II. PLAN SUMMARY

This proposed Act 537 Sewage Facilities Plan Update is based upon additional data collected over the past 5 years to supplement the previous data provided by the prior consultant. As such, the Plan Summary and Recommendations have been revised accordingly. The Feasibility Study for Community On-Lot Disposal Systems (COLDS) by RETTEW Associates Inc. and dated June 2011, evaluated the potential of the soils in and around each study area for implementation of community sand mound systems, community septic drip systems, and community spray irrigation systems. These three identified alternatives were evaluated along with that of utilizing small package treatment systems with stream discharge for each study area, as well as the potential to pump collected sewage to a nearby existing waste water treatment plant (WWTP) in Tamaqua Borough. Several meetings were held with the Tamaqua Borough Sewer Authority to determine the availability of sewage treatment capacity and the Borough Sewer Authority's willingness to possibly serve West Penn and Walker Townships. Correspondence which confirms this alternative was received [Appendix R-II-1a, b, c, & d].

The evaluation of alternatives included capital cost of construction and future operational costs through the use of present worth analysis. The construction costs have been based upon similar recent public bid construction projects for other municipal and authority clients of RETTEW. Several funding resources were evaluated including preliminary meetings with USDA Rural Utilities Services and PennVEST. All of these factors, including comments from the Sewer Committee, Public and Planning Agencies were evaluated for the chosen alternatives which are discussed below.

In 2011, the most cost effective recommended alternative included public sewage collection, conveyance and treatment facilities for the four (4) Study Areas which had a total estimated capital construction cost of $11.5 MM to serve 360 equivalent dwelling units (EDUs). With a 45% grant and 40 year low interest loan the preliminary estimated annual user fee would have been $1,242 per EDU ($103.50 per month). PA DEP concurred with the Sewer Committee's concern that the most cost effective recommended alternative was not affordable. PA DEP recommended that a new Needs Assessment Survey be conducted to determine exactly which properties are experiencing on-lot sewage facility malfunctions.

The conclusion of this new "Needs Assessment" was two-fold: (1) wildcat sewers were identified by positive dye testing in the villages of South Tamaqua and Andreas; and, (2) the previous needs assessment study, which dates back to 2003, significantly overstated the amount of existing sewage facility malfunctions.

The total number properties in the five villages with confirmed sewage malfunctions and/or connected to wildcat sewers is 52. The total number of properties in the five villages with suspected or potential sewage malfunctions (per PA DEP conservative guidelines) is 162. This new total of 214 properties is considerably less than the 360 EDUs planned for in 2011. Furthermore, the detailed door-to-door sewage needs identification process concluded that the majority of these properties could support individual sewage solutions without the need for participation in a community project.

The Feasibility Study for Community On-Lot Sewage Disposal Systems completed by RETTEW in 2011 was based upon large study area-wide flows. This study concluded that there were insufficient areas of

suitable soil for a community on-lot disposal system in any of the four study areas with the exception of Snyders. However, based upon the significant decrease in design flows, cluster community on-lot sewage disposal is a very viable alternative solution for the remaining properties within each of the five villages that cannot resolve their sewage malfunctions on their own property. It is anticipated that these properties would work together with the aid of a new sewage authority to implement corrective cluster or small community on-lot sewage disposal facilities.

The recommendation of the proposed draft Act 537 Sewage Facilities Plan Update still includes the creation of a joint sewer authority, hereafter referred to as the "Sewer Authority". This authority would administer the PA DEP required Sewage Management Ordinance (septic tanks cleaning and maintenance every five years). The joint sewer authority would also work with individual property owners and the respective Township Sewage Enforcement Officer (SEO) to implement individual on-lot sewage facilities solutions where applicable and facilitate the individual income-based grant and low interest loan financing. The sewer authority would also spearhead the implementation of the five village cluster community on-lot sewage facility solutions. The sewage authority would administer the land acquisition and financing through grants and low interest loans.

The total anticipated financial impact to the individual and cluster property owners is significantly lower than the 2011 public solution alternative. It is preliminarily estimated that the annual user fees will range from $750 to $890.

Due to the lapse of time since the 2007 report, the Implementation Schedule has been revised to reflect adoption of this proposed Act 537 Sewage Facilities Plan Update by June 30, 2013.

2007 Report Chapter II – Plan Summary

A. Major Problems Evaluated Within the Regional Act 537 Sewage Facilities Plan for West Penn Township and Walker Township

This Section is retained unaltered with the following exceptions:

1. *The second paragraph references the PA DEP Environmental Assessment Checklist. A new PA DEP Checklist is included in Appendix R-XIV-1.*

B. The Chosen Service Areas

This Section is retained unaltered with the following exceptions:

1. *Under item 1, The South Tamaqua Service Area, the paragraph should end with a reference: (see **Exhibit II-1**).*

2. *At the end of this Section, tables were provided for each service area that show the calculations for existing uses, number of EDUs, and total anticipated existing sewage flows. RETTEW previously had utilized the same 2007 report calculated*

existing flows for the July 2011 Draft Plan Update based upon the understanding that almost no growth has occurred in theses villages since 2007; the housing market has been flat. Calculations were provided for future uses (10-year projection). RETTEW had provided revised Future Use Sewage Flow Calculations based upon the preliminary 2010 census data for the 2011 Draft Plan Update and they are presented in Chapter VII. These revised future flows are more realistic given the downturn of the housing market and they supersede the prior future flow projections. These revised future flows had been the basis of the 2011 Draft Plan Update recommendation of public collection, conveyance and treatment alternatives to serve the entire four (4) service area populations which are fully evaluated in Chapter X.

The new "Needs Assessment" findings revealed that the prior 2003 Needs Assessment significantly overstated the amount of existing sewage facility malfunctions. The new "Needs Assessment" allows for targeted solutions to specific malfunctioning properties which are not dependent on the population projections and projected flows of each entire service area.

C. Chosen Alternatives

This Section is retained unaltered with the following exceptions:

1. *Item 2 references On-lot Sewage Management Program; recommended ordinances for West Penn and Walker Townships have been provided to each solicitor for review and adoption by each municipality [Appendix R-III-1a & b].*

2. *Item 3 references Holding Tank Ordinances; recommended ordinances for West Penn and Walker Townships have been provided to each solicitor for review and adoption by each municipality [Appendix R-III-2a & b].*

3. *Item 7 lists the adoption of the Eastern Schuylkill Planning (ESP) Regional Joint Comprehensive Plan and ESP Zoning Ordinance and SALDO. Walker Township has adopted these ordinances but West Penn Township has chosen not to participate in the regional comprehensive plan. The previous Item 7 of this Section is "Not Applicable" by this proposed Act 537 Plan Update.*

4. *Item 8 lists the inclusion in the ESP SALDO that any lot created by the SALDO has as a requirement a "primary" and "reserve" sewage disposal area. Walker Township has adopted these ordinances, but West Penn Township has chosen not to participate in the regional comprehensive plan. The current West Penn Township SALDO does, however, include this requirement. The previous Item 7 of this Section is "Not Applicable" by this proposed Act 537 Plan Update.*

5. *Item 9 states that within three (3) years of completion of the public sewer systems in the Sewer Service Areas, West Penn Township will evaluate the need for a Special Study for the Medical Crossing Area. This proposed Act 537 Plan Update will provide for the evaluation of the Medical Crossing Area after a period of five (5) years due to the proposed economic impact to the Township for such a study.*

D. Estimated Cost and Funding of the Chosen Alternative(s)

This Section of the previous 2007 report includes cost opinions for the chosen alternatives for each service area. The entire section is superseded by the revised construction cost opinions for individual and cluster community on-lot sewage disposal systems as presented in ***Exhibits R-XI-6 through 10*** *provided at the end of Chapter XI.*

Based upon the full evaluation of alternatives, RETTEW recommends the following sewage facilities solutions:

1. The establishment of the "South Tamaqua Service Area" to encourage specific focus on the maintenance, repair, and/or replacement of the existing on-lot sewage disposal systems, OLDS is recommended. A public cluster community on-lot sewage disposal system, COLDS, is recommended for the properties currently connected to wildcat sewers and for those properties for which insufficient space or suitable soil is available to the property owner. The system would include a septic tank with effluent dosing chamber and pump and check valves, low pressure sewer collection system with redundant check valve and isolation valve at the point of connection to the pressure sewer, and a community sand mound or drip irrigation system on nearby vacant land within the village. The South Tamaqua Sewer Service Area Boundaries are shown in **Exhibit II-1**. The properties with confirmed malfunction and wildcat sewer connections are provided in the "2012 Needs Assessment" report.

2. The establishment of the separate "Clamtown and Reynolds Service Areas" to encourage specific focus on the maintenance, repair, and/or replacement of the existing on-lot sewage disposal systems, OLDS is recommended. A public cluster community on-lot sewage disposal system, COLDS, is recommended for the properties currently connected to wildcat sewers and for those properties for which insufficient space or suitable soil is available to the property owner. The system would include a septic tank with effluent dosing chamber and pump and check valves, low pressure sewer collection system with redundant check valve and isolation valve at the point of connection to the pressure sewer, and a community sand mound or drip irrigation system on nearby vacant land within the village. The Clamtown and Reynolds Sewer Service Area Boundaries are

shown in **Exhibits II-2a & 2b**. The properties with confirmed malfunction and wildcat sewer connections are provided in the "2012 Needs Assessment" report.

3. The establishment of the "Andreas Service Area" to encourage specific focus on the maintenance, repair, and/or replacement of the existing on-lot sewage disposal systems, OLDS is recommended. A public cluster community on-lot sewage disposal system, COLDS, is recommended for the properties currently connected to wildcat sewers and for those properties for which insufficient space or suitable soil is available to the property owner. The system would include a septic tank with effluent dosing chamber and pump and check valves, low pressure sewer collection system with redundant check valve and isolation valve at the point of connection to the pressure sewer, and a community sand mound or drip irrigation system on nearby vacant land within the village. The Andreas Sewer Service Area Boundaries are shown in **Exhibit II-3**. The properties with confirmed malfunction and wildcat sewer connections are provided in the "2012 Needs Assessment" report.

4. The establishment of the "Snyders Service Area" to encourage specific focus on the maintenance, repair, and/or replacement of the existing on-lot sewage disposal systems, OLDS is recommended. A public cluster community on-lot sewage disposal system, COLDS, is recommended for the properties currently connected to wildcat sewers and for those properties for which insufficient space or suitable soil is available to the property owner. The system would include a septic tank with effluent dosing chamber and pump and check valves, low pressure sewer collection system with redundant check valve and isolation valve at the point of connection to the pressure sewer, and a community sand mound or drip irrigation system on nearby vacant land within the village. The Snyders Sewer Service Area Boundaries are shown in **Exhibit II-4**. The properties with confirmed malfunction and wildcat sewer connections are provided in the "2012 Needs Assessment" report.

Although each Study/Service Area has been evaluated separately to determine the most economical sewage facilities solutions, one (1) overall "Project" will be implemented with five (5) "Village Phases" representing each Service Area. The total estimated project cost is approximately $1,029,000. RETTEW has provided preliminary evaluation of funding alternatives. The Project cost may be funded through the USDA Rural Utilities Services with a combination of 45% grant and low interest loans as described in Chapters X and XI of this report. The estimated Annual User Fees for the 30 EDUs including debt service and operation and maintenance costs is approximately $890 or $75 per month (See **Exhibits R-XI 11**). The remaining properties will be able to individually maintain, repair, and/or replace their sewages system on-lot and not participate in the public alternative. Financing alternatives for individual property owner solutions is presented in Chapter X and XI of this report. The estimated Annual User Fees for the 208 EDUs including debt service costs may range approximately

between $420 to $1,320 or $35 to $110 per month depending on qualified financing. (See **Exhibits R-XI 12**).

E. Municipal Commitments to Implement the Regional Act 537 Sewage Facilities Plan

This Section is retained unaltered with the following exceptions:

1. *Include a new second bullet item: "Create the Walker-West Penn Sewer Authority with Ordinance Charters from both municipalities and initial fiscal commitment to initiate the new Sewer Authority."*
2. *Under the sixth bullet item, the requirement to adopt the ESP Regional Comprehensive Plan and Ordinances is "Not Applicable" by this proposed Act 537 Plan Update.*

F. Schedule of Implementation

Due to the time lapse since the previous report, this Section is superseded by this proposed Act 537 Plan Update. The following schedule outlined is applicable to financing through USDA Rural Utilities Services:

1. Walker Township and West Penn Township Boards of Supervisors approve legal advertisement of special meetings, public review period, and Special Joint Municipal Public Hearing on May 2, 2013 and May 6, 2013, respectively.

2. Complete draft of this proposed "Act 537 Sewage Facilities Plan Update" and review with the Sewage Committee on May 17, 2013.

3. With the recommendation of the Sewage Committee, present Draft Act 537 Plan Update to the Boards of Supervisors of both West Penn Township and Walker Township for a Motion to "Accept" the draft document for "Public Review" on May 20, 2013 at a Special Joint Meeting. The 30 day "Public Review Period" starts May 21, 2013. The motions will also authorize the submitting of the draft document to the Planning Commissions of each Township and Schuylkill County.

4. Planning Commission review meetings for both Walker Township and West Penn Township on May 23 and May 28, 2013, respectively.

5. Hold Special Joint Municipal Public Hearing to hear public comments on June 24, 2013. A court stenographer is to be present to record a transcript.

6. Receive written comments from the Planning Commissions of each Township and Schuylkill County. RETTEW to provide written response to the public and planning commission comments and review with the Sewer Committee on June 25, 2013.

7. Provided the public and planning commission comments do not require significant revisions to the Draft Act 537 Sewage Facility Plan, and the Sewer Committee is satisfied with the written responses to each comment, the Final Plan can be submitted to the Boards of Supervisors of both Townships for approval.

8. Both West Penn and Walker Township Boards of Supervisors can vote to approve by individual Resolutions to Adopt the Final Act 537 Sewage Facilities Plan at a Special Joint Meeting on June 26, 2013.

9. Submit final Adopted Act 537 Sewage Facilities Plan to PA DEP on June 28, 2013.

10. During the period of PA DEP review, West Penn and Walker Townships may wish to begin the process of many of the low cost impact municipal commitments such as preparation for and administering of the holding tank, well, and on-lot sewage management ordinances. The two Townships may also engage a non-profit organization to assist is setting up the administration of the proposed Joint Sewage Authority and begin income surveys in support of possible Community Development Block Grant, PennVEST and USDA RUS grant applications.

11. Following a review period of up to 180 days, PA DEP will provide comments, request revisions, or approve the Final Act 537 Sewage Facilities Plan Update. Once PA DEP approves the Final Act 537 Plan Update, the following implementation tasks can be scheduled:

12. West Penn and Walker Townships can submit for reimbursement of 50% of the sewage planning costs as outlined in the PA DEP TAR.

13. Within three (3) months after PA DEP Act 537 Plan Update Approval: Create the Walker/West Penn Sewer Authority. It is anticipated that the members of the current Joint Sewer Committee will form the board of the new Authority.

14. Within six (6) months after PA DEP Act 537 Plan Update Approval: Begin preliminary design of the cluster and wildcat sewer community replacement facilities. The construction of sewage facilities in all four (4) Service Areas will be considered one (1) project with five (5) separate village phases. Also begin working with individual property owners of failing systems that can implement individual on-lot replacement systems.

15. Within nine (9) months after PA DEP Act 537 Plan Update Approval: Initiate the construction financing process with PennVEST and USDA RUS grants and loans.

16. Within ten (10) months after PA DEP Act 537 Plan Update Approval: Start final design and the acquisition of required right-of-way and easements.

17. Within twelve (12) months after PA DEP Act 537 Plan Update Approval: Complete final design of cluster and wildcat sewer community replacement systems; submit applicable PA DEP Part II Sewage Facilities Permit Application, Stream Encroachment Permit Application, PennDOT Highway Occupancy Permit Application, railroad crossing applications, and Schuylkill Conservation District Erosion & Sedimentation Control Plan Application.

18. Within eighteen (18) months after PA DEP Act 537 Plan Update Approval: Receive all required permits and PennVEST or USDA RUS funding commitments.

19. Within twenty (20) months after PA DEP Act 537 Plan Update Approval: Advertise construction bid documents.

20. Within twenty-four (24) months after PA DEP Act 537 Plan Update Approval: Receive construction bids and complete settlement on financing.

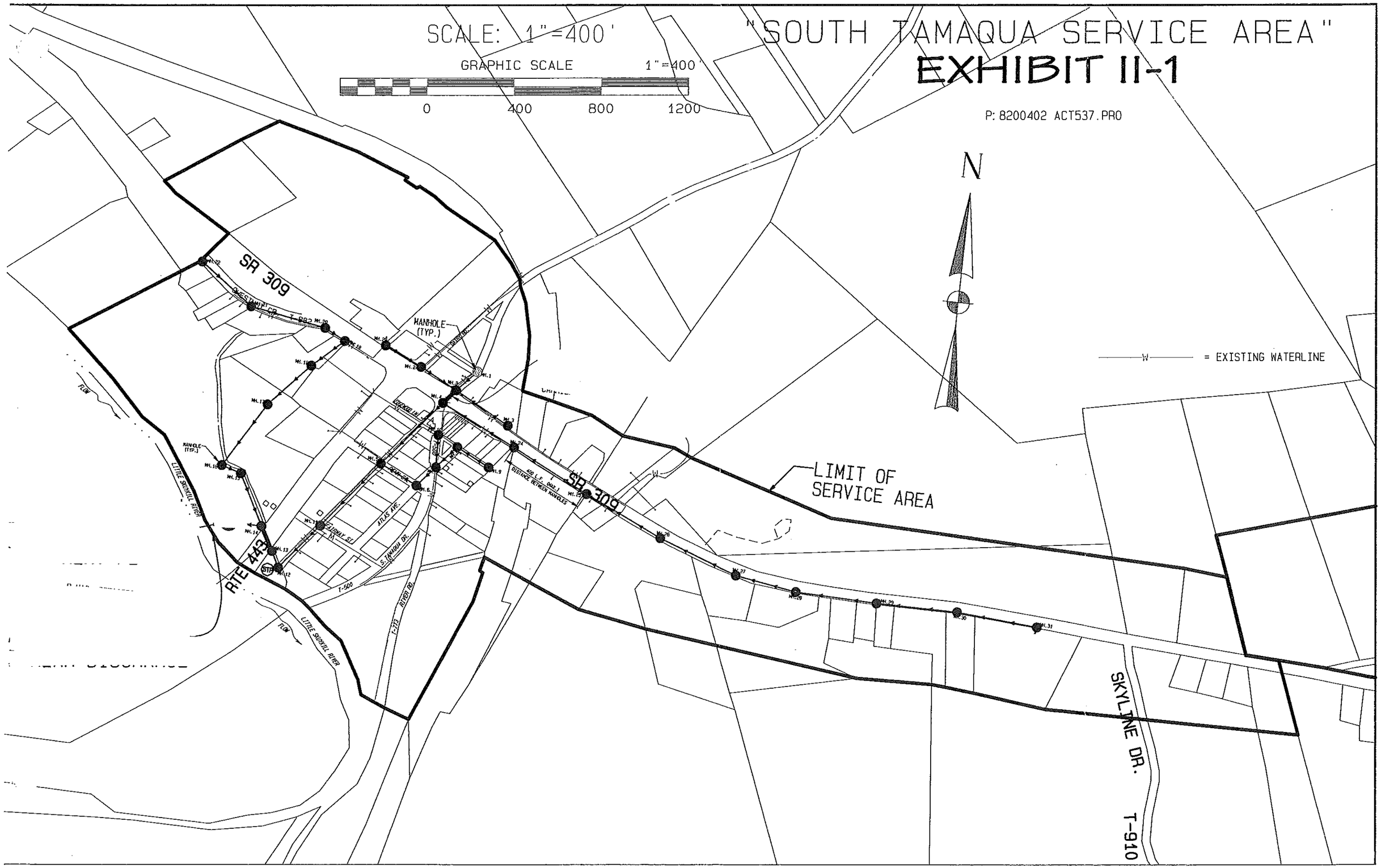
21. Within twenty-six (26) months after PA DEP Act 537 Plan Update Approval: Award the project Construction Contract and start construction.

22. Within thirty-six (36) months after PA DEP Act 537 Plan Update Approval: Complete construction of community sewage collection, conveyance and treatment facilities with full start-up testing and financing closeout.

23. Within thirty-nine (39) months after PA DEP Act 537 Plan Update Approval: Property owners would be notified to pay tapping fees and to begin private home connections to completed COLDS systems within three months.

24. Within forty-two (42) months after PA DEP Act 537 Plan Update Approval: The West Penn and Walker Township Act 537 Sewage Facilities Plan Update is anticipated to be fully implemented.

Exhibit II-1	South Tamaqua Service Area
Exhibit II-2a	Clamtown Service Area
Exhibit II-2b	Reynolds Service Area
Exhibit II-3	Andreas Service Area
Exhibit II-4	Snyders Service Area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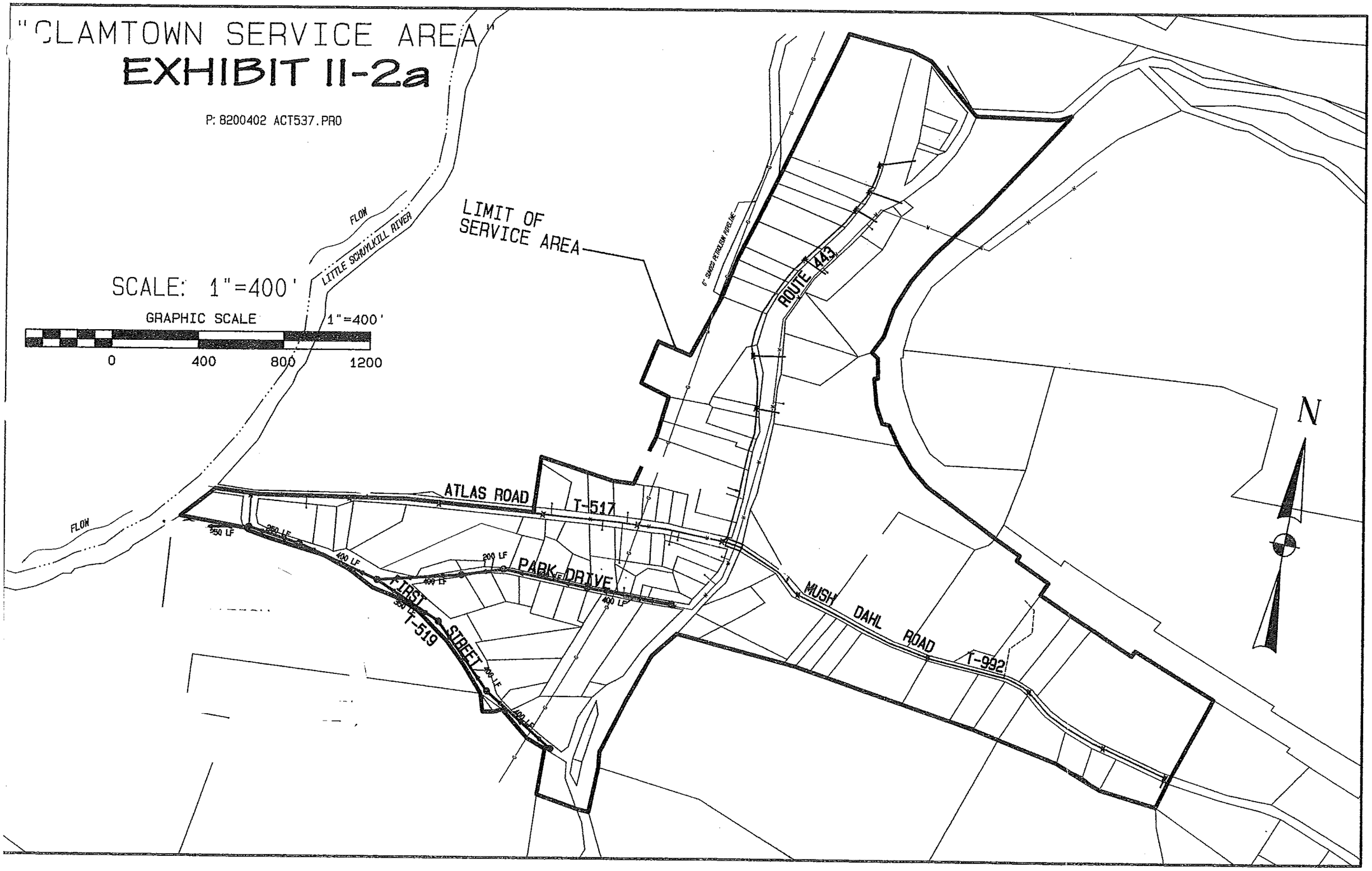
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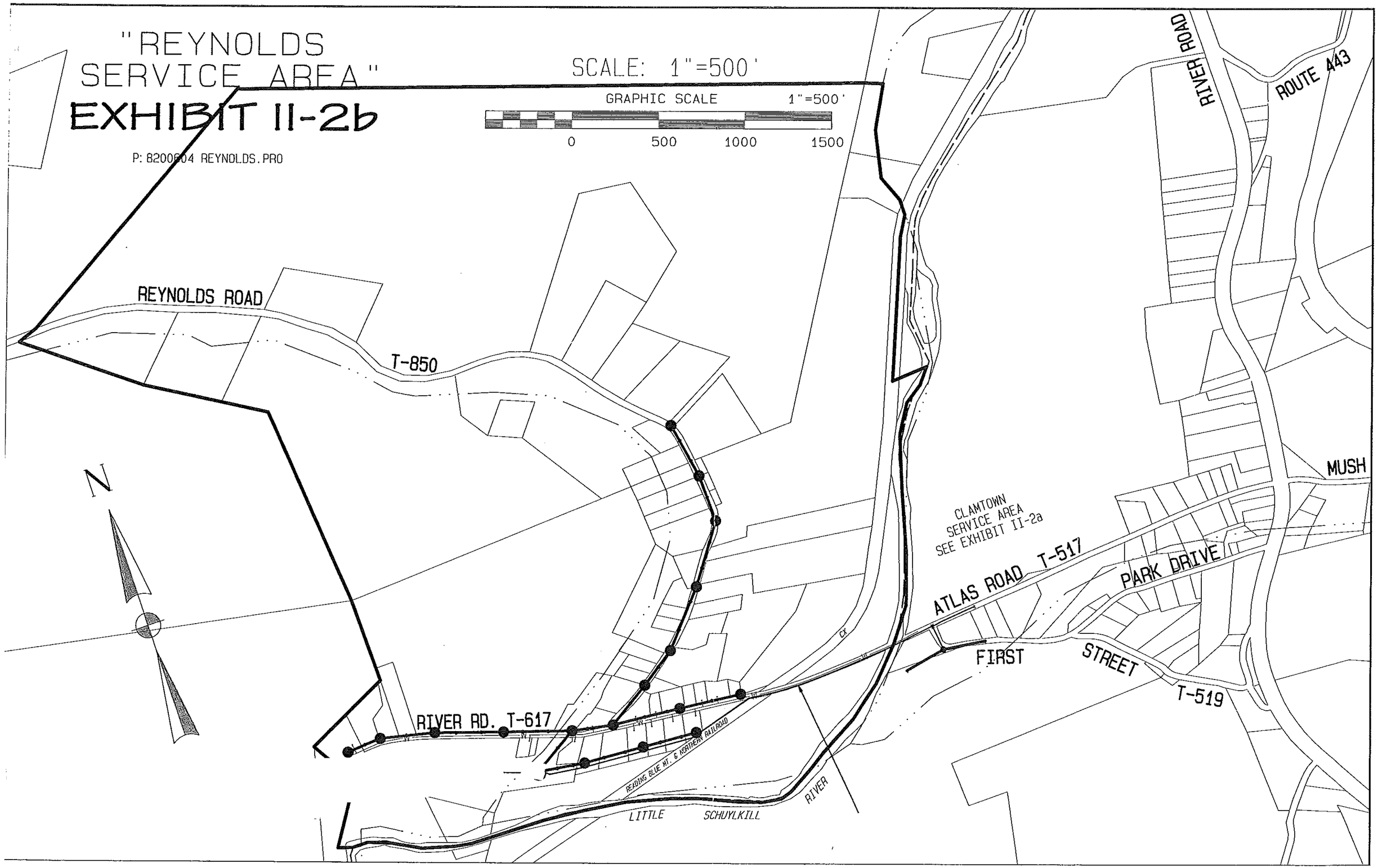
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RIVER ROAD
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MUSH
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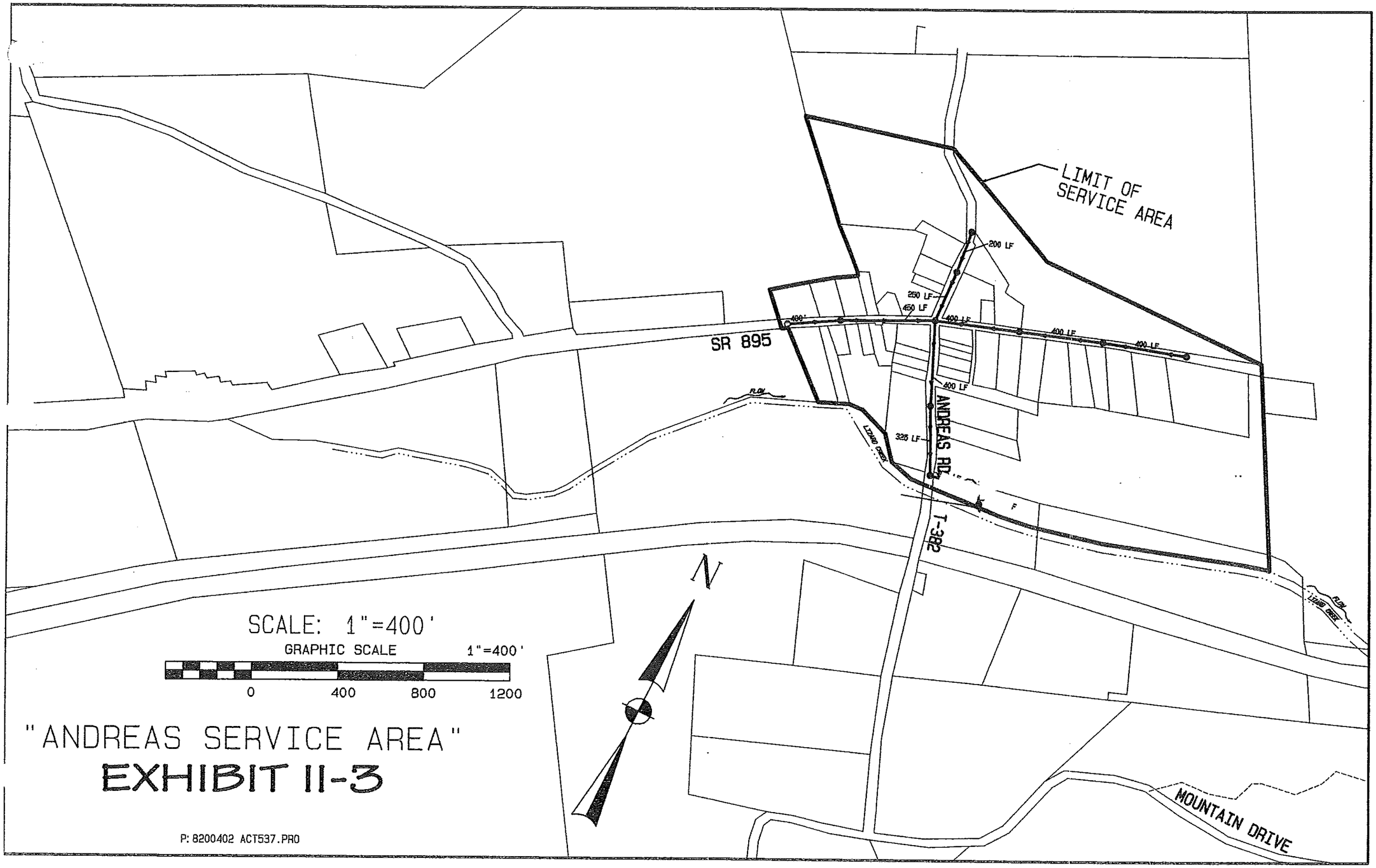
CK



"ANDREAS SERVICE AREA"

EXHIBIT II-3

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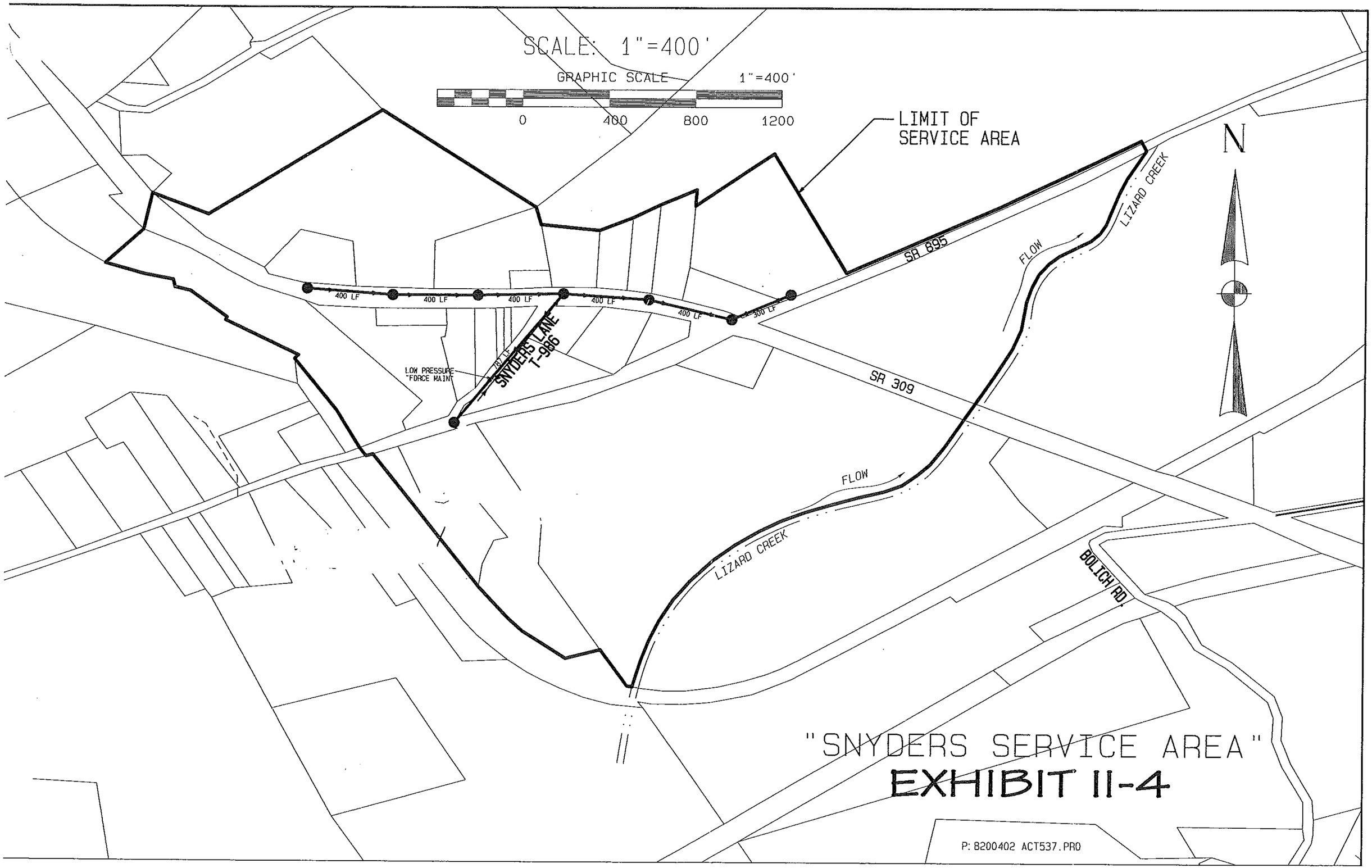
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400 LF
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SNYDERS LANE
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LOW PRESSURE
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