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**KEY CONTACTS**

1. BOTETOURT COUNTY DEPT. OF PUBLIC FACILITIES & PLANNING  
COUNTY ENGINEER: KEVIN SHEARER, P.E.  
ASSISTANT COUNTY ENGINEER: JAY KNIGHT, EIT  
540-473-8316
2. ENGINEERING CONCEPTS, INC.  
PROJECT ENGINEER: BOBBY WAMPLER, EIT  
540-473-1253
3. DIXON CONTRACTING, INC. (SEWER LINE CONTRACTOR)  
WAYNE DIXON  
540-473-2170
4. GEOTECHNICS, INC.  
JOHN CUTRIGHT, P.E.  
540-344-4569
5. AMERICAN ELECTRIC POWER  
RICK JOHNSON  
540-982-7438
6. VIRGINIA DEPARTMENT OF TRANSPORTATION  
RESIDENT ENGINEER: JEFF ECHOLS  
540-387-5488

**LEGEND**

- LINETYPES**
- |—|—|—|—| CONCRETE DITCH LINING
  - EC-2 DITCH LINING
  - PROPOSED ROAD
  - EXISTING ROADS
  - PROPERTY LINE
  - RIGHT-OF-WAY
  - PERMANENT EASEMENT (30' WIDE TYPICAL)
  - WATER LINE
  - GAS LINE
  - SANITARY SEWER LINE
  - FENCE

**SYMBOLS**

- POWER POLE
- FIRE HYDRANT
- ⌋ CAP/DEAD END
- ⌋ GATE VALVE
- ⌋ MJ TEE
- ⌋ MJ GATE VALVE
- ⌋ AIR RELIEF VALVE
- ↑ BLOW OFF VALVE

**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, BRIDGES, FACILITIES, AND OBSTRUCTIONS, WHETHER OR NOT INDICATED ON THESE DRAWINGS. ALL DISTURBED OR DAMAGED UTILITIES, STRUCTURES, BRIDGES, 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, BRIDGES, 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. CONTACT MISS UTILITY (800) 552-7001.
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 PIPE SHALL BE INSTALLED WITH WARNING/CAUTION DETECTOR TAPE 18" FROM FINISHED GRADE.
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. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND MAINTAINING COMPLIANCE WITH ALL NECESSARY PERMITS, INCLUDING BUT NOT LIMITED TO LAND DISTURBING PERMIT, VDOT ROAD ENTRANCE PERMITS, AND BUILDING PERMITS.

15. 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 1994. 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 CBR6 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 DESIGN CBR, 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.

16. UTILITIES

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

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

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

17. 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.

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.

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

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.

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.

18. STANDARD DETAILS

VDOT STANDARD DETAILS HAVE BEEN INCLUDED TO ASSIST THE CONTRACTOR. ADDITIONAL DETAILS MAY BE REQUIRED TO COMPLETE THE PROJECT.

19. TREE PROTECTION

ALL TREES LARGER THAN A 6" CALIPER SHALL BE PROTECTED UNLESS OTHERWISE INDICATED.

**CONSTRUCTION NOTES**

1. SEQUENCE
  - A. US ROUTE 220 INTERSECTION AND IMPROVEMENTS SHALL BE CONSTRUCTED FIRST. WORK IN GENERAL SHOULD PROGRESS FROM THE INTERSECTION TOWARDS THE WEST.
2. MAINTAIN ACCESS TO THE SITE FOR ACTIVITIES OTHER THAN CONSTRUCTION VIA TEMPORARY ROADWAYS.
3. ONE LANE OF US ROUTE 220 MAY BE CLOSED AT ANY ONE TIME, WITH THE PERMISSION OF VDOT AND THE ENGINEER. LANE CLOSURES MAY NOT OCCUR DURING THE HOURS OF 7-9 AM AND 4-6 PM. PAYMENT FOR LANE CLOSURE AND OTHER TRAFFIC CONTROL ISSUES SHALL BE INCLUDED IN OTHER APPROPRIATE ITEMS.

**STORMWATER DETENTION**

PROPOSED STORMWATER DETENTION FACILITY LOCATED DOWNSTREAM OF CULVERT 32+00 WILL PROVIDE 44 AC-FT OF DETENTION INCLUDING 0.7 AC-FT OF DETENTION FOR GREENFIELD PARKWAY PHASE 1.

**GUARD RAILS**

THE NEED FOR GUARD RAILS WILL BE EVALUATED BASED ON FIELD CONDITIONS AFTER CONSTRUCTION OF THE ROADWAY.

**ENGINEERING CONCEPTS, INC.**  
 20 S. ROANOKE ST., PO BOX 619  
 FINCASTLE, VIRGINIA 24090  
 540.473.1253 FAX: 540.473.1254

THE NAME OF THIS ROAD: INTERNATIONAL PARKWAY  
 THE PROPERTY IS OWNED BY BOTETOURT COUNTY - TAX #88.20

AS-BUILT

No.	Revision	By	Appd.	Date	Drawn
01	ADD GUARD RAIL NOTE	RHW	JST	04/29/98	SCG
					Designed RHW
					Checked WPJ
					Approved JST

**GREENFIELD PARKWAY  
 PHASE 1**

**GENERAL NOTES &  
 KEY SHEET**

SCALE AS SHOWN  
 NOVEMBER 12, 1997  
 PROJECT: 97042  
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