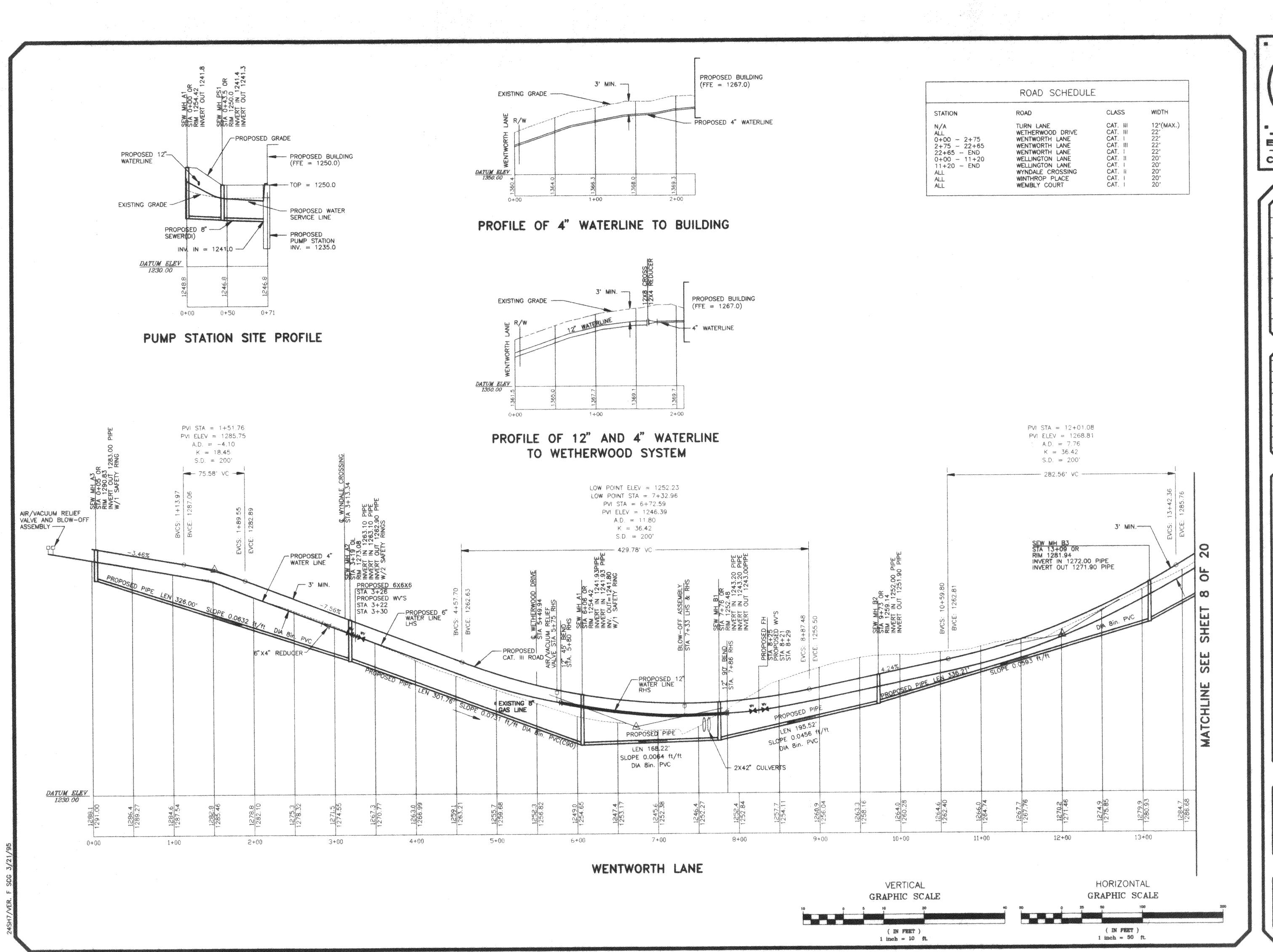
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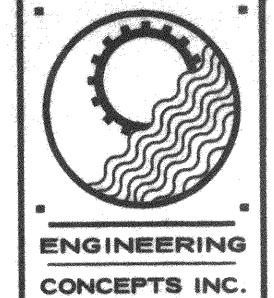
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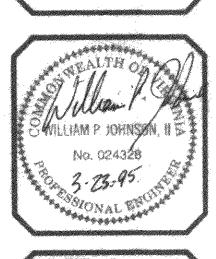
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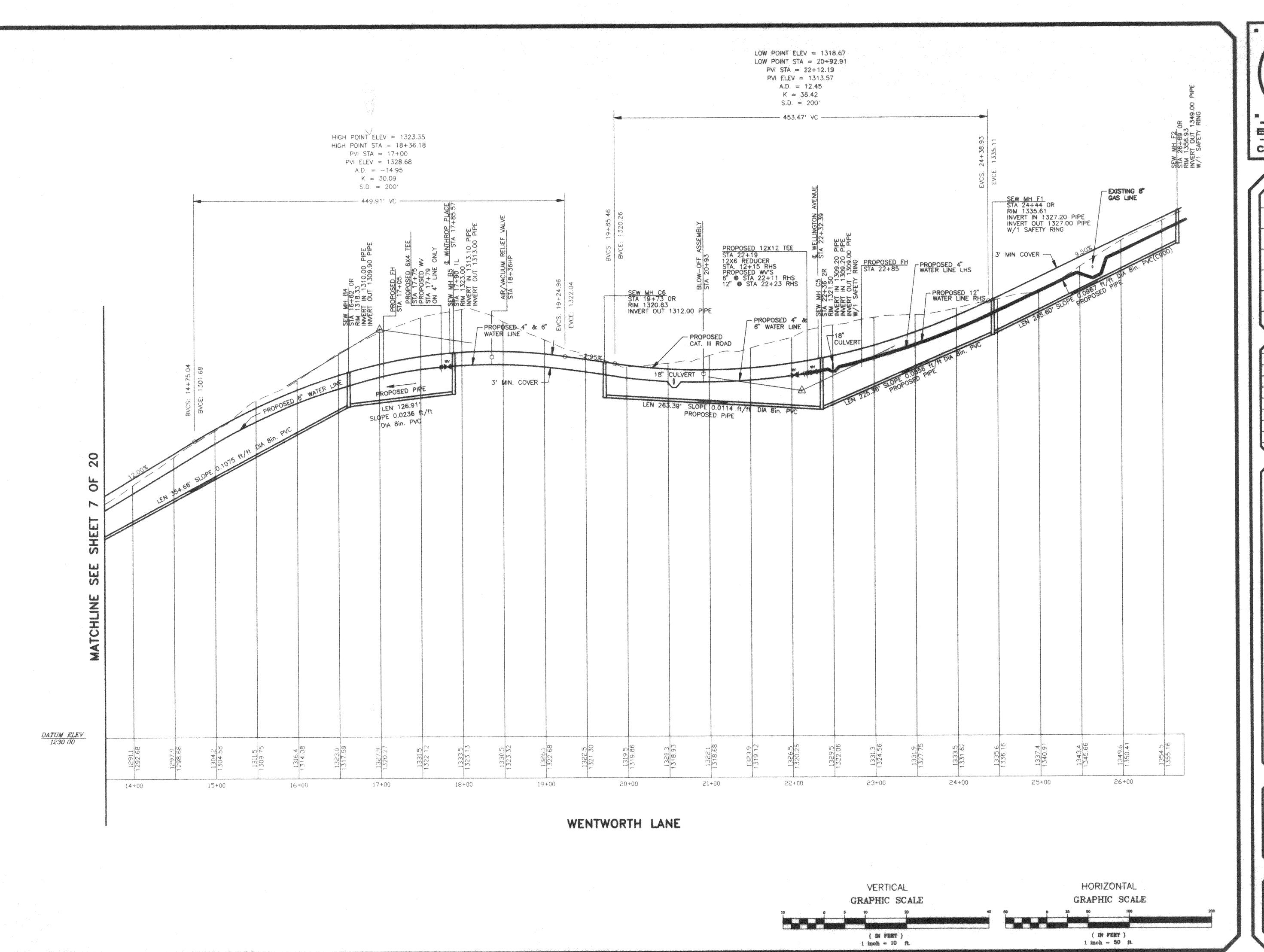
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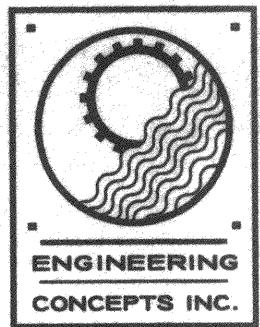
WETHERWOOD SUBDIVISION PROFILE - ROAD/WATER/SEWER



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14 = 50 HORZ

15 = 10 VERT

16 = 100 VERT

17 = 10 VERT

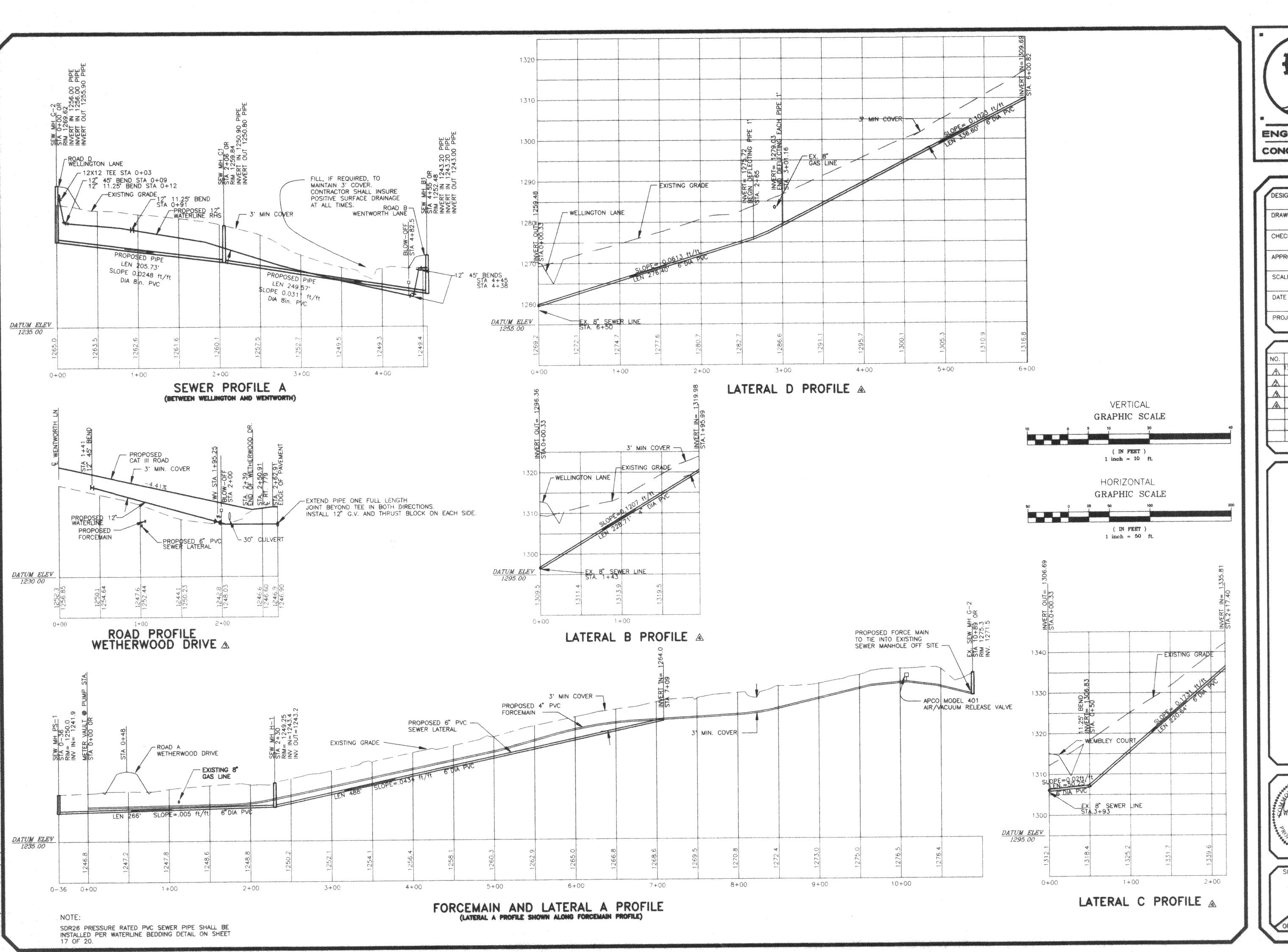
18 = 10 VERT

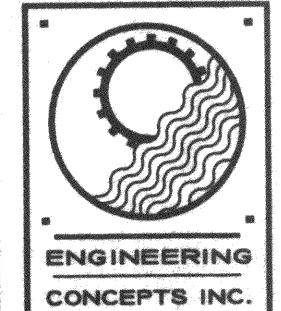
WETHERWOOD SUBDIVISION PROFILE - ROAD/WATER/SEWER

S WILLIAM P. JOHNSON, II S. No. 024328

SHEET NO.

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OF





DESIGNED

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SCALE

1" = 50' HORZ.

1" = 10' VERT.

DATE

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REVISIONS

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A Z-WATERLINE
FEB. 1895 SCG

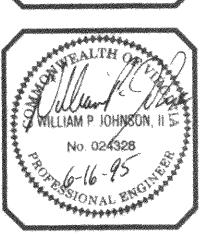
A FFB. 1895 SCG

A SEW. 1895 SCG

A SEW. 1895 SCG

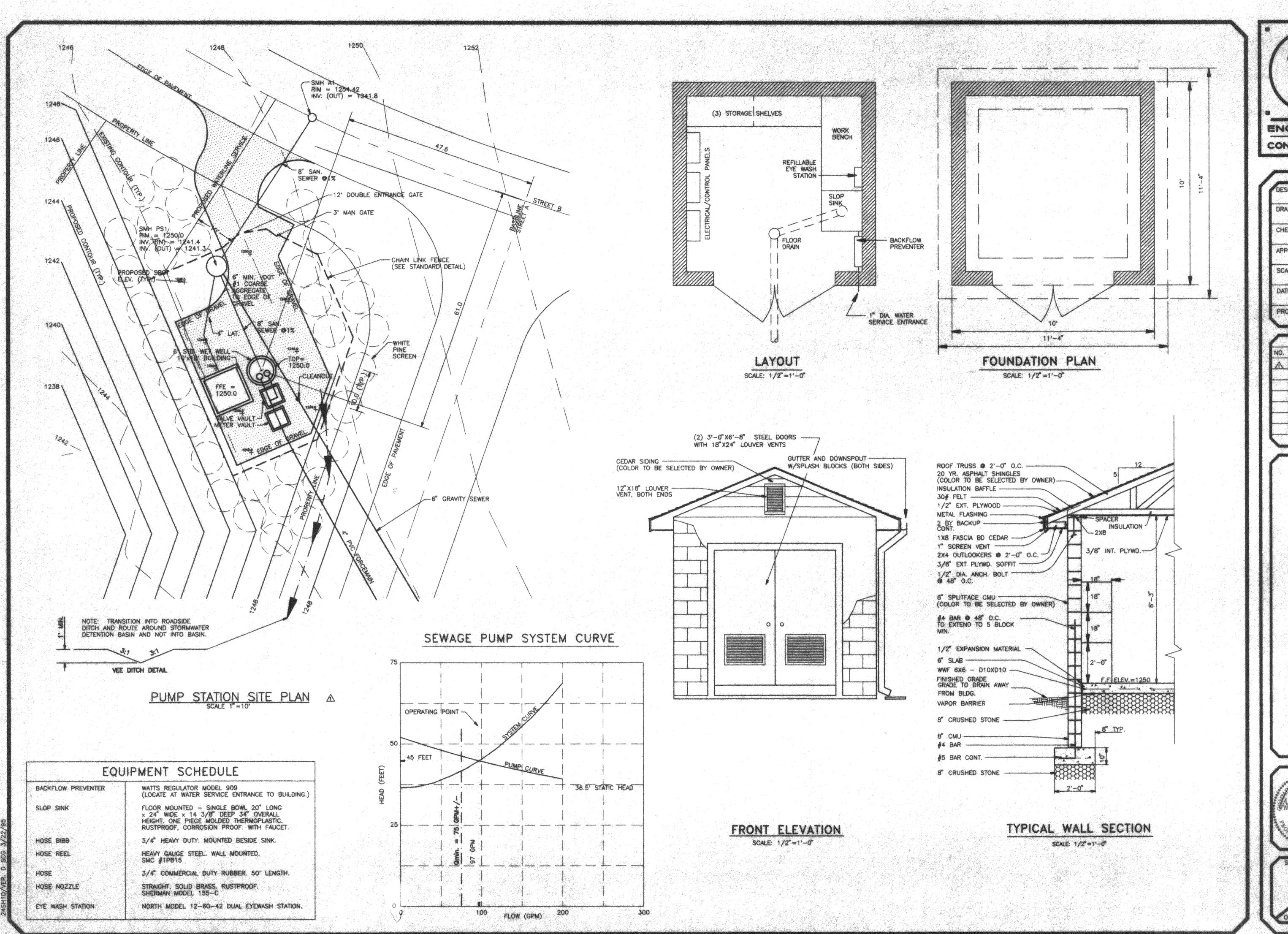
A SEW. 1895 SCG

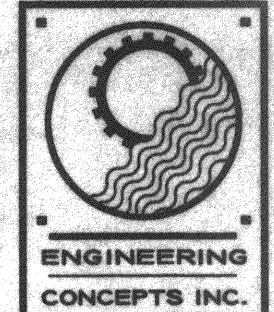
WETHERWOOD SUBDIVISION PROFILE - ROAD/WATER/SEWER



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MDH/SCG

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APPROVED

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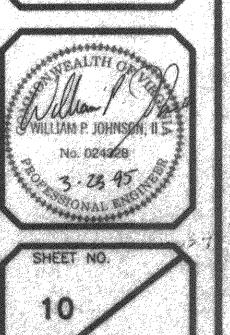
REVISIONS

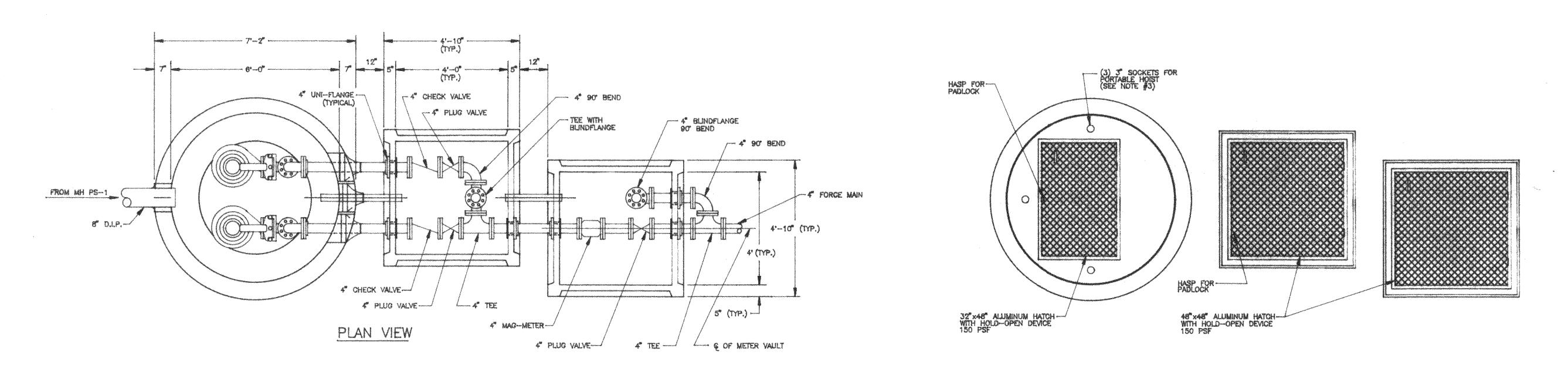
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SWEP 1884

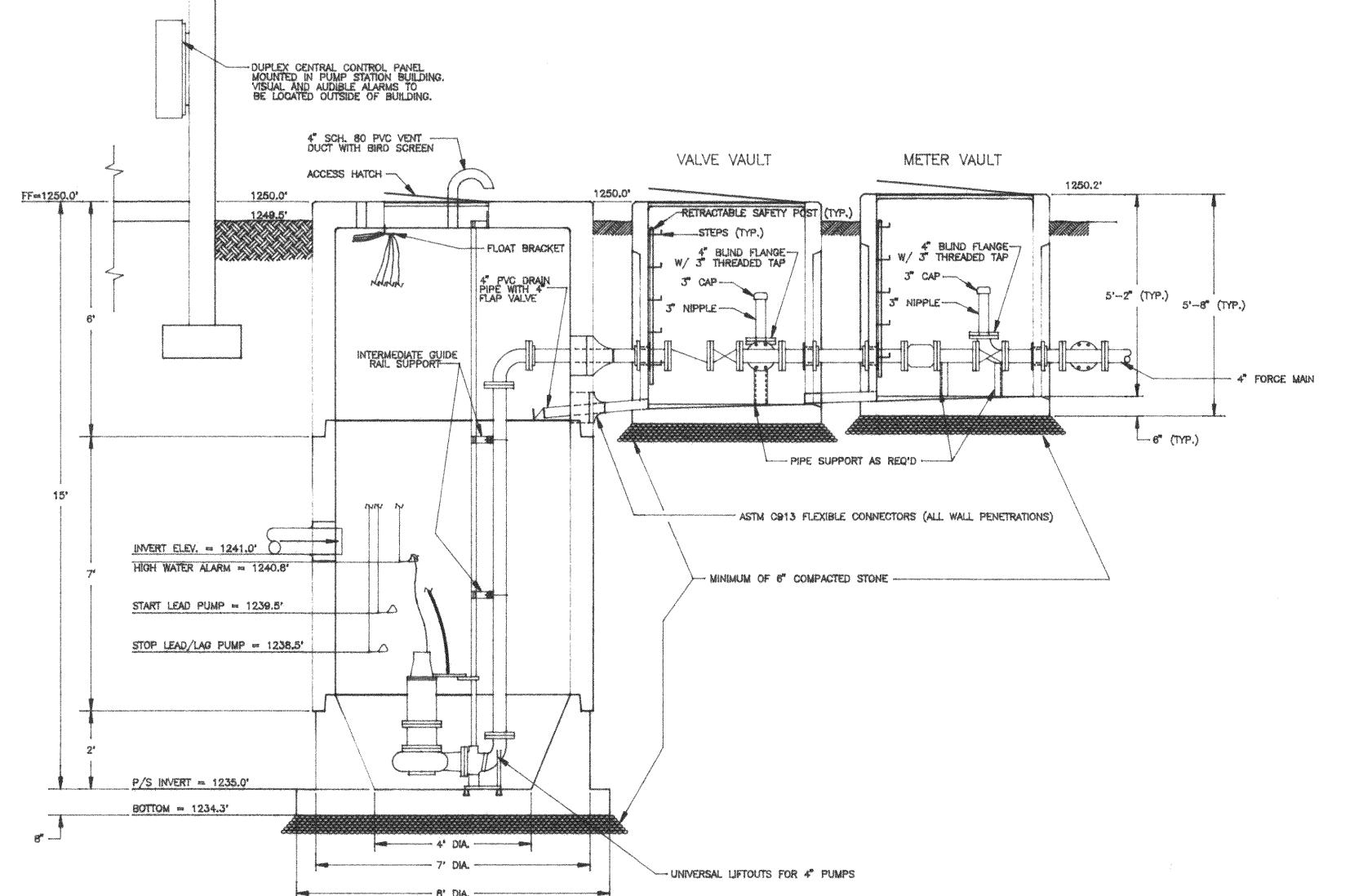
SWEP 1884

SWEP 1884

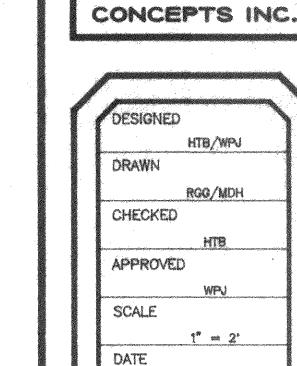








SECTION



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WETHERWOOD SUBDIVISION
MP STATION - PLAN AND ELEVATION

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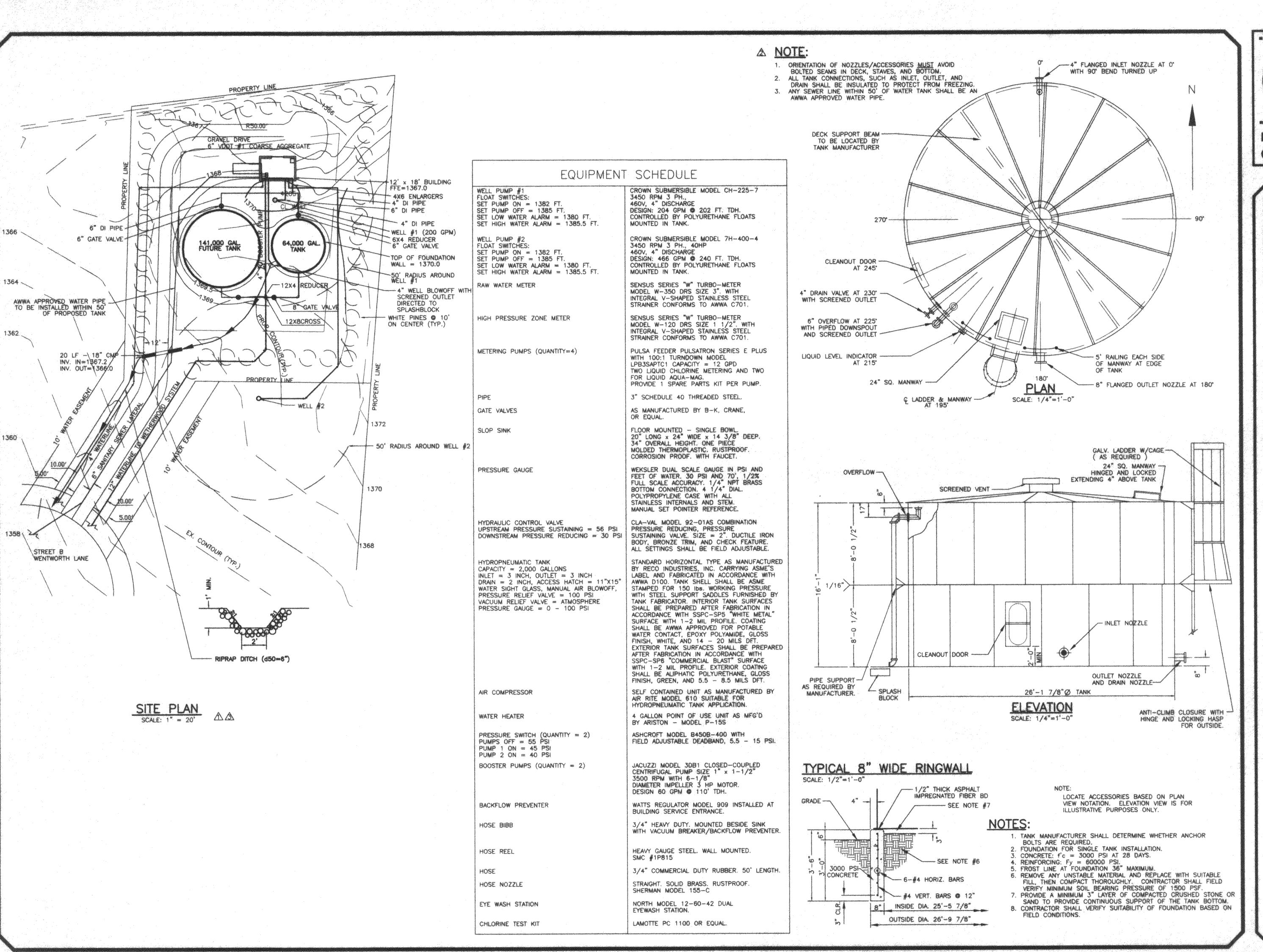
r shall supply openings in concrete for conduit entry

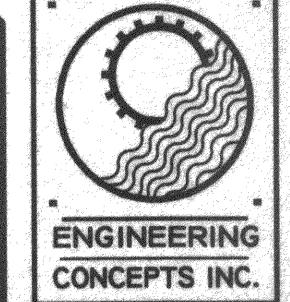
Float, power, and control cables may be run to panel through conduit

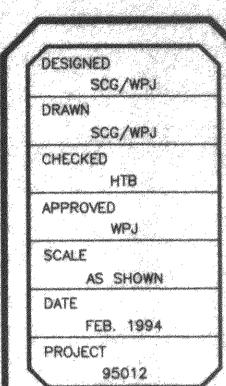
ump Station Manufacturer shall verify fit of liftout elbows, pumps, and hatch.

4. Float switches shall be located away from influent stream

TOP VIEW







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WETHERWOOD SUBDIVISION MATER SYSTEM - SITE PLAN

SWIDLIAM P. IDHINSON, II.

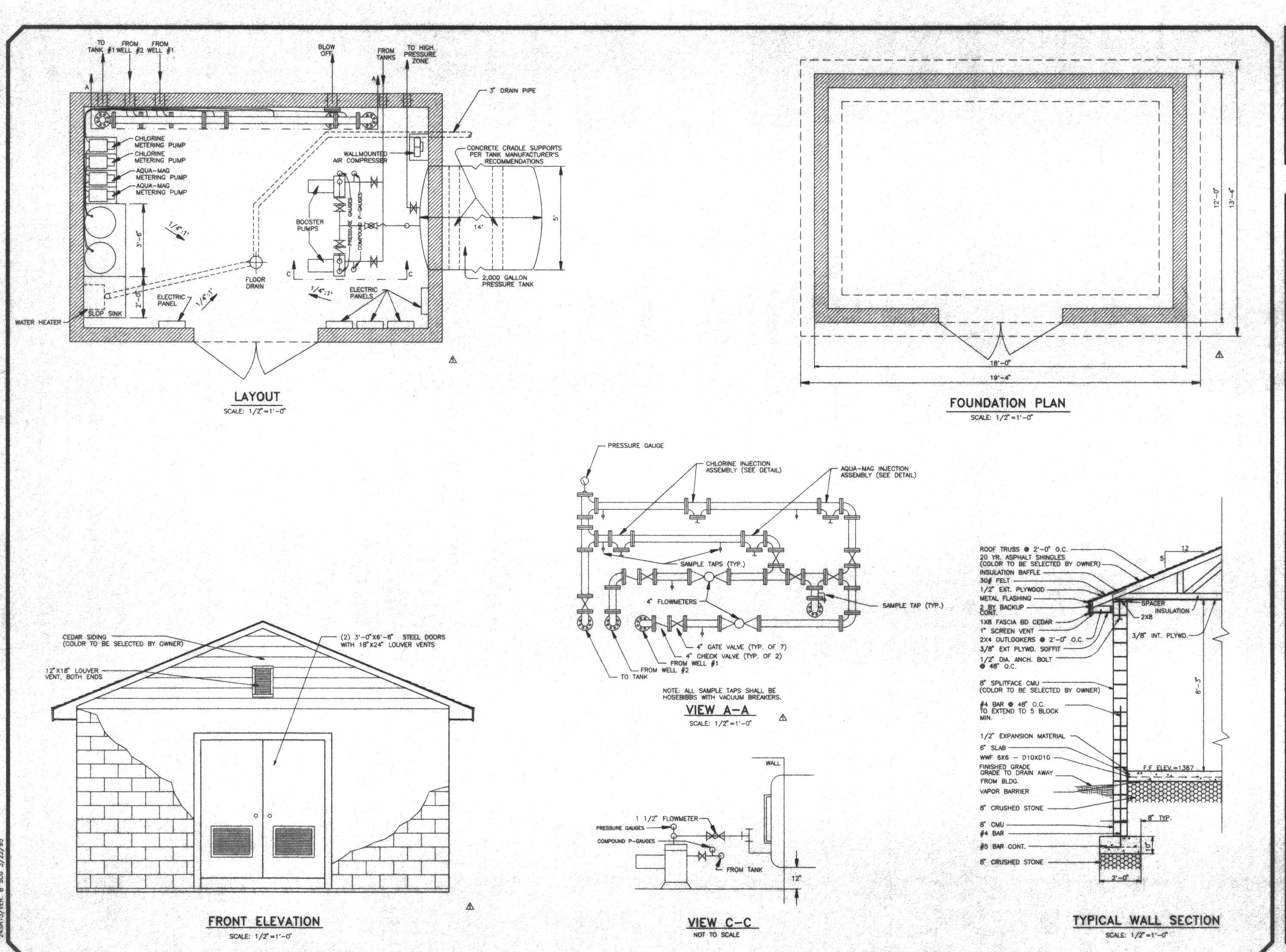
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ENGINEERING CONCEPTS INC.

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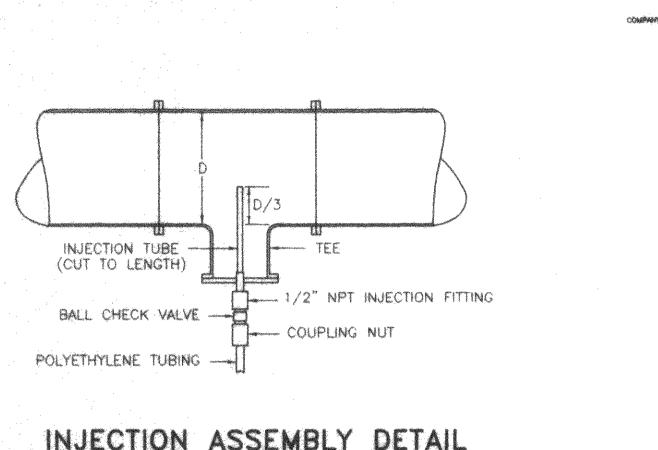
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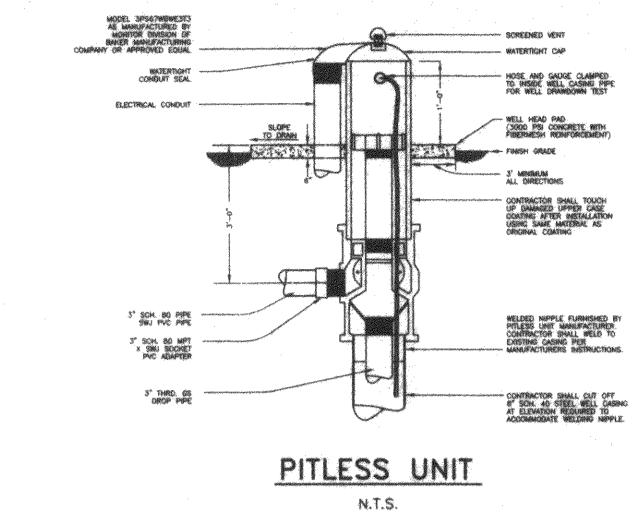
NG DATE BY
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SYSTEM PLAN & PLEASION

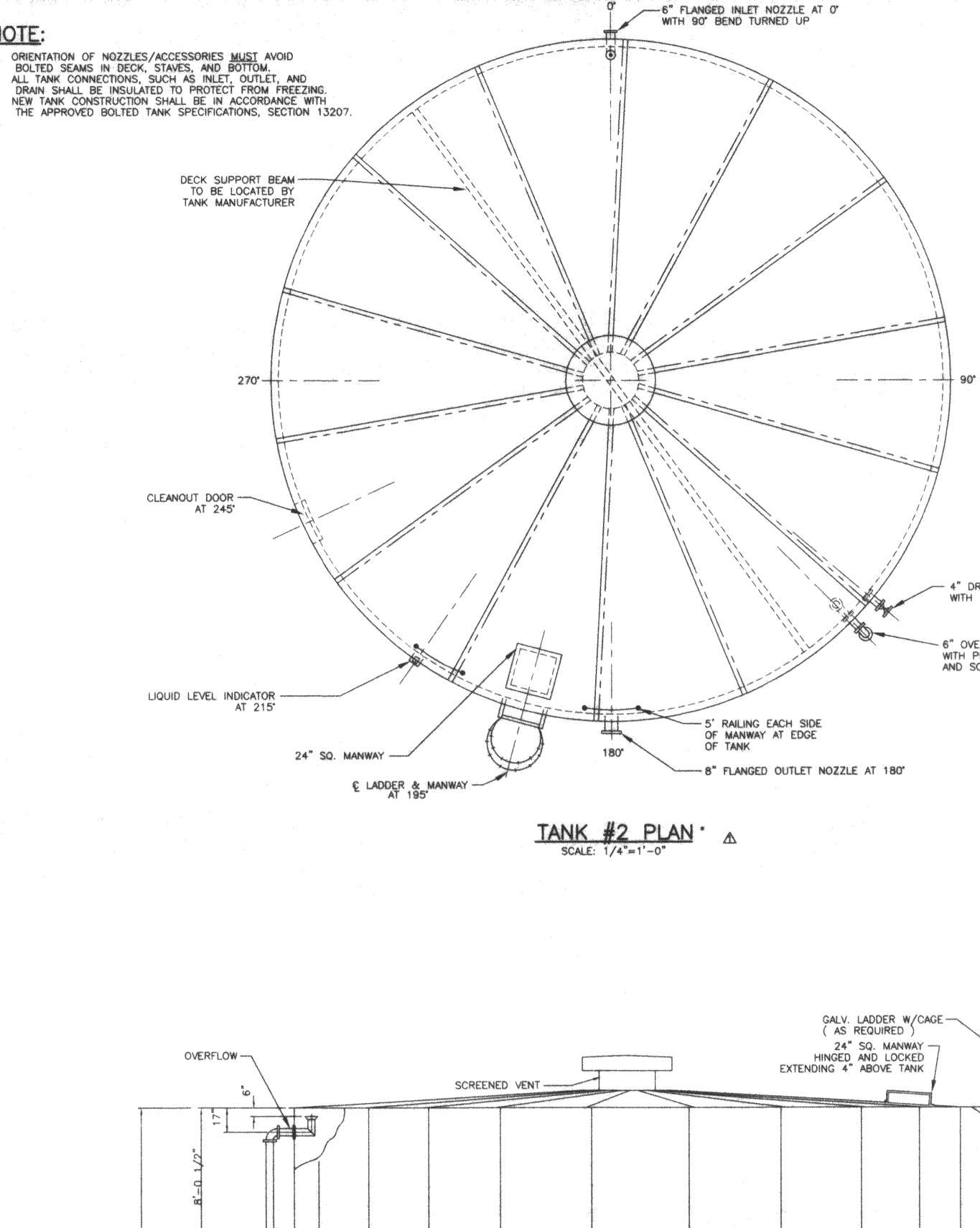
WILLIAM PHOFINSON III.
N. O.4328

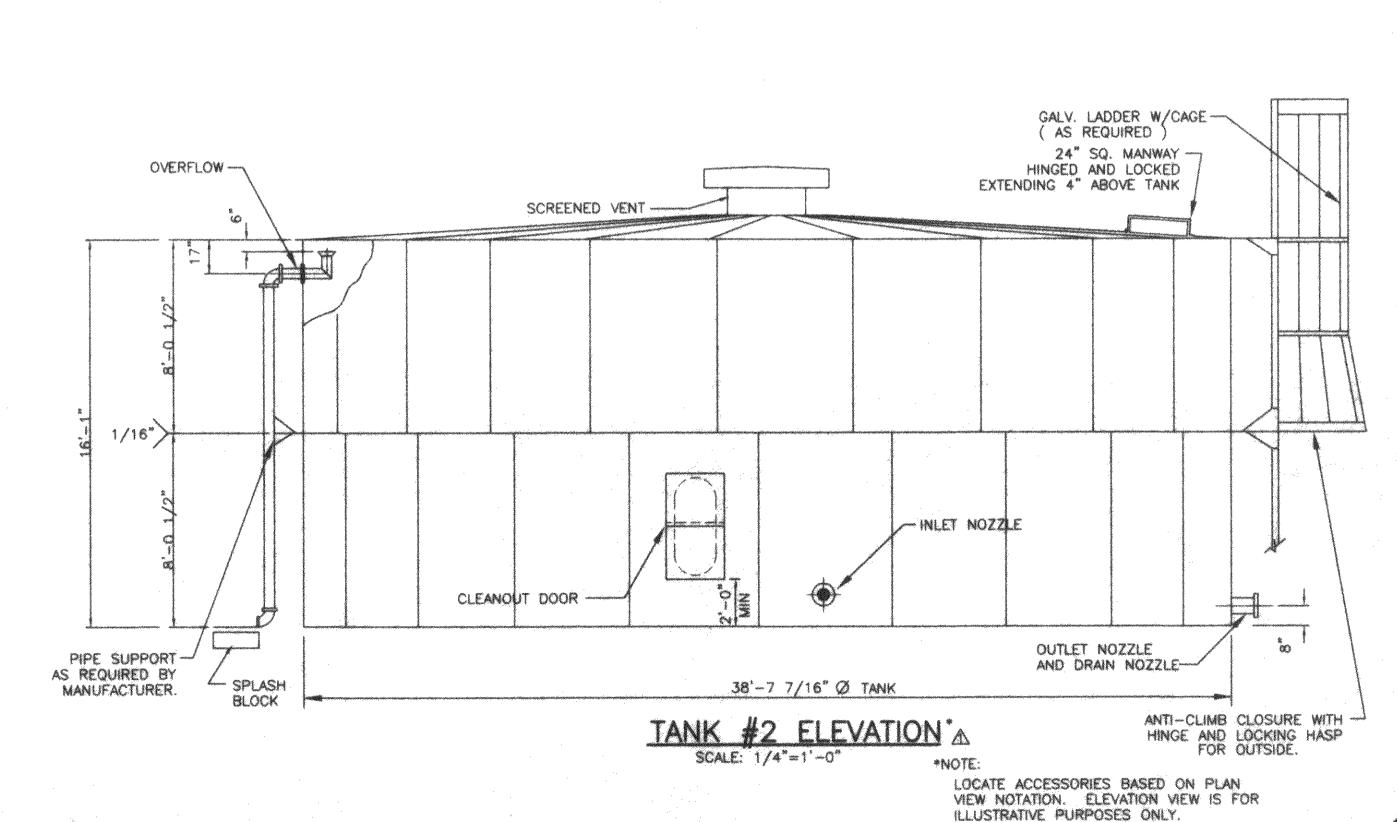
13A / 20

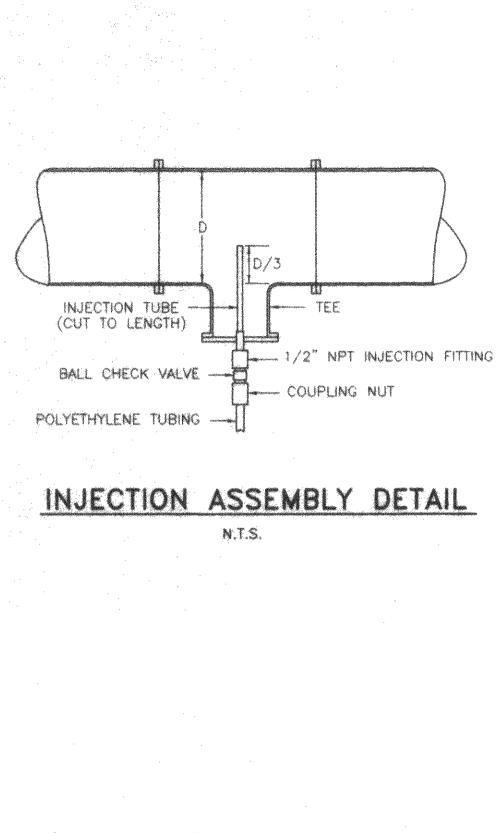


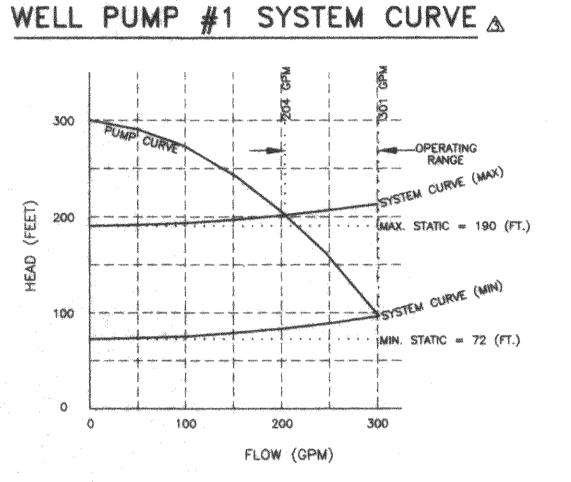


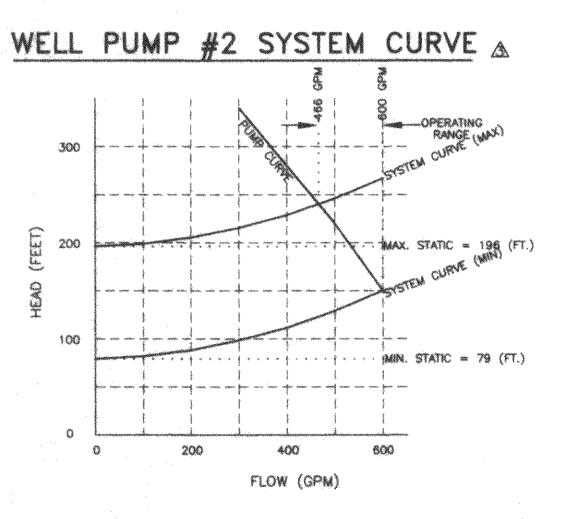
A NOTE:

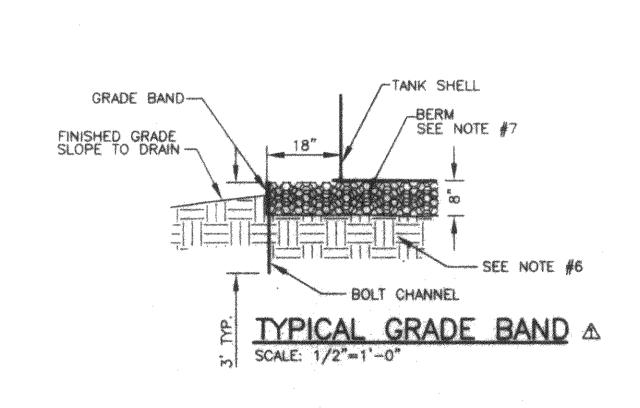












FLOW (GPM)

BOOSTER PUMP SYSTEM CURVE

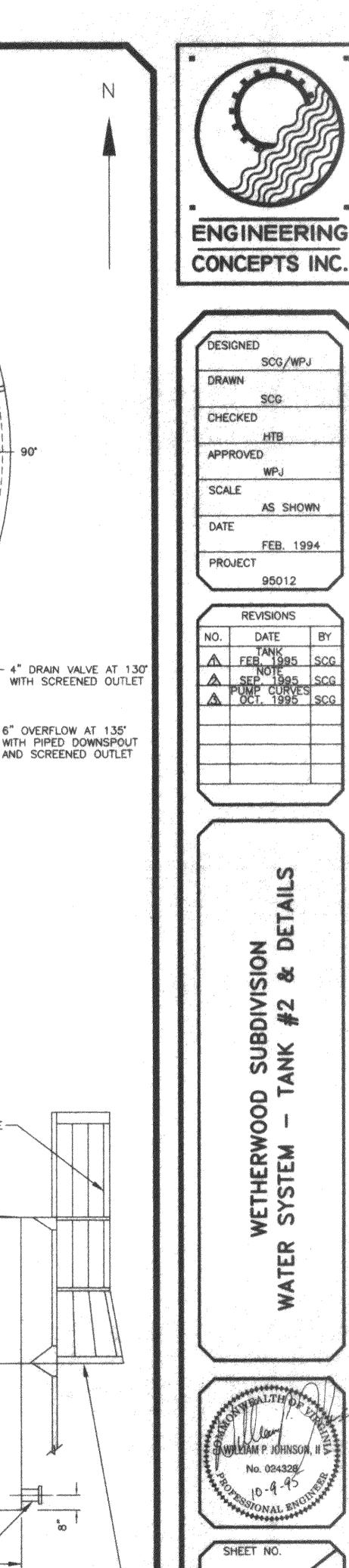
PRESSURE = 127 (FT.)

MIN. PRESSURE = 92 (FT.)

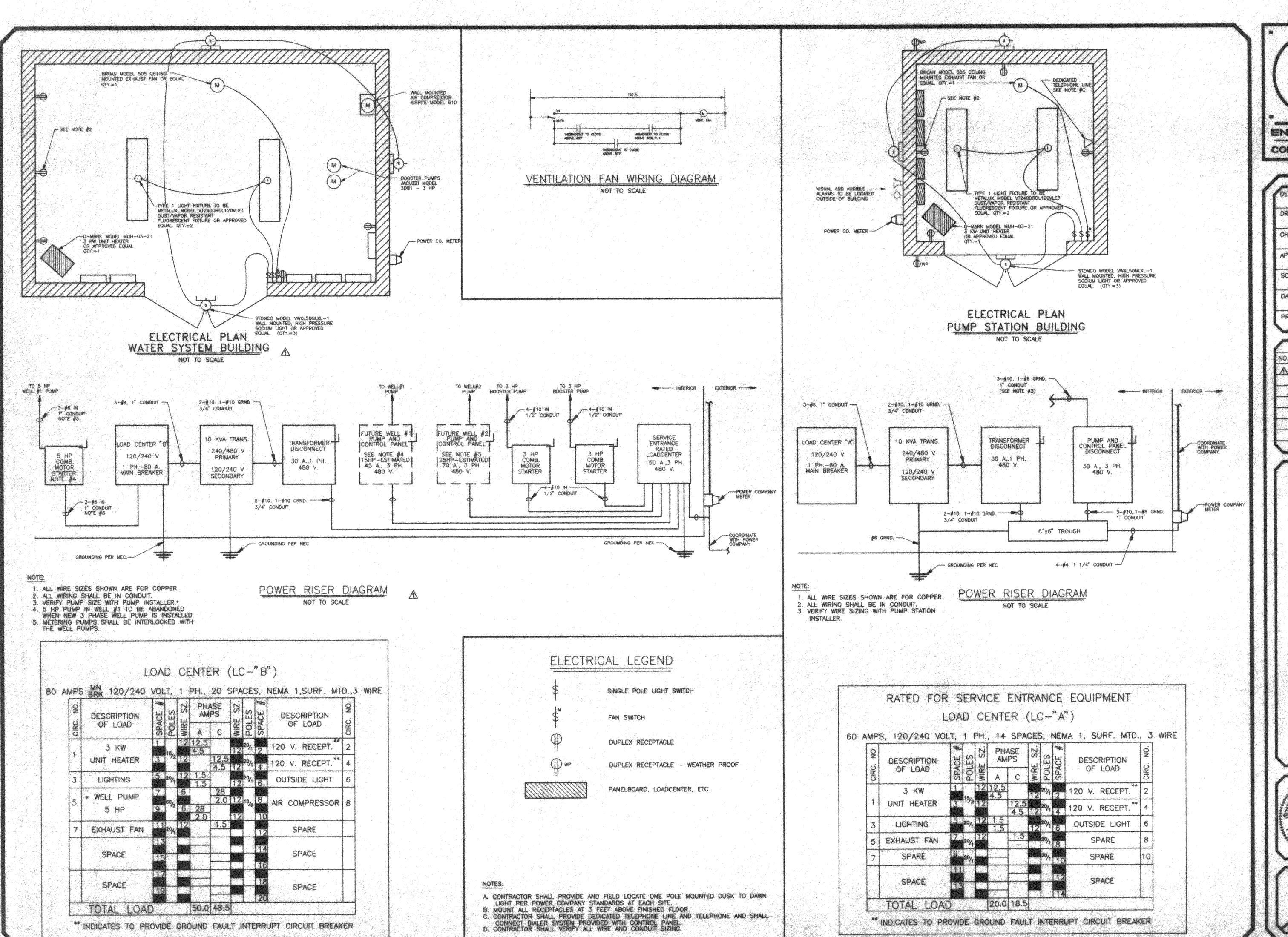
NOTES:

- GRADE BAND SHALL CONFORM WITH AWWAD103-87 TYPE '5' FOUNDATION SPECIFICATION.
- 2. FOUNDATION FOR SINGLE TANK INSTALLATION.
 3. THE BERM SHALL BE WELL GRADED STONE OR GRAVEL.
 4. THE BERM UNDER THE TANK SHELL SHALL BE LEVEL WITHIN 1/8" IN ANY 10' OF CIRCUMFERENCE AND WITHIN 1/2" IN THE TOTAL
- CIRCUMFERENCE. 5. FROST LINE AT FOUNDATION 36" MAXIMUM.
 6. REMOVE ANY UNSTABLE MATERIAL AND REPLACE WITH SUITABLE FILL, THEN COMPACT THOROUGHLY. CONTRACTOR SHALL FIELD VERIFY MINIMUM SOIL BEARING PRESSURE OF 2500 PSF.
- 7. PROVIDE A MINIMUM 8" LAYER OF COMPACTED CRUSHED STONE OR SAND TO PROVIDE CONTINUOUS SUPPORT OF THE TANK BOTTOM.
 8. CONTRACTOR SHALL VERIFY SUITABILITY OF FOUNDATION BASED ON
- FIELD CONDITIONS.

 9. TANK TO BE INSTALLED CONCENTRIC WITH GRADE BAND.



6" OVERFLOW AT 135" WITH PIPED DOWNSPOUT AND SCREENED OUTLET



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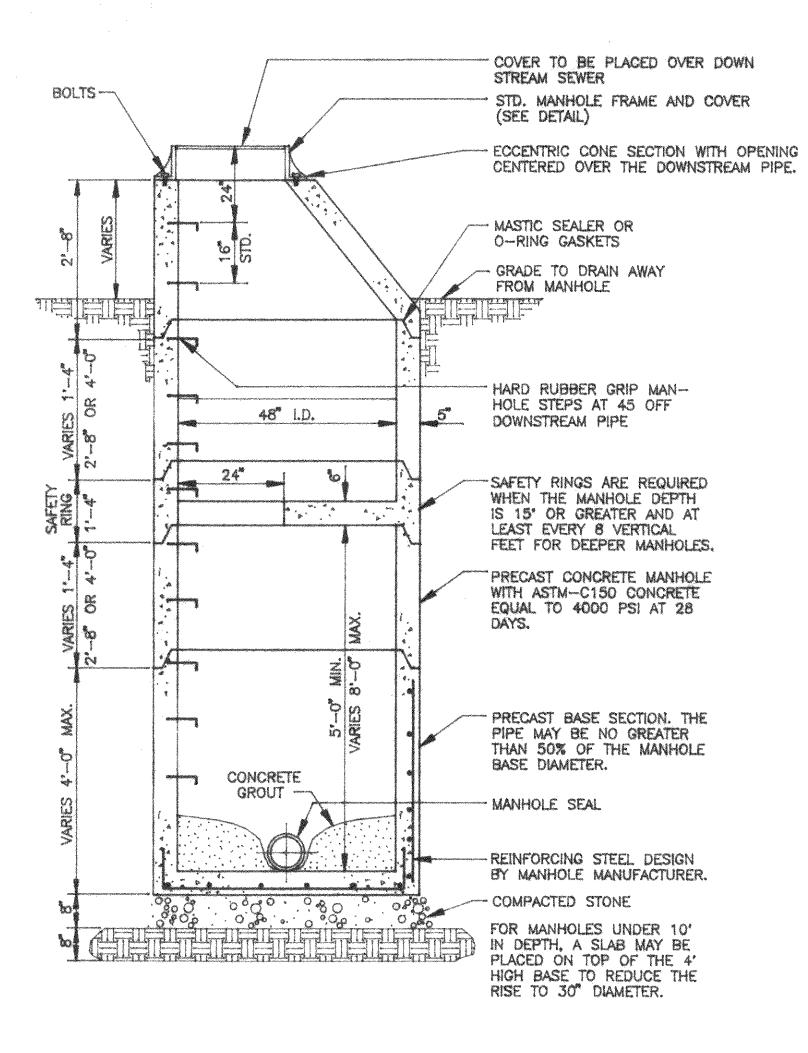
WATER SLOCK

A WAT

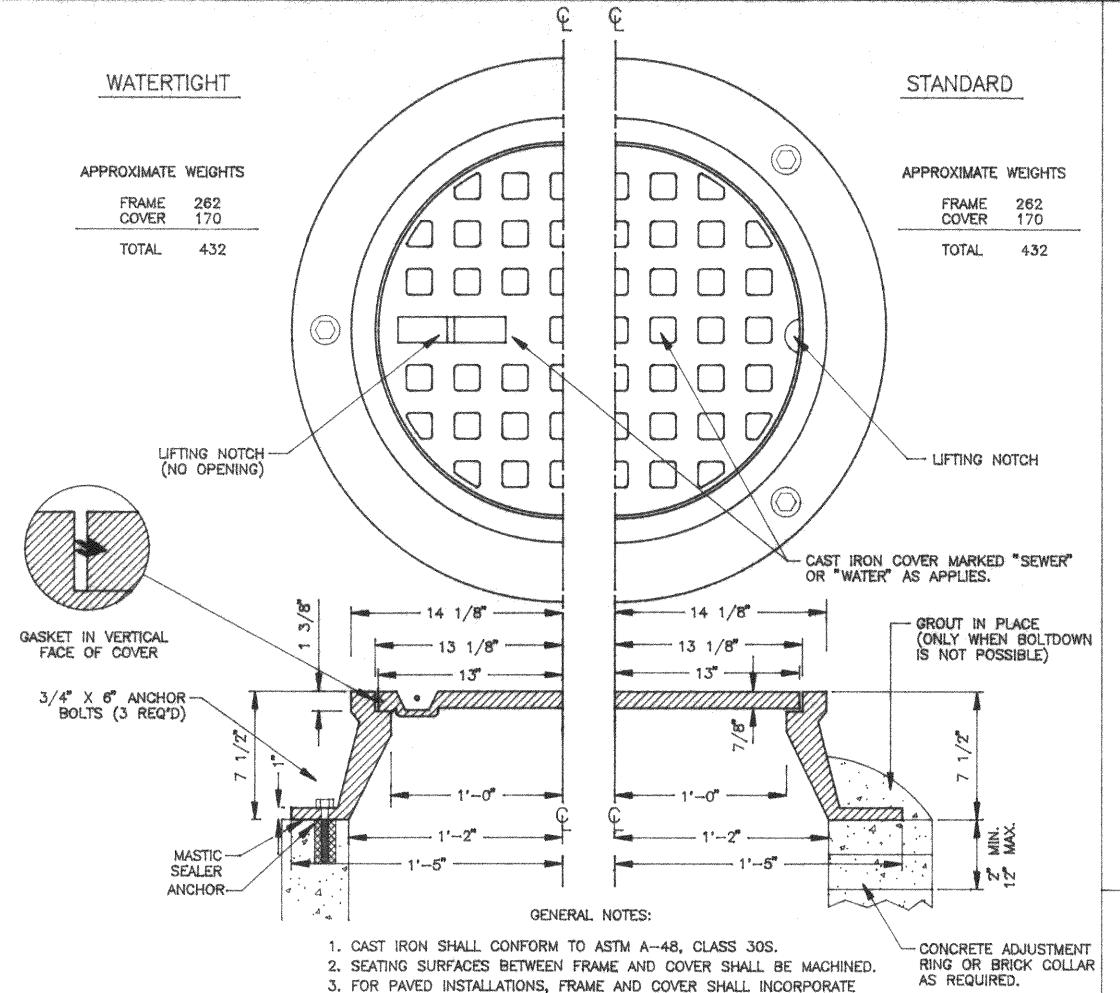
METHERWOOD SUBDIVISION SIGNATURE STATES OF SUBDIVISION SUBDIVISION

TORLHAM P. IOHNSON II

SHEET NO



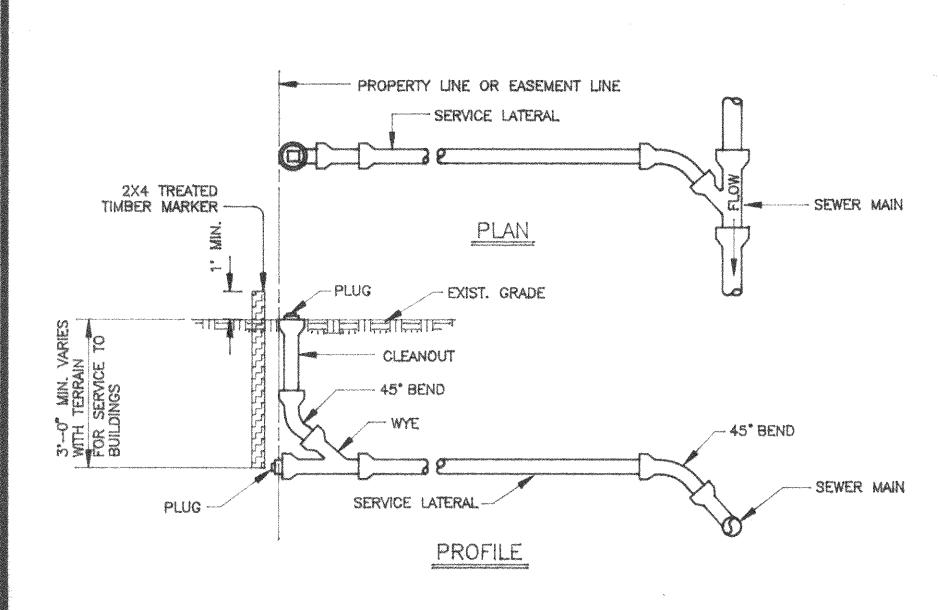
PRECAST ECCENTRIC MANHOLE



MANHOLE FRAME AND COVER

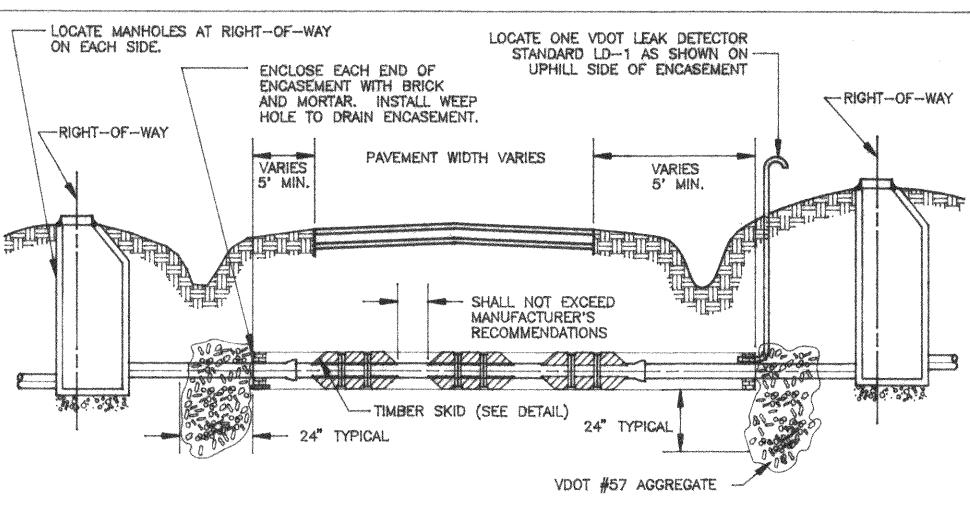
AN ELEVATABLE COVER DESIGN TO ALLOW COVER TO BE RAISED

DURING REPAVING OPERATIONS.



FOR RESIDENTIAL CONNECTIONS, LATERAL PIPES SHALL BE 4" DIA. PVC—SDR35 OR SCH. 40. FOR COMMERCIAL CONNECTIONS, THE LATERAL SIZE SHALL BE SPECIFIED ON THE PLANS BY THE ENGINEER.

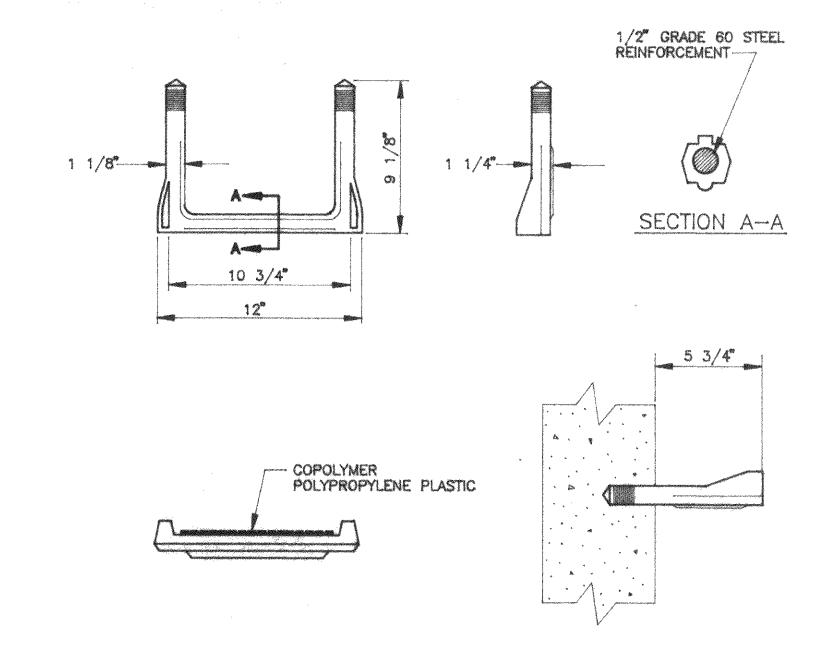
TYPICAL SERVICE CONNECTION WITH CLEANOUT



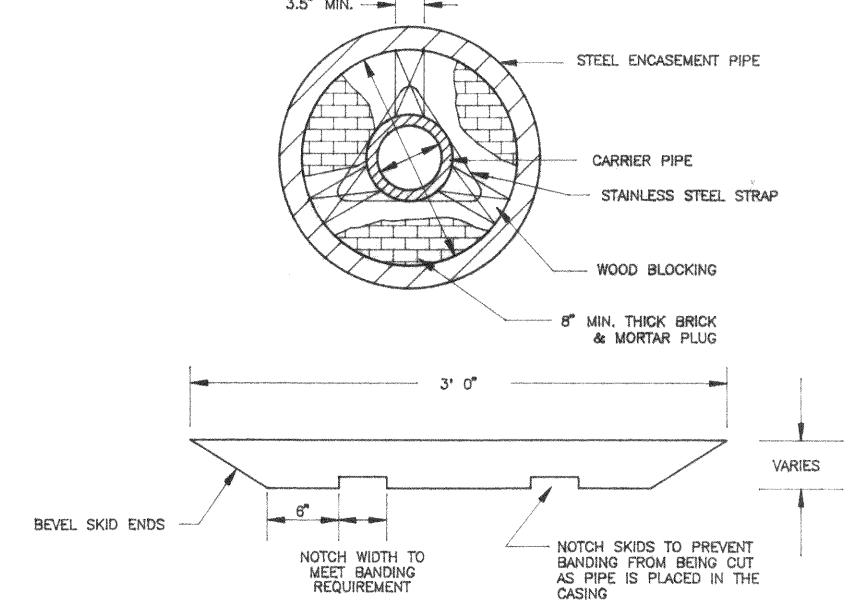
NOTES:

- 1. SLOPE ENCASEMENT TO MATCH SLOPE OF ENCASED SEWER AS SHOWN ON PLANS.
- 2. STEEL ENCASEMENT PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A139 FOR THE CLASS AND THICKNESS SPECIFIED AND SHALL HAVE BEVELED EDGES SUITABLE FOR FIELD WELDING. WALL THICKNESS OF PIPE SHALL BE 1/4" MINIMUM.
- 3. CARRIER PIPE SHALL BE PUSHED OR PULLED THROUGH THE ENCASEMENT PIPE SO THAT JOINTS ARE ALWAYS BEING COMPRESSED.
- 4. CARRIER PIPE SHALL BE WRAPPED WITH TAR PAPER AT MASONRY PLUG.
- 5. MASONRY PLUG SHALL BE WATERTIGHT.
- 6. FOR OPEN CUT INSTALLATIONS:
- A. CONTRACTOR SHALL REPLACE CUT MATERIAL WITH APPROVED CRUSHED AGGREGATE AND SHALL ACHIEVE 95% COMPACTION PER VDOT REQUIREMENTS.
- B. CONTRACTOR SHALL MATCH EXISTING PAVEMENT CROSS SECTION AND SHALL REPLACE
- PAVEMENT AND SURFACE TO ORIGINAL CONDITION OR BETTER.
- 7. FOR JACK AND BORE INSTALLATIONS:
 A. CONTRACTOR SHALL FIELD VERIFY LOCATION OF BORE PIT AND CONFIRM WITH ENGINEER BEFORE PROCEEDING WITH ENCASEMENT INSTALLATION.

ENCASED ROAD CROSSING - SEWER



MANHOLE STEP DETAIL

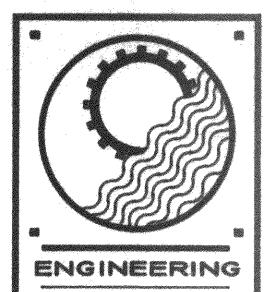


NOTES:

- 1. TIMBER SKIDS SHALL BE LOCUST, CYPRESS, PRESERVATIVE TREATED HARDWOOD, OR OTHER MATERIAL APPROVED BY THE ENGINEER.
- 2. TIMBER PRESERVATIVES SHALL BE USED ACCORDING TO THEIR SUITABILITY FOR THE CONDITION OF EXPOSURE TO WHICH THEY WILL BE SUBJECTED AND SHALL NOT BE USED INTERCHANGEABLY. TREATMENTS SHALL CONFORM TO THE FOLLOWING LIMITATIONS:
 - A. WATERBORNE PRESERVATIVES SHALL BE USED FOR TIMBER WHERE A CLEAN SURFACE IS DESIRABLE. THE MOISTURE CONTENT OF WOOD MATERIAL SHALL NOT BE MORE THAN 19 PERCENT AT THE TIME OF TREATMENT.
 - B. PRESERVATIVES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M133 EXCEPT THAT COAL TAR CREOSOTE SOLUTION WILL NOT BE PERMITTED.
 - C. PRESSURE TREATMENT SHALL CONFORM TO THE REQUIREMENTS OF AWPA C2.
- 3. METAL STRAPS AND CLIPS HOLDING BLOCKING TO CARRIER PIPE SHALL BE STAINLESS STEEL WITH A MINIMUM CROSS SECTION OF 0.014 SQ. IN. STRAP SPACING SHALL BE A MINIMUM OF TWO (2) BANDS PER SKID LENGTH.

TIMBER SKID

SOURCE: 1993 VDOT ROAD AND BRIDGE STANDARDS SEC. 1404.01



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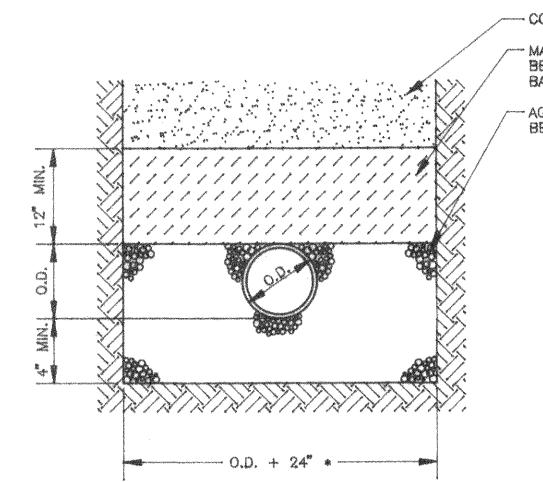
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FTHERWOOD SUBDIVISION SEWER DETAILS



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1. WHERE THE TRENCH BOTTOM IS IN ROCK, IT

BELOW THE BOTTOM OF THE PIPE AND

BACKFILLED WITH BEDDING MATERIAL.

2. WHERE PIPE FOUNDATIONS ARE YIELDING,

* FOR PIPE LESS THAN 12" THE TRENCH WIDTH MAY BE 36" MAXIMUM.

BEDDING DETAIL

REF: 1993 VDOT ROAD AND BRIDGE STANDARDS DETAIL 1401.01

8" BEDDING MATERIAL.

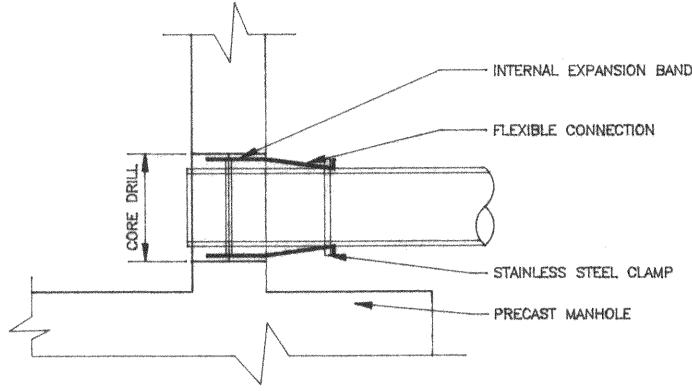
SHALL BE EXCAVATED TO A MINIMUM OF 8"

PIPE SHALL BE BEDDED ON A MINIMUM OF

NOTES:

- COMPACTED BACKFILL MAXIMUM PARTICLE SIZE SHALL
BE LESS THAN 1" FOR INITIAL BACKFILL.

-AGGREGATE #57 OR #58 BEDDING



ALL PIPELINE CONNECTIONS TO PRECAST MANHOLES SHALL BE MADE WITH A FLEXIBLE BOOT. THE BOOT SHALL MEET ASTM SPECIFICATION C-923. BOOT SHALL BE MADE FROM NEOPRENE RUBBER AND HAVE A 3/8" MINIMUM WALL THICKNESS THROUGHOUT. THE INTERNAL EXPANSION BAND TO SECURE THE BOOT IN PLACE SHALL CONFORM TO ALUMINUM MATERIAL SPECIFICATION 6061-T6. THE EXTERNAL BAND TO CLAMP AND SEAL THE BOOT TO THE PIPE SHALL BE STAINLESS STEEL-CORROSION RESISTANT CONFORMING TO ASTM SPECIFICATION A-167. THE PORT TO RECEIVE THE BOOT SHALL BE CORE DRILLED AND SHALL ALLOW FOR LATERAL AND VERTICAL ANGULAR ADJUSTMENT THRU 20 DEGREES IN ALL DIRECTIONS. ALL FIELD INSTALLATION OF PIPE THRU FLEXIBLE CONNECTION SHALL BE DONE IN ACCORDANCE

- INTERNAL EXPANSION BAND

WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

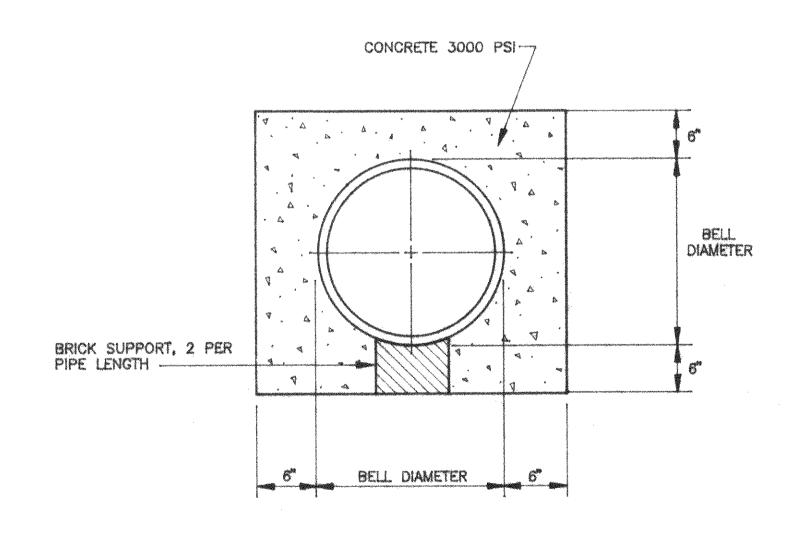
FLEXIBLE CONNECTION DETAIL

REF: 1993 VOOT ROAD AND BRIDGE STANDARDS DETAIL 1411.02

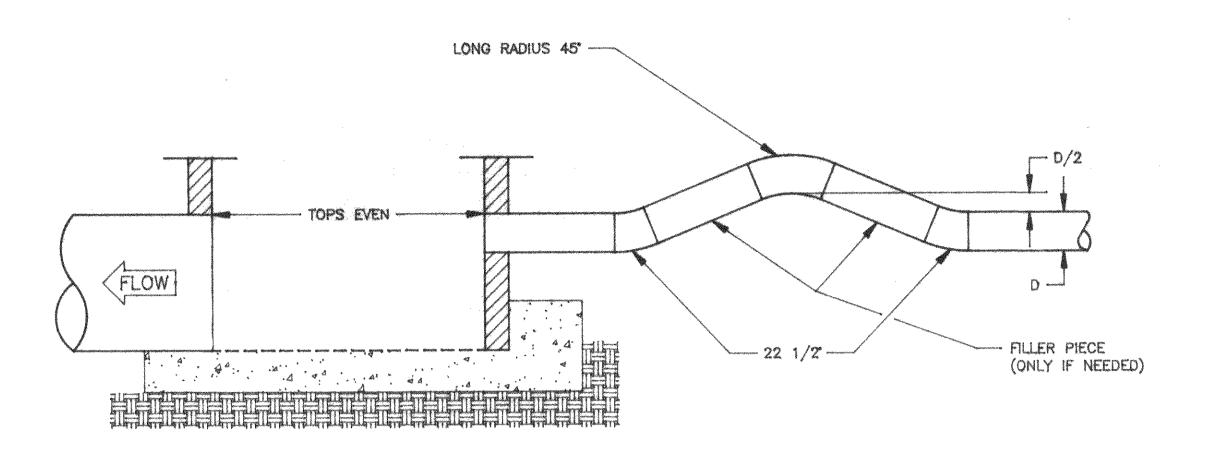
PIPE TO BE PLACED AS CLOSE AS POSSIBLE TO M.H. WALL AND TO BE SECURED TO THE WALL WITH 1 1/2" X 12 GA. STAINLESS STEEL CLAMPS, 6' O.C. MAX. ANCHOR TO M.H. WALL WITH 2 1/2" STAINLESS STEEL ANCHOR BOLTS. PRECAST MANHOLE 2'-0" MAX TEE WITH SCREW CAP 8" PIPE OR SMALLER ----INFLUENT SEWER-COMPRESSION COUPLING -G CLAMP DROP FITTINGS AND PIPE TO BE SAME SIZE AS INFLUENT SEWER PVC PIPE ---ELBOW EMBEDDED IN CONG. AT 45" WITH SEWER FLOW 80 eg 0.20 ABOVE EXIT PIPE INVERT INSIDE DROP CONNECTION

NOTES: 1. DROP CONSTRUCTION IS TO BE AT EVERY LOCATION WHERE THE INFLUENT INVERT IS GREATER THAN 2'-0" ABOVE THE EFFLUENT SEWER INVERT.

DROP CONSTRUCTION AT STANDARD MANHOLE



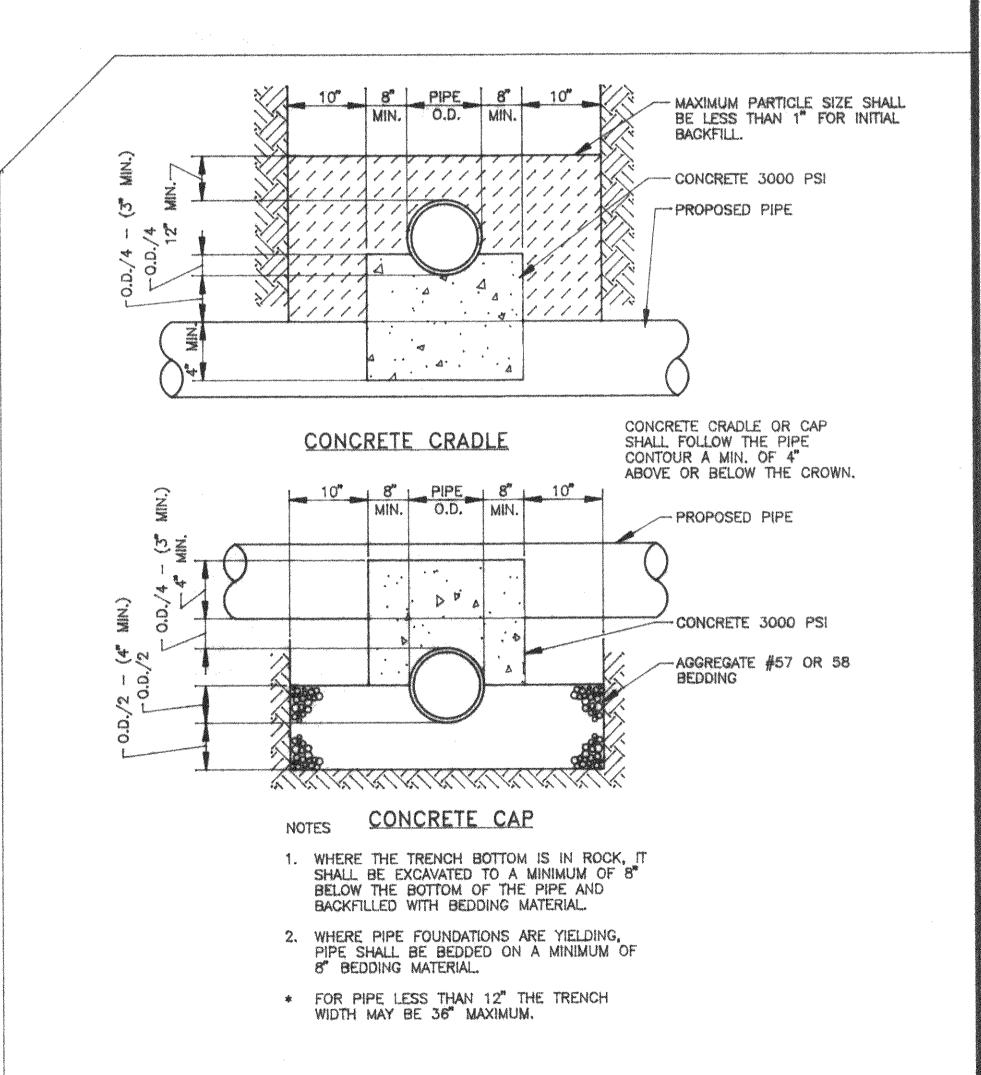
CONCRETE ENCASED PIPE



ALL JOINTS SHALL BE RESTRAINED BY RETAINER GLANDS OR THREADED RODS (GALV.).

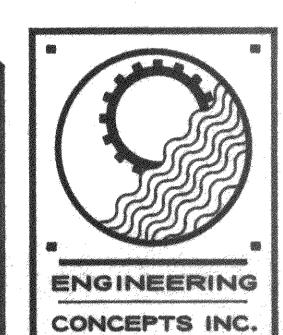
FORCE MAIN DISCHARGE

REF: 1993 VDOT ROAD AND BRIDGE STANDARDS DETAIL 1411.02



UTILITY PROTECTION DETAILS

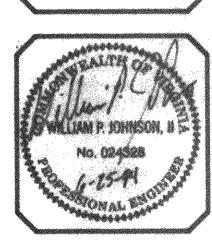
REF: 1993 VOOT ROAD AND BRIDGE STANDARDS DETAIL 1401.01

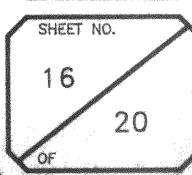


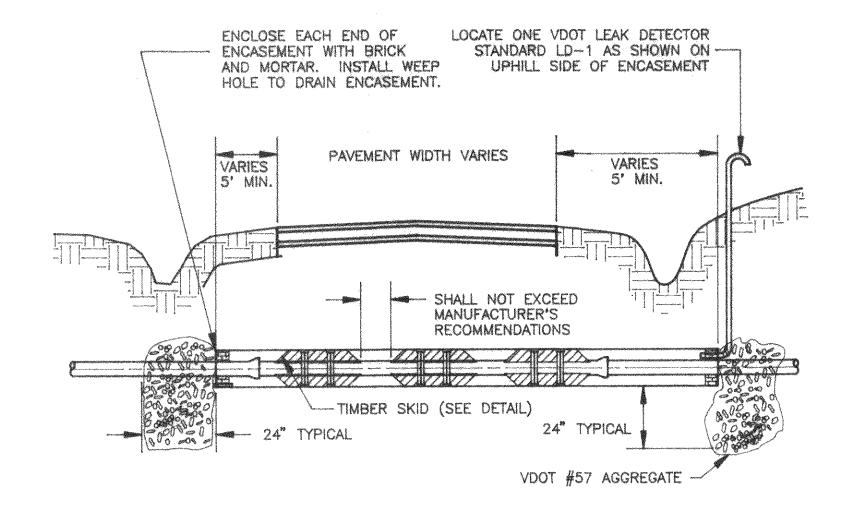
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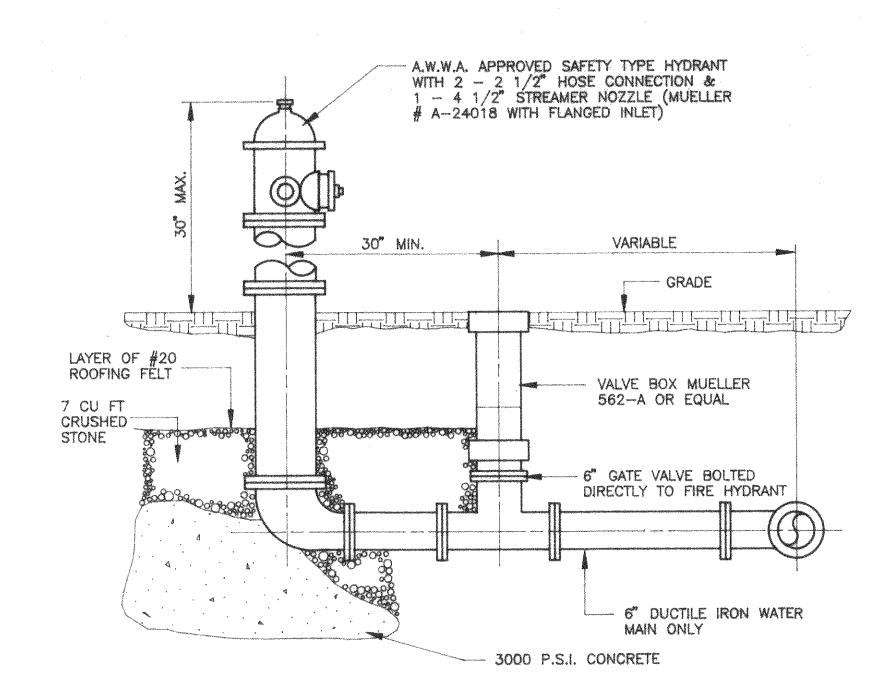


NOTES:

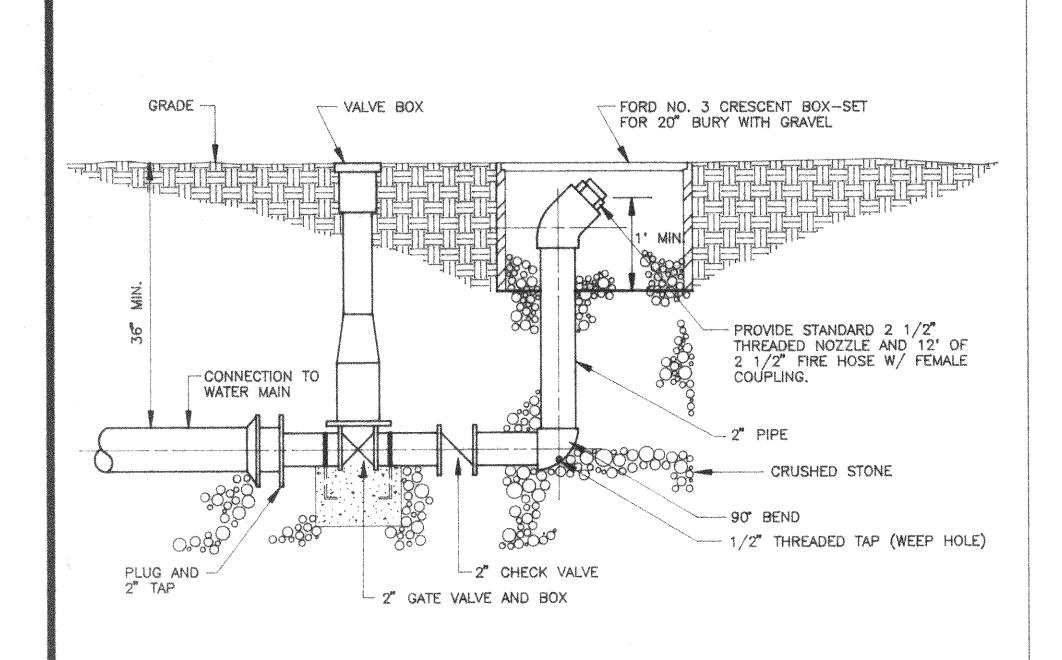
- 1. SLOPE ENCASEMENT TO MATCH SLOPE OF ENCASED WATER AS SHOWN ON PLANS.
- 2. STEEL ENCASEMENT PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A139 FOR THE CLASS AND THICKNESS SPECIFIED AND SHALL HAVE BEVELED EDGES SUITABLE FOR FIELD WELDING. WALL THICKNESS OF PIPE SHALL BE 1/4" MINIMUM.
- 3. CARRIER PIPE SHALL BE PUSHED OR PULLED THROUGH THE ENCASEMENT PIPE SO THAT JOINTS ARE ALWAYS BEING COMPRESSED.
- 4. CARRIER PIPE SHALL BE WRAPPED WITH TAR PAPER AT MASONRY PLUG.
- 5. MASONRY PLUG SHALL BE WATERTIGHT.
- 6. FOR OPEN CUT INSTALLATIONS:
- A. CONTRACTOR SHALL REPLACE CUT MATERIAL WITH APPROVED CRUSHED AGGREGATE AND
- SHALL ACHIEVE 95% COMPACTION PER VDOT REQUIREMENTS.

 B. CONTRACTOR SHALL MATCH EXISTING PAVEMENT CROSS SECTION AND SHALL REPLACE PAVEMENT AND SURFACE TO ORIGINAL CONDITION OR BETTER.
- 7. FOR JACK AND BORE INSTALLATIONS:
 A. CONTRACTOR SHALL FIELD VERIFY LOCATION OF BORE PIT AND CONFIRM WITH ENGINEER BEFORE PROCEEDING WITH ENCASEMENT INSTALLATION.

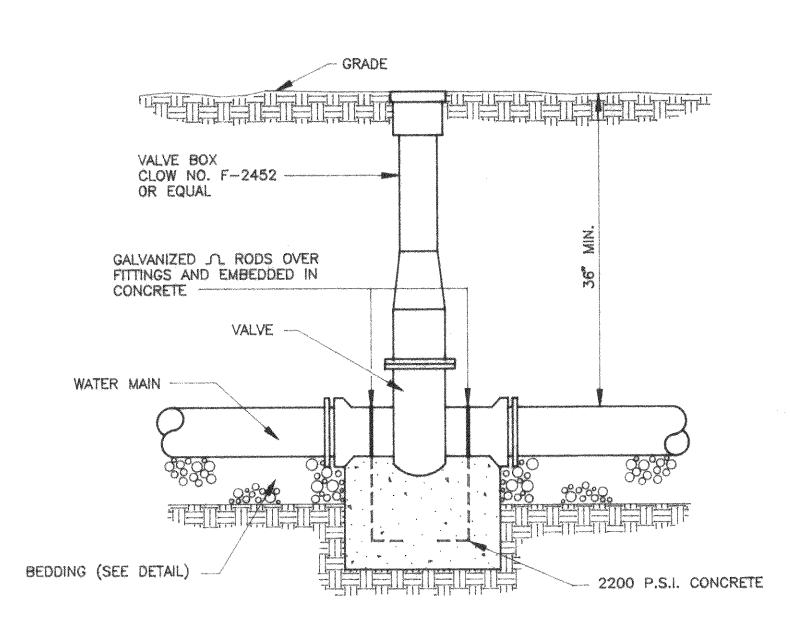
ENCASED ROAD CROSSING - WATER



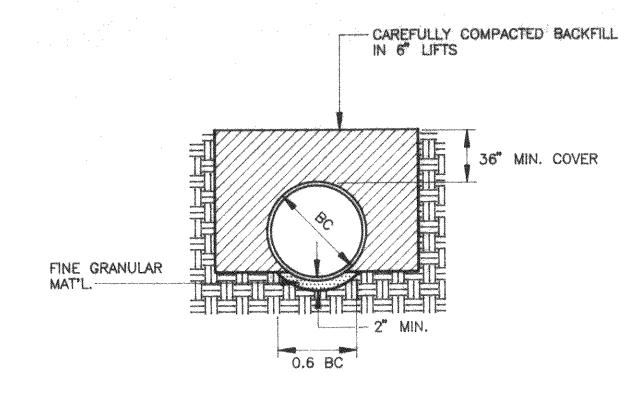
FIRE HYDRANT DETAIL



BLOW-OFF ASSEMBLY



TYPICAL VALVE INSTALLATION



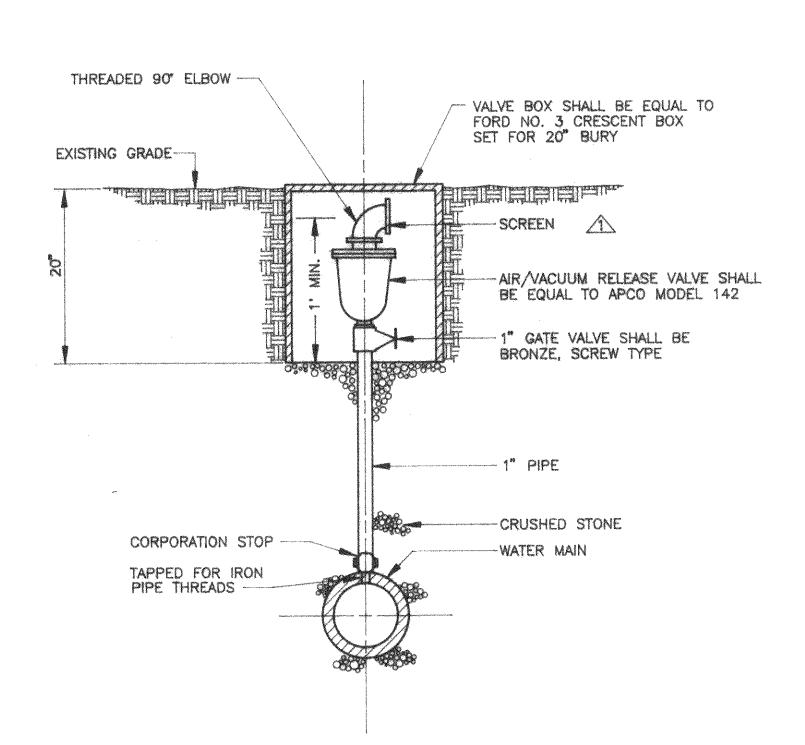
SHAPED BOTTOM
W/ TAMPED BACKFILL

NOTES: 1. WHERE THE TRENCH BOTTOM IS IN ROCK, IT SHALL BE EXCAVATED TO A MINIMUM OF 8" BELOW THE THE BOTTOM OF THE PIPE AND BACKFILLED WITH

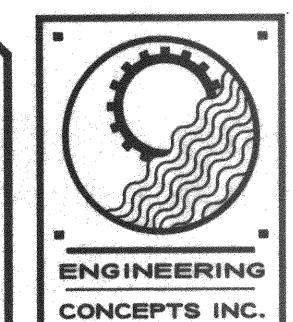
- SUITABLE BEDDING MATERIAL.

 2. WHERE PIPE FOUNDATIONS ARE YIELDING, PIPE SHALL BE BEDDED ON A MINIMUM OF 8" SUITABLE BEDDING MATERIAL.
- 3. SHAPE TRENCH BOTTOM FOR PIPE BARREL, JOINTS, AND FITTINGS TO PROVIDE CONTINUOUS SUPPORT AND NO POINT LOADING OF PIPE, JOINTS, AND FITTINGS.

BEDDING DETAIL



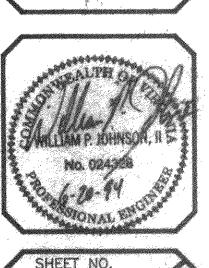
AUTOMATIC AIR/VACUUM RELEASE VALVE



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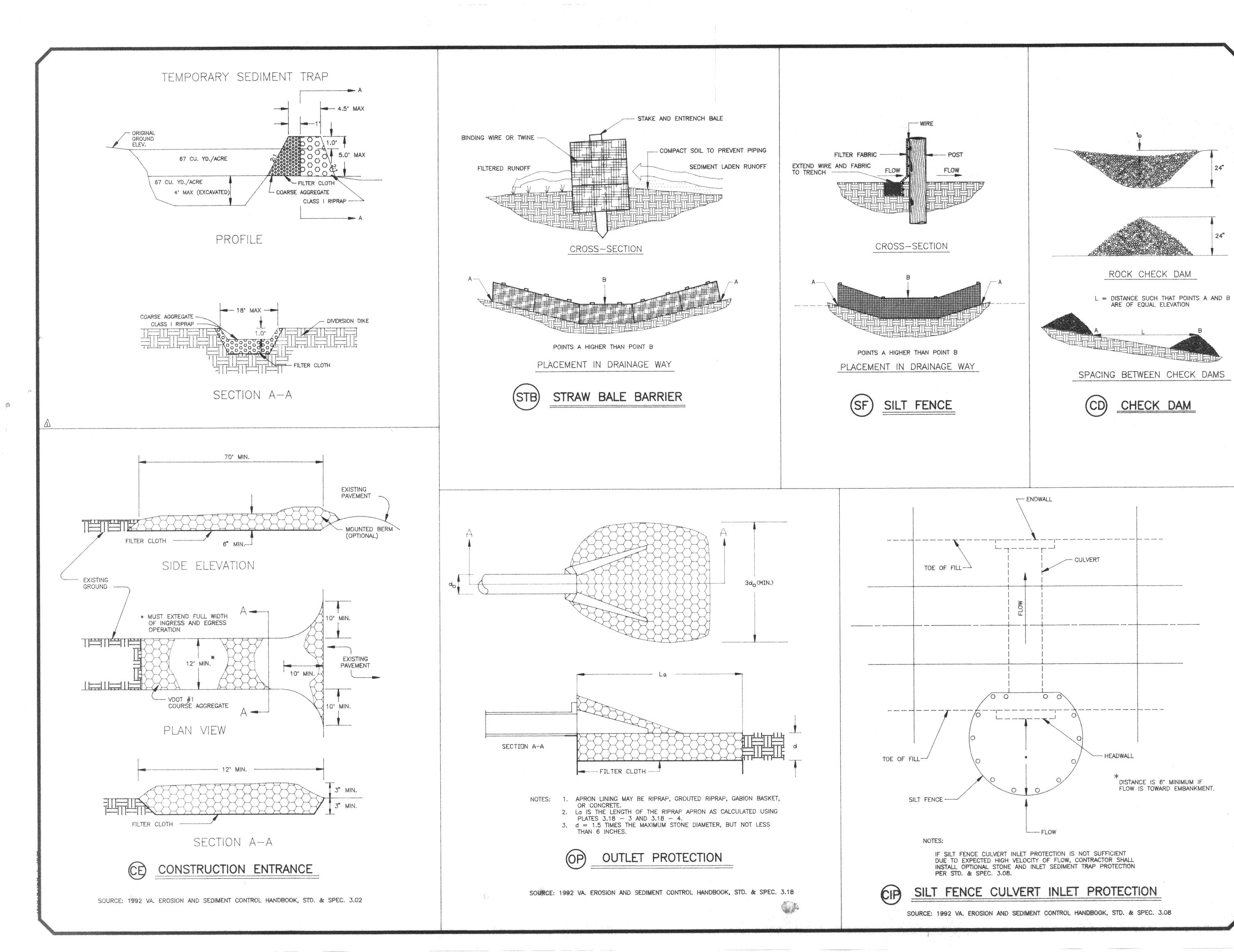
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WETHERWOOD SUBDIVISION WATER DETAILS



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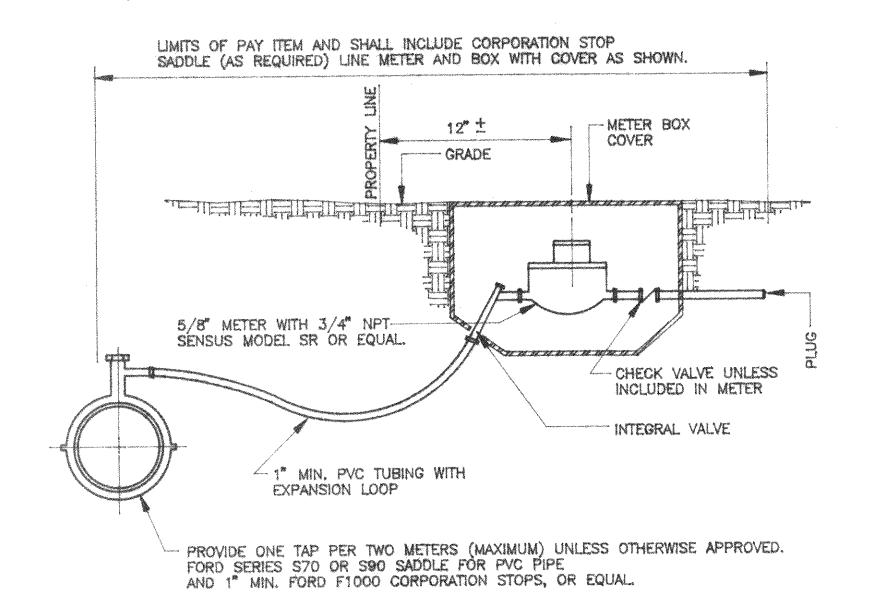
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WETHERWOOD SUBDIVISION SPOSION AND SEDIMENT CONTROL DETAIL

E VILLIAM P. JOHNSON, II S. No. 024328

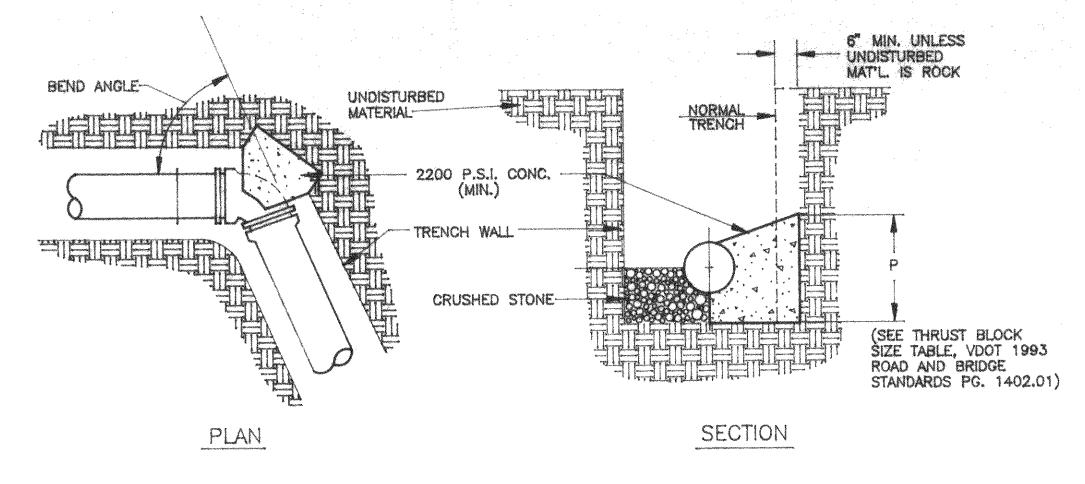
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NOTE:
METER BOX SHALL BE FORD YOKE BOX OR EQUAL.
PROVIDE DOUBLE BOX INSTALLATION WHERE EVER
POSSIBLE TO SERVE TWO CONNECTIONS FROM ONE LOCATION.

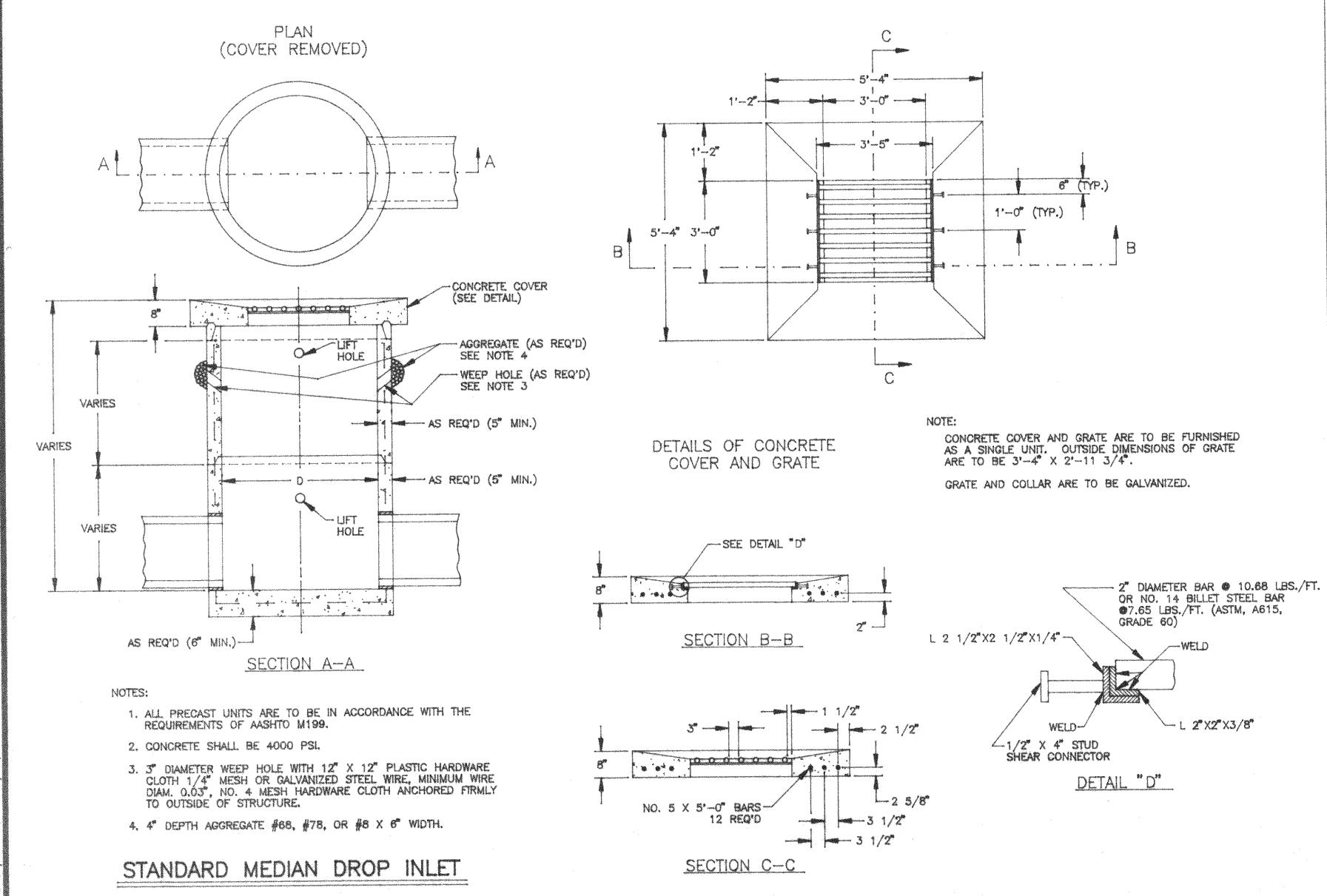
TYPICAL 5/8", 3/4" & 1" CONNECTION

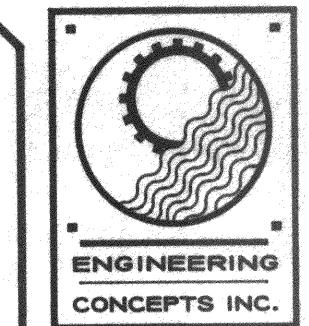


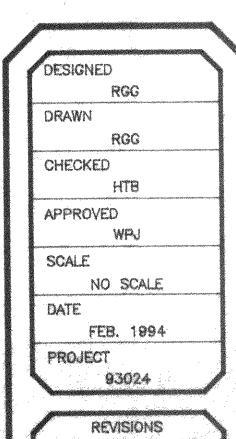
NOTES:

- 1. THRUST BLOCKS ARE REQUIRED AT ALL BENDS OF MORE THAN 10.
- 2. KEEP CONCRETE CLEAR OF JOINT AND JOINT ACCESSORIES.
- 3. BEARING SURFACE OF THRUST BLOCKS MUST BE NORMAL TO RESULTANT THRUST OF BEND AND BEAR ON SUITABLE UNDISTURBED MATERIAL.

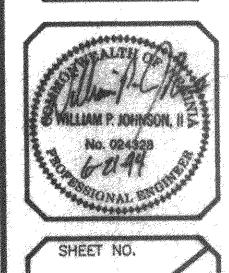
HORIZONTAL THRUST BLOCK DETAIL







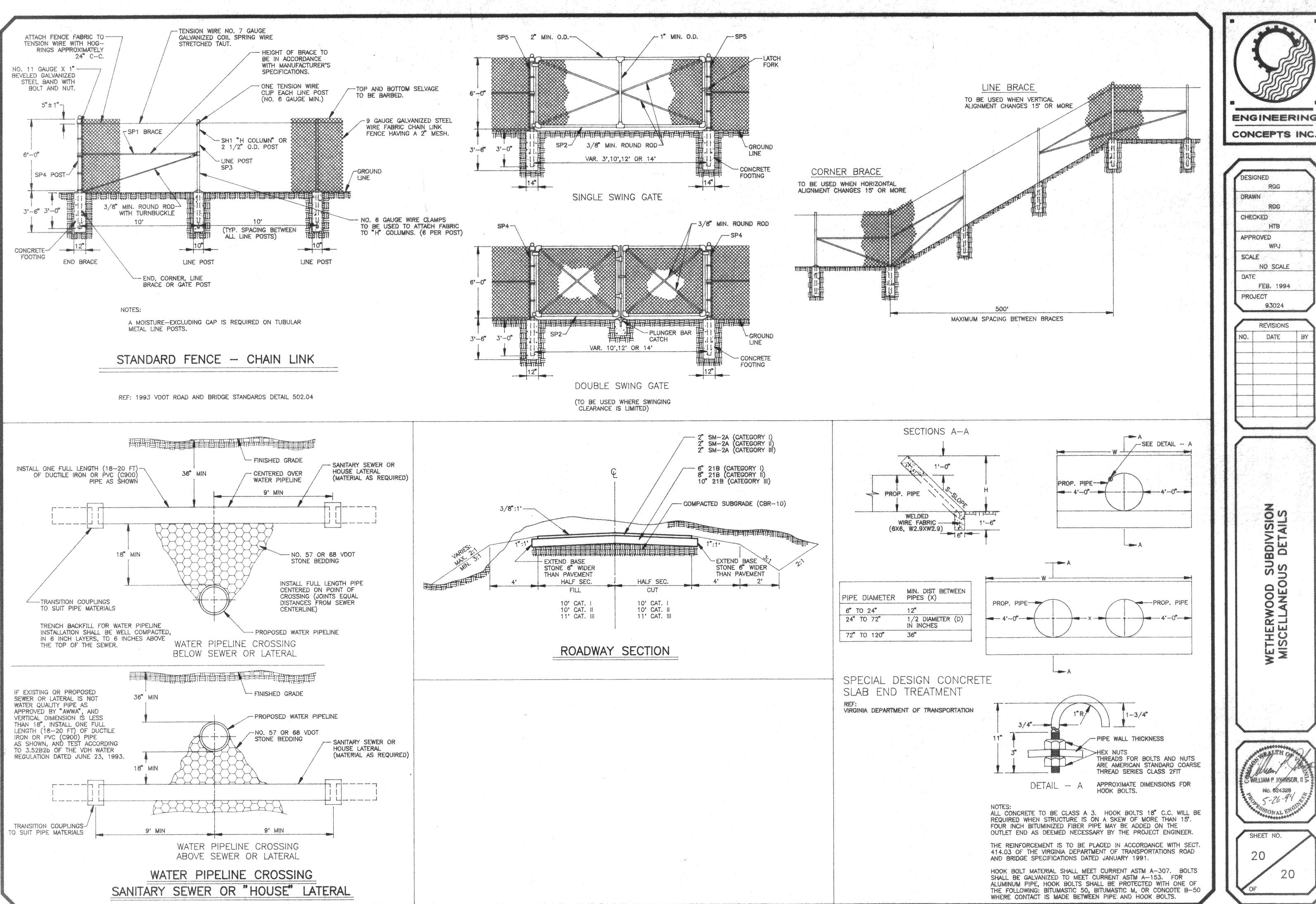
WETHERWOOD SUBDIVISION
MISCELLANEOUS DETAILS

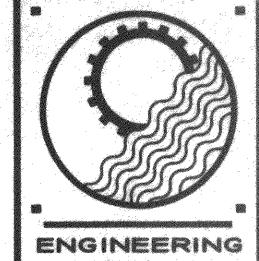


SHEET NO.

19
20
OF

SOURCE: 1993 VDOT ROAD AND BRIDGE STANDARDS SEC. 104.22 & 104.23





DESIGNED RGG DRAWN CHECKED HTB APPROVED WPJ SCALE NO SCALE FEB. 1994 PROJECT 93024

REVISIONS DATE

> BDIVISION WETHERWOOD MISSELLANDO

