GENERAL NOTES

- 1. THE CONTRACTOR IS RESPONSIBLE FOR HAVING A SET OF "APPROVED" ENGINEERING PLANS WITH THE LATEST REVISION DATE ON THE JOB SITE PRIOR TO THE START OF CONSTRUCTION. AN APPROVED SET OF PLANS WILL NEED TO BE ON SITE DURING THE PROJECT AS WELL.
- 2. ANY DEVIATION FROM THESE DESIGN PLANS MAY CAUSE THE WORK TO BE UNACCEPTABLE.
- 3. ANY UNANTICIPATED CONDITIONS ENCOUNTERED DURING THE CONSTRUCTION PROCESS SHALL BE IDENTIFIED IN WRITING TO THE OWNER/ENGINEER IMMEDIATELY.
- 4. THE STREETS SURROUNDING THESE PROJECT SITES AND ANY STREET USED FOR CONSTRUCTION ACCESS THERETO SHALL BE KEPT FREE FROM MUD AND CONSTRUCTION DEBRIS AND SHALL BE CLEANED THROUGHOUT THE DAY. ALL AFFECTED STREETS WILL NEED TO BE "BROOM CLEANED" BY THE END OF EACH DAY.
- ALL TRASH AND DEBRIS ON SITE, EITHER EXISTING OR FROM CONSTRUCTION, MUST BE REMOVED AND PROPERLY DISPOSED OF OFF SITE. NO BURNING OF DEBRIS ON SITE SHALL BE PERMITTED.
- 6. NO EXCAVATION SHALL BE MADE SO CLOSE TO THE PROPERTY LINE AS TO ENDANGER ANY ADJOINING PROPERTY OR ANY PUBLIC OR PRIVATE STREET WITHOUT SUPPORTING AND PROTECTING SUCH PUBLIC OR PRIVATE STREET OR PROPERTY FROM SETTLING, CRACKING, OR OTHER DAMAGE.
- 7. ALL GRADES SHALL BE WITHIN 0.1 FEET, PLUS OR MINUS, OF THOSE SHOWN ON THE PLAN. ALL STRUCTURES, RETAINING WALLS AND CREST BOULDERS SHALL BE WITHIN 0.1 FEET. GRADING TO BE REVIEWED AND APPROVED BY OWNERS REPRESENTATIVE.
- 8. CONTRACTOR IS RESPONSIBLE FOR MONITORING GRADING OPERATION AND ACCURACY OF "FINAL ROUGH" GRADES. CONTACT ENGINEER OF ANY DISCREPANCIES AFFECTING FINAL GRADING BALANCE.
- SITE CONDITIONS MAY HAVE CHANGED SINCE THE SURVEY WAS PREPARED. CONTRACTOR SHALL VISIT SITE TO FAMILIARIZE THEMSELVES WITH THE CURRENT CONDITIONS.
- 10. HORIZONTAL AND VERTICAL CONTROL WAS ESTABLISHED USING "TRIMBLE" GPS EQUIPMENT, USING THE MoDOT CONTINUOUSLY OPERATING MIDWEST RTK NETWORK. HORIZONTAL CONTROL IS REPORTED IN WGS-84 AND VERTICAL CONTROL IS REPORTED IN NAVD-88. FIELD WORK WAS PERFORMED DURING THE MONTH OF OCTOBER, 2023.
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALIBRATING GPS GRADING HUBS WITH SURVEYOR HUBS IF BOTH METHODS ARE TO BE USED ON SITE.
- 12. ALL EXISTING TOPOGRAPHY, UNDERGROUND UTILITIES, STRUCTURES AND ASSOCIATED FACILITIES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEREFORE, THEIR LOCATIONS AND ELEVATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHER FACILITIES, THE EXISTENCE OF WHICH ARE NOT PRESENTLY KNOWN.
- 13. CONTRACTOR IS TO VERIFY ALL EXISTING STRUCTURES AND FACILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL AND STARTING WORK.
- 14. BEFORE EXCAVATING OVER OR ADJACENT TO ANY EXISTING UTILITIES, CONTRACTOR SHALL NOTIFY THE OWNER OF SUCH UTILITIES TO ENSURE THAT PROTECTIVE WORK WILL BE COORDINATED AND PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER OF THE UTILITY INVOLVED. IF ANY EXISTING SERVICE LINES, UTILITIES AND UTILITY STRUCTURES WHICH ARE TO REMAIN IN SERVICE ARE UNCOVERED OR ENCOUNTERED DURING THIS OPERATION, THEY SHALL BE SAFEGUARDED, PROTECTED FROM DAMAGE AND SUPPORTED IF NECESSARY.



- 15. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS REGARDING PRIVATE UTILITIES ON THE PREMESIS, INCLUDING BUT NOT LIMITED TO IRRIGATION SYSTEM AND LIGHTING FACILITIES.
- 16. CONTRACTOR SHALL NOT REMOVE ANY TREE OR FENCE, UNLESS MARKED FOR REMOVAL ON THE PLANS WITHOUT PRIOR APPROVAL.
- 17. ALL APPLICABLE PROVISIONS OF THE CURRENT OCCUPATIONAL SAFETY AND HEALTH ACT ARE HEREIN INCORPORATED BY REFERENCE.
- 18. THE CONTRACTOR, BY USING THESE PLANS FOR THEIR WORK, AGREES TO HOLD HARMLESS INTUITION & LOGIC ENGINEERING, INC. AND ST. CHARLES COUNTY, MISSOURI, THEIR EMPLOYEES AND AGENTS AND THE OWNER WHILE ACTING WITHIN THE SCOPE OF THEIR DUTIES FROM AND AGAINST ANY AND ALL LIABILITY, CLAIMS, DAMAGES, AND THE COST OF DEFENSE ARISING OUT OF CONTRACTOR(S) PERFORMANCE OF THE WORK DESCRIBED HEREIN, BUT NOT INCLUDING THE SOLE NEGLIGENCE OF THE OWNER, HIS AGENTS, THE ENGINEER, HIS EMPLOYEES AND AGENTS. THE CONTRACTOR'S LIABILITY IS FURTHER DEFINED IN THE COUNTY-CONTRACTOR AGREEMENT.
- 19. ALL "CLEARING AND GRUBBING" SHALL INCLUDE CLEARING OF TREES, STUMPS, BRUSH, FENCES, POSTS, MAILBOXES AND OTHER EXISTING SURFACE FEATURES AS NECESSARY BY THE CONTRACTOR TO PERFORM THE WORK SHOWN ON THE PLANS.
- 20. THE CONTRACTOR SHALL PROVIDE FOR THE SAFE AND ORDERLY PASSAGE OF TRAFFIC AND PEDESTRIANS WHERE HIS/HER OPERATIONS ABUT PUBLIC THOROUGHFARES AND ADJACENT PROPERTY IN ACCORDANCE WITH LOCAL ORDINANCE AND TO THE SATISFACTION OF THE PROJECT MANAGER FOR ST. CHARLES COUNTY.

- 21. AREAS OUTSIDE THE R.O.W. LINE OR CONSTRUCTION LIMIT LINE IMPACTED BY OPERATIONS OF THE CONTRACTOR SHALL BE RETURNED TO THE STATE IT WAS FOUND PRIOR TO NEW CONSTRUCTION, EXCEPT WHERE NEW WORK IS SHOWN.
- 22. STREET PAVING AND CURBS TO REMAIN SHALL BE PROTECTED FROM DAMAGE AND IF DAMAGED, SHALL BE REPLACED PROMPTLY TO THE SATISFACTION OF THE PROJECT MANAGER FOR ST. CHARLES COUNTY.
- 23. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.
- 24. ALL EXISTING PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE FULL DEPTH SAWCUT ALONG LIMITS OF PROPOSED REMOVAL BEFORE COMMENCEMENT OF PAVEMENT REMOVAL
- 25. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, AT THE CONTRACTOR'S EXPENSE, TO ACCOMPLISH THIS WORK.
- 26. A ST. CHARLES COUNTY HIGHWAY DEPARTMENT SPECIAL USE PERMIT IS REQUIRED BEFORE ANY WORK IS ALLOWED TO COMMENCE ON THE RIGHT OF WAY OF PUBLIC ROADS UNDER ST. CHARLES COUNTY CONTROL OR MAINTENANCE. PLEASE CONTACT THE HIGHWAY DEPARTMENT AT (636) 949-7305.
- 27. BUILDING PERMITS FROM ST. CHARLES COUNTY CODE ENFORCEMENT ARE REQUIRED FOR STRUCTURE AND UTILITY INSTALLATION.
- 28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS. TRAFFIC CONTROL DEVICES AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION. BARRICADES AND WARNING SIGNS SHALL BE PROVIDED IN ACCORDANCE WITH ST. LOUIS COUNTY STANDARD SPECIFICATIONS. ALL TRAFFIC CONTROL WORK SHALL BE DONE IN ACCORDANCE WITH MUTCD AND ST. CHARLES COUNTY.
- 29. THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, TIME OF PERFORMANCE, PROGRAMS OR FOR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF HIS/HER WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
- 30. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- 31. THE CONTRACTOR IS NOT TO START WORK UNTIL WRITTEN AUTHORIZATION FROM THE OWNER HAS BEEN RECEIVED.
- 32. SAFETY NOTICE TO CONTRACTOR: IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE. INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTORS SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE.
- 33. NOTICE TO BIDDERS: ALL QUESTIONS REGARDING THE PREPARATION OF THE CONTRACTOR'S BID SHALL BE DIRECTED TO THE OWNER. SUBCONTRACTORS MUST DIRECT THEIR QUESTIONS THROUGH THE CONTRACTOR. THE CONSULTING ENGINEER SHALL NOT BE CONTACTED DIRECTLY WITHOUT PRIOR AUTHORIZATION FROM THE OWNER.

GRADING NOTES:

- 1. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE FOR ALL NATURAL AND PAVED AREAS.
- 2. ALL CUT OR FILL SLOPES SHALL BE 3H:1V OR FLATTER UNLESS OTHERWISE NOTED. THE ENGINEER ASSUMES NO LIABILITY FOR SLOPES EXCEEDING THOSE RECOMMENDED IN THE APPLICABLE GEOTECHNICAL REPORT.
- 3. ALL FILLS AND BACKFILLS SHALL CONSIST OF SELECTED EARTH MATERIALS, FREE FROM BROKEN MASONRY, ROCK, FROZEN EARTH, RUBBISH, ORGANIC MATERIAL AND DEBRIS.
- 4. ALL FILL PLACED FOR PROPOSED STORM AND SANITARY SEWER LINES, PAVED AREAS, OR DRAINAGE BERMS SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AS DETERMINED BY THE AASHTO T 180 ,MODIFIED PROCTOR COMPACTION TEST OR 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO T 99 STANDARD PROCTOR COMPACTION TEST. ALL TESTS SHALL BE VERIFIED BY A GEOTECHNICAL ENGINEER CONCURRENT WITH THE GRADING AND BACKFILLING OPERATIONS.
- 5. ALL FILLED PLACES IN PROPOSED AND EXISTING ST. CHARLES COUNTY ROADS (HIGHWAYS) SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP TO 90 PERCENT MAXIMUM DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T 180 COMPACTION TEST" (ASTM D-1557). PAVED AREAS IN CUTS SHALL MEET THE SAME COMPACTION REQUIREMENTS. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING OPERATIONS.

	LEGEND		-
EXISTING		NEW	
S	SANITARY MANHOLE		
	STORM MANHOLE		
\bigcirc	INLET		<
	PIPE		
X	FENCE	X	
	FLOWLINE	· · · · · · ·	
	- INDEX CONTOURS		
	INT. CONTOURS		
	ROCK LIMITS		
₽	- PROPERTY LINE		
'			
	- EASEMENTS		
	LIMITS OF DISTURBANCE		
	HGL		C
	EGL		
	PROFILE GRADE		~~~~
	ROOT PRUNE		
	SILT FENCE	SF	
	IN STREAM SILTATION CONTROL		
	TREE PROTECTION	TP	
	URBAN FORESTRY LIMIT		
	TREE LINE		
	ROCK TOE		
	VEGETATED ROCK SLOPE		
ar 1970 a	COIR WATTLE		
	TREE		
5 · 3	BUSH		
\bigwedge^{\sim}	CONTROL POINT		
<u>M</u>	STUMP		
TRANS-BOX	TRANS BOX		
🖸 РСВ	PCB		
CTV	CTV		
HUB-SET	HUB SET		
	BUILDING		
	CONCRETE		
	IRON PIN		
BM	SITE BENCHMARK		
	EDGE OF WATER		
<u> </u>	SECTION LINE		
	GIS PROPERTY LINE		

SITE NOTES:

1. ALL CONSTRUCTION MATERIALS AND TECHNIQUES OF INSTALLATION SHALL MEET PERFORMANCE VALUES OF THE MATERIALS SPECIFIED AND COMPLY WITH ALL REGULATIONS AND CODES OF THE AUTHORITY HAVING JURISDICTION AND O.S.H.A. STANDARDS.

------ FLOODPLAIN/FLOODWAY

LIMITS

- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THIS PROJECT IS CONSTRUCTED IN ACCORDANCE WITH THESE DOCUMENTS AND IN COMPLIANCE WITH CODES INDICATED HEREIN. THE QUALITY OF WORKMANSHIP AND INSTALLATION OF MATERIALS SPECIFIED BY THE ENGINEER ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER WILL NOT BE HELD RESPONSIBLE FOR ANY SUBSTANDARD OR INSUFFICIENT WORKMANSHIP, MATERIALS, OR SERVICES PROVIDED IN THE EXECUTION OF ANY PHASE OF CONSTRUCTION OF THIS PROJECT.
- 3. ALL MATERIALS ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. THE GENERAL CONTRACTOR SHALL ENSURE THAT ALL MANUFACTURER'S WARRANTIES WILL BE HONORED.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF EXISTING FIELD CONDITIONS AND PROJECT AND HIS FIELD OF SERVICE SHALL NOT RELIEVE HIM OF ANY RESPONSIBILITY FOR PERFORMING HIS WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED DUE TO THE CONTRACTOR'S FAILURE TO CONVEY THE NECESSARY KNOWLEDGE TO FAMILIARIZE WORKERS AND SUBCONTRACTORS WITH THIS PROJECT.
- 5. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE AREA CLEAN AND FREE OF DEBRIS AT ALL TIMES DURING CONSTRUCTION.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE SAFETY OF ALL PERSONS ON THE JOB SITE AT ALL TIMES INCLUDING (BUT NOT LIMITED TO) SUBCONTRACTORS, STORE PERSONNEL, VENDORS, DESIGN STAFF PROFESSIONALS AND INSPECTION PERSONNEL.

LEGEND CONTINUED			
R C	RECORD CALCULATED		
1	SURVEY POINTS ESTABLISHED		
100	SURVEY MONUMENTATION FOUND		
K CM O ^{IP} O ^{IB} ⊠ ^{RW} ST ST O ^{RR} O ^{RR}	CROSS FOUND CONCRETE MONUMENT FOUND IRON PIPE FOUND IRON BAR FOUND R.O.W. MONUMENT FOUND STONE FOUND RAILROAD SPIKE FOUND LARGE NAIL (TRAVERSE)		
<u>A</u> β Ass A ^{ρκ}	iron bar (traverse) cross (traverse) pk nail (traverse)		
	INDIVIDUAL OWNERSHIP PARCEL (IOP)		
3 ^{GV} SH	SUBDIVISION LOT NUMBER GUARD RAIL UTILITY METER OR VALVE SPRINKLER HEAD		
⊾SV	SPRINKLER VALVE		
——SAN —— —— UPL —— —— GAS —— —— W —— —— T ——	BURIED PIPELINE BURIED GAS BURIED WATER BURIED TELEPHONE		
CTV	BURIED CABLE TV LINE		

- 8. ALL TRUCKING OPERATIONS SHALL FOLLOW THE APPROVED TRUCKING HAUL ROUTE. CONCRETE TRUCKS SHALL HAVE PROPER WASHOUTS, AS APPROVED BY THE COUNTY INSPECTOR. MUNICIPAL, COUNTY, AND STATE ROADS SHALL BE CLEANED AND KEPT CLEAR OF MUD, SEDIMENT, AND ANY OTHER DEBRIS AT ALL TIMES THROUGHOUT CONSTRUCTION.
- 9. ALL ON-SITE TRASH, LITTER, DISCARDED BUILDING MATERIALS, OTHER CONSTRUCTION SITE WASTES, AND DEBRIS, EITHER EXISTING OR FROM CONSTRUCTION, MUST BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE.
- 10. CONTRACTOR SHALL PROVIDE SUFFICIENT TEMPORARY TOILET AND HANDWASH STATION FACILITIES TO SERVE THE NUMBER OF WORKERS ON THE SITE.
- 11. CONTRACTOR SHALL PROVIDE THE COUNTY INSPECTOR INFORMATION CONCERNING STORAGE AND HANDLING OF ALL HAZARDOUS AND TOXIC SUBSTANCES BROUGHT ONTO THE SITE. THE CONTRACTOR WILL ADHERE TO APPLICABLE FEDERAL AND STATE REGULATIONS CONCERNING STORAGE AND DISPENSERS, SPILL PREVENTION CONTROL, AND COUNTERMEASURE PLANS FOR CLEAN-UP.
- 12. DIMENSIONS SHOWN ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- 13. CONTRACTOR TO REPAIR ALL EXISTING IMPROVEMENTS TO REMAIN THAT ARE DAMAGED DURING CONSTRUCTION BY CONTRACTOR AND HIS SUBCONTRACTORS.
- 14.IT SHALL BE UNDERSTOOD THAT FAILURE TO MENTION ANY WORK IN THESE PLANS WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.

ABBREVIATIONS

ADDREVIATIONS			
AI	AREA INLET		
ASPH	ASPHALT		
ATG	ADJUST TO GRADE		
BF	BASEMENT FLOOR ELEVATION		
BFE	BASE FLOOD ELEVATION		
B.M. B&B	BENCH MARK BALL & BURLAP		
BMP	BEST MANAGEMENT PRACTICES		
ę.	CENTER LINE		
CFS	CUBIC FEET PER SECOND		
CLCW	COIR LOG CONTOUR WATTLING		
CMP CONC.	CORRUGATED METAL PIPE CONCRETE		
CONC. CPP	CONCRETE CORRUGATED PLASTIC PIPE		
CR	COMPOSITE REVETMENT		
CTV	CABLE TELEVISION		
DIP	DUCTILE IRON PIPE		
DND	DO NOT DISTURB ELECTRIC		
E EGL	ELECTRIC ENERGY GRADE LINE		
EL	ELEVATION		
EP	EXPOSED PIPE		
ESMT	EASEMENT		
EXIST	EXISTING		
፹ FES			
FES FF	FLARED END SECTION FIRST FLOOR ELEVATION		
FH	FIRE HYDRANT		
FO	FIBER OPTIC		
FT	FEET		
G GC	GAS GRADE CONTROL		
GCI	GRATED CURB INLET		
HGL	HYDRAULIC GRADE LINE		
I.D.	INNER DIAMETER		
IN IP	INCHES IRON PIN		
	LEFT DESCENDING BANK		
MAX	MAXIMUM		
MH	MANHOLE		
MIN			
OC O&M	ON CENTER OPERATION AND MAINTENANCE		
OHW	OVERHEAD WIRE		
OTP	OPEN TOP PIPE		
ዊ DOD			
PCB PCR	PHONE CABLE BOX PARTIAL COMPOSITE REVETMENT		
PDE	PERMANENT DRAINAGE EASEMENT		
PED	PEDESTAL		
PPED	POWER PEDESTAL		
PROP PVC	PROPOSED POLYVINYL CHLORIDE		
RCP	REINFORCED CONCRETE PIPE		
RDB	RIGHT DESCENDING BANK		
RR	RAILROAD		
SAN SHLDR	SANITARY SHOULDER		
SMH	SANITARY MANHOLE		
SS	STORM SEWER		
SSD	STOPPING SIGHT DISTANCE		
SSMH	STORM SEWER MANHOLE		
STA T	STATION TELEPHONE		
TB	TELEPHONE BOX		
TBR	TO BE REMOVED		
TBR&R	TO BE REMOVED AND REPLACED		
TBR&RBO TBR&REL	TO BE REMOVED AND REPLACED BY OTHERS TO BE REMOVED AND RELOCATED		
TPED	TELEPHONE PEDESTAL		
TSCL	TEMPORARY SLOPE CONSTRUCTION LIMIT		
TVPED	TELEVISION PEDESTAL		
TYP UIP	TYPICAL USE IN PLACE		
UPL	USE IN PLACE UNDERGROUND PIPELINE		
VC	VERTICAL CURVE		
VCP			
W YR	WATER YEAR		

