

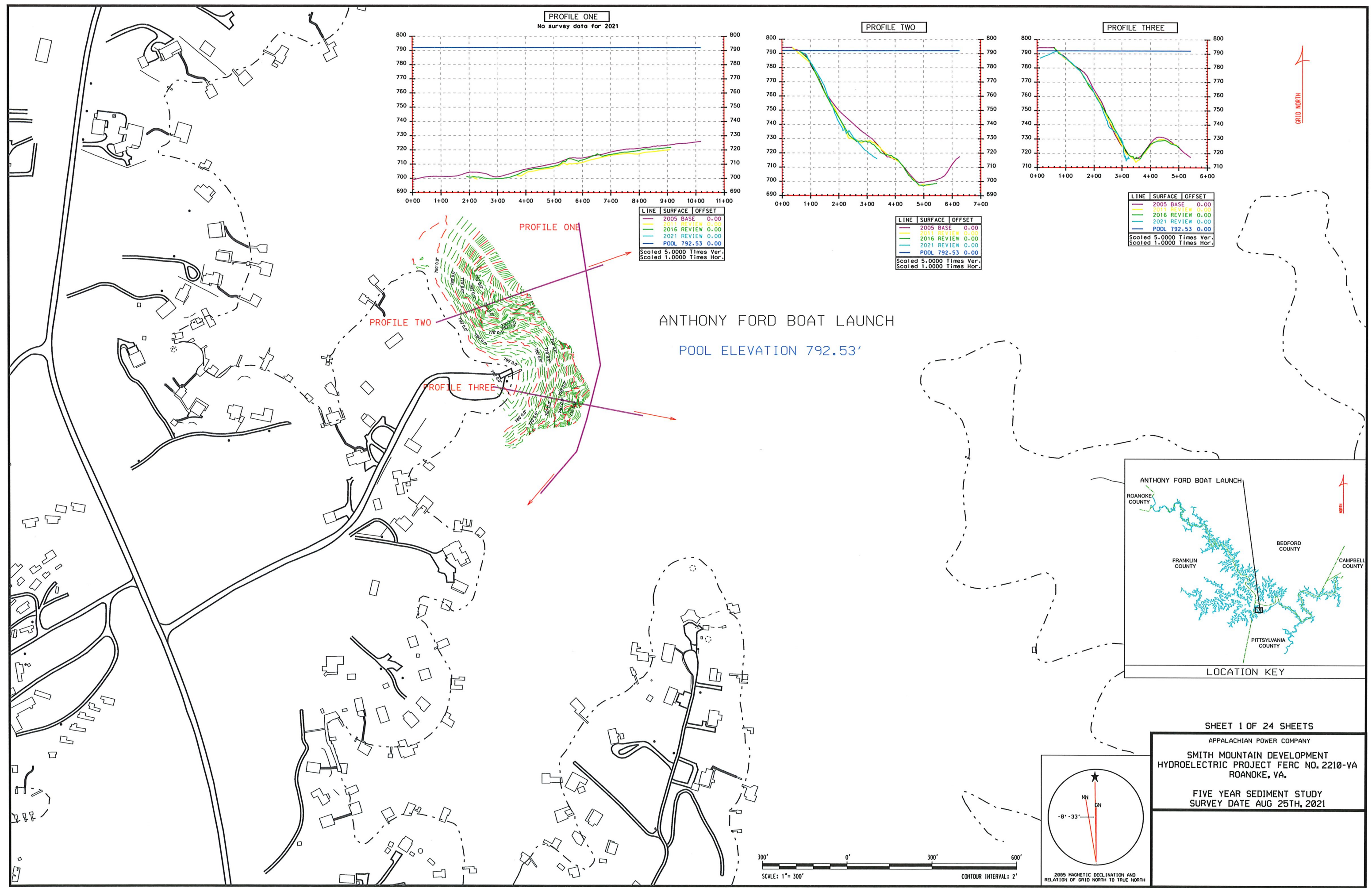
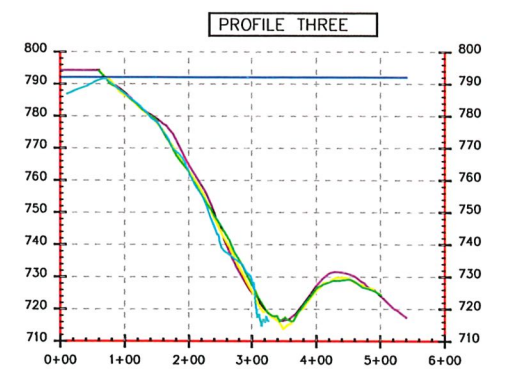
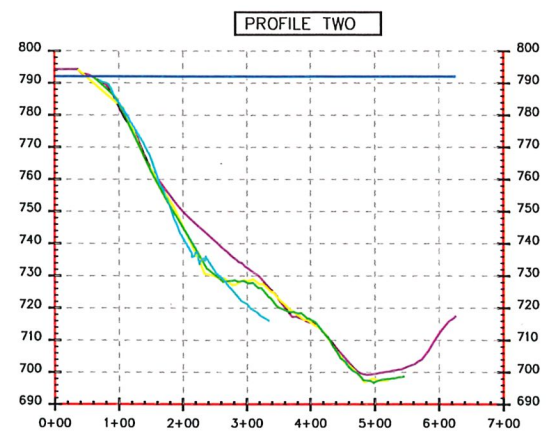
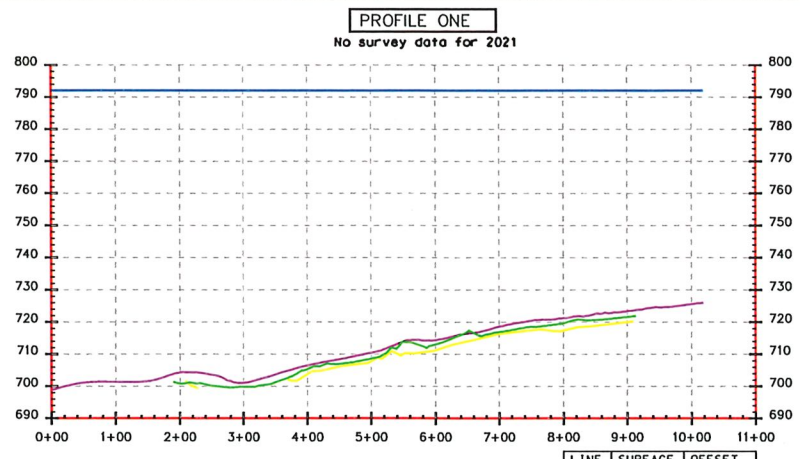
Appalachian Power Co.

2021 Five-Year Sedimentation Survey Report

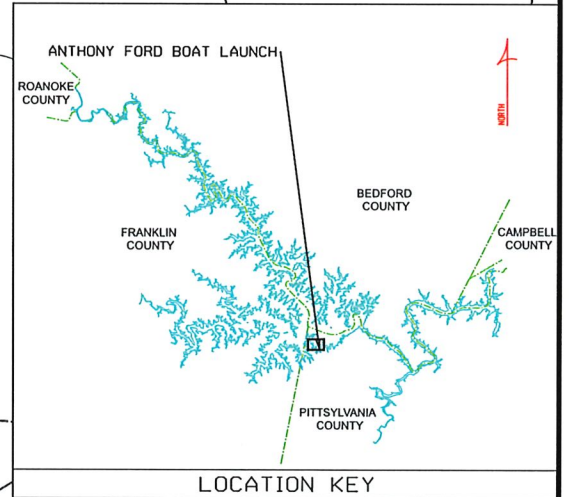
October 31, 2023

Sites Mapped:

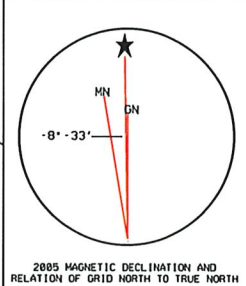
1. Anthony Ford Boat Launch
2. Beaver Dam Creek
3. Becky's Creek
4. Bett's Creek
5. Big Indian Creek
6. Blackwater River (headwaters)
7. Craddock Creek
8. Gills Creek
9. Grimes Creek
10. Hales Ford Boat Launch
11. Hardy Ford Boat Launch
12. Leesville Dam Boat Luanch
13. Little Indian Creek
14. Lynville Creek
15. Mariners Landing
16. Mitchell's Cove
17. Myers Creek Boat Launch
18. Old Woman's Creek
19. Penhook Boat Launch
20. Pigg River
21. Roanoke River (headwaters)
22. Scruggs Boat Launch
23. Standiford Creek
24. State Park Boat Launch

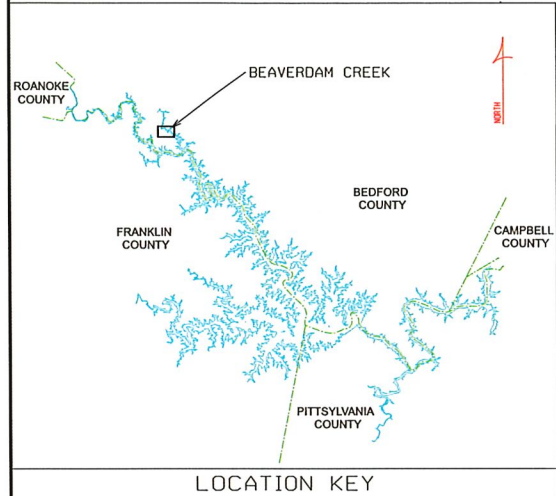
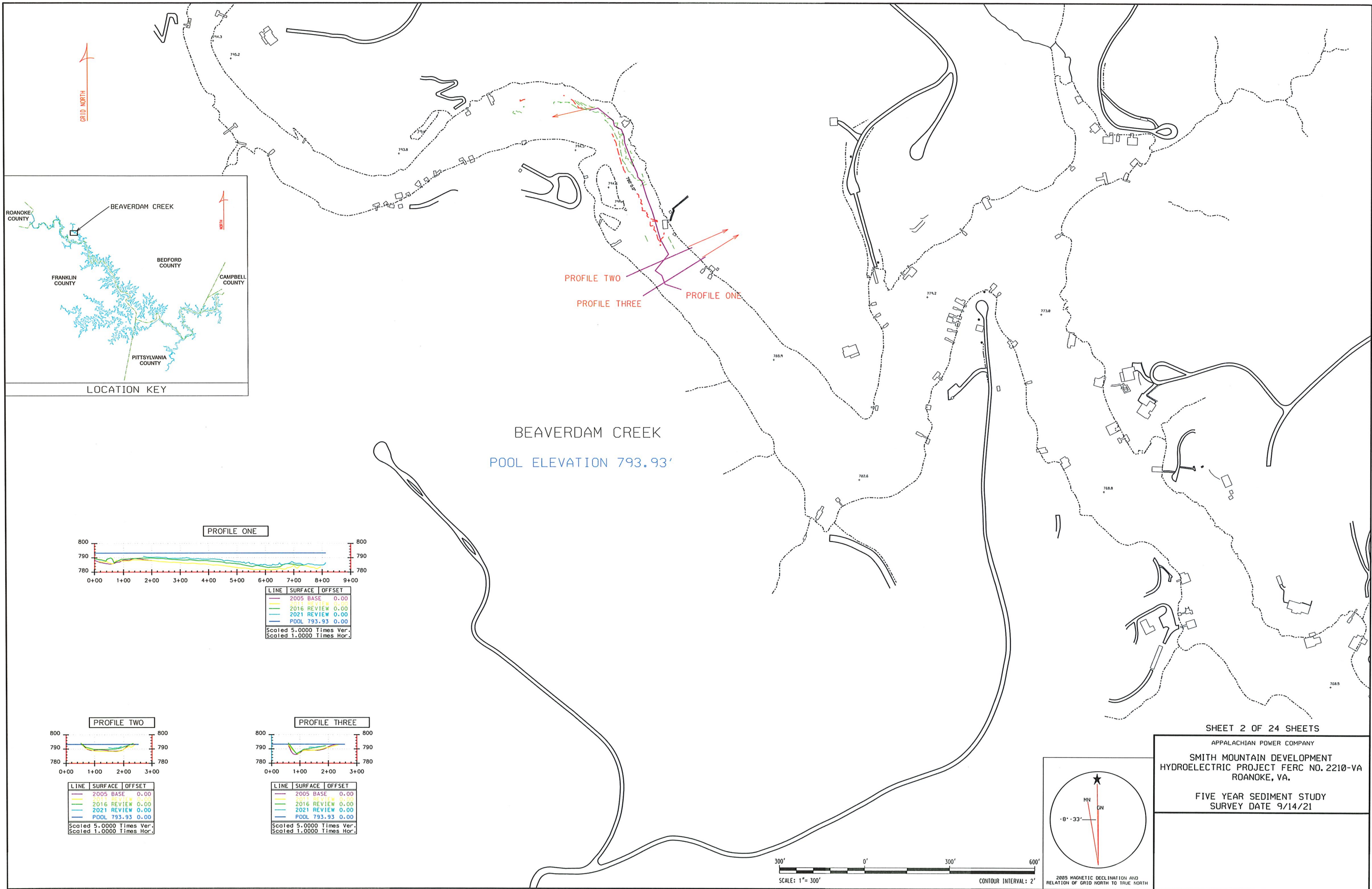


GRID NORTH

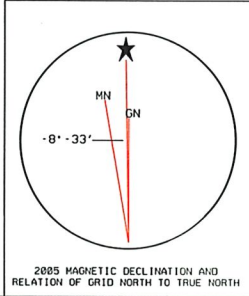
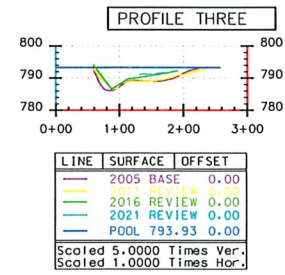
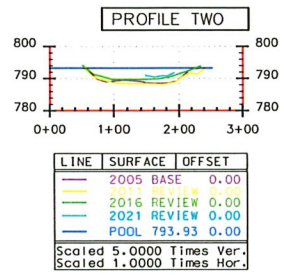
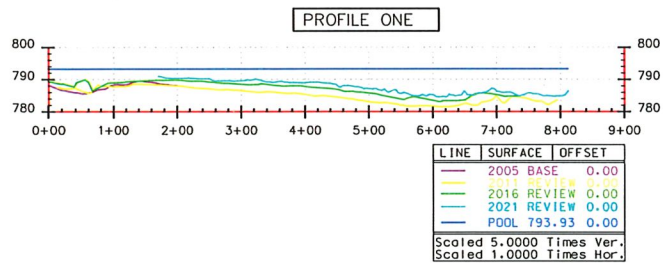


SHEET 1 OF 24 SHEETS  
APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.  
FIVE YEAR SEDIMENT STUDY  
SURVEY DATE AUG 25TH, 2021



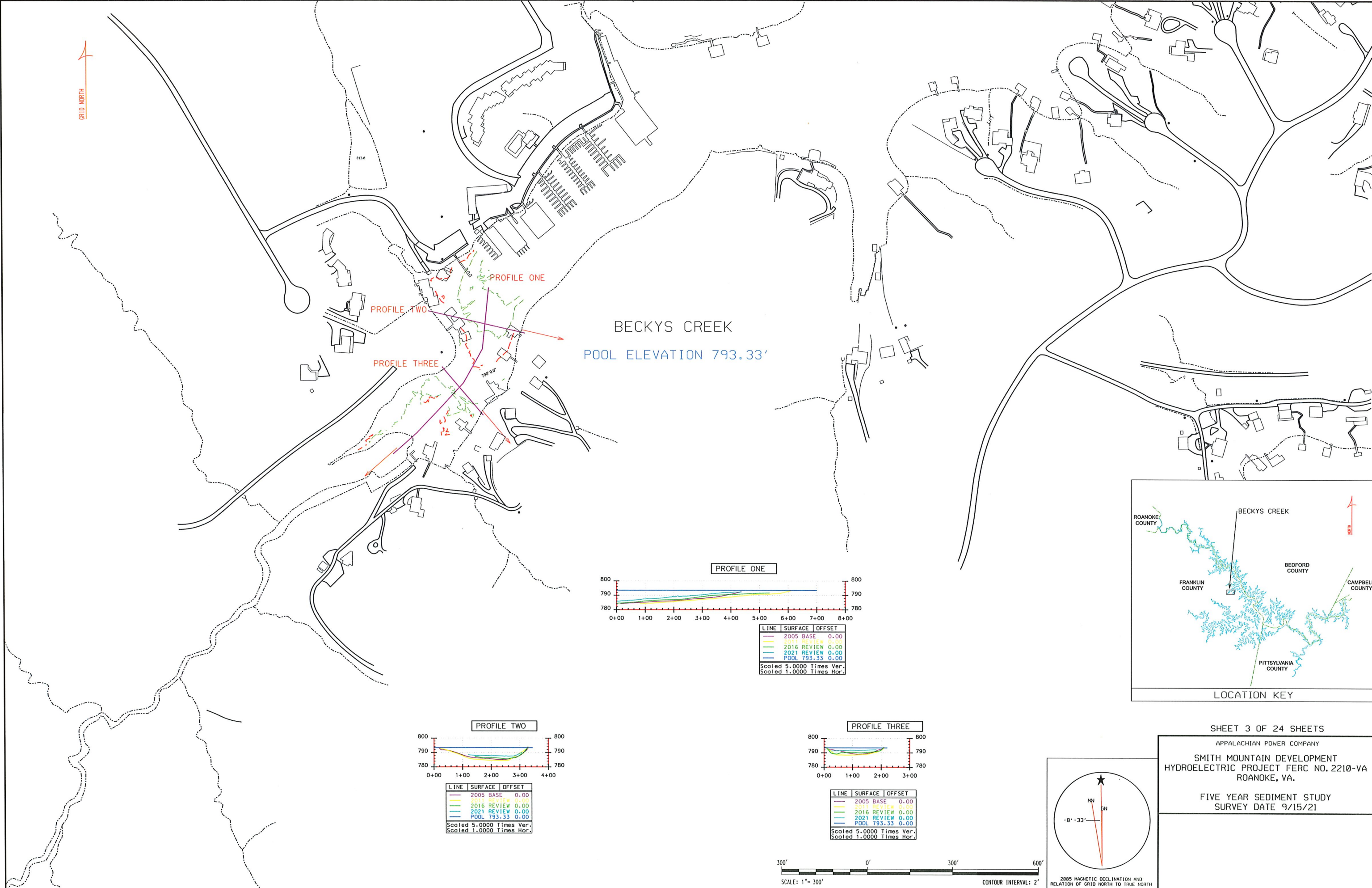


BEAVERDAM CREEK  
POOL ELEVATION 793.93'

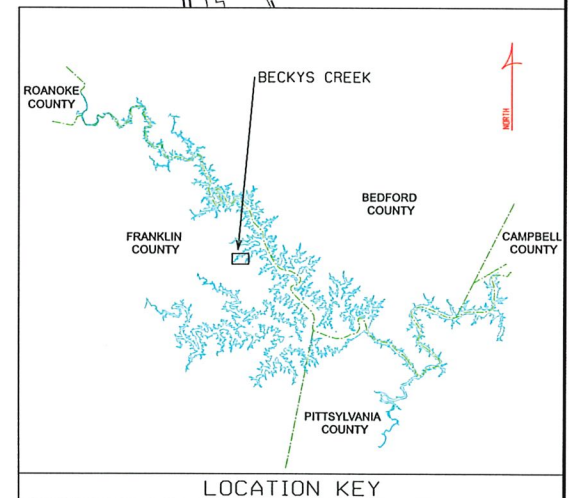
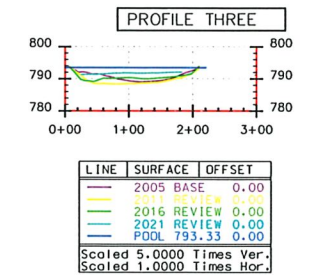
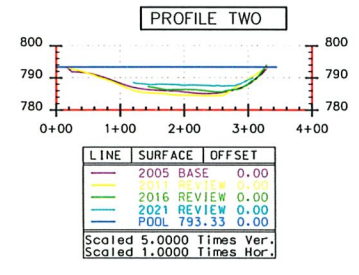
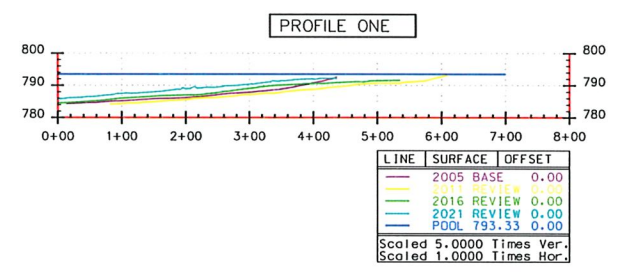


SHEET 2 OF 24 SHEETS  
 APPALACHIAN POWER COMPANY  
 SMITH MOUNTAIN DEVELOPMENT  
 HYDROELECTRIC PROJECT FERC NO. 2210-VA  
 ROANOKE, VA.  
 FIVE YEAR SEDIMENT STUDY  
 SURVEY DATE 9/14/21

GRID NORTH



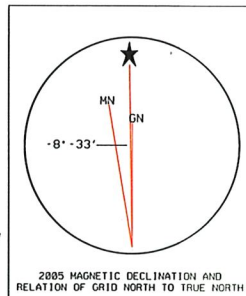
BECKYS CREEK  
POOL ELEVATION 793.33'

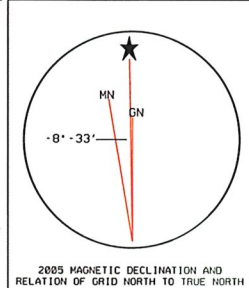
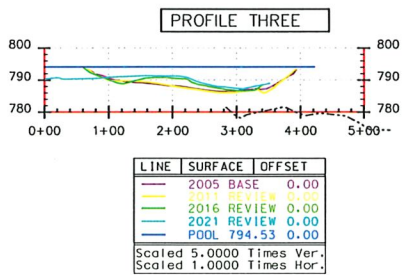
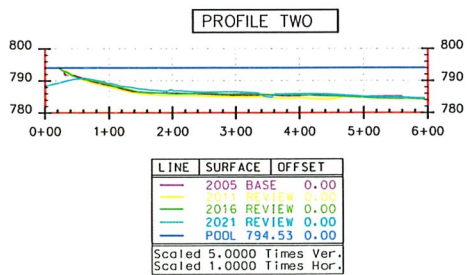
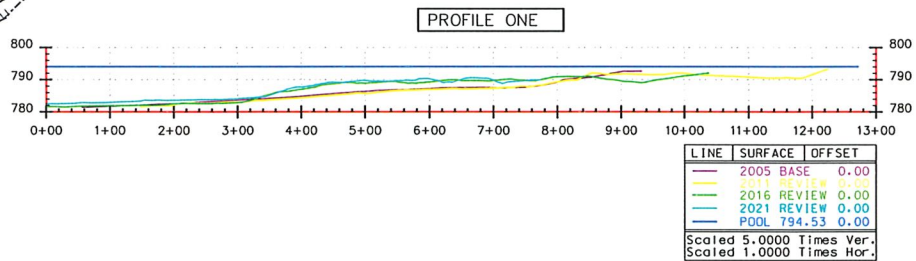
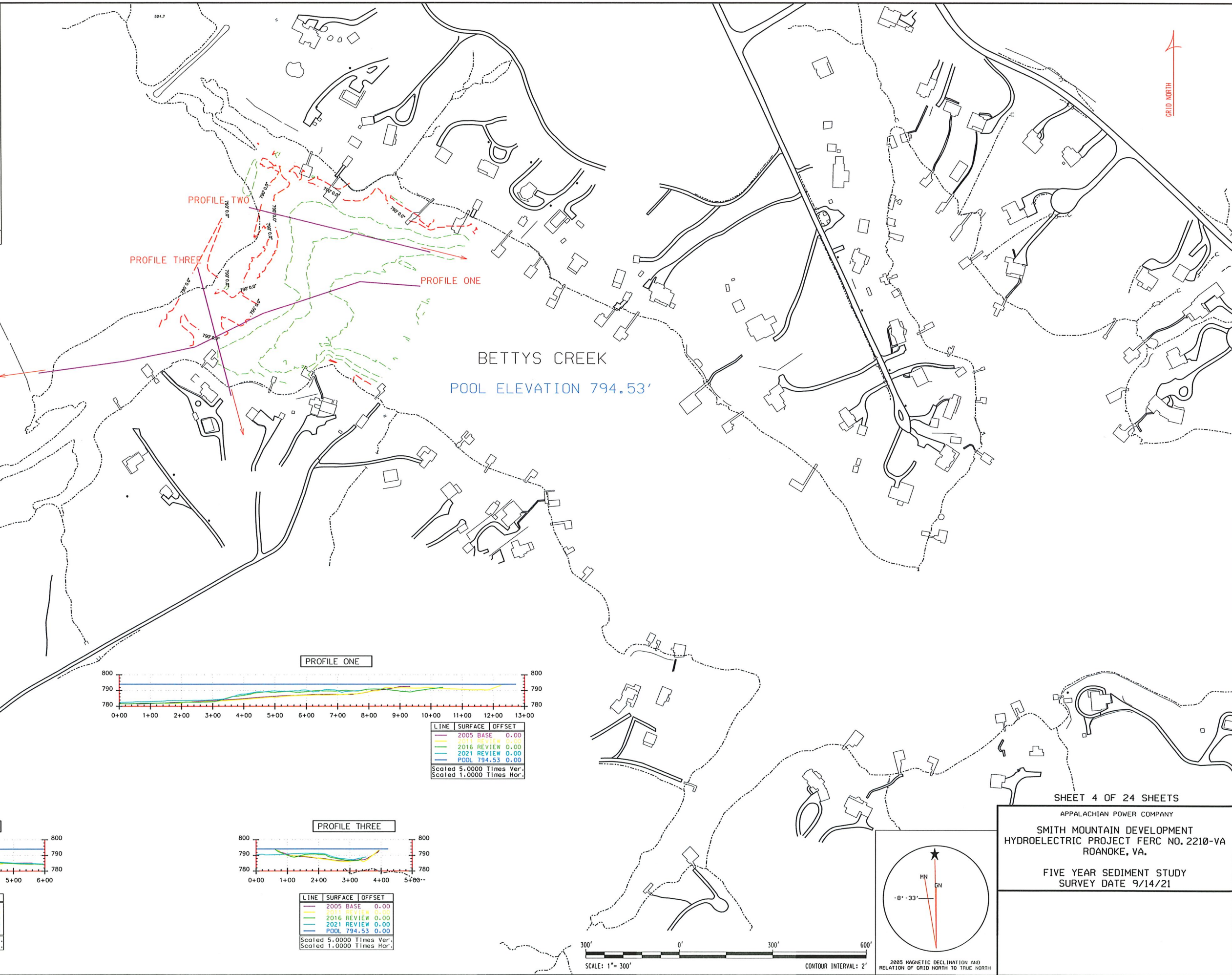
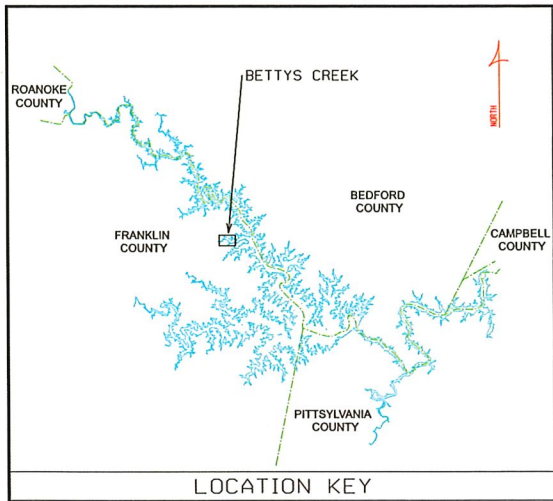


SHEET 3 OF 24 SHEETS

APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.

FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 9/15/21



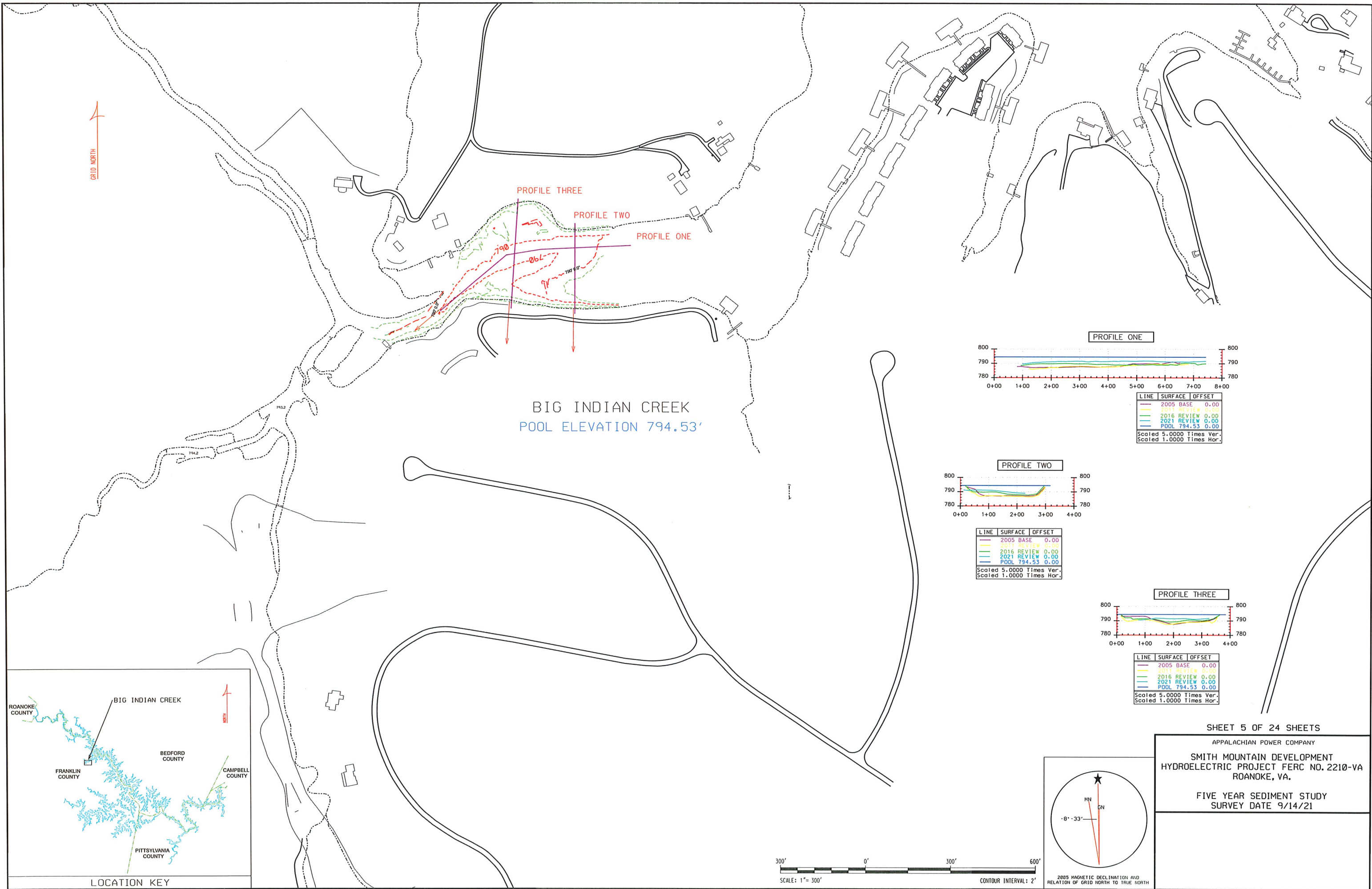


SHEET 4 OF 24 SHEETS

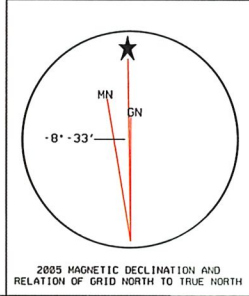
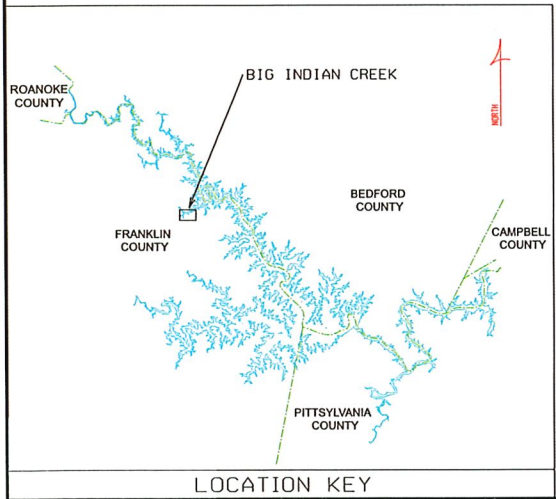
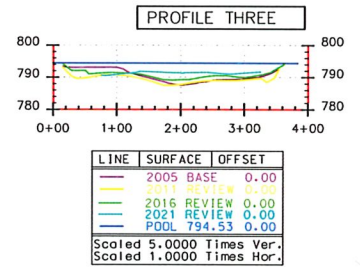
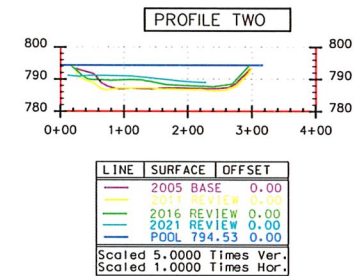
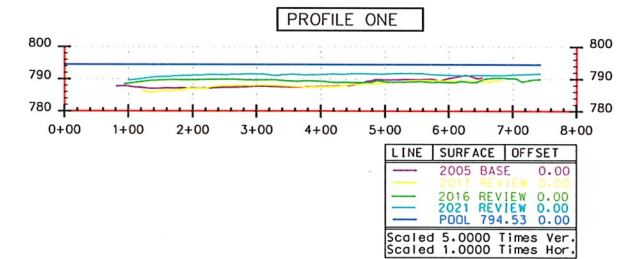
APPALACHIAN POWER COMPANY

SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.

FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 9/14/21



BIG INDIAN CREEK  
POOL ELEVATION 794.53'

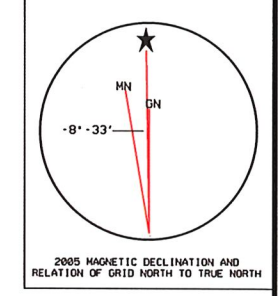
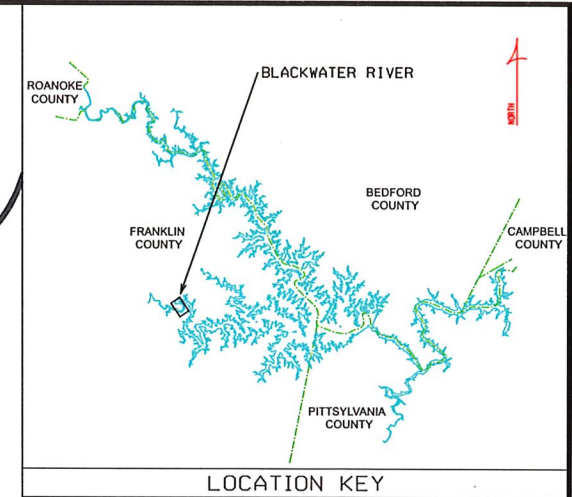
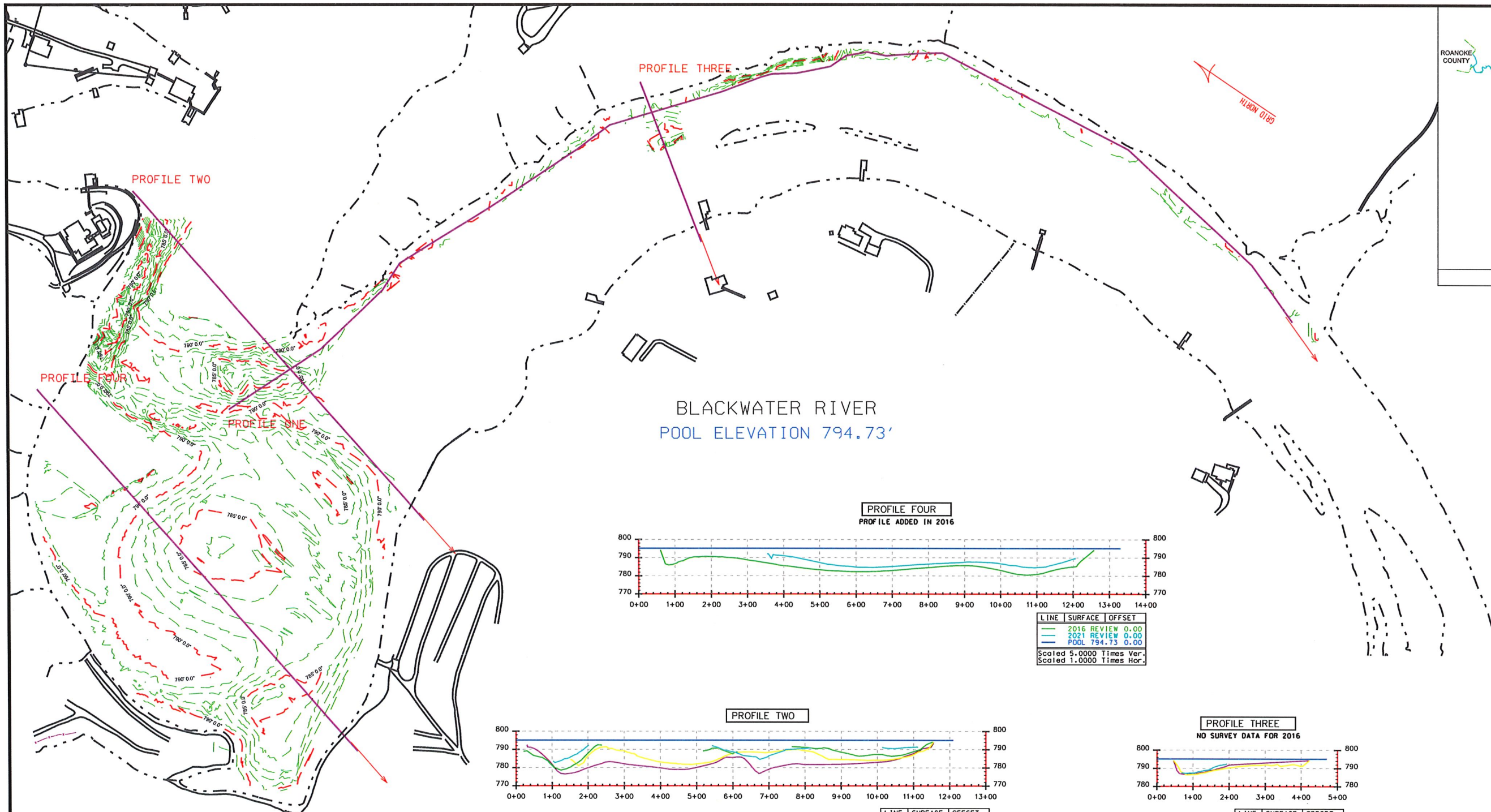


SHEET 5 OF 24 SHEETS

APPALACHIAN POWER COMPANY

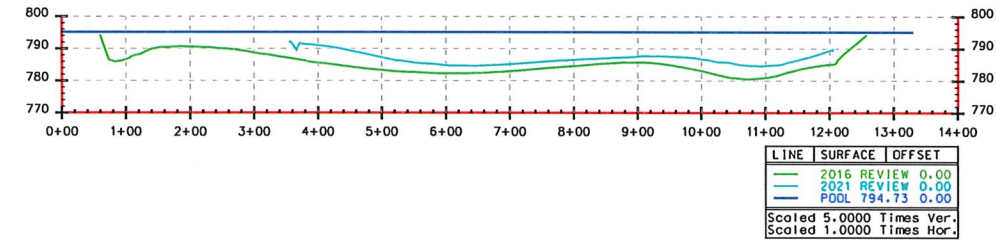
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.

FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 9/14/21

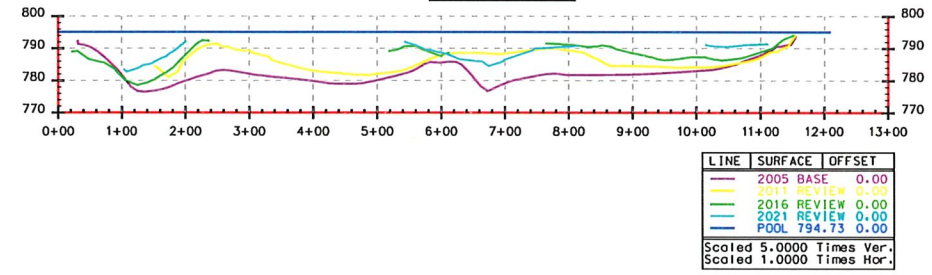


BLACKWATER RIVER  
POOL ELEVATION 794.73'

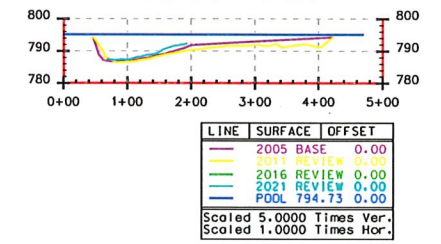
PROFILE FOUR  
PROFILE ADDED IN 2016



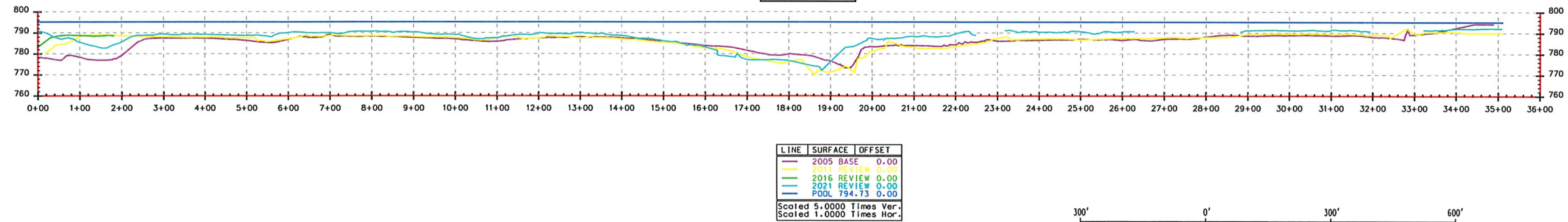
PROFILE TWO



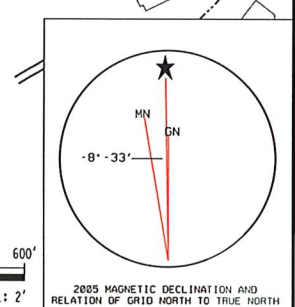
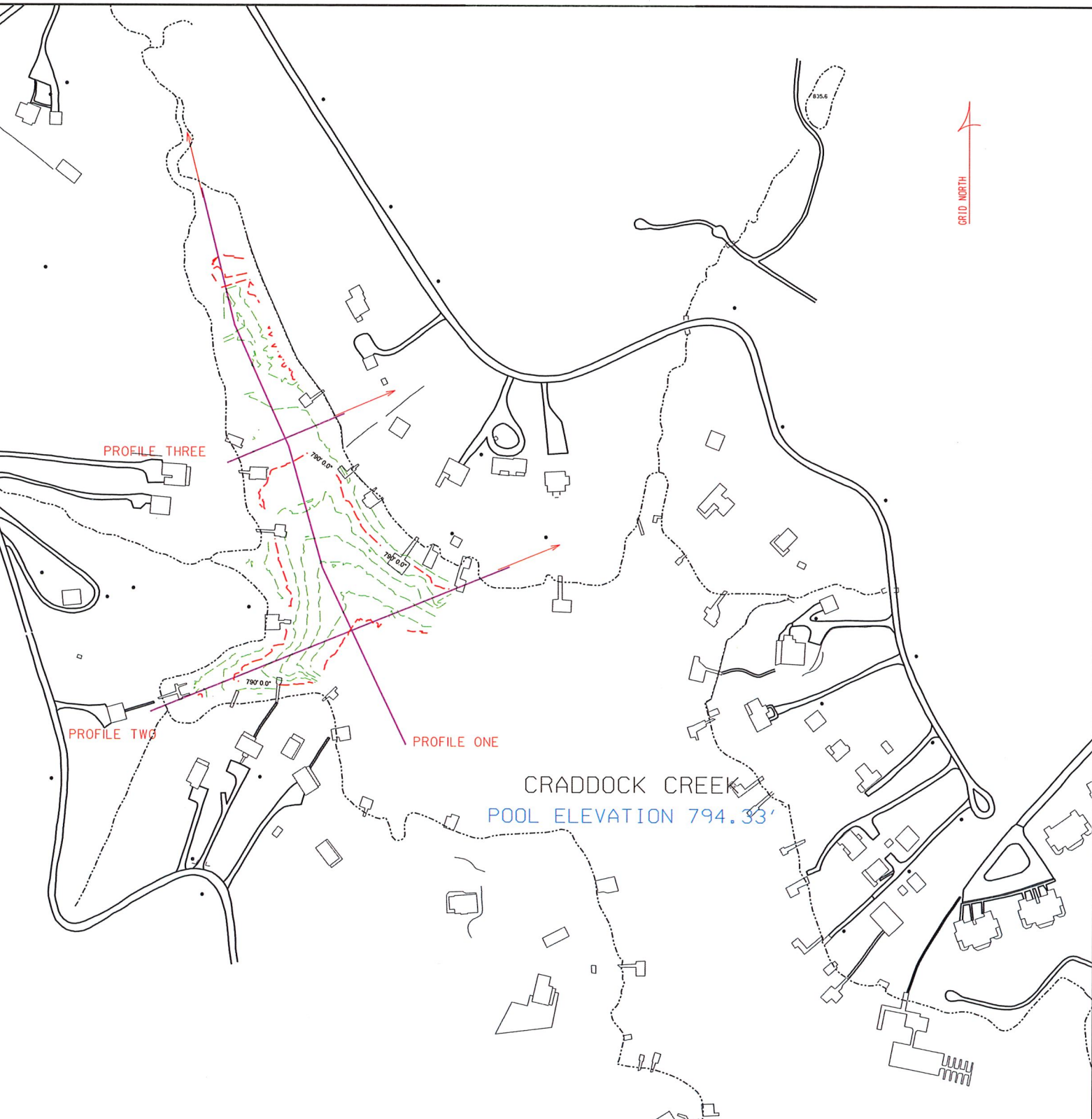
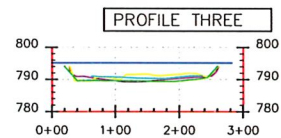
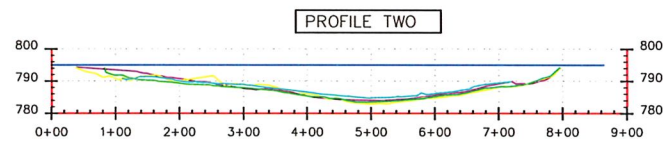
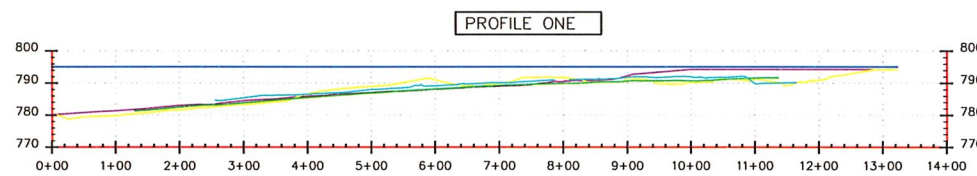
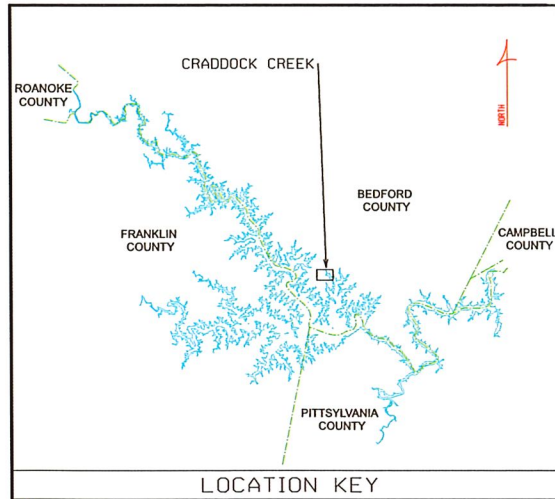
PROFILE THREE  
NO SURVEY DATA FOR 2016



PROFILE ONE



SHEET 6 OF 24 SHEETS  
APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.  
FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 8/24/21

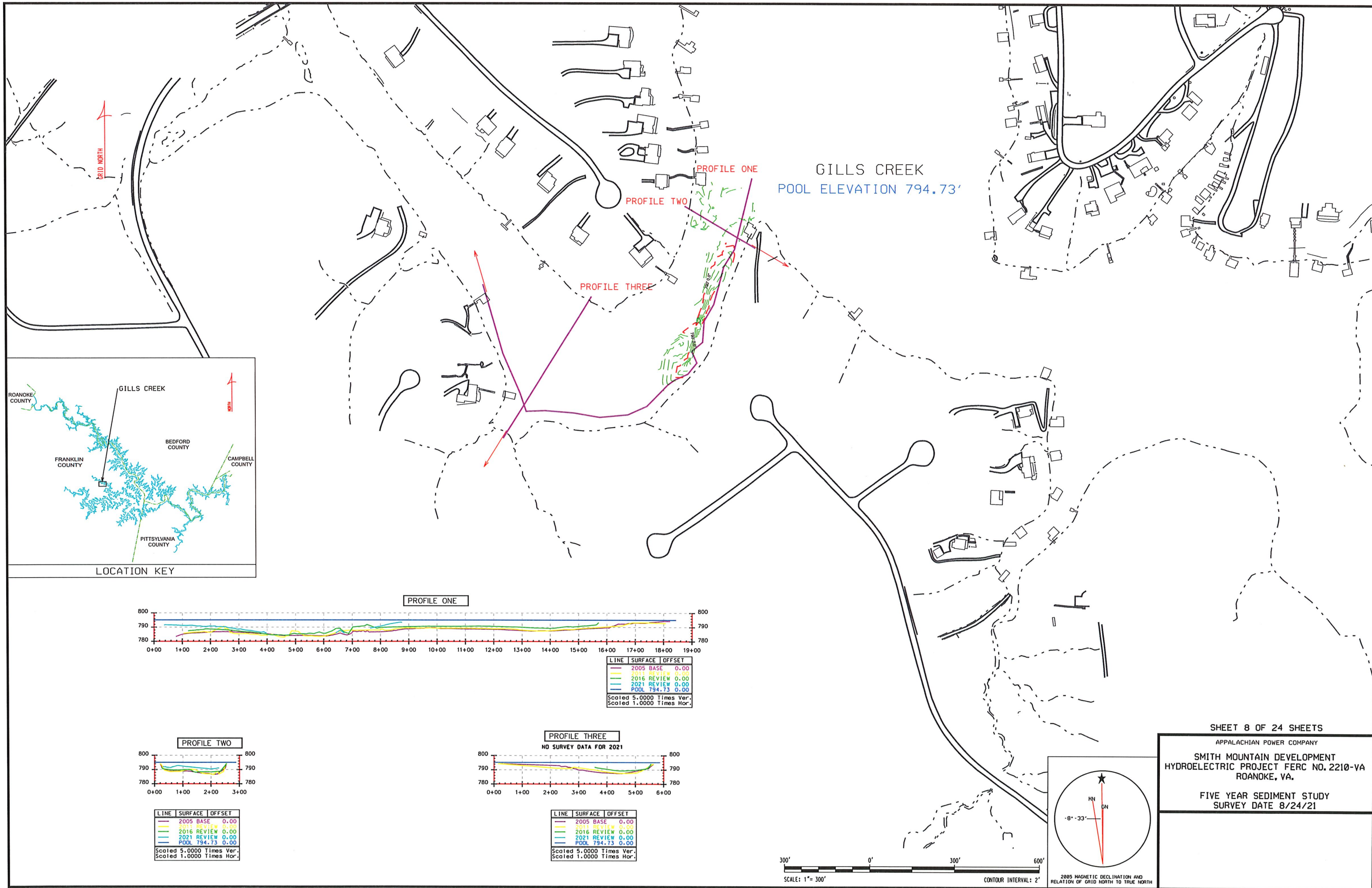


SHEET 7 OF 24 SHEETS

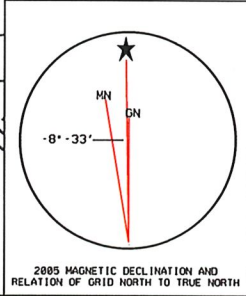
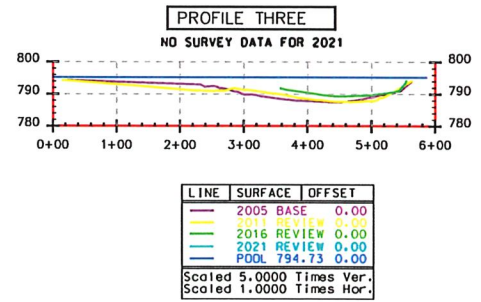
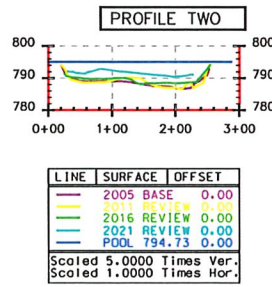
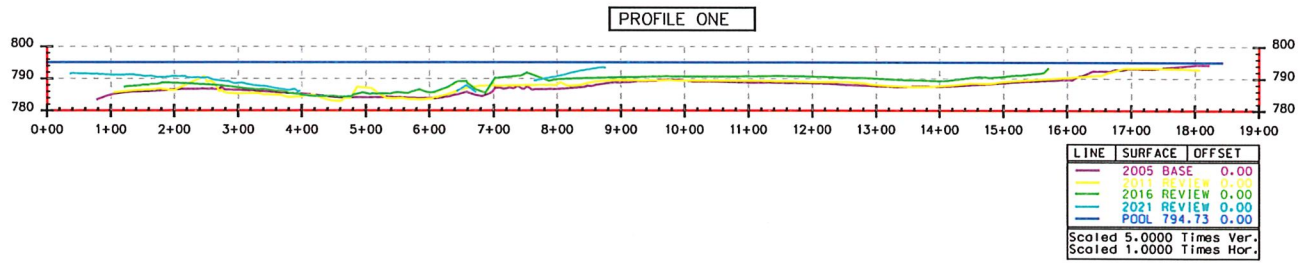
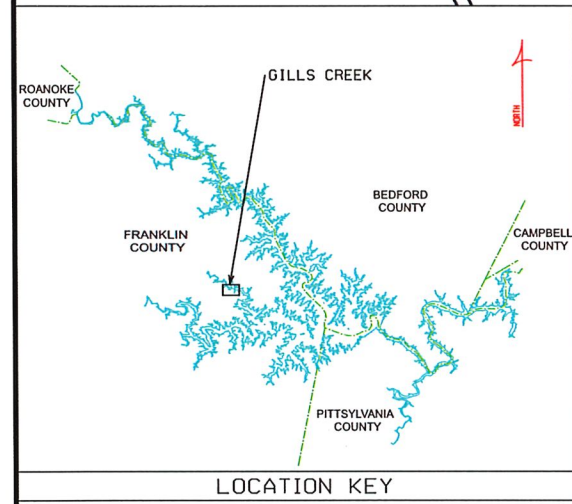
APPALACHIAN POWER COMPANY

SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.

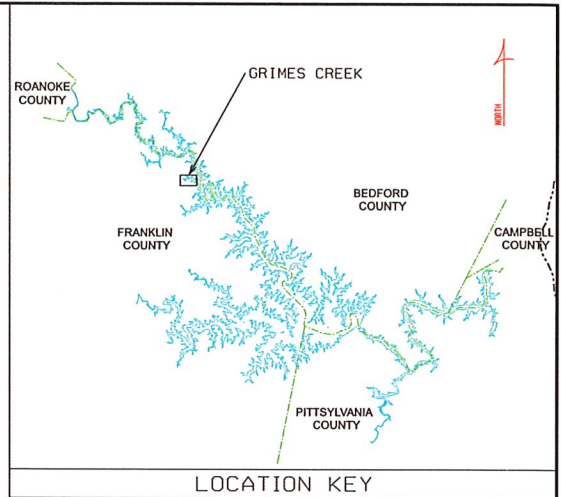
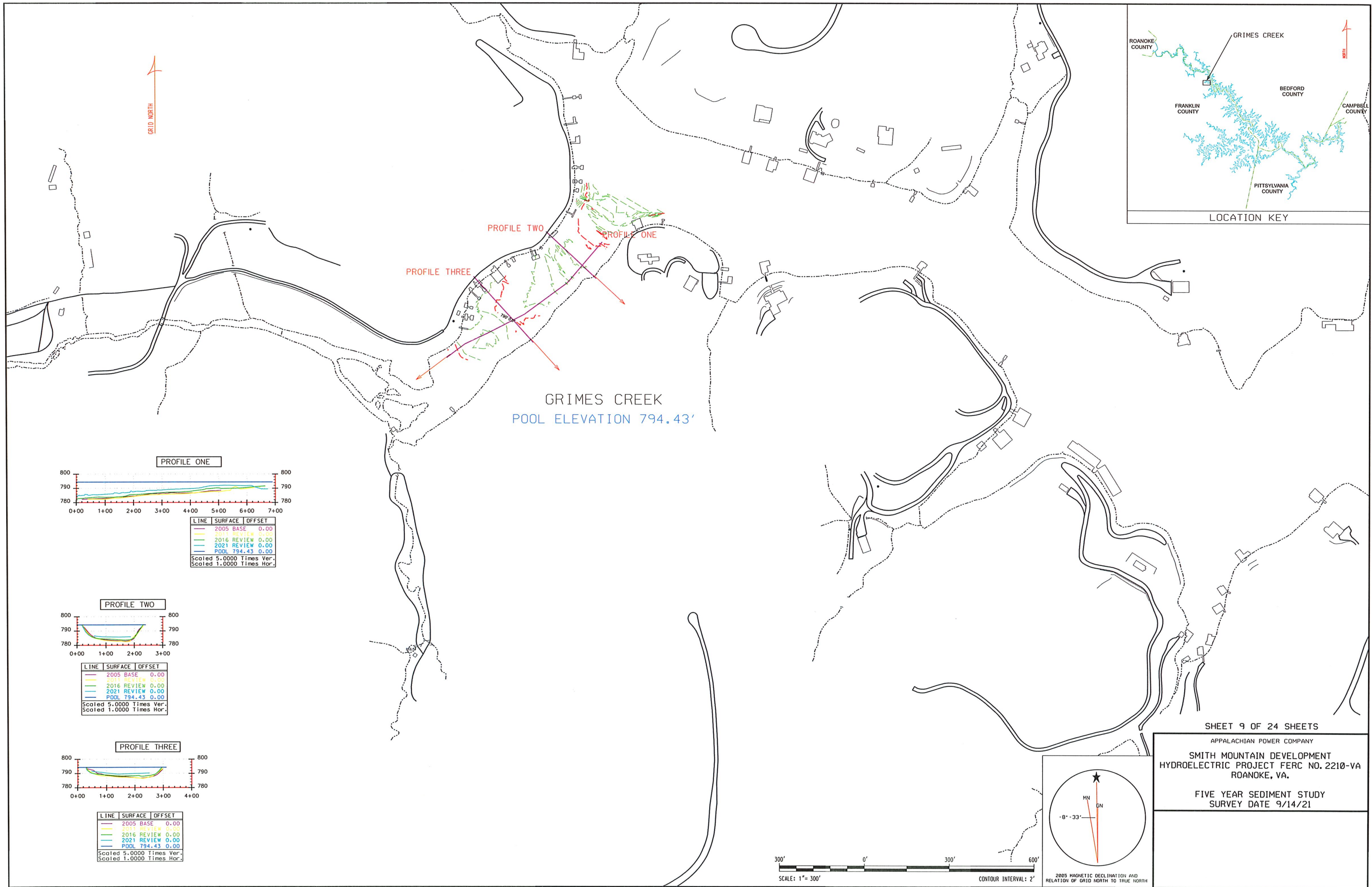
FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 8/25/21



GILLS CREEK  
POOL ELEVATION 794.73'



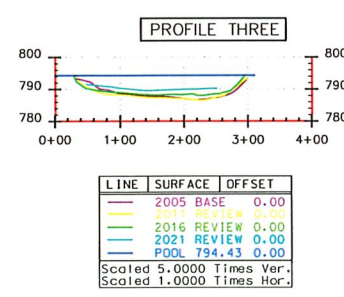
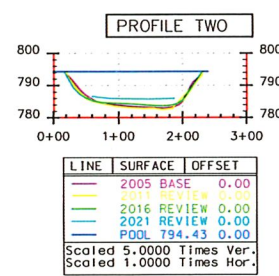
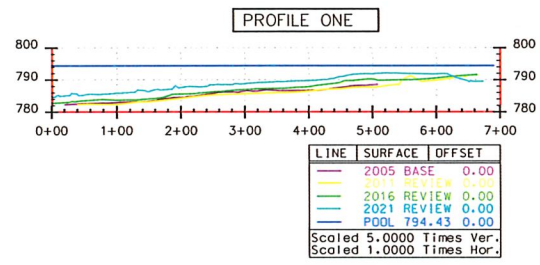
SHEET 8 OF 24 SHEETS  
APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.  
FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 8/24/21



GRID NORTH

PROFILE TWO  
PROFILE ONE  
PROFILE THREE

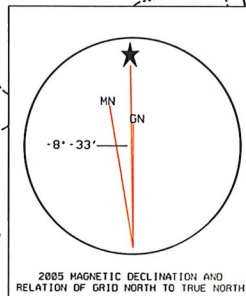
GRIMES CREEK  
POOL ELEVATION 794.43'

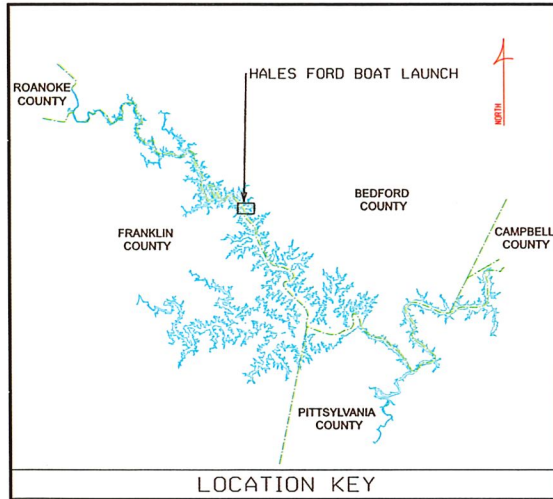


SHEET 9 OF 24 SHEETS

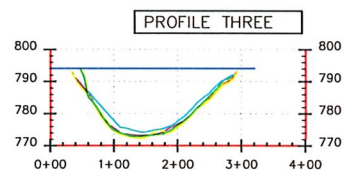
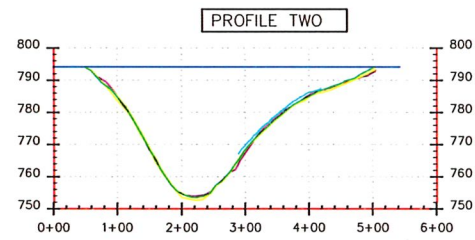
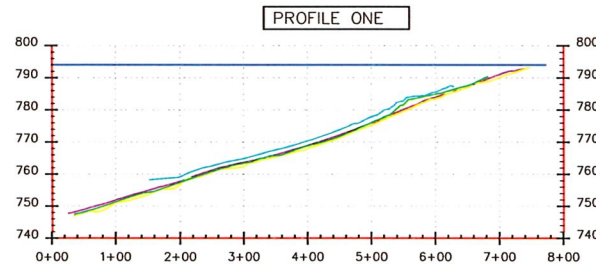
APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.

FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 9/14/21





GRID NORTH



HALES FORD BOAT LAUNCH  
POOL ELEVATION 794.03'

PROFILE ONE

PROFILE TWO

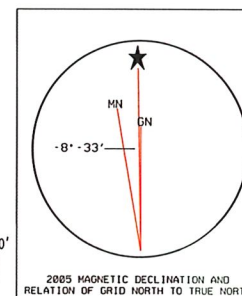
PROFILE THREE

SHEET 10 OF 24 SHEETS

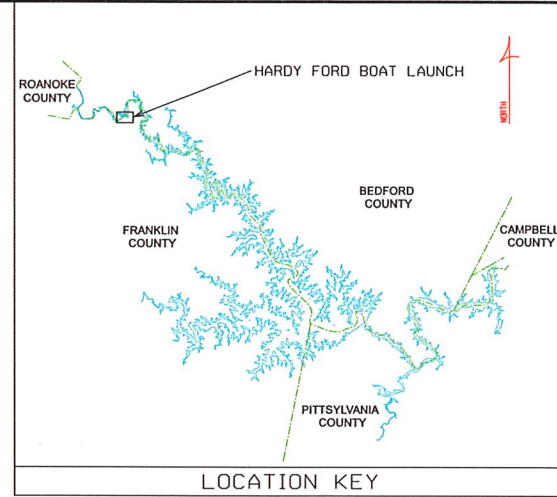
APPALACHIAN POWER COMPANY

SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.

FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 9/14/21



HARDY FORD BOAT LAUNCH  
POOL ELEVATION 793.83'

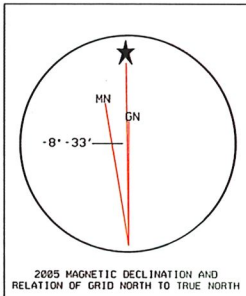
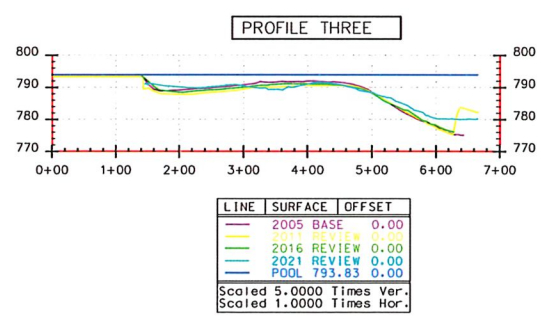
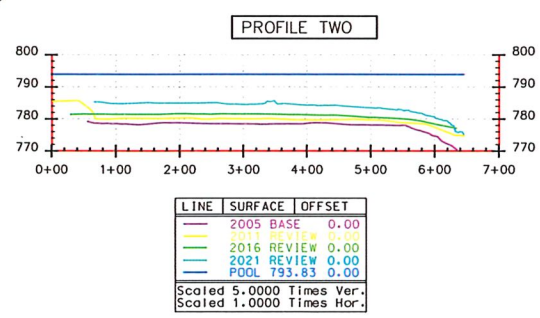
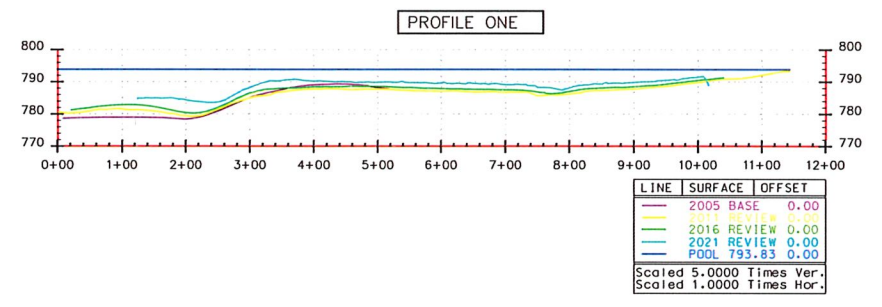


GRID NORTH

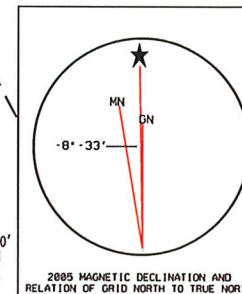
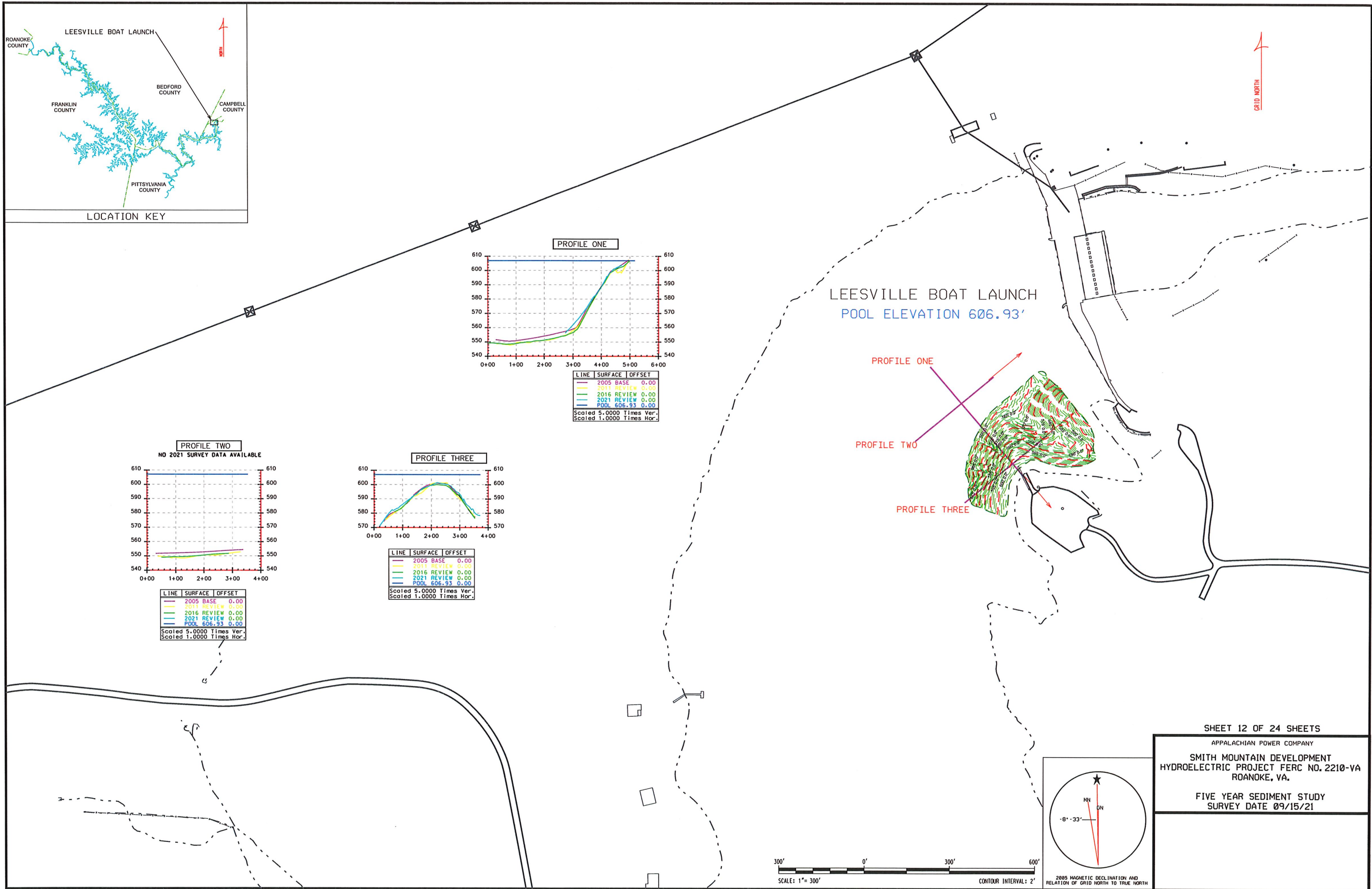
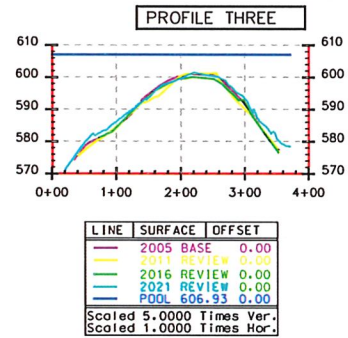
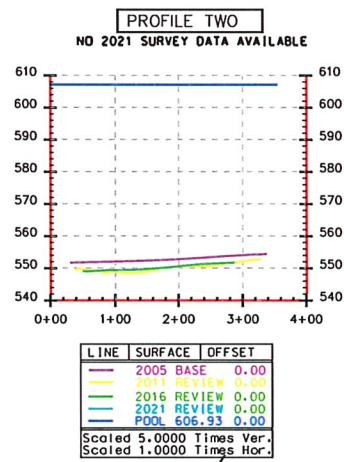
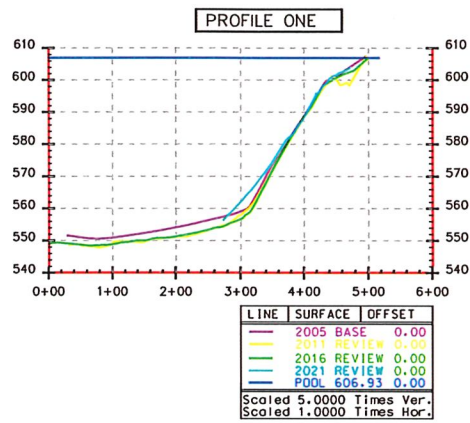
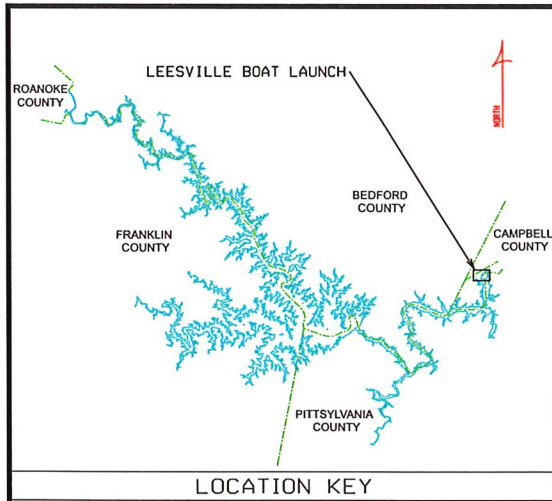
PROFILE THREE

PROFILE TWO

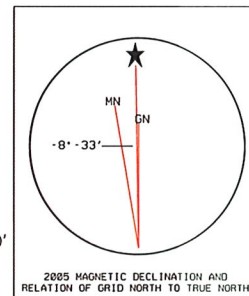
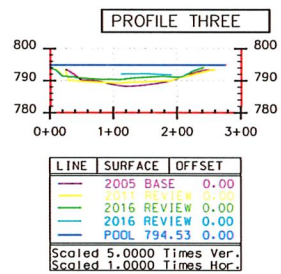
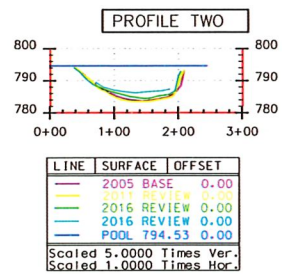
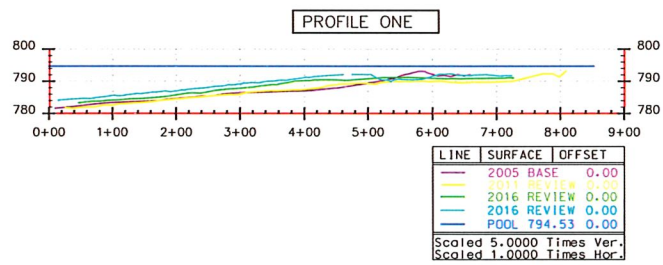
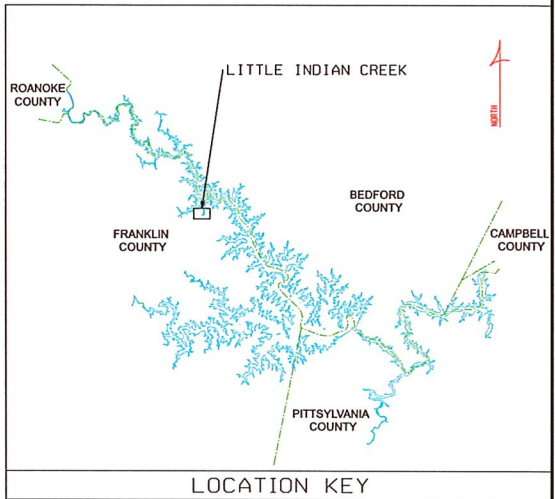
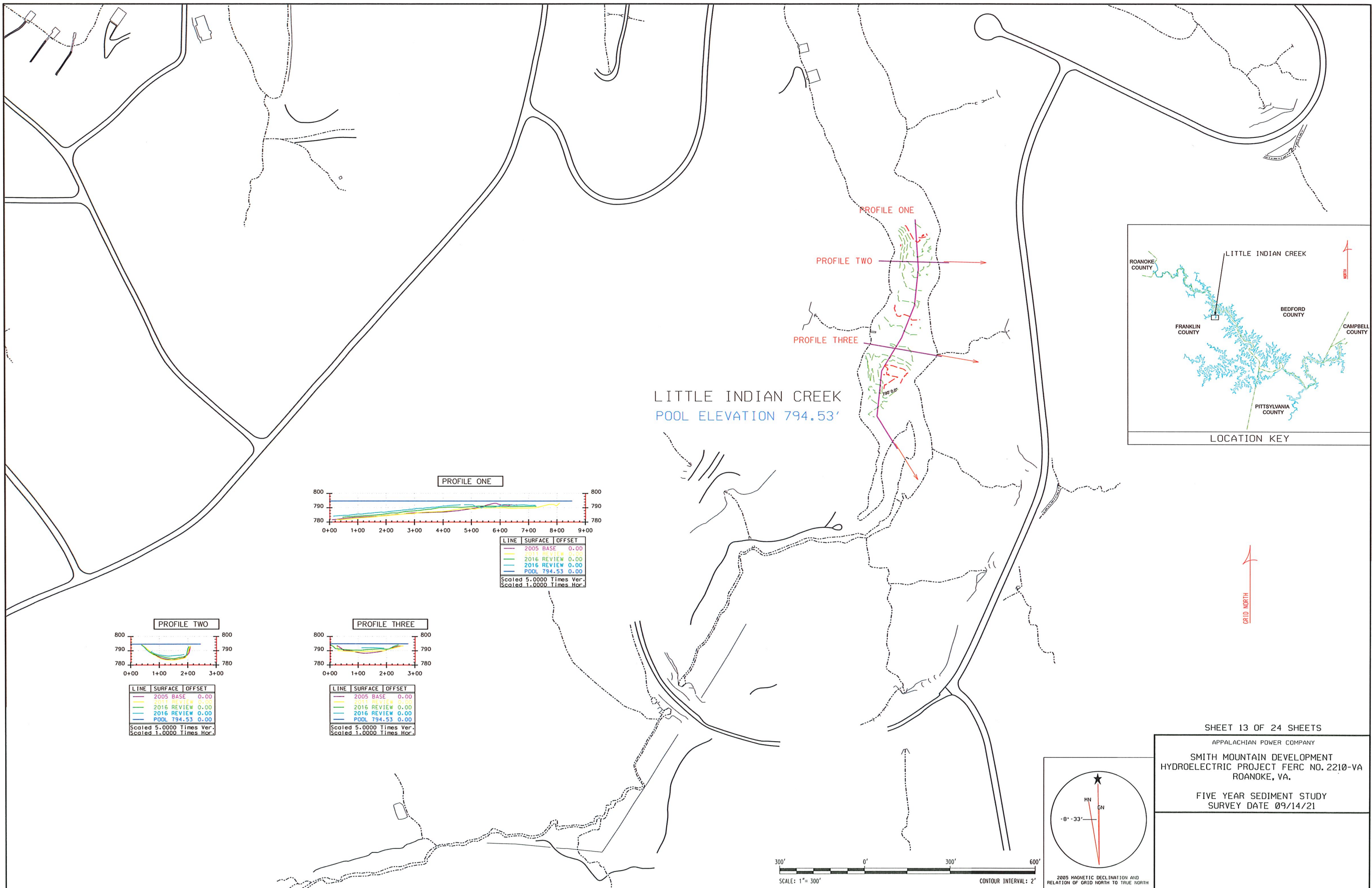
PROFILE ONE



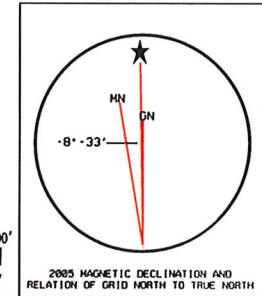
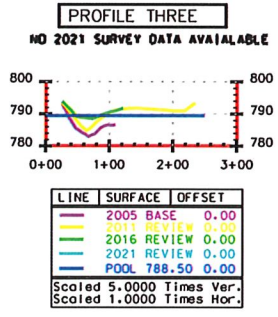
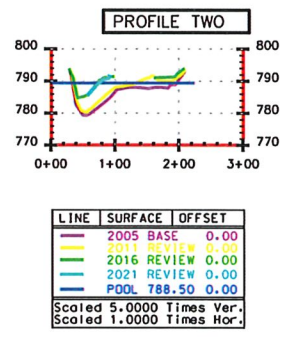
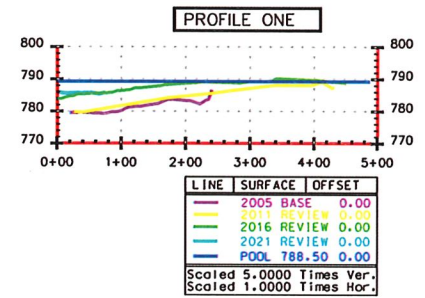
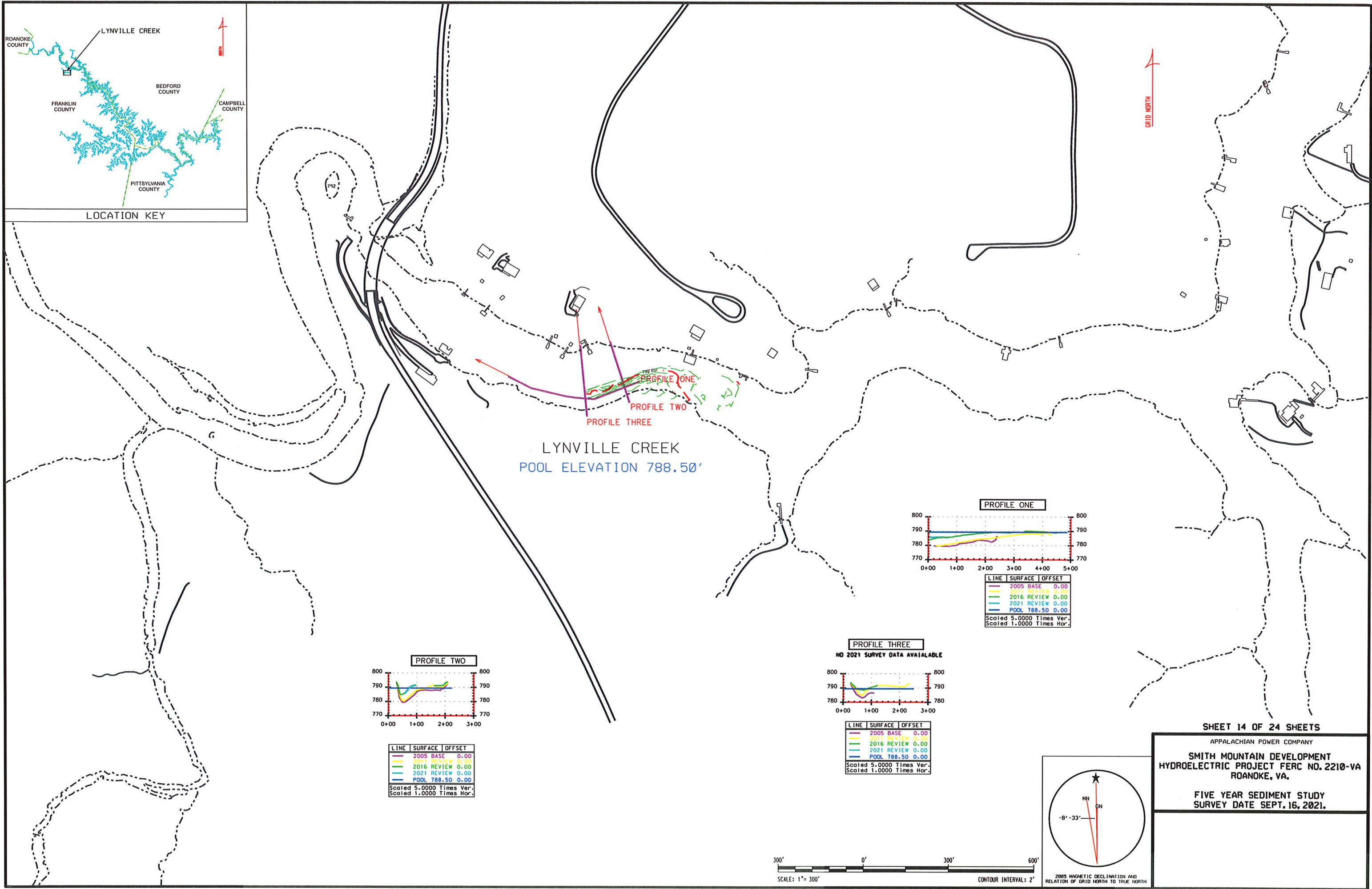
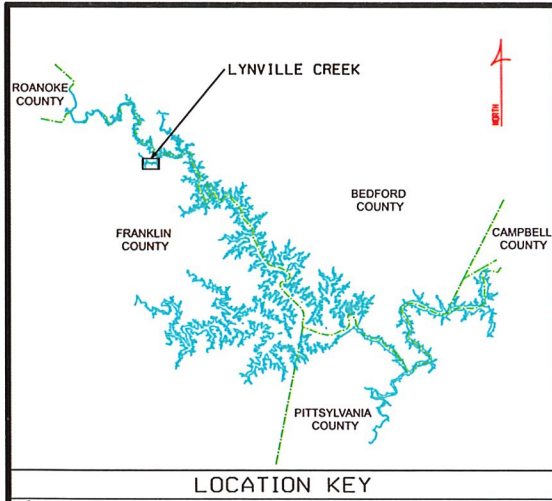
SHEET 11 OF 24 SHEETS  
APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.  
FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 9/16/21



SHEET 12 OF 24 SHEETS  
APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.  
FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 09/15/21



SHEET 13 OF 24 SHEETS  
 APPALACHIAN POWER COMPANY  
 SMITH MOUNTAIN DEVELOPMENT  
 HYDROELECTRIC PROJECT FERC NO. 2210-VA  
 ROANOKE, VA.  
 FIVE YEAR SEDIMENT STUDY  
 SURVEY DATE 09/14/21

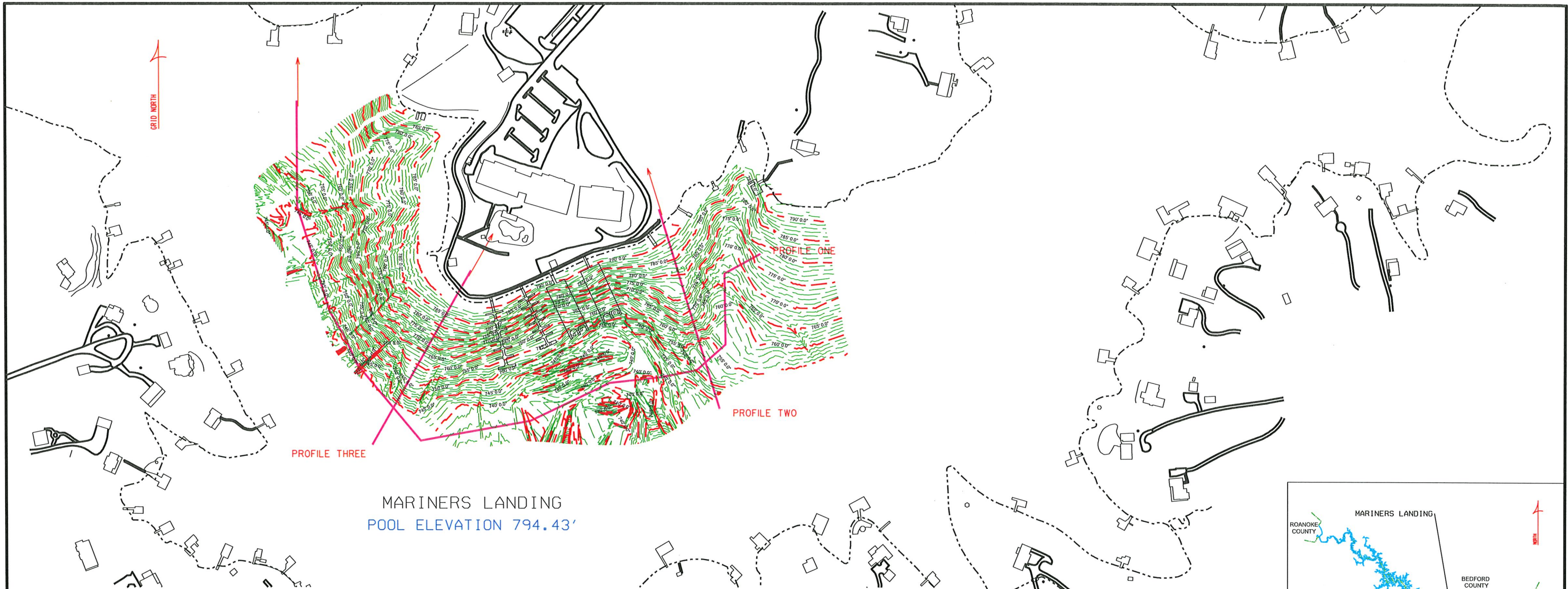


SHEET 14 OF 24 SHEETS

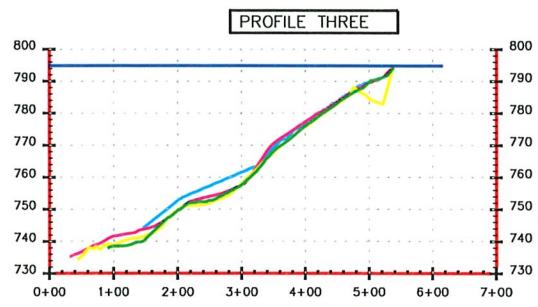
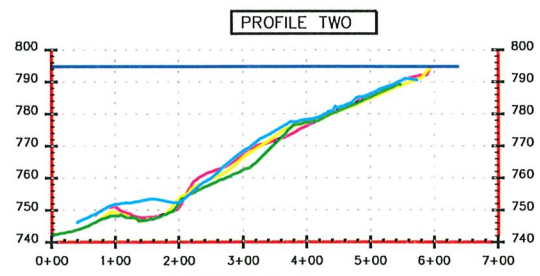
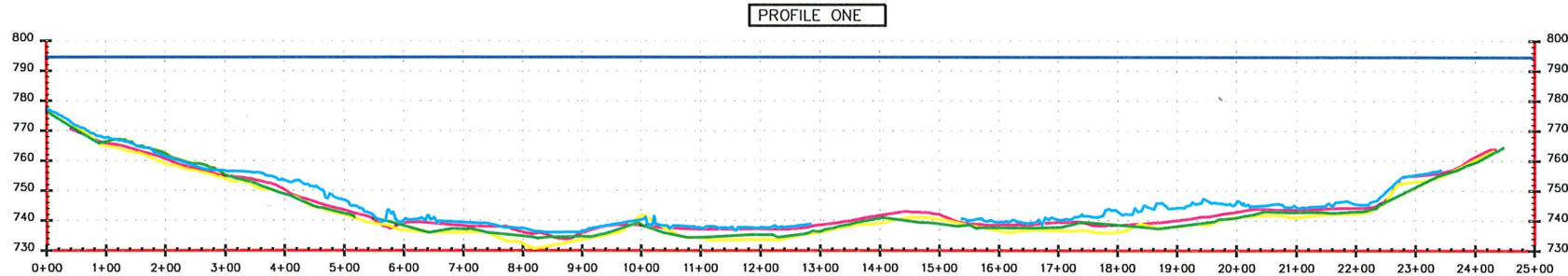
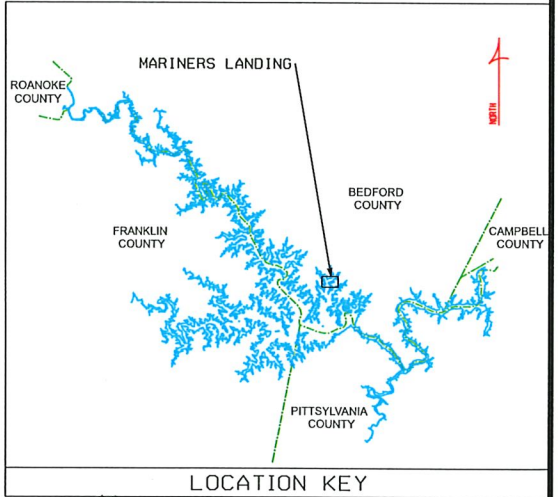
APPALACHIAN POWER COMPANY

SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.

FIVE YEAR SEDIMENT STUDY  
SURVEY DATE SEPT. 16, 2021.

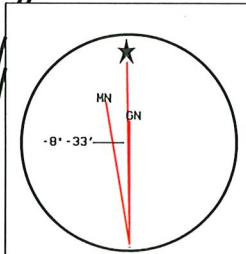


MARINERS LANDING  
POOL ELEVATION 794.43'



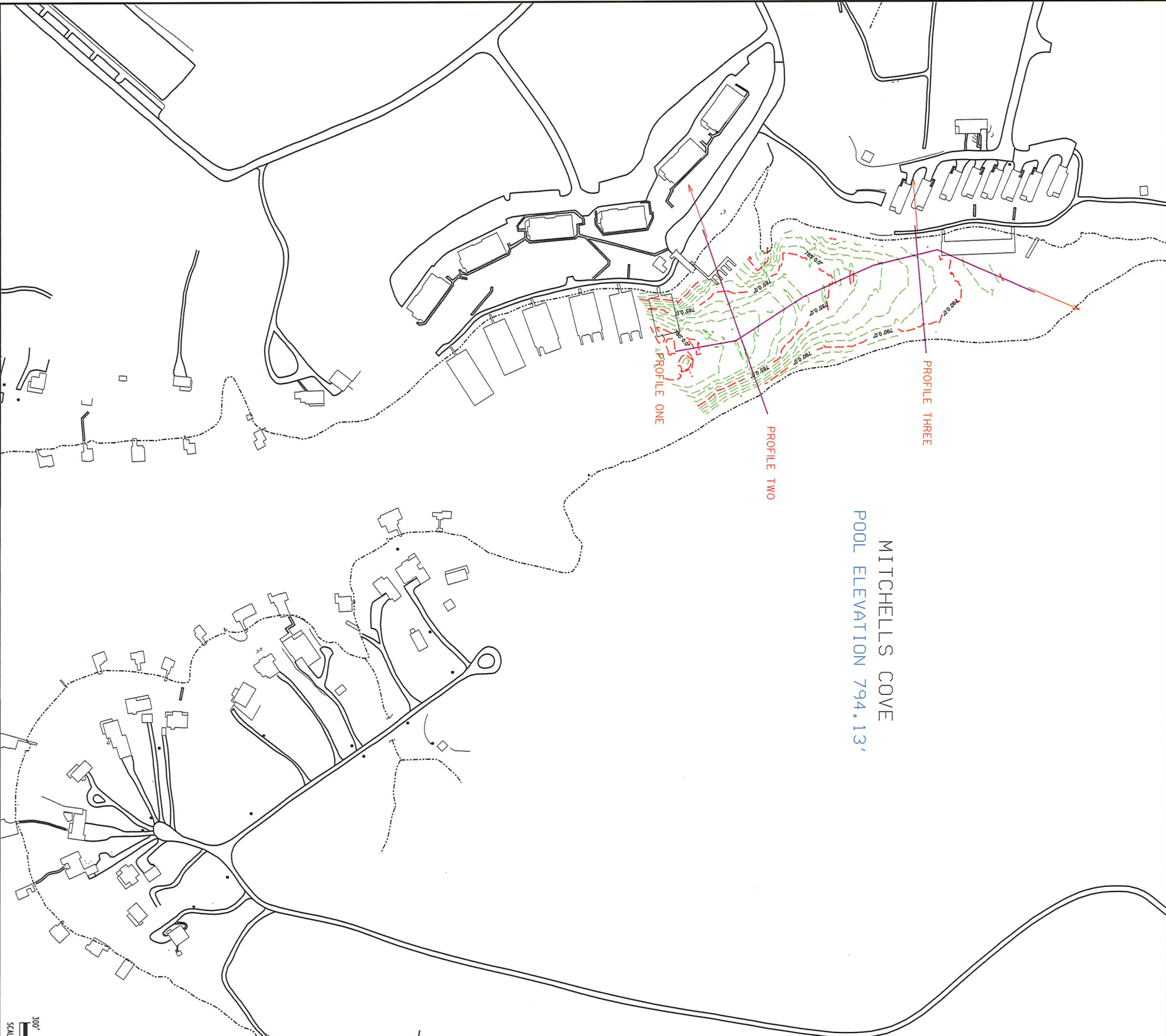
LINE	SURFACE	OFFSET
2005 BASE	0.00	
2011 REVIEW	0.00	
2016 REVIEW	0.00	
2021 REVIEW	0.00	
POOL	794.31	0.00

Scaled 5.0000 Times Ver.  
Scaled 1.0000 Times Hor.

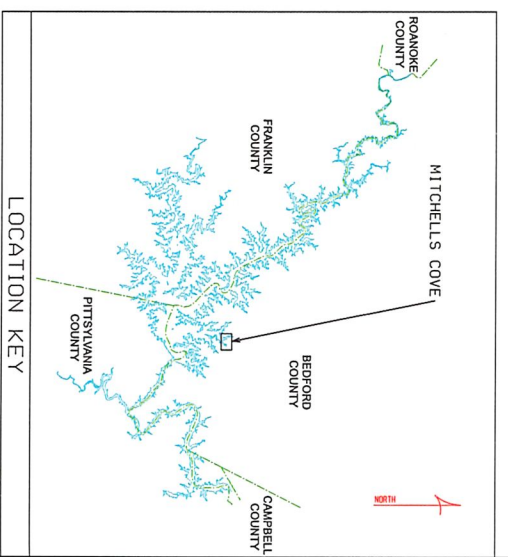
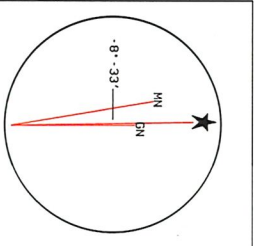
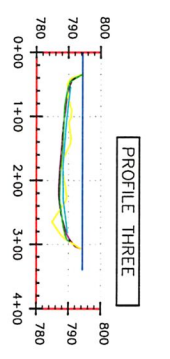
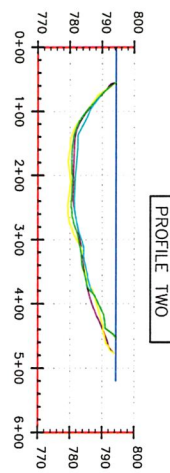
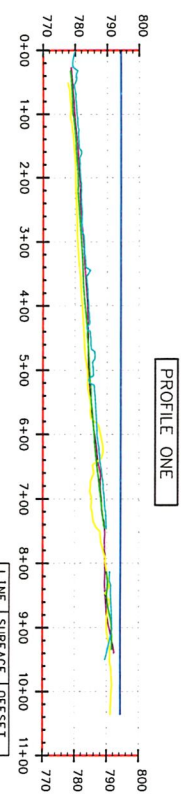


CONTOUR INTERVAL: 2'

SHEET 15 OF 24 SHEETS  
APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.  
FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 08/25/21



MITCHELLS COVE  
POOL ELEVATION 794.13'



SHEET 16 OF 24 SHEETS

APPALACHIAN POWER COMPANY

SMITH MOUNTAIN DEVELOPMENT

HYDROELECTRIC PROJECT FERC NO. 2210-VA

ROANOKE, VA.

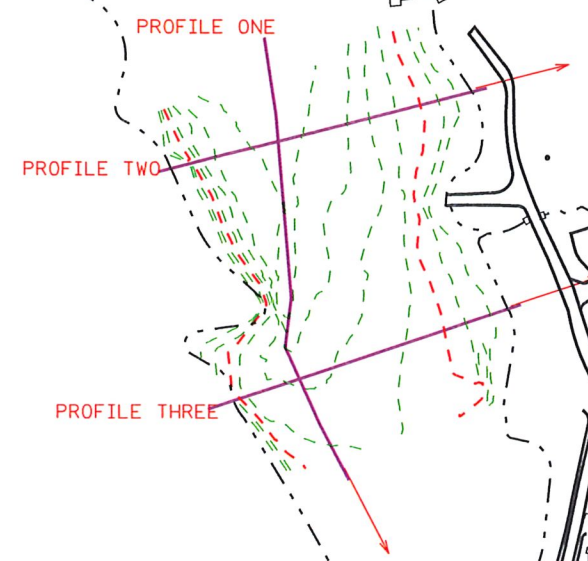
FIVE YEAR SEDIMENT STUDY

SURVEY DATE 08/25/21

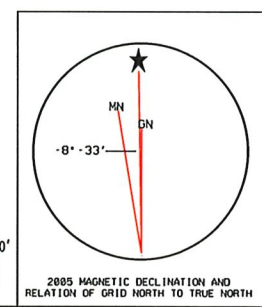
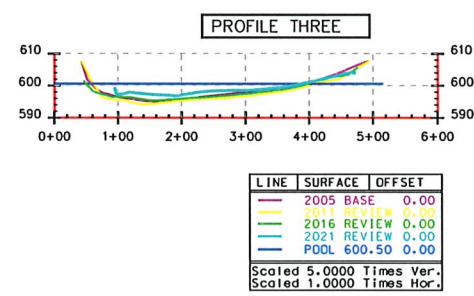
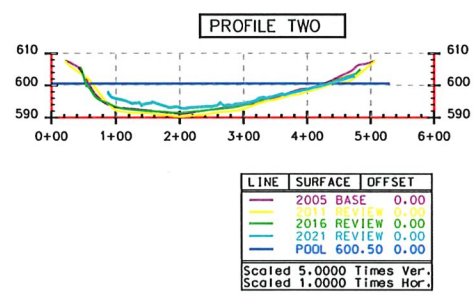
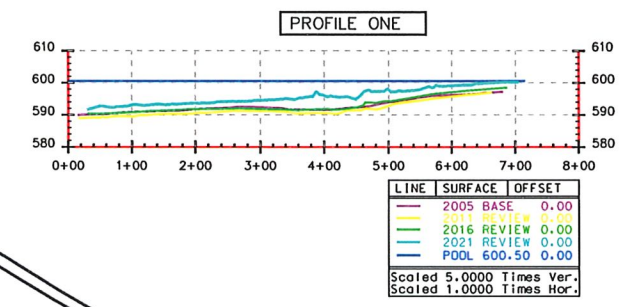
GRID NORTH

MYERS CREEK BOAT LAUNCH

LOCATION KEY

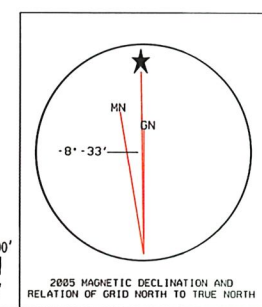
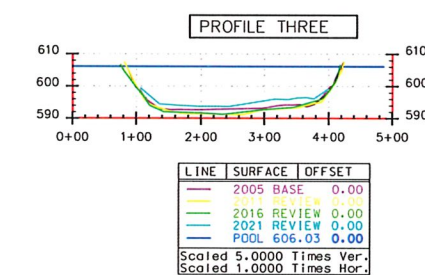
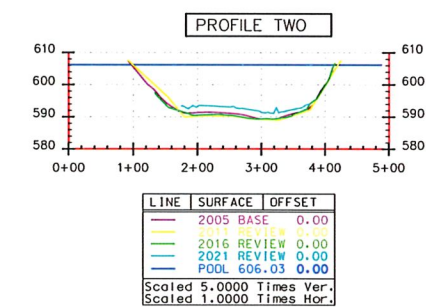
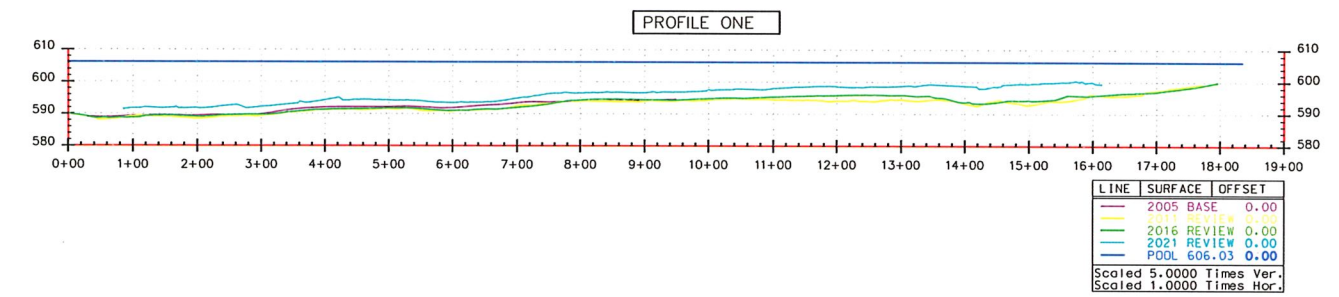
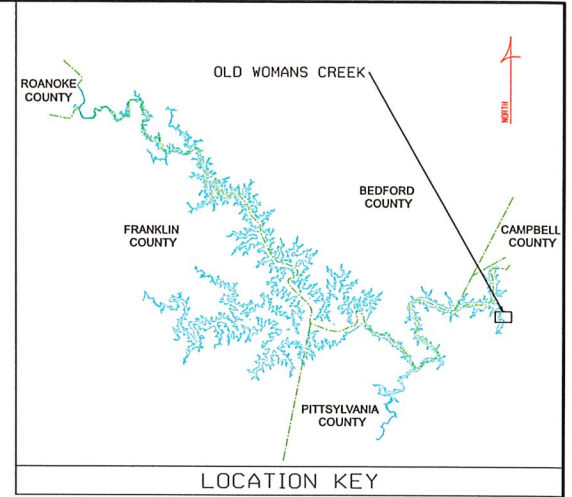
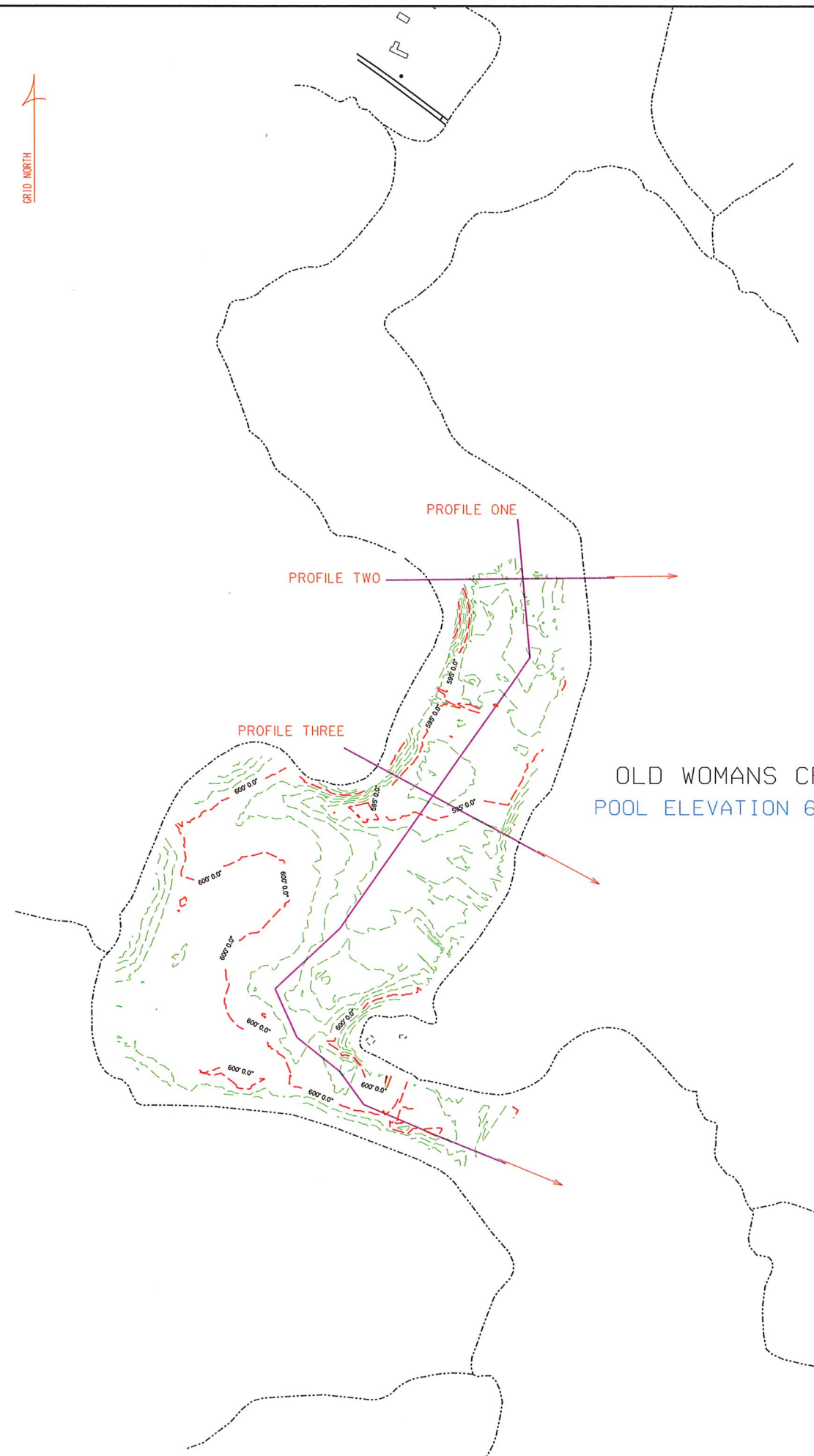


MYERS CREEK BOAT LAUNCH  
 POOL ELEVATION 600.50'

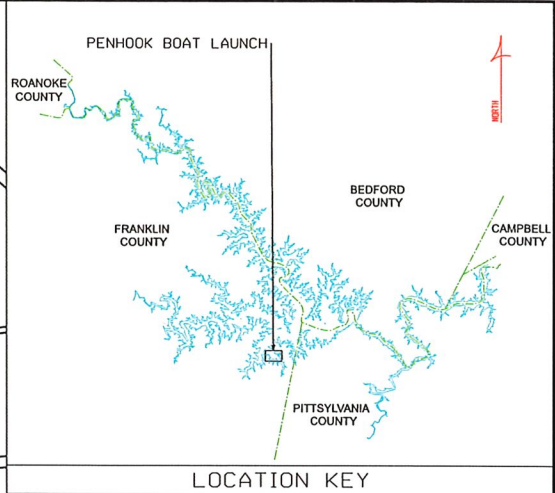
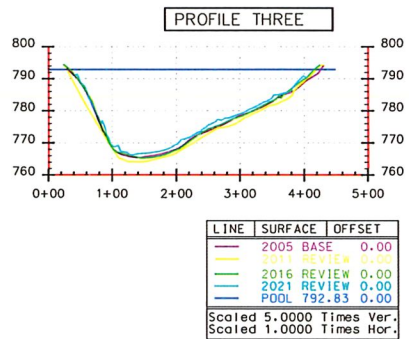
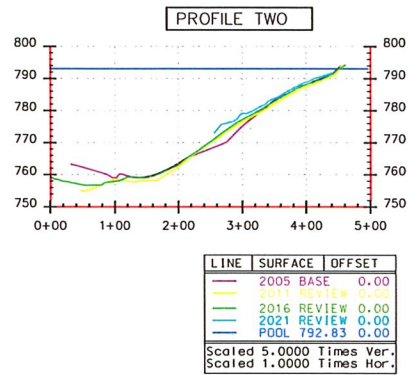
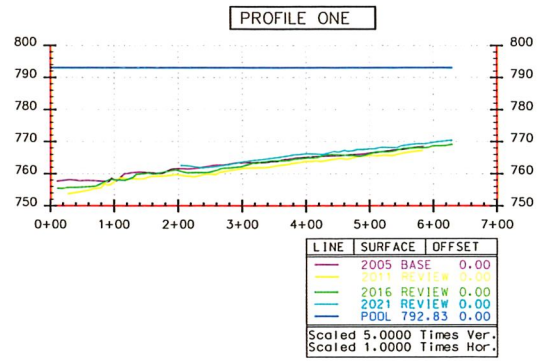
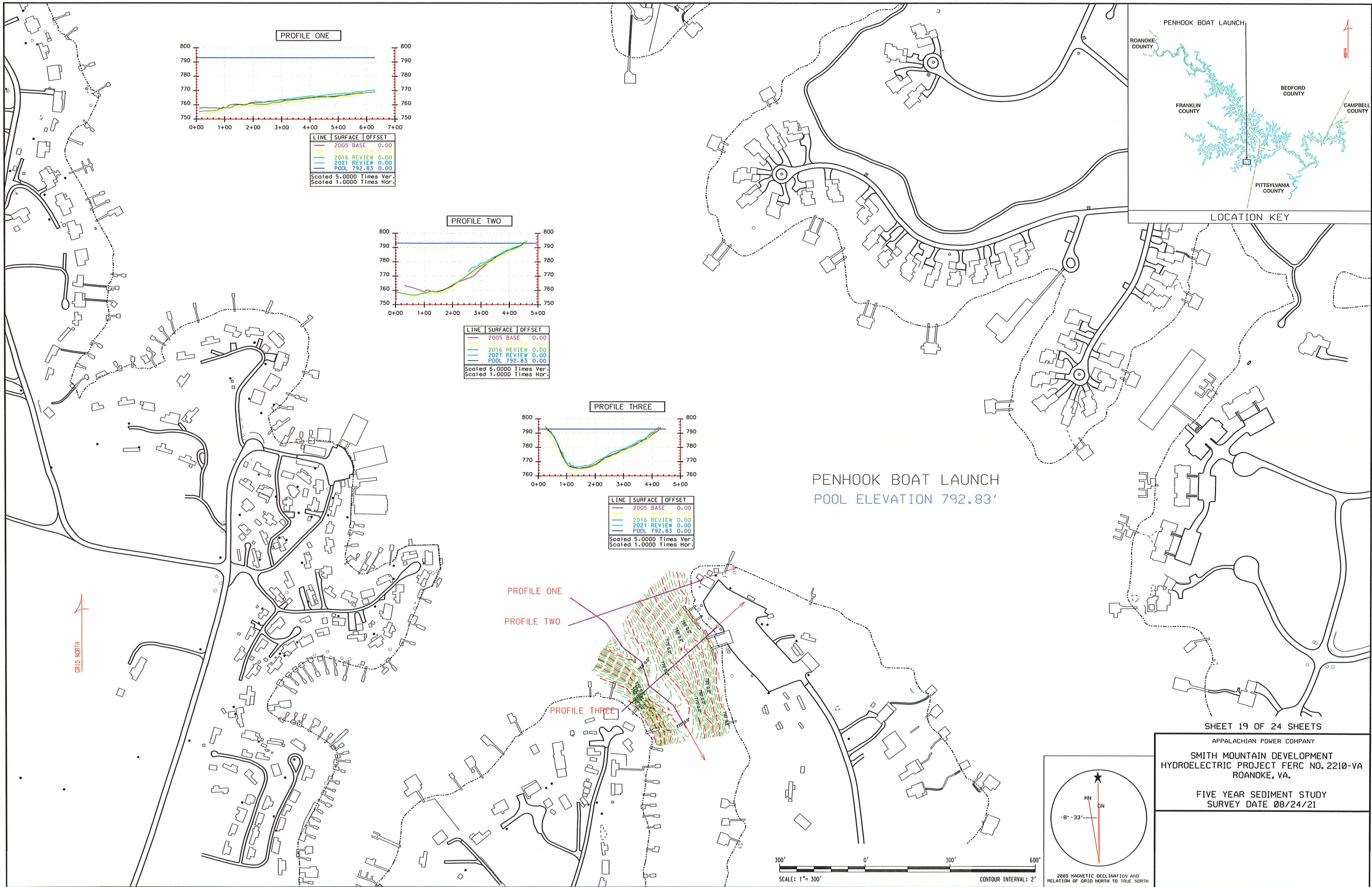


SHEET 17 OF 24 SHEETS  
 APPALACHIAN POWER COMPANY  
 SMITH MOUNTAIN DEVELOPMENT  
 HYDROELECTRIC PROJECT FERC NO. 2210-VA  
 ROANOKE, VA.  
 FIVE YEAR SEDIMENT STUDY  
 SURVEY DATE SEPT. 15, 2021

GRID NORTH



SHEET 18 OF 24 SHEETS  
 APPALACHIAN POWER COMPANY  
 SMITH MOUNTAIN DEVELOPMENT  
 HYDROELECTRIC PROJECT FERC NO. 2210-VA  
 ROANOKE, VA.  
 FIVE YEAR SEDIMENT STUDY  
 SURVEY DATE 09/15/21



PENHOOK BOAT LAUNCH  
POOL ELEVATION 792.83'

PROFILE ONE

PROFILE TWO

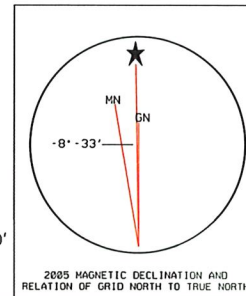
PROFILE THREE

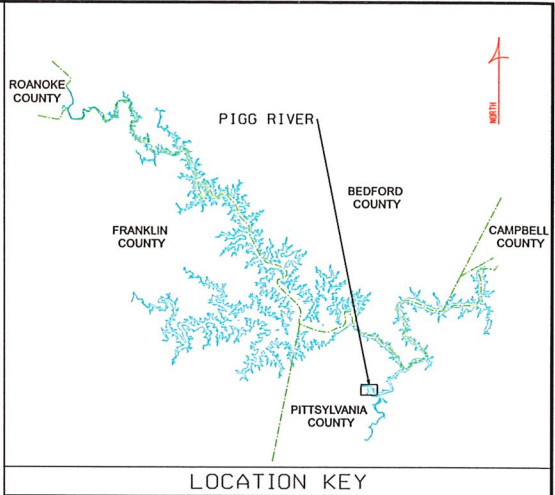
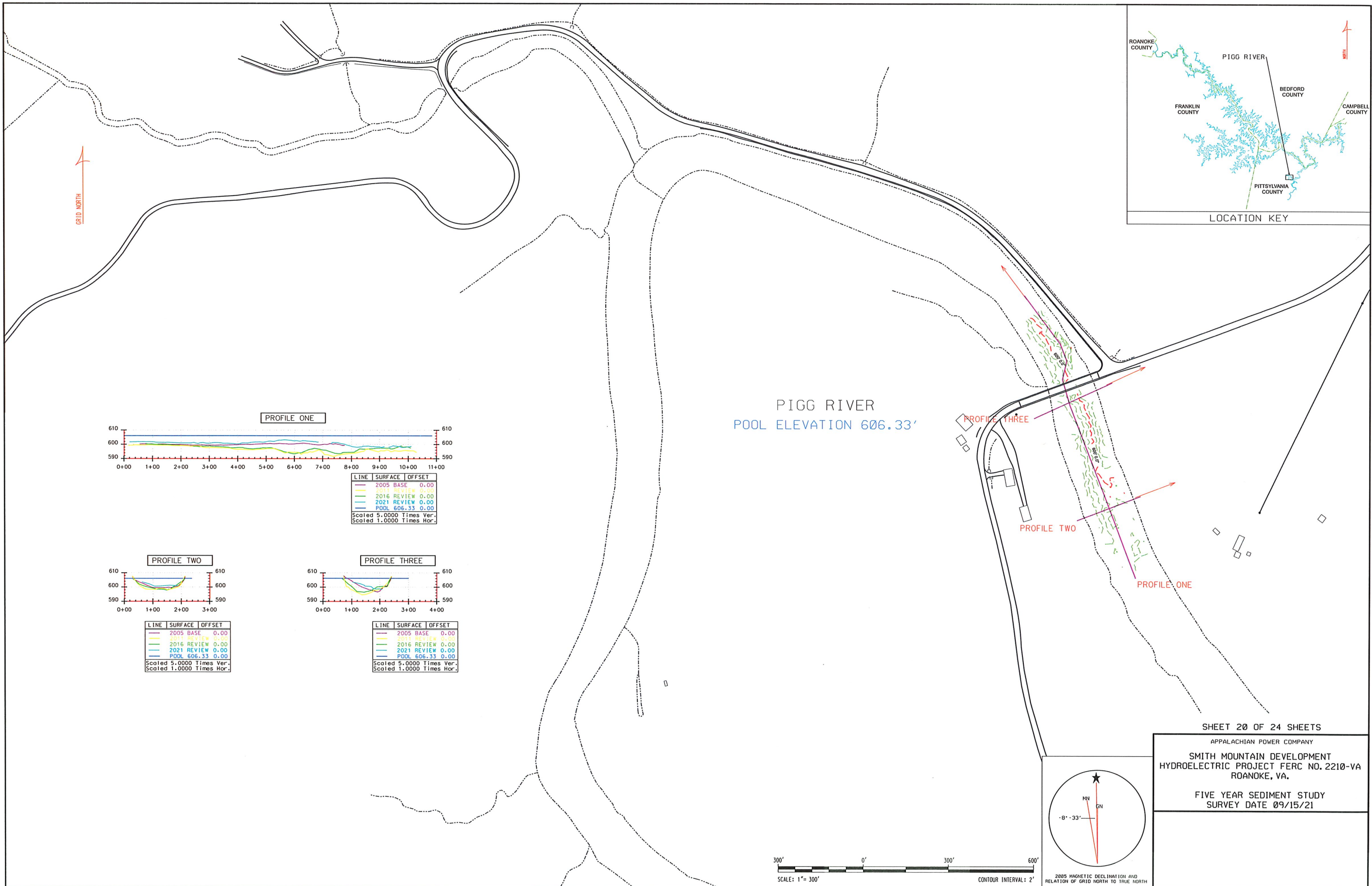
GRID NORTH

SHEET 19 OF 24 SHEETS

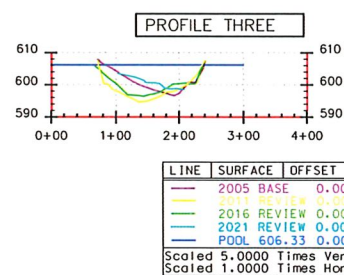
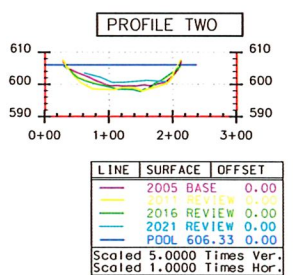
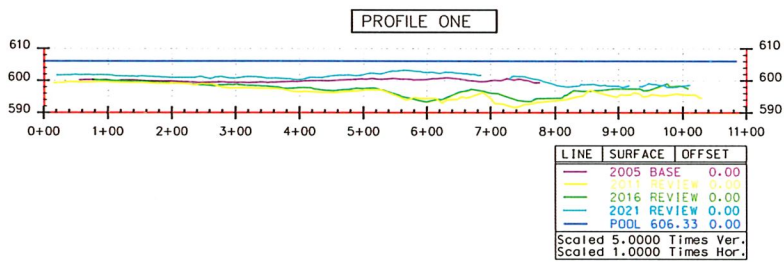
APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.

FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 08/24/21





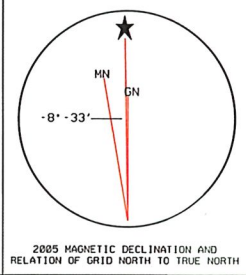
PIGG RIVER  
POOL ELEVATION 606.33'

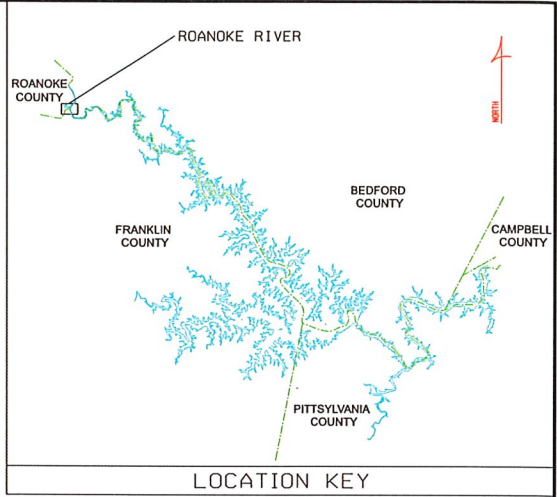
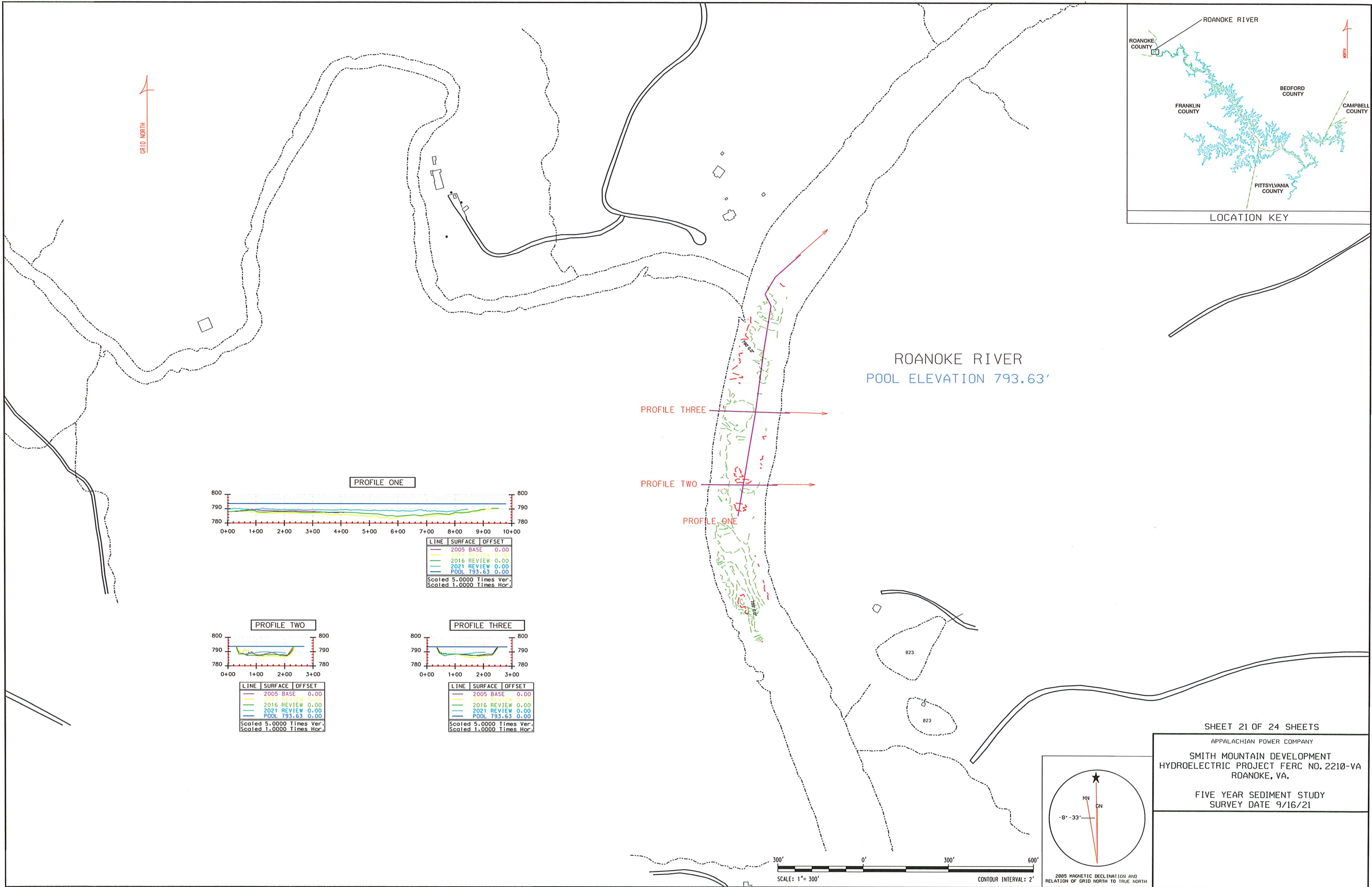


SHEET 20 OF 24 SHEETS

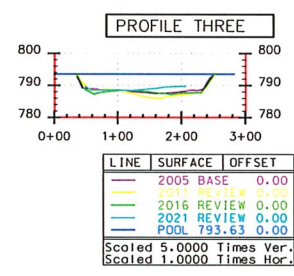
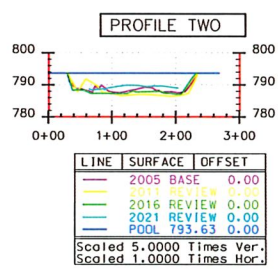
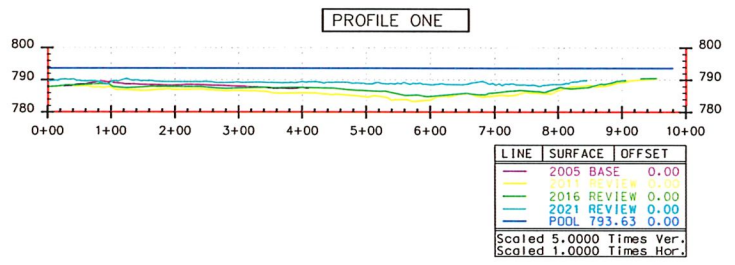
APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.

FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 09/15/21

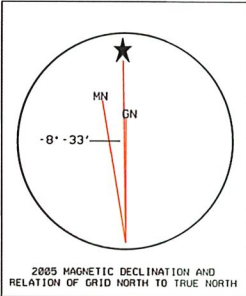




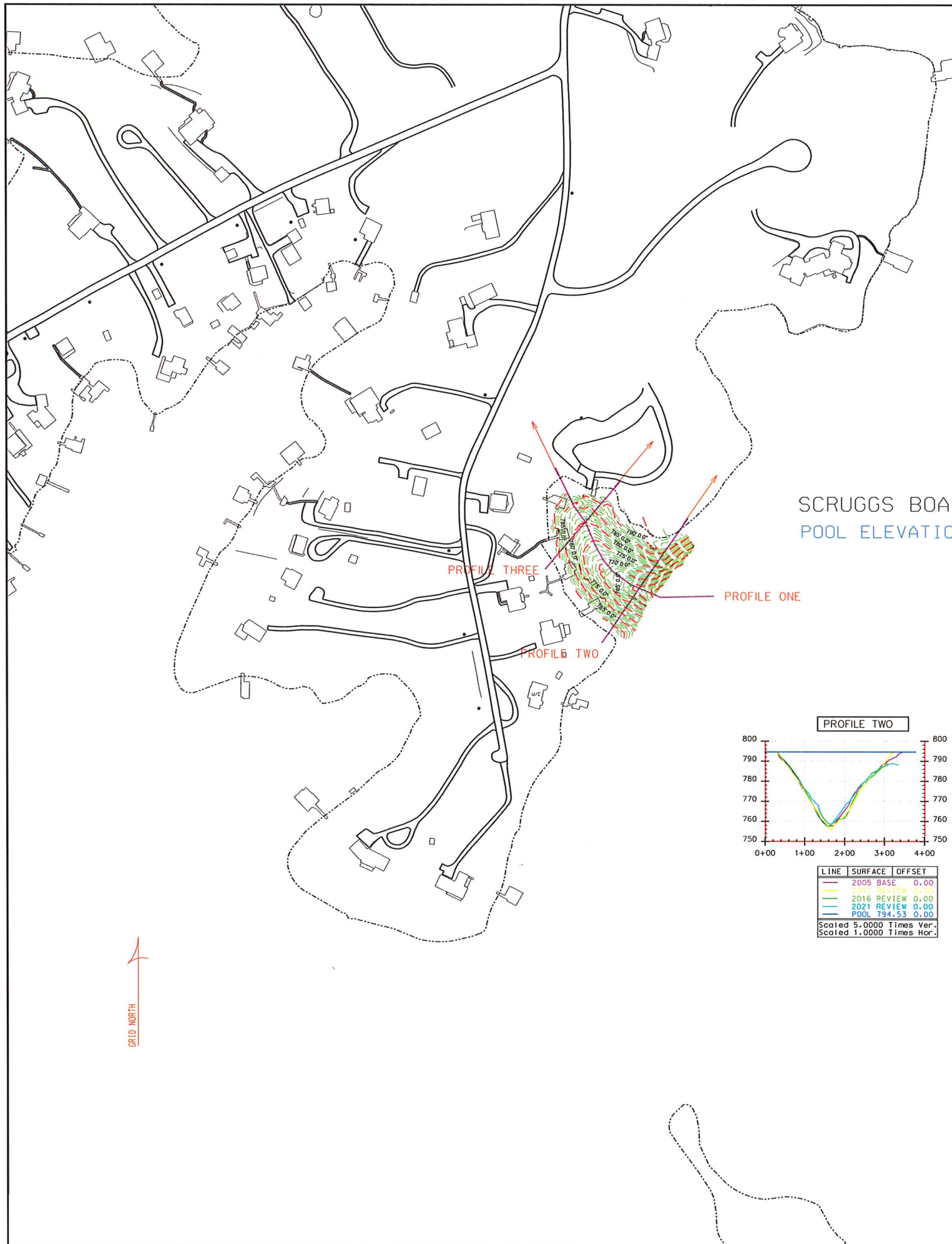
ROANOKE RIVER  
POOL ELEVATION 793.63'



PROFILE THREE  
PROFILE TWO  
PROFILE ONE

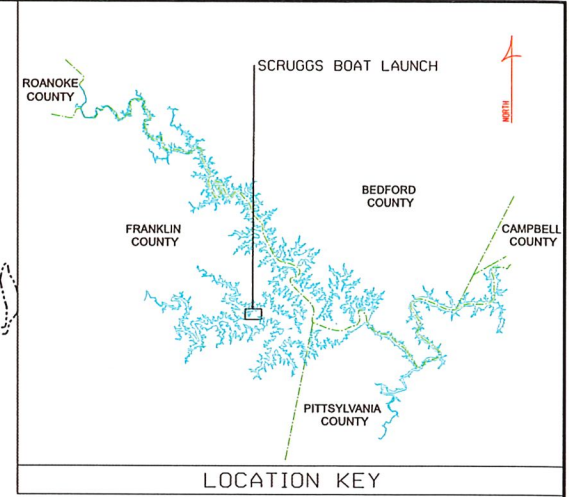
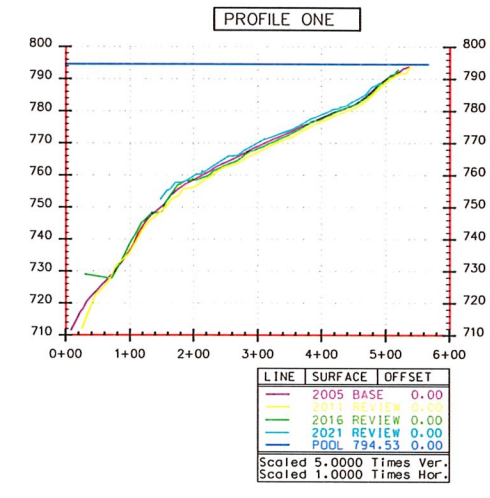
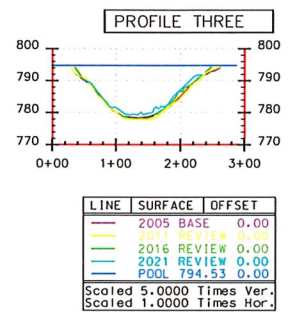
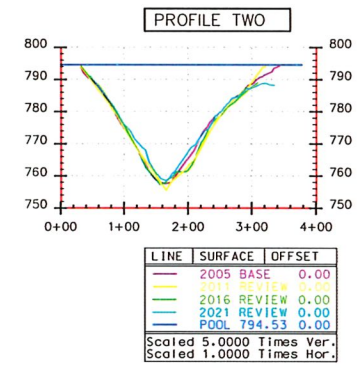


SHEET 21 OF 24 SHEETS  
APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.  
FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 9/16/21

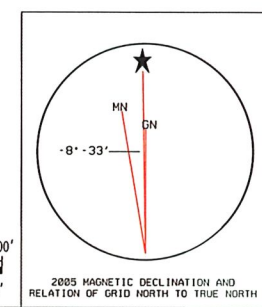


SCRUGGS BOAT LAUNCH  
 POOL ELEVATION 794.53'

PROFILE THREE  
 PROFILE ONE  
 PROFILE TWO



GRID NORTH

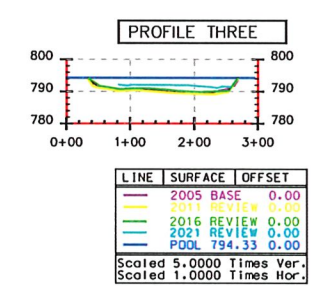
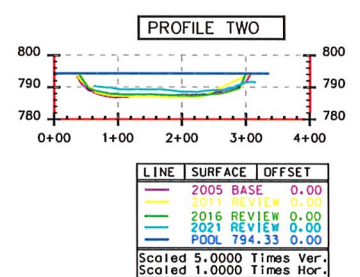
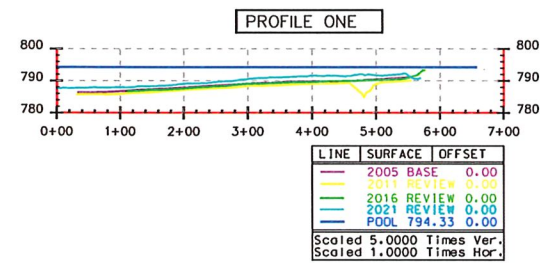
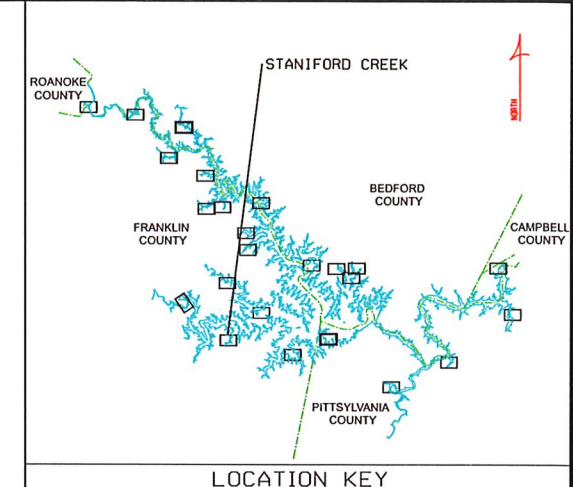


SHEET 22 OF 24 SHEETS

APPALACHIAN POWER COMPANY  
 SMITH MOUNTAIN DEVELOPMENT  
 HYDROELECTRIC PROJECT FERC NO. 2210-VA  
 ROANOKE, VA.

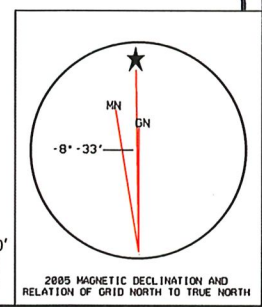
FIVE YEAR SEDIMENT STUDY  
 SURVEY DATE 08/25/21

GRID NORTH

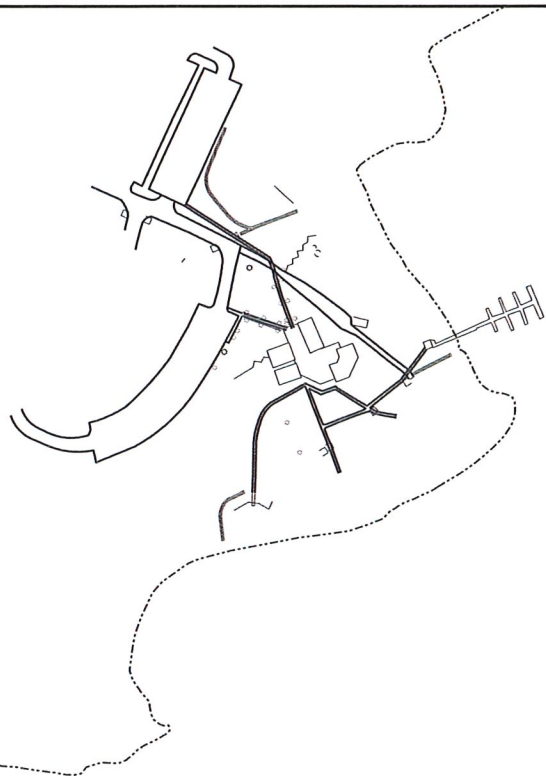
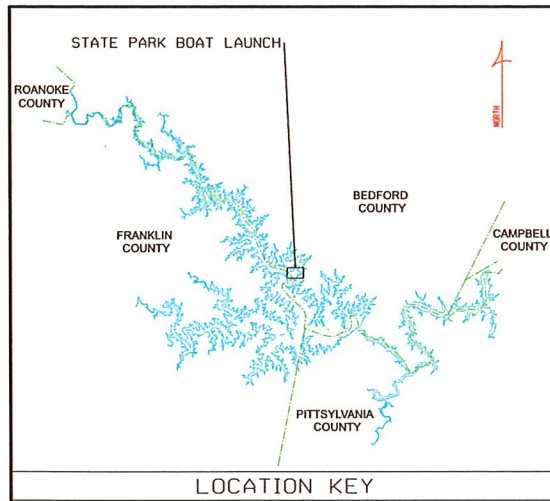


STANIFORD CREEK  
POOL ELEVATION 794.33'

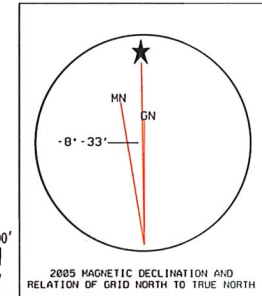
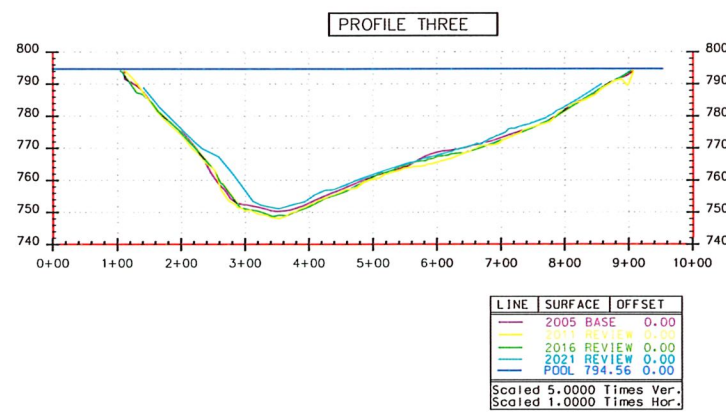
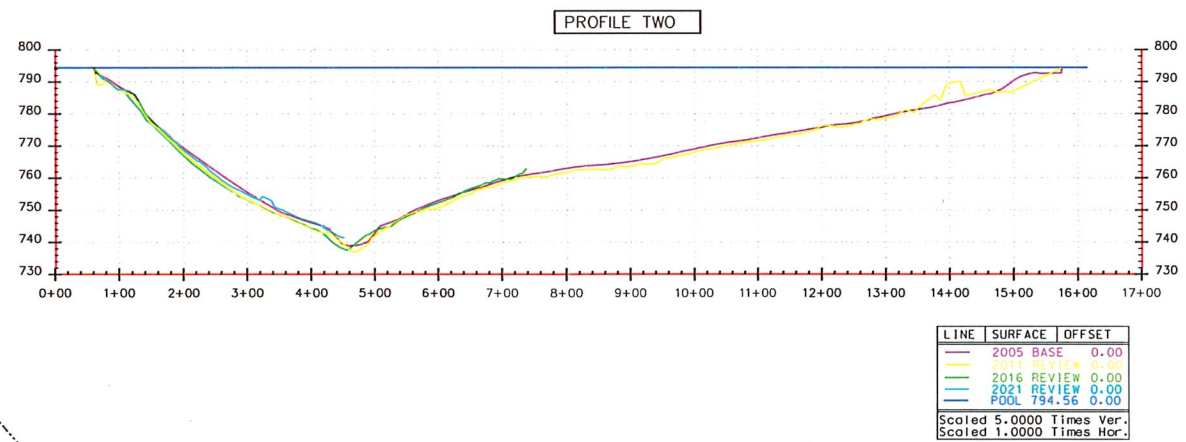
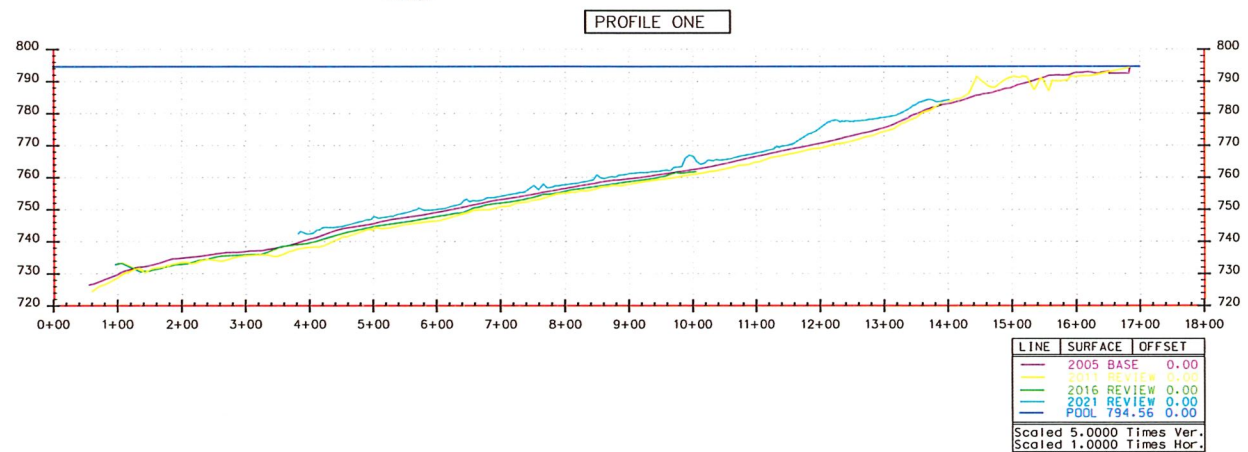
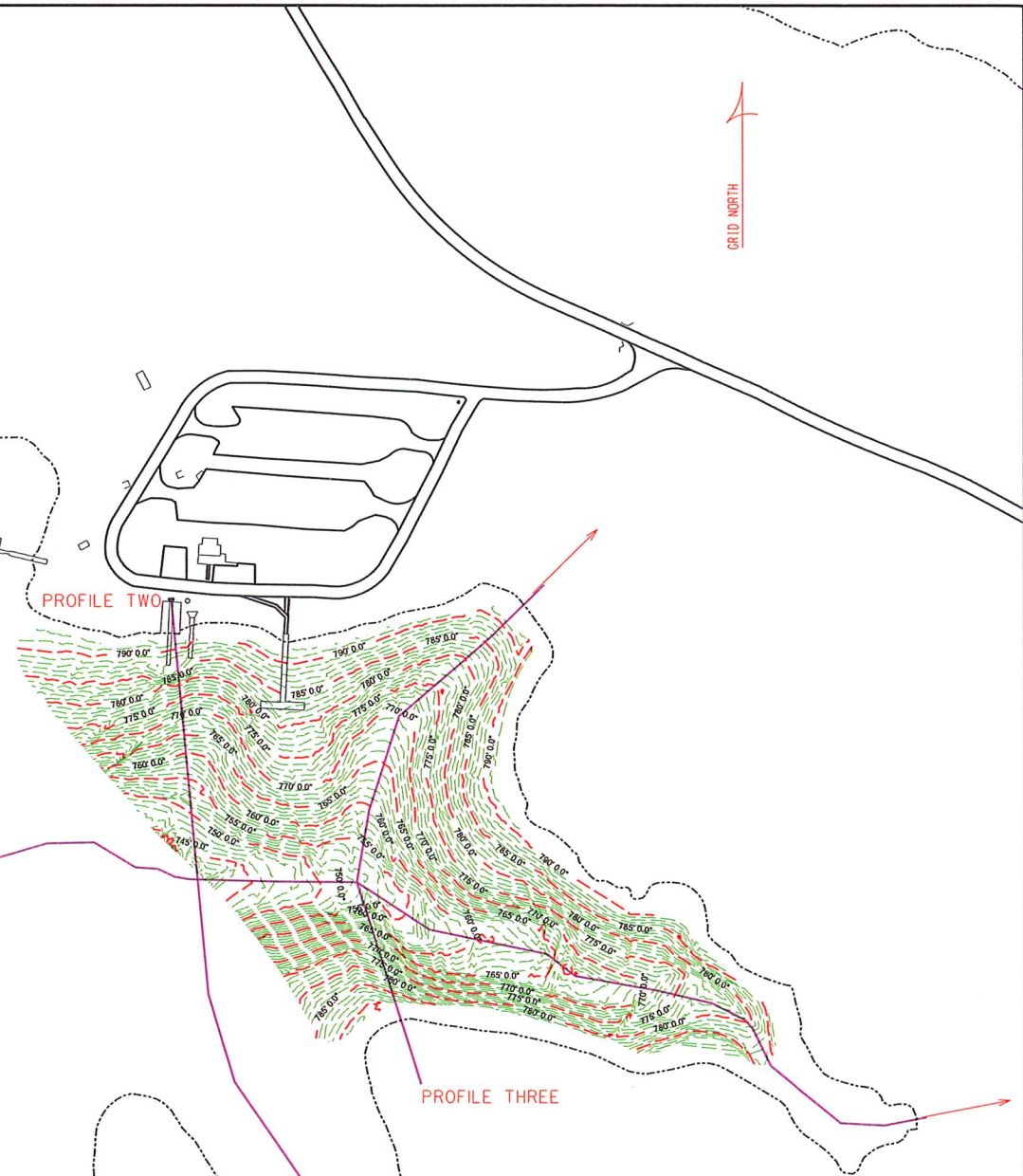
PROFILE ONE  
PROFILE TWO  
PROFILE THREE



SHEET 23 OF 24 SHEETS  
APPALACHIAN POWER COMPANY  
SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.  
FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 08/25/21



STATE PARK BOAT LAUNCH  
POOL ELEVATION 794.56'



SHEET 24 OF 24 SHEETS

APPALACHIAN POWER COMPANY

SMITH MOUNTAIN DEVELOPMENT  
HYDROELECTRIC PROJECT FERC NO. 2210-VA  
ROANOKE, VA.

FIVE YEAR SEDIMENT STUDY  
SURVEY DATE 09/14/21