ABBREVIATIONS:

R/W - RIGHT-OF-WAY CORRUGATED METAL PIPE DIRECT BURIED CABLE DUCTILE IRON ECOMMUNICATIONS MANHOLE - UTILITY POLE ELECTRICAL BOX - FIBEROPTICS

GENERAL NOTES

OWNER: ROGERS-CHENAULT INC. 7240 LEE DAVIS ROAD MECHANICSVILLE, VA 23111 ATTN: JIM DUKE PHONE: (804) 730-7195 FAX: (804) 730-2079

MECHANICAL JOINT

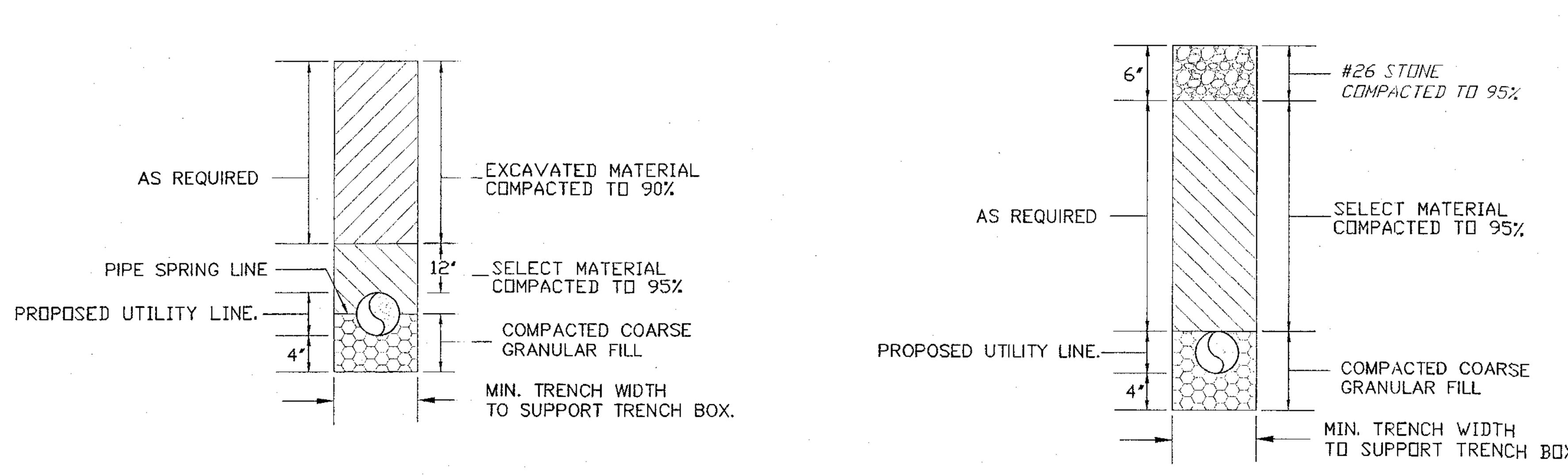
1001 BOULDERS PARKWAY, SUITE 300 RICHMOND, VIRGINIA 23225 ATTN: JUDY DING, P.E. PHONE: (804) 200-6392 FAX: (804) 560-1438

CONSTRUCTION NOTES

- DISTURBED AREAS SHALL BE KEPT TO A MINIMUM, AND RESTORATION OF SUCH AREAS SHALL BE DONE BY THE CONTRACTOR AS QUICKLY AS POSSIBLE. ALL DISTURBED AREAS SHALL BE SEEDED OR PAVED WITHIN 7 DAYS AFTER BEING DISTURBED OR BACKFILLED, OR AS DIRECTED BY THE INSPECTOR ASSIGNED TO THE PROJECT.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE V.D.O.T. ROAD AND BRIDGE SPECIFICATIONS AND ROAD AND BRIDGE STANDARDS. CONTRACTOR SHALL REPLACE ALL EXISTING ROAD SIGNS DISTURBED OR DESTROYED
- DURING CONSTRUCTION. ALL STORM SEWER REPLACED DURING CONSTRUCTION SHALL HAVE A MINIMUM OF 4" OF AGGREGATE BEDDING MATERIAL BENEATH THE PIPE.
- . ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE <u>VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK</u>, AND SECTION 1.5 OF THE E&S REGULATIONS OF THE VIRGINIA DIVISION OF SOIL AND WATER CONSERVATION (VR625-02-00). THE CONTRACTOR SHALL INSTALL SILT FENCE OR STRAW BALE DITCH CHECKS AT LOCATIONS NEEDED TO CONTAIN EROSION, AND AS DIRECTED BY THE COUNTY INSPECTOR.
- 7. FINAL ACCEPTANCE BY THE COUNTY AND STATE SHALL NOT BE MADE UNTIL ALL WORK SHOWN ON THE APPROVED PLANS IS COMPLETED, INCLUDING PAVING, GRADING AND ALL
- WHERE UNSUITABLE MATERIAL IS ENCOUNTERED, IT SHALL BE REMOVED WHERE NECESSARY, AND REPLACED WITH SUITABLE MATERIAL TO THE SATISFACTION OF THE STATE OR COUNTY INSPECTOR.
- 9. ALL TRAFFIC CONTROL SHALL BE INSTALLED AT THE CONTRACTOR'S EXPENSE, AND SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE <u>VIRGINIA WORK AREA</u> PROTECTION MANUAL, ISSUED BY V.D.O.T.
- 10. ALL WATERLINE VALVES AND ANY ASSOCIATED CONCRETE COLLARS MUST BE FLUSH WITH THE FINISHED GRADE ELEVATION.
- 1. SUBGRADE MUST BE APPROVED BY THE COUNTY INSPECTOR FOR GRADE, TAMPED AND COMPACTED BEFORE BASE MATERIAL IS PLACED.
- 12. BASE MATERIAL MUST BE APPROVED BY THE COUNTY INSPECTOR FOR DEPTH, TAMPED AND COMPACTED BEFORE SURFACE TREATMENT IS APPLIED.
- 13. SURFACE TREATMENT SHALL NOT BE APPLIED BETWEEN NOVEMBER 1st AND APRIL 1st WITHOUT WRITTEN AUTHORIZATION FROM V.D.O.T.
- 14. A TACK COAT AND PRIME COAT SHALL BE APPLIED BETWEEN THE PROPOSED PAVEMENT AND AGGREGATE SECTIONS IN ACCORDANCE WITH THE LATEST EDITION OF THE V.D.O.T. ROAD AND BRIDGE SPECIFICATIONS. A TACK COAT SHALL ALSO BE APPLIED TO ANY EXISTING PAVEMENT UPON THE COMMENCEMENT OF A PAVEMENT OVERLAY OPERATION.
- 15. BITUMINOUS SURFACES ARE TO BE APPLIED IN ACCORDANCE WITH THE LATEST EDITION OF THE V.D.O.T. ROAD AND BRIDGE SPECIFICATIONS.
- 16. STAKING FOR CONSTRUCTION, TO ASSURE ADHERENCE WITH EASEMENT REQUIREMENTS, SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR IN THE COMMONWEALTH OF VIRGINIA.
- 17. THE HORIZONTAL DATUM FOR THIS PROJECT IS LOCAL AND THE VERTICAL DATUM FOR ALL ELEVATIONS SHOWN IS LOCAL.
- 18. DURING CONSTRUCTION, ALL STORM INLETS SHALL BE PROTECTED BY SILT TRAPS MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
- 19. UPON REQUEST, CONTRACTOR SHALL TURN OVER ALL REMOVED MATERIALS TO THE COUNTY.
- 20. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL EXISTING FEATURES SUCH AS SIDEWALKS. BRICKWORK, CULVERTS, FENCES, SHRUBS, PLANTERS, ETC., TO THEIR ORIGINAL LOCATION AND CONDITION WHICH EXISTED PRIOR TO CONSTRUCTION. TOTAL REPLACEMENT MAY BE NECESSARY.
- 21. THE ALLOWABLE PER JOINT DEFLECTION FOR PIPES TO BE LAID WITHOUT FITTINGS SHALL BE ONE-HALF THAT RECOMMENDED BY AWWA STANDARDS OR ONE-HALF THE MANUFACTURER'S ALLOWABLE LIMITS, WHICHEVER IS LESS.
- 22. SAND OR AN ACCEPTABLE SUBSTITUTE SHALL BE PLACED ON THE ROAD PRIOR TO PLACING ANY EXCAVATION ON THE ROADWAY. THE CONTRACTOR SHALL MAKE PROVISIONS TO MINIMIZE THE TRANSPORT TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
- 23. CONTRACTOR SHALL RESTORE EXISTING DITCH TO ORIGINAL CONDITION AND INSURE THAT POSITIVE DRAINAGE IS MAINTAINED WITHIN THE DITCH. PAVEMENT AND SHOULDERS MUST ALSO BE RESTORED TO THEIR ORIGINAL CONDITION.
- 24. CONTRACTOR SHALL INSURE THAT PUBLIC AND PRIVATE ENTRANCE CULVERTS ARE FREE OF ANY CONSTRUCTION DEBRIS.
- 25. CONTRACTOR SHALL NOTIFY PROPERTY OWNERS (IN WRITING) OF ANY CONSTRUCTION WORK SCHEDULED THROUGH THAT OWNER'S PROPERTY A MINIMUM OF ONE WEEK IN ADVANCE PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBANCE.
- 26. CONTRACTOR SHALL REPAIR OR REPLACE IN KIND ALL DRIVEWAY AND ROAD CULVERTS AS REQUIRED.
- 27. ASSUME FIBEROPTIC & TELEPHONE CABLES 2.5' DEPTH OF COVER. CONTRACTOR SHALL FIELD VERIFY BEFORE INSTALLING FORCE MAIN.
- 28. MEGALUG RESTRAINED JOINTS SHALL BE INSTALLED TO RESTRAIN PIPE A MINIMUM OF 60 LINEAR FEET ON BOTH SIDES OF ALL FITTINGS AND VALVES.

SEWER AND WATER NOTES

- ALL MATERIALS FOR SEWER AND WITER SYSTEMS SHOWN SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST APPLICABLE SPECIFICATION OF PRINCE GEORGE COUNTY.
- 2. ALL WORK SHALL BE SUBJECT TO INSPECTION BY UTILITY DEPARTMENT OFFICIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF APPROPRIATE COUNTY OFFICIALS 48 HOURS PRIOR TO START OF WORK.
- . MINIMUM CLEAR COVER FOR ALL WATER PIPE SHALL BE 3.5 FEET.
- THE UTILITY CONTRACTOR OR DEVELOPER IS RESPONSIBLE FOR OBTAINING ANY HIGHWAY PERMITS AND FOR SENDING A COPY TO THE COUNTY PRIOR TO START OF CONSTRUCTION.
- ANY LOT WITH LESS THAN 50 FEET OF FRONTAGE SHALL HAVE FRONT CORNERS OR END OF 6' CONNECTION STAKED PRIOR TO CONSTRUCTION DE A 6' SEWER SERVICE.
- SEWER PIPE SHALL BE PVC. ALL SIWER JOINTS SHALL BE CLASS A. BEDDING SHALL BE CLASS B MINIMUM; BEDDING SHALL BE AS SHOWN IN DETAIL ON SHEET 2.
- . SEWER GRADES ARE BASED ON AF AL PHOTOGRAPHY BY LOUISA AERIAL SURVEYS USING NAVD88 DATUM
- 8. CONTRACTOR SHALL INSTALL 6" SI WER SERVICE CONNECTIONS TO ALL LOTS (R/W LINE OR EDGE OF EASEMENT)
- 9. ALL WATER SERVICES ARE TO BE OPPER, TYPE K, DRAWN TUBING.
- 10. THE CONTRACTOR WILL INSTALL AL. WATER CONNECTIONS AND METER BOXES. METER BOXES ARE TO BE FIELD ADJUSTED TO ACCOMODATE HOME (WNERS.
- 11. FIRE HYDRANT PUMPER CONNECTIC IS SHALL FACE IN THE DIRECTION OF THE ARROW.
- 12. THE EXACT MANHOLE TOP SHALL DE ON THE SAME GRADE AS THE FINISHED ROAD GRADE AND AS NOTED ON SEWER CUT SHEETS. NO HEIGHT ADJUSTMENT RINGS ARE ALLOWED IN THE SEWER EASEMENTS AND ONLY ONE HEIGHT ADJUSTMENT RING IS ALLOWED WITHIN THE PAVEMENT.
- 13. BACKFILL FOR ALL UTILITIES WITHII PROPOSED SUBDIVISION STREETS SHALL BE PLACED GENERALLY IN ACCORDANCE WITH PRINCE GEORGE COUNTY SPECIFICATIONS, AND THE FOLLOWING CRITERIA: (1.) NO TRENCH SHALL BE BACKFILLED UNTIL AUTHORIZED BY THE COUNTY. MATERIALS USED FOR BACKFILL FROM THE BOTTOM OF THE TRENCH TO 12" (TWELVE INCHES) ABOVE THE PIPE SHALL BE SELECT MATERIAL, FREE FROM FROST, LARGE CLODS, STONES AND DEBRIS, AND SHALL BE THOROUGHLY AND CAREFULLY COMPACTED. 2. BACKFILL SHALL BE COMPACTED BY MECHANICAL TAMENG THROUGHOUT THE DEPTH OF THE TRENCH TO INSURE A SUITABLE SUBBASE. ACCEPTABLE TO THE ROAD ENGINEER, IF THE MATERIAL IS TAKEN FROM THE DITCH IS NOT SUITABLE FOR BACKFILLING IT SHALL BE REMOVED AND ACCEPTABLE MATERIAL USED FOR BACKFILLING THE TRENCH.
- 14. THE ENGINEER WILL CERTIFY THAT THE ROADS ARE WITHIN 6" OF SUBGRADE BEFORE WATERLINE CONSTRUCTION CAN BEGIN.
- 15. FOR SEWER AND WATER INSTALLA ION WITHIN EXISTING VDOT R/W; UTILITY CONTRACTORS SHALL NOTIFY VDOT 48 HOURS IN ADVANCE WHEN INSTALLATION BEGINS SO THAT DENSITY CAN BE TESTED (95% @ OPTIMUM MOISTURE +20%).
- 16. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON THE PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY, IF: LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLAN, OR IF: THERE APPEARS TO BE A CONFLICT, AND UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLAN. TO MISS THE UTILITY CALL "MISS UTILITY" OF CENTRAL VIRGINIA: 1-800-552-7001 (TOLL FREE).
- 17. THE INSTALLATION OF BACK FLOW DEVICE IS REQUIRED IN ALL HOUSES WHERE THE FINISHED FLOOR ELEVATION IS LOWER THAN UPGRADE MANHOLES. THIS DEVICE WILL BE INSPECTED BY THE COUNTY BUILDING INSPECTOR.
- 18. INDIVIDUAL WATER SERVICES TO E : 3/4".
- 19. ALL WATERLINE VALVES MUST BE LOCATED ON THE TEE OR CROSS WHEN APPLICABLE.
- 20. ALL MANHOLES IN UTILITY EASEMENTS ARE TO HAVE THE CONCRETE SECTION EXTENDED ONE FOOT ABOVE THE GROUND.
- 21. A SMOOTH TRANSITION OF DROP JANHOLE MUST BE PROVIDED FOR EACH LATERAL OR SANITARY SEWER ENTERING A SANITARY MANHOLE.
- 22. ALL FIRE HYDRANTS SHALL BE O.S.H.A. RED IN COLOR.
- 23. METER BOXES PROVIDED SHALL B CAST IRON 12"x18"x24" HIGH WITH CAST IRON LIDS. THE METER ASSEMBLIES ARE TO BE SUPPLIED WITH NEPTL NE PROREAD ENCODERS AND R900 PIT MIU (RF) ATTACHED TO THE LID. METERS ARE TO BE COMPATIBLE WITH THE PROPOSED SYSTEM. A WAND TYPE VISUAL READER COMPATIBLE WITH ARB SYSTEM WILL BE SUPPLIED TO THE UTILITY DEPARTMENT WITH THE WATER METERS.
- 24. FIRE HYDRANTS ARE TO BE MUEL ER TYPE BE INSTALLED USING TEES.
- 25. ALL SANITARY LATERALS THAT AFE LOCATED OUTSIDE OF THE RIGHT OF WAY ARE TO HAVE THE CLEANOUT INSTALLED TO THE EDGE OF THE EASEMENT. A CARSONITE MARKER SHALL ALSO BE INSTALLED TO INDICATE THEIR LOCATION.
- 26. ALL HYDRANTS SHALL BE EQUIPPED WITH A MUELLER HYDRANT DEFENDER, SECURING THE OPERATING NUT AND IT SHALL BE SUPPLIED WITH 4 CODED KEYS THAT WILL WORK WITH THEALL NOZZLE CAPS. THE CODED LOCK/KEY COMBINATION. KEYS SHALL BE SENT DIRECTLY TO THE COUNTY ENGINEER AT PRINCE GEORGE COUNTY.
- 27. ALL HYDRANTS AND BENDS SHALL BE EQUIPPED WITH MEGA LUGS.



FORCE MAIN TRENCH DETAIL



LEGEND

ROADS EXISTING CULVERT EXISTING EDGE OF PAVEMENT

EXISTING PAVEMENT EARTH DITCH

BENCH MARK EXISTING TREE LINE CLEARING LIMITS EXISTING CONTOUR

--OHE --OHE -- EXISTING OVERHEAD POWER LINE

EXISTING UNDERGROUND POWER LINE EXISTING UNDERGROUND TELEPHONE LINE EXISTING CABLE TV LINE EXISTING GAS LINE PROPOSED SILT FENCE

EXISTING FENCE LINE EXISTING PROPERTY LINE EXISTING CREEK LINE

<u>SEWER</u> EXISTING SANITARY SEWER PROPOSED P.V.C. FORCEMAIN PIPE

WATER ----W---- EXISTING WATER LINE EXISTING WELL PROPOSED FIRE HYDRANT ASSEMBLY (INCLUDES 6" LINE, TEE, 6" VALVE AND HYDRANT) AIR RELEASE VALVE FLUSHING HYDRANT (BLOW-OFF)

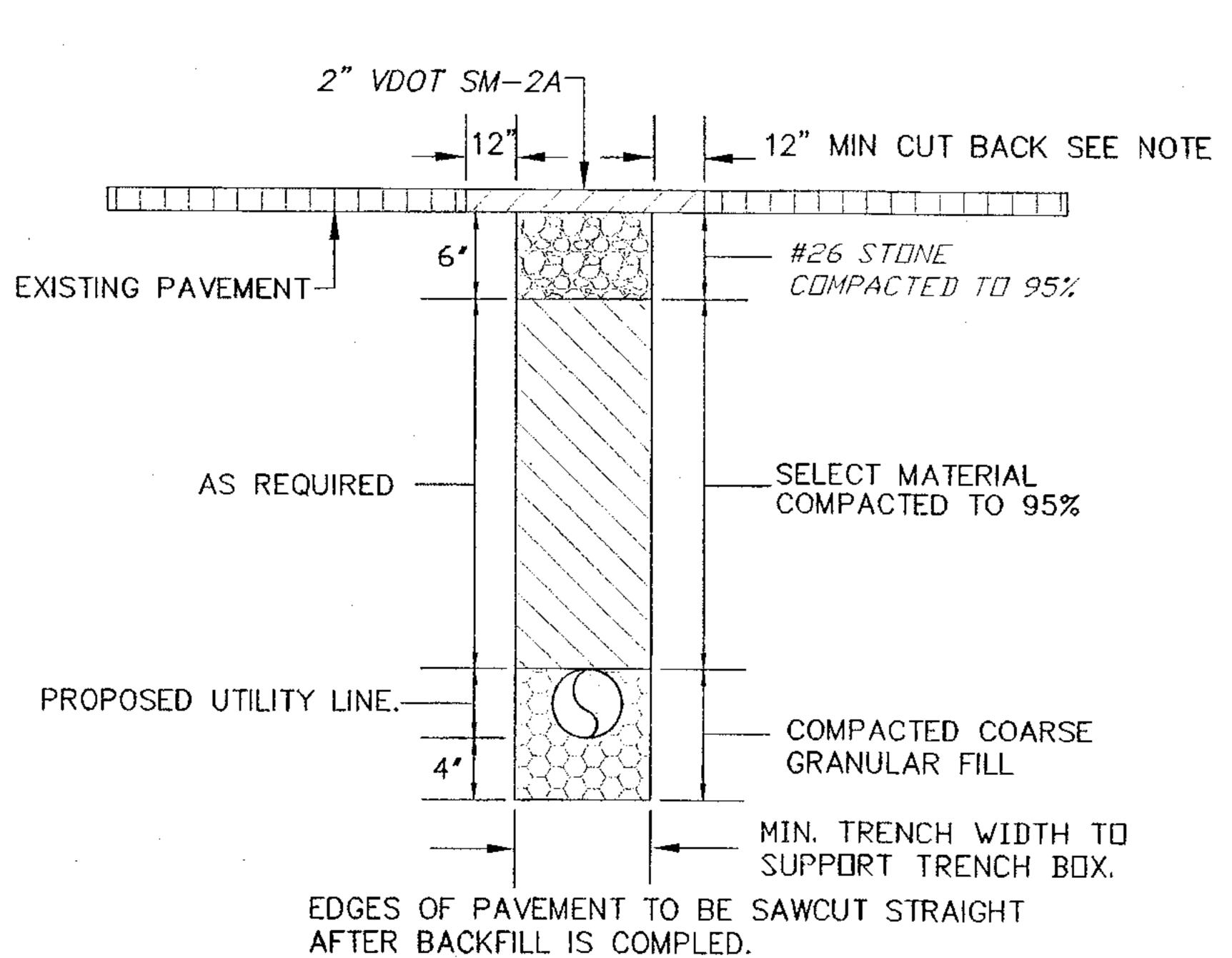
DRAWN BY

B. WALKER

DESIGNED BY

B. WALKER

CHECKED BY



PAVEMENT DRIVEWAY REPAIR NOT TO SCALE

FINAL REVIEW