TENNESSEE Wastewater

851 Avi ation Parkway
Smyrna, TN 37167

January 22, 2018

Chairman David Jones c/o
Sharla Dillon
Tennessee Public Utilities Commission
502 Deaderick Street, 4th Floor
Nashville, TN 37243

RE: Status Update for Docket 15-00025

Dear Chairman Jones,

With today's filing of various documents in this docket, all that remains to be filed are documents that TWSI will not be able to create, execute, receive, or possess until TWSI approves and accepts the system and the developer conveys the system to the utility. The remaining documents will be timely filed as per the terms set forth in the Order.

Kind regards,

Jeff Risden
General Counsel

Adenus Solutions Group

849 Aviation Parkway
Smyrna, TN 37167

This Letter of Understanding (LOU) outlines the fundamental terms of agreement and intentions between Adenus Solutions Group, LLC (ASG), Tennessee Wastewater Systems, Inc. (TWS), and Nolensville 162, LLC (N162), Developer. Signatures represent acceptance of the terms of this LOU, pending final contract.

Questions and comments should be directed to Keith Townsend at:
(615) 522-7865, or keith.townsend@adenus.com

Dated: February 2, 2015

The fundamental terms of agreement and intention between ASG, TWS, and N162 are as follows:
N162 is a developer in Williamson County, TN, and desires to develop a residential subdivision on approximately **222.33 +/-** acres of property, located on Nolensville Road near Big Oak Road (being **Tax Map 083, Parcels 13.00 and 13.02, Tax Map 085, Parcel 1.01, and Tax Map 086, Parcel 11.00**, in Williamson County, TN). This property will accommodate approximately **165** lots. This lot count will be used for this Letter of Understanding.

1. TWS is willing to pursue this subject property as a service territory under its current Certificate of Convenience and Necessity (CCN), and has made a petition to the Tennessee Regulatory Authority (TRA) for this site. All items following are contingent upon TWS being granted an amendment to its CCN of the property as a utility service territory.
2. N162 has been informed that ASG and TWS share common ownership, and that N162 is not "required" to use ASG as its sewer treatment and disposal system construction Contractor. Nor, is N162 "required" to use ASG as the design engineering firm for its project. Design and construction may be "put-out" to bid by N162. Additionally, N162 agrees to:
    - Require its design engineer to design to the specifications of TWS, and to provide a copy of design plans to TWS for review **prior** to submitting plans to the Tennessee Department of Environment and Conservation for review and approval.
    - Require its construction Contractor to construct the treatment and disposal system in accordance with approved plans, and submit to final construction inspection of TWS's engineer, **prior** to TWS accepting the system.
3. N162 agrees to pursue all necessary permits for TWS to operate the wastewater treatment and disposal system.

4. ASG is willing to pursue all necessary permits for N162 for a lump sum fee of $4000.00, and will submit a Professional Services Agreement (PSA) for these services, if necessary.
5. N162 understands that a Design Development Report (DDR) and a Detailed Soils Investigation Report (DSIR) must be performed in order to develop property using a drip irrigation system for the disposal of treated wastewater in Williamson County, TN. ASG is willing to perform the DDR/DSIR for a lump sum cost of $30,000.00**. The DDR/DSIR will be billed directly to N162 as follows, and will be handled with a PSA:
   - 50% of the cost of the DDR/DSIR prior to commencing the work.
   - Remaining 50% of the fee after approval from County Engineer

**The $4000.00 fee to pursue the permits for N162, in item #4, is included in this fee and would eliminate the need for that PSA if ASG performs the DDR/DSIR.

6. N162 agrees to provide the following for the DDR/DSIR, and for engineering and construction of the treatment, disposal, and sewer collection system:
   - Approximately One (1) acre of good soil per 13 homes proposed for disposal/recycling (165 lots / 13 = 12.69 acres minimum, plus buffers).
   - Adequate land for construction of the designed Recirculating Gravel filter (and the Reserve RGF).
   - Adequate land for the construction of the storage pond required by Williamson County regulations.
   - 7 original copies of an Extra High Intensity soil map (50' grid) by Certified Soil Scientist of the drip field areas (required for permit application, DDR/DSIR, and final design plans).
   - Topography map of the entire proposed drip field areas @ a 2' contour interval (required for permit application).
   - Topography map of the entire proposed property @ a 2' contour interval (required for DDR/DSIR and for final design plans).
   - Overall site plan of the proposed project with building envelopes (Sketch plat required for permit application and for DDR/DSIR – Preliminary plat required for final design plans).
   - Lay sewer collection lines per requirements of TWS approved plans and specifications, to include any required pump stations, force mains, and residential service taps.
   - Single phase, 200 amp, underground electrical service to the treatment facility building.
   - Construct gravel access drive (all weather access) to the treatment facility construction site, capable of accommodating 60+ gravel/media trucks, to include any temporary or permanent bridges for creek

crossings, and any associated Aquatic Resource Alteration Permits and Storm Water Pollution Prevention Plans.
- Maintain (mow) the area of grid staking until construction has begun. Wooded areas will be cleared by ASG, if ASG is construction contractor.
- Dedicate easements as dictated by the final design plans for access to the collection, treatment and recycling system, and for the residential services.

If ASG performs the DDR/DSIR, timing is critical. The 2-foot interval topographic survey, preliminary subdivision layout, soil mapping, and the signed Professional Services Agreement with first payment must be in my possession a minimum of 21 days prior to the required submittal date for Planning Commission consideration in Williamson County. This would constitute notice to proceed.

7. ASG is willing to construct* the treatment and disposal system for the per lot price of $5700.00 (165 lots * $5700.00 = $940,500.00). Payment will be due in 1/3 increments as follows:
   - 1/3 of fees **will** be due 10 days prior to the start of construction
   - 1/3 of fees **will** be due at 50% completion of construction
   - 1/3 of fees **will** be due within 15 days of completion of construction, and approval and acceptance of the system by TWS.

   * *Construction includes: RGF, controls building, drip irrigation system @* ***2-foot centers*** (TDEC now requires the increase in piping) *installed, Williamson County required storage pond, four-rail wood fence, Stormwater Pollution Prevention Plan for Treatment and Disposal Facility area only (subdivision and access drive are not covered), final testing of the system and start-up (after developer supplies power to the site), and final acceptance from TDEC and TWS.*
8. TWS will assume ownership of the treatment, disposal, and collection system once inspections are approved and accepted by TWS engineer. N162 will be required to enter into a Sewer Service Agreement with TWS at the time TWS accepts the system. N162 will be required to pay TWS a $1200.00 per lot development fee for all lots presented to TWS for final plat signing. The $1200.00 per lot fee will be due at the time TWS is requested to sign the final plat for recording (Ex. 15 lots presented for final plat * $1200.00 per lot = $18,000.00 due by N162 to TWS at plat signing). Additionally, N162 will convey by **quit claim deed**, the Sewage Facility Land to TWS and provide title insurance policy, not to exceed $150,000.00 (U.S. dollars).

9. N162 agrees to post any bond amounts required by the County, etc., prior to final plat being signed by TWS. All bonding costs and security for bonds required by Williamson County for the sewer system during the construction of the subdivision are the responsibility of the developer.
10. Any landscaping, plant units, etc., required by Williamson County to meet the screening (opacity) requirement, are the sole responsibility of N162.
11. Cost of tankage, components, etc, for each individual residence site and installation of sewer collection main lines and lot services is outside the scope of this agreement.
12. N162 agrees that ASG and TWS have submitted "preliminary" contracts as an example of what will be expected of N162 in the performance of this project. N162 agrees that changes made to TDEC regulations, or to Williamson County regulations after the date of this understanding are beyond the control of ASG and TWS, and may cause a change to the proposed costs. Assuming that no regulation changes occur, the costs and fees presented in this understanding shall be valid for a period of not more than one (1) year from the date at the beginning of this understanding, regardless of the date the parties sign. Any contracts, or agreements, between the parties that are not signed within this one-year time limit may be revised to reflect costs in effect at that time.
13. Signature acknowledges and accepts the aforementioned terms of agreement and intention.

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Letter of Understanding
Enclave at Dove Lake Subdivision
Nolensville 162, LLC
February 2, 2015

Tennessee Wastewater Systems, Inc.
Utility Provider
Charles Hyatt

Title: President

Date: 2-19-15

Nolensville 162, LLC
Developer
Pete Ferrari

Title: Manager

Date: 2-13-15

Adenus Solutions Group, LLC
Keith Townsend

Title: Project Manager

Date: 2-19-15

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

March 1, 2016

Mr. Charles Hyatt, President
Tennessee Wastewater Systems, Inc.
e-copy: Charles.Hyatt@adenus.com
851 Aviation Parkway
Smyrna, TN 37167

Re: State Operating Permit No. SOP-15015
TN Wastewater Systems - Nolensville - Dove Lake Treatment Facility
Nolensville, Williamson County, Tennessee

Dear Mr. Hyatt:

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated (T.C.A.), Sections 69-3-101 through 69-3-120, the Division of Water Resources hereby issues the enclosed State Operating Permit. The continuance and/or reissuance of this Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application. Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment. Any petition for permit appeal under this subsection (i) shall be filed with the technical secretary of the Water Resources Board within thirty (30) days after public notice of the commissioner's decision to issue or deny the permit. A copy of the filing should also be sent to TDEC's Office of General Counsel.

If you have questions, please contact the Nashville Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Mr. Hari Akunuri at (615) 532-0650 or by E-mail at *Hari.Akunuri@tn.gov*.

Sincerely,

Brad C. Harris, P.E.
Manager, Land-based Systems

Enclosure

cc/ec: Water-based Systems File
Nashville Environmental Field Office
Jesse Hutcherson, Operator, TWSI, 849 Aviation Pkwy., Smyrna, TN 37167

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

Permit No. SOP-15015

PERMIT
For the operation of Wastewater Treatment Facilities

In accordance with the provision of Tennessee Code Annotated section 69-3-108 and Regulations promulgated pursuant thereto:

PERMISSION IS HEREBY GRANTED TO

TN Wastewater Systems - Nolensville - Dove Lake Treatment Facility
Nolensville, Williamson County, Tennessee

FOR THE OPERATION OF

Septic tanks, effluent collection system, recirculating media filter, fenced drip irrigation system located at latitude 35.9025 and longitude -86.65278 in Williamson County, Tennessee to serve approximately 165 homes in the Nolensville – Dove Lake Treatment Facility. The design capacity of the system is .0495 MGD.

This permit is issued as a result of the application filed on August 19, 2015, in the office of the Tennessee Division of Water Resources. This permit is contingent on the submission and department approval of construction plans, specifications and other data in accordance with rules of the department. Updated plans and specifications must be approved before any further construction activity.

This permit shall become effective on: April 1, 2016

This permit shall expire on: March 31, 2021

Issuance date: March 1, 2016

for Tisha Calabrese Benton
Director

A. GENERAL REQUIREMENTS

The treatment system shall be monitored by the permittee as specified below:

Parameter	**Sample Type**	**Daily Maximum**	**Monthly Average**	**Measurement Frequency**
Flow *	Totalizer			Daily
BOD_5	Grab	**45** mg/l	N/A	Once/Year
Ammonia as N	Grab	**Report**	N/A	Once /Quarter

* Report average daily flow for each calendar month.

Sampling requirements in the table above apply to effluent being discharged to the drip irrigation plots.

This permit allows the operation of a wastewater drip irrigation system. There shall be no discharge of wastewater to any surface stream or any location where it is likely to enter surface waters. There shall be no discharge of wastewater to any open throat sinkhole. In addition, the drip irrigation system shall be operated in a manner preventing the creation of a health hazard or a nuisance.

Instances of ponding or pooling within the drip dispersal area not associated with a recent rainfall event shall be promptly investigated and noted on the Monthly Operations Report. The report shall include details regarding location(s), determined cause(s), the actions taken to eliminate the ponding, and the date the corrective actions were made. Ponding resulting in the discharge of treated wastewater into the Waters of the State or to locations where it is likely to move to Waters of the State shall be considered a violation of your State Operating Permit.

All drip fields shall be fenced sufficiently to prevent or impede unauthorized entry as well as to protect the facility from vandalism. Fencing shall be a minimum of four feet in height. Fencing shall be constructed of durable materials. Gates shall be designed and constructed in a manner to prevent or impede unauthorized entry. All designs are subject to division approval. Fence shall be installed prior to beginning of operation.

All drip lines shall be buried and maintained 6 to 10 inches below the ground surface.

The site shall be inspected by the certified operator or his/her designee, at a minimum, once per fourteen days (default) OR in accordance with an operating and maintenance inspection schedule in the permit administrative file record. The default inspection frequency will apply if an operating and maintenance inspection schedule is not submitted to be a part of the permit administrative file record. The operating and maintenance inspection schedule shall at a

minimum evaluate the following via onsite visits or telemetry monitoring or a combination of the two:

- the condition of the treatment facility security controls (doors, fencing, gates, etc.),
- the condition of the drip area security controls (doors, fencing, gates, etc.),
- the condition of the site signage,
- the operational status of the mechanical parts of the treatment system (pumps, filters, telemetry equipment, etc.)
- the condition of the UV bulbs (if applicable)

Submission of the schedule, or revisions to the schedule, may be submitted to the division electronically. The schedule shall be submitted on or before the effective date of the permit. The permittee is responsible for maintaining evidence that the schedule, or revisions, have been submitted to the division.

B. MONITORING PROCEDURES

1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s):

Effluent to drip irrigation plots.

2. Test Procedures

Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR, Part 136.

C. DEFINITIONS

The "daily maximum concentration" is a limitation on the average concentration, in milligrams per liter, of the discharge during any calendar day.

The "***monthly average concentration***", other than for *E. coli* bacteria, is the arithmetic mean of all the composite or grab samples collected in a one-calendar month period.

A "grab sample" is a single influent or effluent sample collected at a particular time.

For the purpose of this permit, "*continuous monitoring*" means collection of samples using a probe and a recorder with at least one data point per dosing cycle.

A "quarter" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

D. REPORTING

1. Monitoring Results

Monitoring results shall be recorded monthly OR in accordance with the operating and maintenance inspection schedule in the permit administrative file record and submitted quarterly. The quarterly report shall detail the following:

Submittals shall be postmarked no later than 15 days after the completion of the reporting period. A copy should be retained for the permittee's files. Operation reports and any communication regarding compliance with the conditions of this permit must be sent to:

Division of Water Resources
Nashville Environmental Field Office
711 R.S. Gass Boulevard
Nashville, TN 37216

The first operation report is due on the 15th of the month following the quarter containing the permit effective date. Until the construction of the treatment system is complete and the treatment system is placed into operation, operational reports shall report "monitoring not required".

2. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified in 0400-40-05-.07(2)(h)2, the results of such monitoring shall be included in the calculation and reporting of the values required in the Quarterly Operation Report. Such increased frequency shall also be indicated.

3. Falsifying Reports

Knowingly making any false statement on any report required by this permit may result in the imposition of criminal penalties as provided for in Section 69-3-115 of the Tennessee Water Quality Control Act.

4. Signatory Requirement

All reports or information submitted to the commissioner shall be signed and certified by the persons identified in Rules 0400-40-05-.05(6)(a-c).

E. SCHEDULE OF COMPLIANCE

Full operational level shall be attained after the construction of the treatment system is complete and the treatment system is placed into operation.

PART II

A. GENERAL PROVISIONS

1. Duty to Reapply

The permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Resources (the "Director") no later than 180 days prior to the expiration date.

2. Right of Entry

The permittee shall allow the Director, or authorized representatives, upon the notification of permittee and presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;

b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and

c. To sample at reasonable times any discharge of pollutants.

3. Availability of Reports

All reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Resources.

4. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to

achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

The monitoring frequency stated in this permit shall not be construed as specifying a minimum level of operator attention to the facility. It is anticipated that visits to the treatment facility by the operator will occur at intervals frequent enough to assure proper operation and maintenance, but in no case less than one visit every fourteen days OR in accordance with an operating and maintenance inspection schedule in the permit administrative file record. If monitoring reports, division's inspection reports, or other information indicates a problem with the facility, the permittee may be subject to enforcement action and/or the permit may be modified to include increased parameter monitoring, increased monitoring frequency or other requirements as deemed necessary by the division to correct the problem. The permittee shall ensure that the certified operator is in charge of the facility and observes the operation of the system frequently enough to ensure its proper operation and maintenance regardless of the monitoring frequency stated in the permit

Dilution water shall not be added to comply with effluent requirements.

The drip dispersal area shall not be used for vehicular traffic or vehicular parking. Dozers, trucks, tractors, and other heavy vehicles shall not be allowed to run over the drip dispersal area lines or other parts of the system.

5. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

6. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

7. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

B. CHANGES AFFECTING THE PERMIT

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

2. Permit Modification, Revocation, or Termination

a. This permit may be modified, revoked and reissued, or terminated for cause as described in section 69-3-108 (h) The Tennessee Water Quality Control Act as amended.

b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

3. Change of Ownership

This permit may be transferred to another person by the permittee if:

a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;

b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and

c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

C. NONCOMPLIANCE

1. Effect of Noncompliance

Any permit noncompliance constitutes a violation of applicable State laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the appropriate Division environmental assistance center within 24 hours from the time the permittee becomes aware of the circumstances. (The environmental field office should be contacted for names and phone numbers of emergency response personnel.)

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:

i. A description of the discharge and cause of noncompliance;

ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

iii. The steps being taken to reduce, eliminate, and prevent recurrence of the non complying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.a. above, the permittee shall report the noncompliance on the Quarterly Operation Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

3. Overflow

a. "***Overflow***" means the unintended discharge to land or waters of Tennessee of wastes from any portion of the collection, transmission, or treatment system other than through permitted outfalls.

b. Overflows are prohibited.

c. The permittee shall operate the collection system so as to avoid overflows. No new or additional flows shall be added upstream of any point in the collection system, which experiences chronic overflows (greater than 5 events per year) or would otherwise overload any portion of the system.

d. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after: 1) an authorized representative of the Commissioner of the

Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem; 2) the correction work is underway; and 3) the cumulative, peak-design, flows potentially added from new connections and line extensions upstream of any chronic overflow point are less than or proportional to the amount of inflow and infiltration removal documented upstream of that point. The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the environmental engineering field and reported in an attachment to a Monthly Operating Report submitted to the local TDEC Environmental Field Office on a quarterly basis. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.

e. In the event that more than 5 overflows have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium or completion of the actions identified in this paragraph, the permittee may request a meeting with the Division of Water Resources EFO staff to petition for a waiver based on mitigating evidence.

4. Upset

a. "***Upset***" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i. An upset occurred and that the permittee can identify the cause(s) of the upset;

ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

iii. The permittee submitted information required under "Reporting of Noncompliance" within 24-hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and

iv. The permittee complied with any remedial measures required under "Adverse Impact."

5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have

been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6. Bypass

a. "***Bypass***" is the intentional diversion of wastewater away from any portion of a treatment facility. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypasses are prohibited unless all of the following 3 conditions are met:

i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There are no feasible alternatives to bypass, such as the construction and use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass, which occurred during normal periods of equipment downtime or preventative maintenance;

iii. The permittee submits notice of an unanticipated bypass to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the director, if possible, at least 10 days before the date of the bypass.

c. Bypasses not exceeding permit limitations are allowed **only** if the bypass is necessary for essential maintenance to assure efficient operation. All other bypasses are prohibited. Allowable bypasses not exceeding limitations are not subject to the reporting requirements of 6.b.iii, above.

7. Washout

a. For domestic wastewater plants only, a "washout" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decrease due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to infiltration and inflow.

b. A washout is prohibited. If a washout occurs the permittee must report the incident to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours by telephone. A written submission must be provided within five days. The washout must be noted on the discharge monitoring report. Each day of a washout is a separate violation.

D. LIABILITIES

1. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law.

PART III
OTHER REQUIREMENTS

A. CERTIFIED OPERATOR

The waste treatment facilities shall be operated under the supervision of a Biological Natural System certified wastewater treatment operator and collection system shall be operated under the supervision of a the grade I certified collection system operator in accordance with the Water Environmental Health Act of 1984.

B. PLACEMENT OF SIGNS

The permittee shall place a sign at the entrance if the drip area if fenced or all reasonsable approaches to the drip irrigation lot. The sign should be clearly visible to the public. The minimum sign size should be two feet by two feet (2' x 2') with one inch (1") letters. The sign should be made of durable material

RECLAIMED WASTEWATER
DRIP IRRIGATION
(PERMITTEE'S NAME)
(PERMITTEE'S PHONE NUMBER)
TENNESSEE DIVISION OF WATER RESOURCES
Nashville Environmental Field Office
PHONE NUMBER: 1-888-891-8332

No later than sixty (60) days from the effective date of the permit, the permittee shall have the above sign(s) on display in the location specified. New facilities must have the signs installed upon commencing operation.

C. ADDITION OF WASTE LOADS

The permittee may not add wasteloads to the existing treatment system without the knowledge and approval of the division.

D. SEPTIC TANK OPERATION

The proper operation of this treatment system depends, largely, on the efficient use of the septic tank. The solids that accumulate in the tank shall be removed at a frequency that is sufficient to insure that the treatment plant will comply with the discharge requirements of this permit.

E. SEPTAGE MANAGEMENT PRACTICES

The permittee must comply with the provisions of Rule 0400-48-01-.22. If the septage is transported to another POTW for disposal, the permittee shall note the amount of septage wasted in gallons and name of the facility the hauler intends to use for disposal of the septage on the monthly operation report. Sludge or any other material removed by any treatment works must be disposed of in a manner which prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 et seq. and Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

F. OWNERSHIP OF THE TREATMENT FACILITIES

a. The permittee shall own the treatment facilities (and the land upon which they are constructed) including the land to be utilized for drip or spray irrigation. A perpetual easement (properly recorded) may be accepted in lieu of ownership. If the permittee elects to make the treated wastewater available for reuse (irrigation of a golf course for example) a backup dedicated land application site must be provided or a perpetual easement must be obtained for the property where reuse is to take place. The perpetual easement must allow year-round application of the wastewater except where the permittee has provided (and the division has approved) storage facilities for periods when reuse is not available. Evidence of ownership of the treatment facility land application site(s) and/or a copy of the perpetual easement(s) must be furnished to the division for approval prior to construction of the wastewater collection and treatment system.

b. Where the treatment facility serves private homes, condominiums, apartments, retirement homes, nursing homes, trailer parks, or any other place where the individuals being served have property ownership, rental agreements, or other agreements that would prevent their being displaced in the even of abandonment or noncompliance of the sewerage system, ownership of the treatment facilities must be by a municipality, a public utility, a wastewater authority, or a

privately owned public utility (having a Certificate of Convenience and Necessity from the Tennessee Regulatory Authority), or another public agency.

Attachment 1

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES-WATER SUPPLY BRANCH
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue
Nashville, Tennessee 37243

MEMORANDUM

TO: Hari Akunuri, DWR-CO

FROM: Allen Rather, DWR- Land Based Systems Unit

DATE: 8/24/2015

SUBJECT: Nolensville-Dove Lake Treatment Facility
Nolensville, Williamson County, Tennessee
SOP-15015

The Division of Water Resources has reviewed the Application and Preliminary Engineering Report for the proposed decentralized wastewater treatment system at the Nolensville-Dove Lake Treatment Facility located at Nolensville, Williamson County, Tennessee. The initial evaluation has determined that there are sufficient suitable soils to accommodate the design flow of this project. Based on this information, the project can be placed on public notice and a Draft permit can be issued at this time.

A detailed engineering report and plans must be submitted to and approved by the Division prior to the issuance of a final permit.

Should you have any questions or comments please feel free to contact me at (615) 532-5819 or allen.rather@tn.gov.

Attachment 2

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES-LAND BASED SYSTEMS UNIT
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue
Nashville, Tennessee 37243

MEMORANDUM

TO: Hari Akunuri, DWR-CO

FROM: Allen Rather, DWR- Land Based Systems Unit

DATE: 3/01/2016

SUBJECT: LCSS/SFDS (Class V Injection) Approval
Enclave at Dove Lake Subdivision
Nolensville, Williamson County, Tennessee
UIC File WIL 0000171 SOP-15015

The Division of Water Resources has reviewed the submittal of an Application for Authorization to Operate a Class V Underground Injection Well (Large Capacity Septic System/Subsurface Fluid Disposal System) utilizing drip dispersal for the waste water at the Enclave at Dove Lake Subdivision located at Nolensville, Williamson County, Tennessee. This Division approves the application dated 8/24/2015.

If at any time the Division learns that a ground water discharge system may be in violation of The Tennessee Water Quality Control Act, the Division shall:

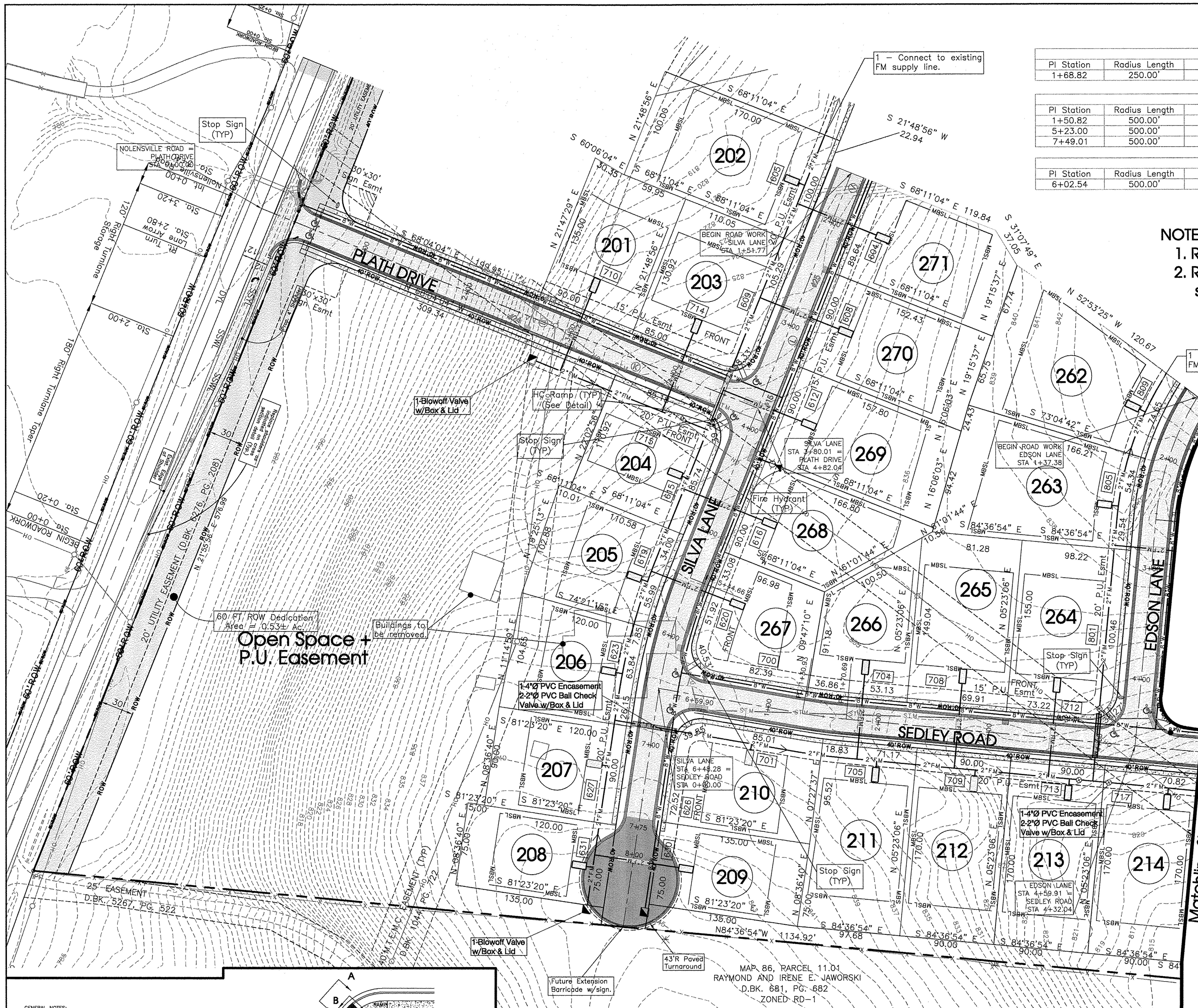
a. require the injector to apply for an individual permit;
b. order the injector to take such actions including, where required, closure of the injection well as may be necessary to prevent the violation; or
c. take enforcement action.

All groundwater discharge activities must operate in such a manner that they do not present a hazard to groundwater.

In accordance with Underground Injection Control (UIC) Rule 0400-45-06-.14 (3) "The owner of a Class V well shall be responsible for notifying the Department of change in ownership." This notification must be made to this Division within thirty (30) days of the change in ownership.

Also note that according to Underground Injection Control (UIC) Rule 0400-45-6-.14 (8)(d) "Upon completion of the well, the owner or operator must certify to the Department that the well has been completed in accordance with the approved construction plan, and must submit any other additional information required". The certification must be submitted to the UIC Program within thirty (30) days upon the completion/closure of the Class V well.

This Division will require a minimum of seven (7) working days advance notice before the construction on the drip system is to begin to allow for a witness from this Division to be present.



EDSON LANE					
PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
1+68.82	250.00'	181.52'	41°36'05.11"	22°55'05.92"	177.56'

SEDLEY ROAD					
PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
1+50.82	500.00'	39.76'	04°33'23.79"	11°27'32.96"	39.75'
5+23.00	500.00'	37.33'	04°16'37.75"	11°27'32.96"	37.32'
7+49.01	500.00'	46.61'	05°20'28.26"	11°27'32.96"	46.59'

SILVA LANE					
PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
6+02.54	500.00'	115.23'	13°12'16.54"	11°27'32.96"	114.98'

NOTES:

1. Request for 40' Right Of Way width.
2. Request 25 mph design speed limit for internal subdivision roads.

Use Type:
Single family residences.
Wasterwater Treatment Area: 15.64± Acres
Total acreage of original tract: 214.60± Acres
Phase 2 Total Area: 40.26± Acres
Phase 2 Area of R.O.W. dedication: 2.48± Acres
Phase 2 Nolensville Road ROW Dedication: 0.53± Ac.
Phase 2 Open Space: 15.26± Acres (37.90%)
Phase 2 Number of lots: 71 Lots

Know what's **below.**
Call before you dig.

SCALE: 1"=50'

Legend:

	EXIST. CONCRETE MONUMENT		BENCHMARK
	IRON PIN SET (I.P.S.)		HANDICAP RAMP SYMBOL
	IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION
	EXIST. SIGN POST		HC SIGN
	EXIST. SEWER CLEANOUT		PROPOSED SIGN POST
	EXIST. MANHOLE (SEWER & PHONE)		CONCRETE BOLLARD
	EXIST. CATCH BASIN (STORM SEWER)		WHEEL STOP
	EXIST. WATER/GAS VALVE		CONCRETE SIDEWALK
	EXIST. TELEPHONE RISER		EXTRUDED CURB
	EXIST. GAS RISER		CURB & GUTTER
	ELECTRICAL ENCLOSURE		TRAFFIC ARROW
	EXIST. WATER METER		TURN LANE ARROWS
	EXIST. UTILITY POLE		REVISION NUMBER
	EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION
	POST INDICATOR VALVE	(A)	DRAINAGE PIPE DESIGNATION
	BLOW OFF VALVE		RIP RAP
	REDUCER		RUNOFF FLOW ARROW
	REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION
	CONCRETE THRUST BLOCK	63.25 ×	PROPOSED SPOT ELEVATION
	DOUBLE DETECTOR CHECK VALVE	(63.25) ×	EXIST. SPOT ELEVATION
	FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION
	FIRE HYDRANT		CATCH BASIN
	GATE VALVE & BOX		CURB INLET
	WATER METER		AREA DRAIN
	GAS METER		HEADWALL
	GREASE TRAP		WINGED HEADWALL
	EXTERIOR CLEANOUT ECO		CONCRETE SWALE
	MANHOLE		TYPE- X- HEADWALL

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF — SF
EROSION EEL	E — E — E — E
EXISTING TREELINE	
EXISTING FENCELINE	X — X
MINIMUM BUILDING SETBACK LINE	MBSL
PHASE BOUNDARY	
EXISTING GAS LINE	GAS — GAS
PROPOSED GAS LINE	GAS — GAS
EXISTING STORM	STM — STM
PROPOSED STORM	STM — STM
EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	SS — SS
PROPOSED SANITARY SEWER	SS — SS
EXISTING WATER	W — W
PROPOSED WATER	W — W

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PHONE: (615) 890-7901 E-MAIL: RHOUZE@SEC-CIVIL.COM FAX: (615) 895-2567

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RICHARD HOUZE REGISTERED ENGINEER STATE OF TENNESSEE

The Enclave @ Dove Lake
Phase 2
Williamson County, Tennessee

GENERAL NOTES:

1. LANDING SHALL BE FLUSH WITH EDGE OF PAVEMENT.

2. SURFACE TEXTURE OF THE CURB RAMP SHALL BE STABLE, FIRM, AND SLIP RESISTANT. THE SURFACE SHALL BE COARSE BROOMED FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.

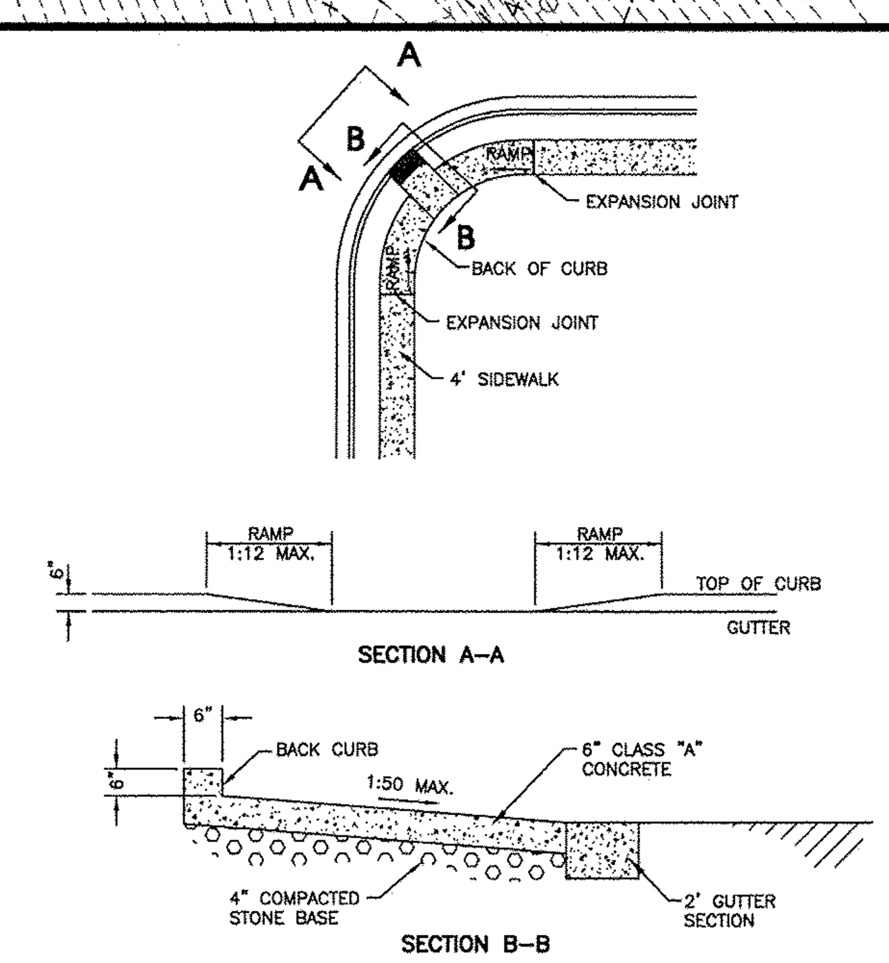
3. BACK CURB HEIGHT ALONG RAMPS SHALL TRANSITION FROM 0 INCHES AT EXPANSION JOINTS TO 6" AT LANDING AND SHALL BE A CONSTANT HEIGHT OF 6" THROUGH LANDING. CROSS-SLOPE (BACK TO FRONT) OF TOP OF BACK CURB SHALL BE THE SAME AS THE SIDEWALK CROSS-SLOPE.

4. RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12 (VERTICAL:HORIZONTAL) AND SHALL NOT BE REQUIRED TO EXCEED 8 FEET (96 INCHES) IN LENGTH.

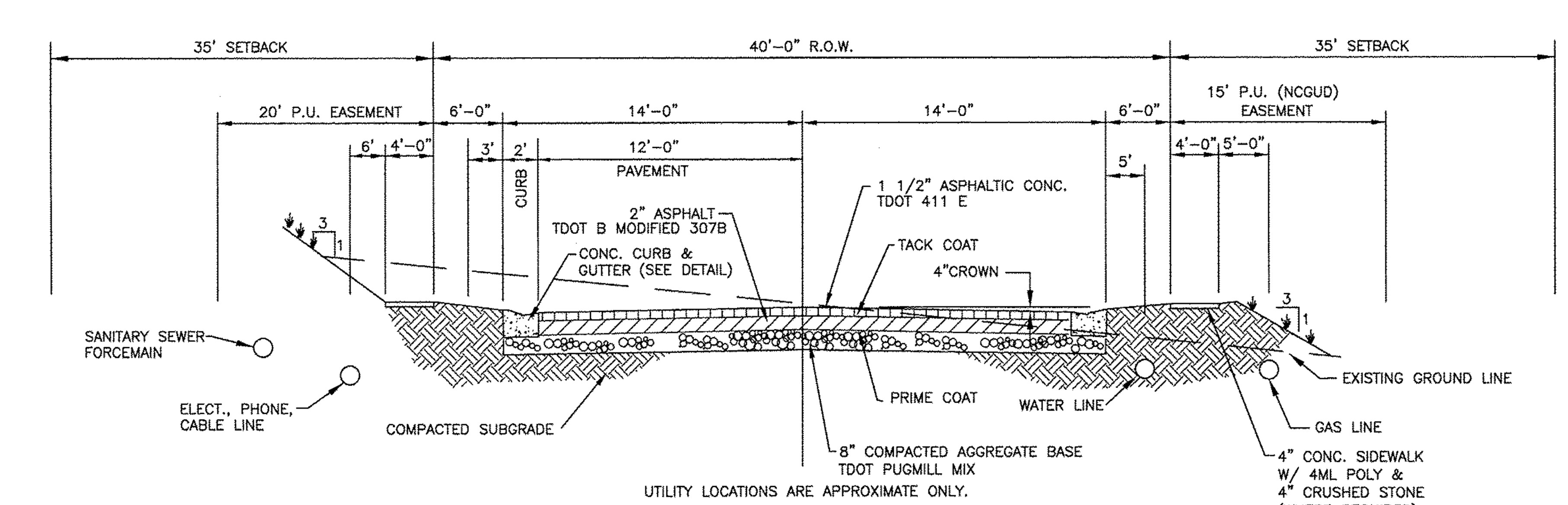
5. HANDICAP RAMP SHALL BE CONSTRUCTED WITH DETECTABLE WARNINGS WHICH SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9 INCHES, A NOMINAL HEIGHT OF 0.2 INCHES AND A NOMINAL CENTER-TO-CENTER SPACING OF 2.35 INCHES AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, WITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED SHALL BE YELLOW BRICK PAVERS AND SHALL PROVIDE CONTRAST AND BE AN INTEGRAL PART OF THE WALKING SURFACE. THE PAVERS SHALL COMPLY WITH THE CURRENT REQUIREMENTS SET FORTH IN THE ADA AND BE INSTALLED PER THE MANUFACTURERS RECOMENDATIONS. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND FOR 2 FEET FROM THE BOTTOM OF RAMP.

6. A CURB RAMP SHALL HAVE A DETECTABLE WARNING COMPLYING WITH 4.29.2 OF ADA REQUIREMENTS. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP.

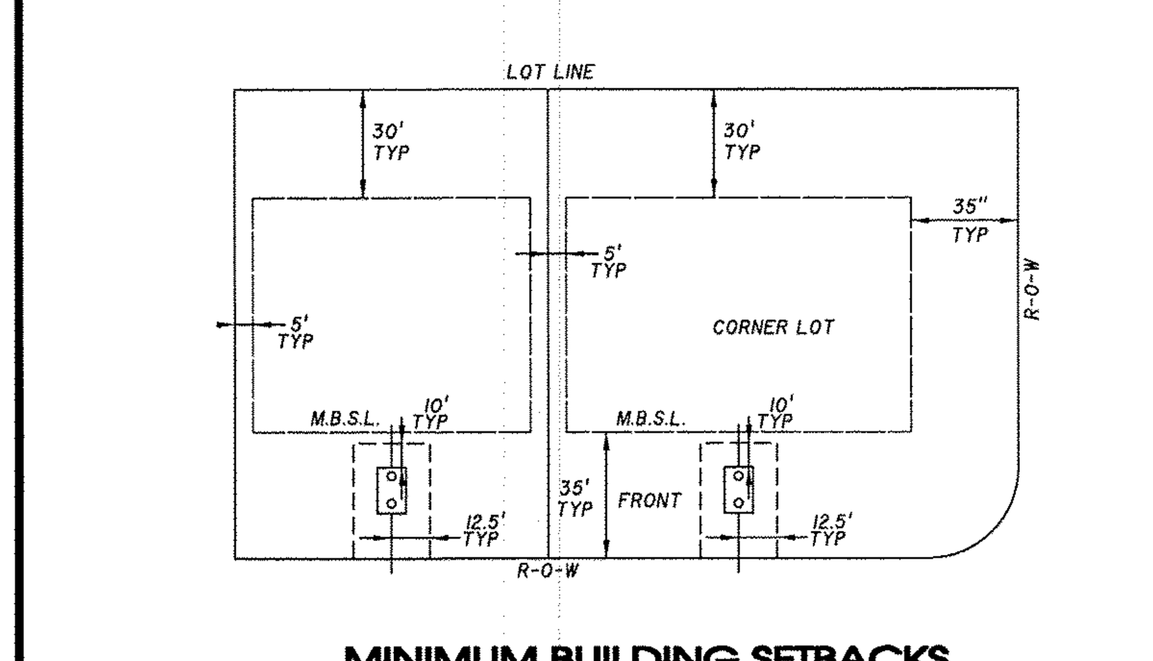
7. As-Built certification for ADA compliance required before release of LOC.



HANDICAP RAMP
SCALE——NONE



TYPICAL 40' R.O.W. SECTION
SCALE——NONE



MINIMUM BUILDING SETBACKS
SCALE——NONE

NOTES:

1. **This property has been reviewed for the existence of intermittent and perennial streams. Streams that would require Waterway Natural Areas as described in Section 4 of the Williamson County Storm Water Management Regulations have been located as shown.**

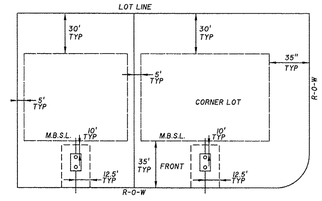
2. **Within the Waterway Natural Area, there shall be no clearing, grading, construction or disturbance of vegetation except as permitted by the Williamson County Engineering Department.**

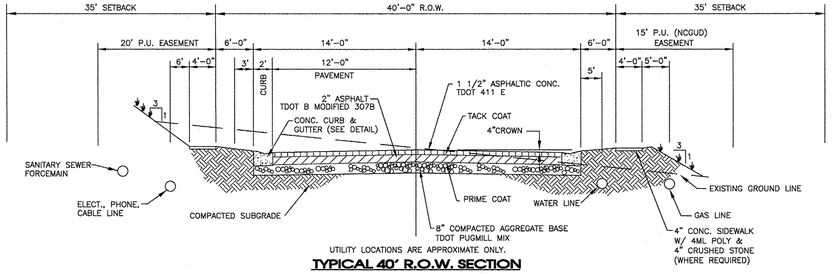
3. **This property has been evaluated in relation to Article 13 of the Williamson County Zoning Ordinance for Resource Protection. The resources include, but are not limited to, Woodland and Tree Protection, Special Flood Hazard Area Protection, and Waterway Protection. The resources not found on the property are Wetland Protection, Karst Topographic Protection, and Historic and Cultural Resources Protection.**

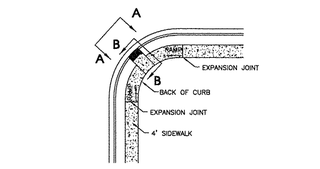
Revised: 4-19-17 Comments
5-5-17 County Comments
6-13-17 County Comments

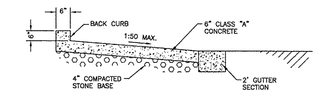
Preliminary Plat

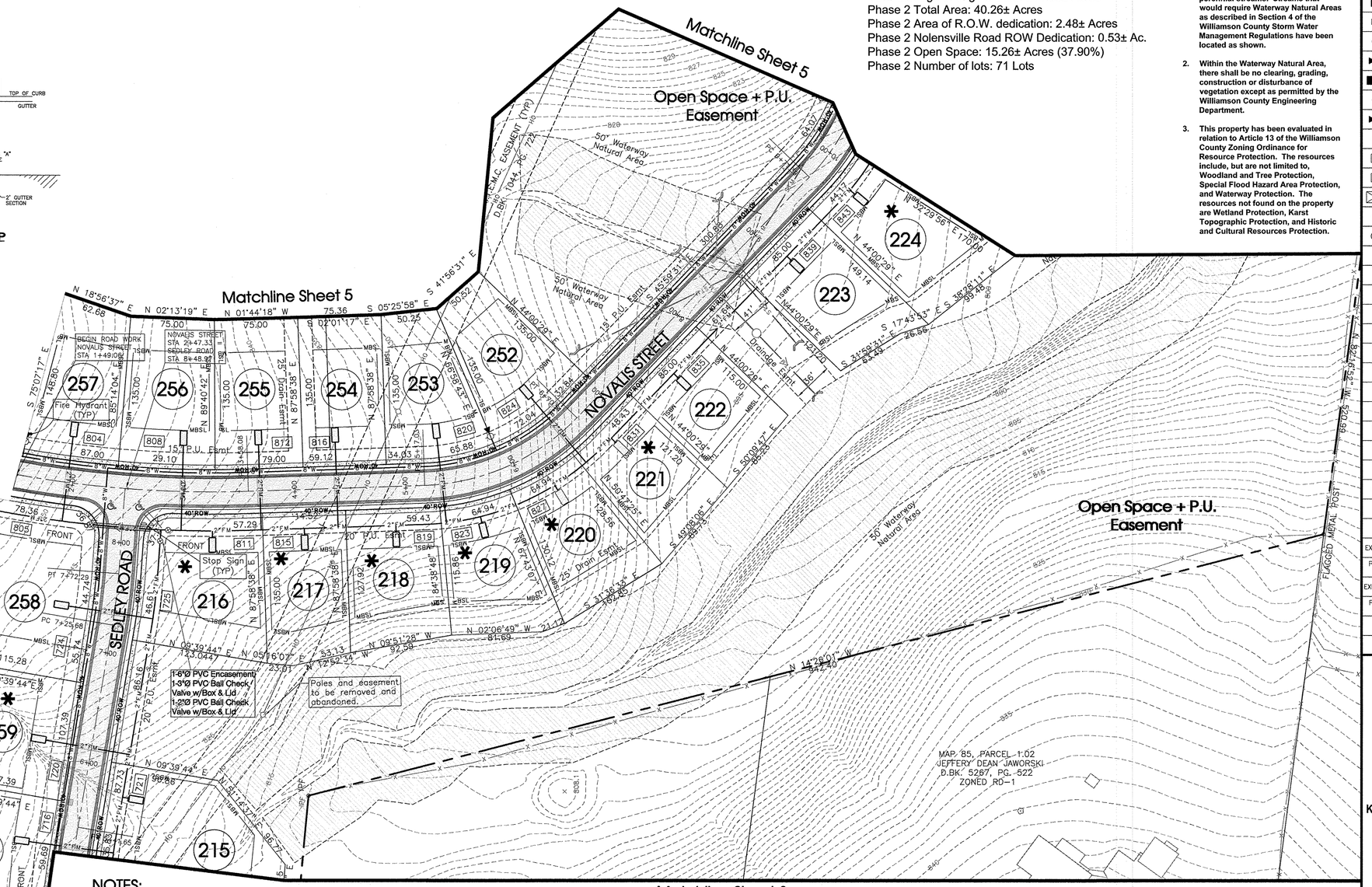
DRAWN: MLG
DATE: 3-21-17
CHECKED: RH
FILE NAME: 14204ProjectP2
SCALE: 1"=50'
JOB NO. 14204











MINIMUM BUILDING SETBACKS

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TYPICAL 40' R.O.W. SECTION

SCALE——NONE

NOVALIS STREET					
PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
1+99.87	1000.00'	319.16'	18°17'12.41"	05°43'46.48"	317.81'
5+97.77	200.00'	153.48'	43°58'09.14"	28°38'52.40"	149.74'
10+82.04	200.00'	202.13'	57°54'23.35"	28°38'52.40"	193.64'

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7+49.01	500.00'	46.61'	05°20'28.26"	11°27'32.96"	46.59'

*** Plot Plans will be required for lots prior to building permit, due to steep slopes.**

Use Type:

Single family residences.
Wastewater Treatment Area: 15.64± Acres
Total acreage of original tract: 214.60± Acres
Phase 2 Total Area: 40.26± Acres
Phase 2 Area of R.O.W. dedication: 2.48± Acres
Phase 2 Nolensville Road ROW Dedication: 0.53± Ac.
Phase 2 Open Space: 15.26± Acres (37.90%)
Phase 2 Number of lots: 71 Lots

NOTES:

1. **This property has been reviewed for the existence of intermittent and perennial streams. Streams that would require Waterway Natural Areas as described in Section 4 of the Williamson County Storm Water Management Regulations have been located as shown.**
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HANDICAP RAMP

SCALE NONE

GENERAL NOTES:

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NOTES:

1. Request for 40' Right Of Way width.
2. Request 25 mph design speed limit for internal subdivision roads.

Legend:

◻	EXIST. CONCRETE MONUMENT	⊕	BENCHMARK
●	IRON PIN SET (I.P.S.)	♿	HANDICAP RAMP SYMBOL
○	IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION
-○-	EXIST. SIGN POST	⊖	HC SIGN
○	EXIST. SEWER CLEANOUT	-●-	PROPOSED SIGN POST
◎	EXIST. MANHOLE (SEWER & PHONE)	•	CONCRETE BOLLARD
▤	EXIST. CATCH BASIN (STORM SEWER)	▭	WHEEL STOP
⊗	EXIST. WATER/GAS VALVE	▨	CONCRETE SIDEWALK
T	EXIST. TELEPHONE RISER	═	EXTRUDED CURB
G	EXIST. GAS RISER	≡	CURB & GUTTER
E	ELECTRICAL ENCLOSURE	➡	TRAFFIC ARROW
Ⓦ	EXIST. WATER METER	⮥	TURN LANE ARROWS
-○-	EXIST. UTILITY POLE	△1	REVISION NUMBER
-○-	EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION
◐	POST INDICATOR VALVE	Ⓐ	DRAINAGE PIPE DESIGNATION
◩	BLOW OFF VALVE	∞	RIP RAP
▭	REDUCER	➡	RUNOFF FLOW ARROW
≺	REMOTE FIRE DEPT. CONNECTION	⌜⌟	INLET FILTER PROTECTION
▶	CONCRETE THRUST BLOCK	63.25 ×	PROPOSED SPOT ELEVATION
■	DOUBLE DETECTOR CHECK VALVE	(63.25) ×	EXIST. SPOT ELEVATION
≺	FIRE DEPT. CONNECTION	>	SEWER/STORM FLOW DIRECTION
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W	WATER METER	●	AREA DRAIN
G	GAS METER	—	HEADWALL
☒	GREASE TRAP	◡	WINGED HEADWALL
○	EXTERIOR CLEANOUT ECO	▨	CONCRETE SWALE
○	MANHOLE	☒	TYPE- X- HEADWALL

EXISTING PHONE	—— PH ——
EXISTING ELECTRIC	—— OH ——
PROPERTY LINE	—— — — —— — — ——
EASEMENTS	- - - - - - - -
RIGHT OF WAY	—— ROW ——
EROSION CONTROL SILT FENCE	—— SF —— SF ——
EROSION EEL	— E — E — E — E —
EXISTING TREELINE	⌒⌒⌒⌒⌒⌒
EXISTING FENCELINE	—— X —— X ——
MINIMUM BUILDING SETBACK LINE	—— MBSL ——
PHASE BOUNDARY	■■■■■■■■■■
EXISTING GAS LINE	—— GAS —— GAS ——
PROPOSED GAS LINE	—— GAS —— GAS ——
EXISTING STORM	—— STM —— STM ——
PROPOSED STORM	—— STM —— STM ——
EXISTING CONTOUR LINES	- - - 601 - - -
PROPOSED CONTOUR LINES	—— 601 ——
EXISTING SANITARY SEWER	—— SS —— SS ——
PROPOSED SANITARY SEWER	—— SS —— SS ——
EXISTING WATER	—— W —— W ——
PROPOSED WATER	—— W —— W ——

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SCALE: 1"= 50'

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RICHARD HOUZE
No. 108494

The Enclave @ Dove Lake
Phase 2
Williamson County, Tennessee

Revised: 4-19-17 Comments
5-5-17 County Comments
6-13-17 County Comments

DRAWN: MLG
DATE: 3-21-17
CHECKED: RH
FILE NAME: 14204ProjectP2
SCALE: 1"=50'
JOB NO. 14204

Preliminary Plat

SHEET: 4 of 20

NOVALIS STREET					
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10+82.04	200.00'	202.13'	57°54'23.35"	28°38'52.40"	193.64'

TYNAN WAY					
PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
4+86.69	700.00'	492.80'	40°20'09.74"	08°11'06.40"	482.68'

Use Type:
Single family residences.
Wastewater Treatment Area: 15.64± Acres
Total acreage of original tract: 214.60± Acres
Phase 2 Total Area: 40.26± Acres
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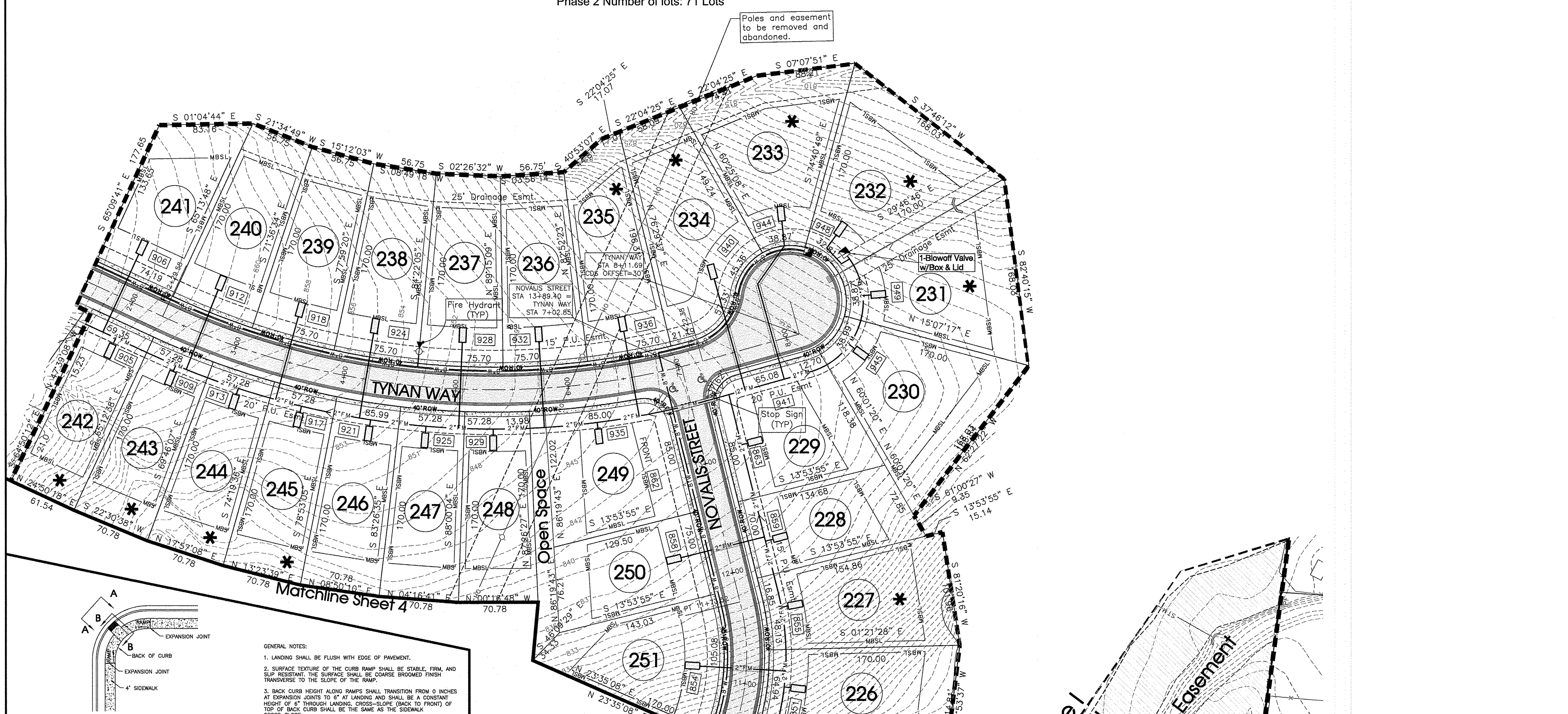

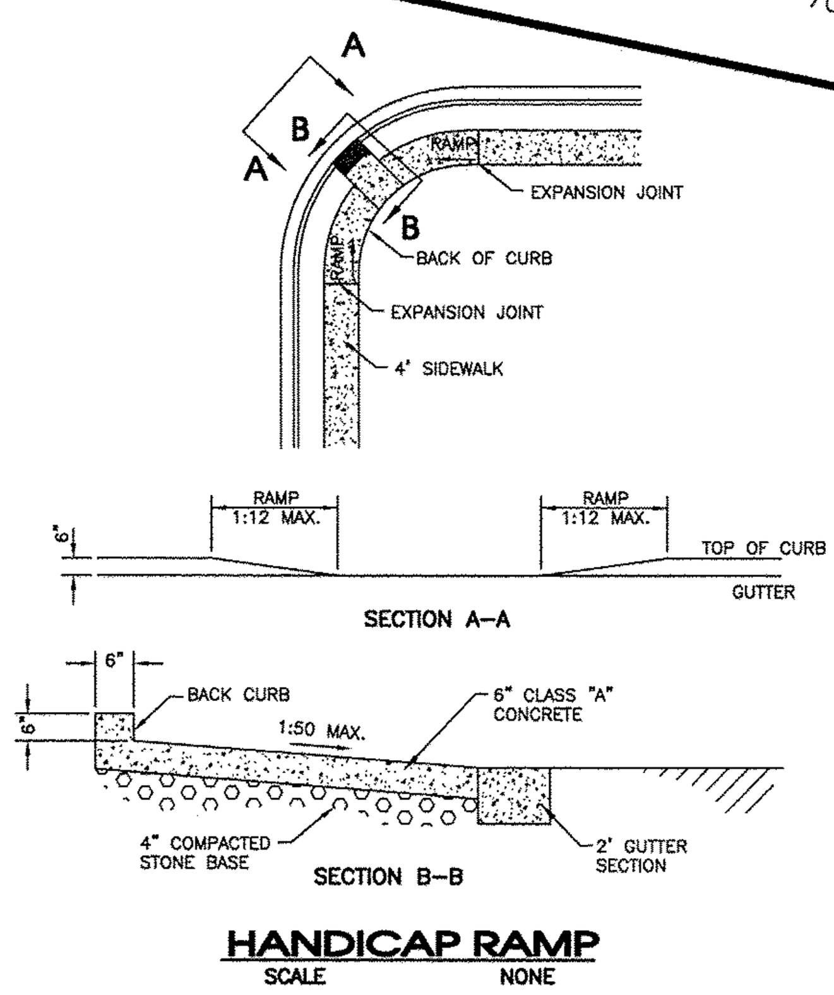

GENERAL NOTES:

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2. SURFACE TEXTURE OF THE CURB RAMP SHALL BE STABLE, FIRM, AND SLIP RESISTANT. THE SURFACE SHALL BE COARSE BROOMED FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.

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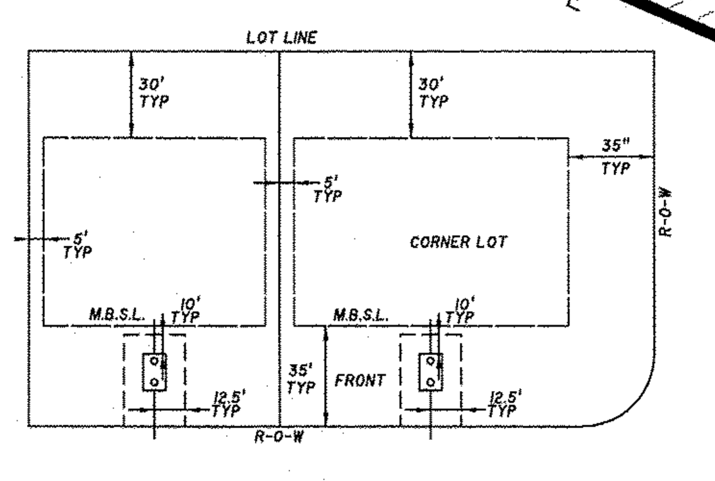
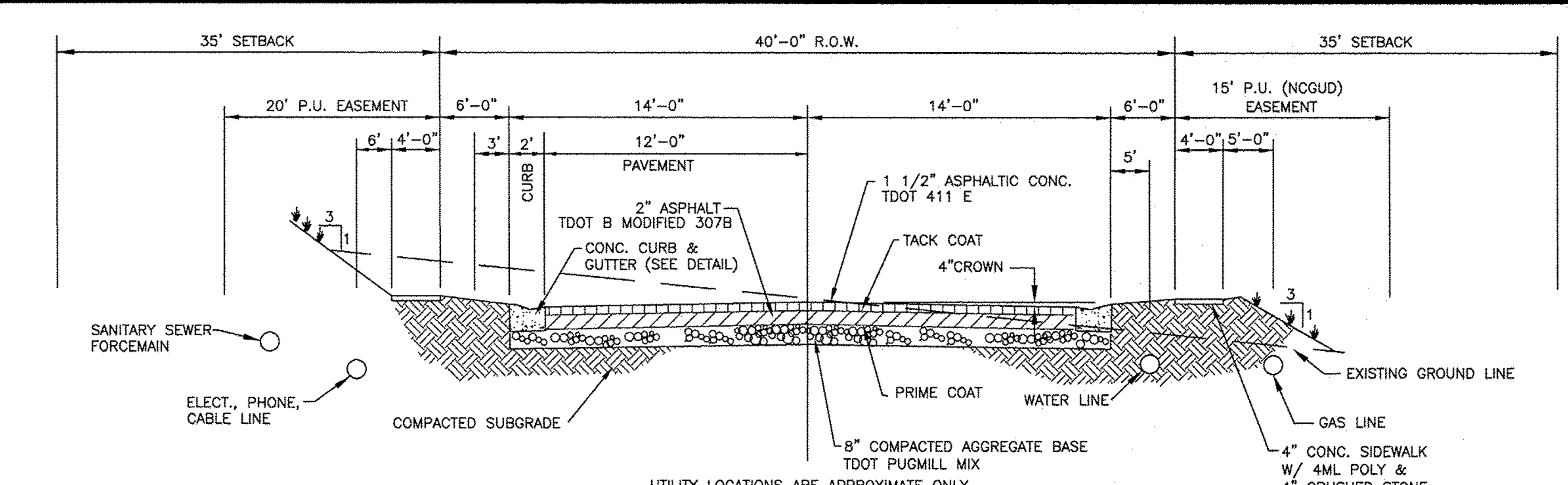
6. A CURB RAMP SHALL HAVE A DETECTABLE WARNING COMPLYING WITH 4.29.2 OF ADA REQUIREMENTS. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP.

7. As-Built certification for ADA compliance required before release of LOC.

HANDICAP RAMP
SCALE NONE



MINIMUM BUILDING SETBACKS
SCALE NONE



TYPICAL 40' R.O.W. SECTION
SCALE NONE

Matchline Sheet 4

NOTES:
1. **This property has been reviewed for the existence of intermittent and perennial streams. Streams that would require Waterway Natural Areas as described in Section 4 of the Williamson County Storm Water Management Regulations have been located as shown.**
2. **Within the Waterway Natural Area, there shall be no clearing, grading, construction or disturbance of vegetation except as permitted by the Williamson County Engineering Department.**
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Legend:

EXIST. CONCRETE MONUMENT	BENCHMARK
IRON PIN SET (I.P.S.)	HANDICAP RAMP SYMBOL
IRON PIN FOUND (I.P.F.)	V.A. VAN ACCESSIBLE HANDICAP DESIGNATION
EXIST. SIGN POST	HC SIGN
EXIST. SEWER CLEANOUT	PROPOSED SIGN POST
EXIST. MANHOLE (SEWER & PHONE)	CONCRETE BOLLARD
EXIST. CATCH BASIN (STORM SEWER)	WHEEL STOP
EXIST. WATER/GAS VALVE	CONCRETE SIDEWALK
EXIST. TELEPHONE RISER	EXTRUDED CURB
EXIST. GAS RISER	CURB & GUTTER
ELECTRICAL ENCLOSURE	TRAFFIC ARROW
EXIST. WATER METER	TURN LANE ARROWS
EXIST. UTILITY POLE	REVISION NUMBER
EXIST. FIRE HYDRANT	#1 DRAINAGE STRUCTURE DESIGNATION
POST INDICATOR VALVE	DRAINAGE PIPE DESIGNATION
BLOW OFF VALVE	RIP RAP
REDUCER	RUNOFF FLOW ARROW
REMOTE FIRE DEPT. CONNECTION	INLET FILTER PROTECTION
CONCRETE THRUST BLOCK	63.25 PROPOSED SPOT ELEVATION
DOUBLE DETECTOR CHECK VALVE	(63.25) EXIST. SPOT ELEVATION
FIRE DEPT. CONNECTION	SEWER/STORM FLOW DIRECTION
FIRE HYDRANT	CATCH BASIN
GATE VALVE & BOX	CURB INLET
WATER METER	AREA DRAIN
GAS METER	HEADWALL
GREASE TRAP	WINGED HEADWALL
EXTERIOR CLEANOUT ECO	CONCRETE SWALE
MANHOLE	TYPE- X- HEADWALL

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF
EROSION EEL	E
EXISTING TREELINE	
EXISTING FENCELINE	X
MINIMUM BUILDING SETBACK LINE	MBSL
PHASE BOUNDARY	
EXISTING GAS LINE	GAS
PROPOSED GAS LINE	GAS
EXISTING STORM	STM
PROPOSED STORM	STM
EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	SS
PROPOSED SANITARY SEWER	SS
EXISTING WATER	W
PROPOSED WATER	W

811 Know what's **below.** **Call** before you dig.

-50' 0 50' 100'
SCALE: 1"= 50'

SEC, Inc. SITE ENGINEERING CONSULTANTS
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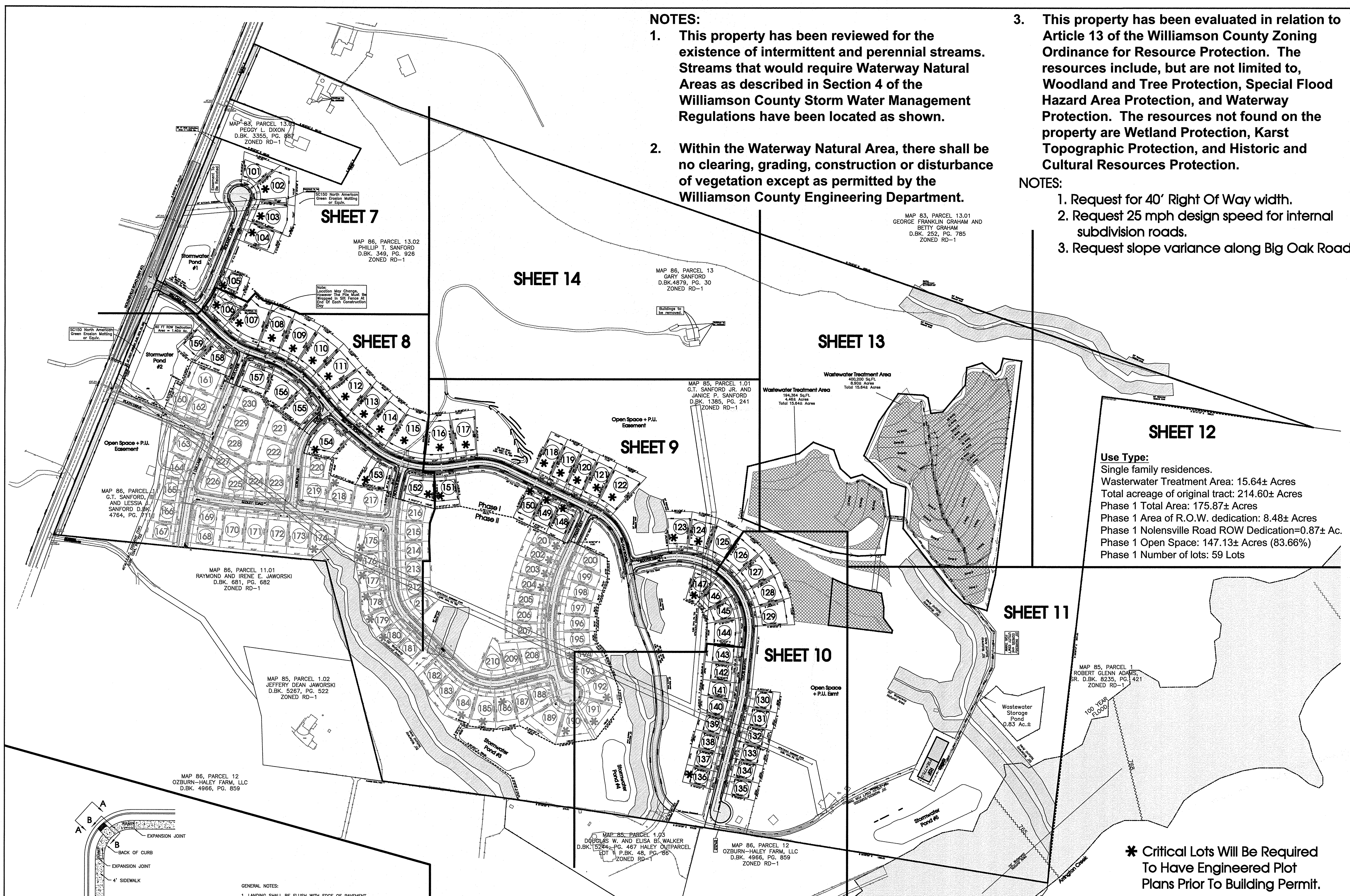
RICHARD HOUZE — STATE OF TENNESSEE (seal)

The Enclave @ Dove Lake
Phase 2
Williamson County, Tennessee

Revised: 4-19-17 Comments
5-5-17 County Comments
6-13-17 County Comments

DRAWN: MLG
DATE: 3-21-17
CHECKED: RH
FILE NAME: 14204ProjectP2
SCALE: 1"=50'
JOB NO. 14204

Preliminary Plat



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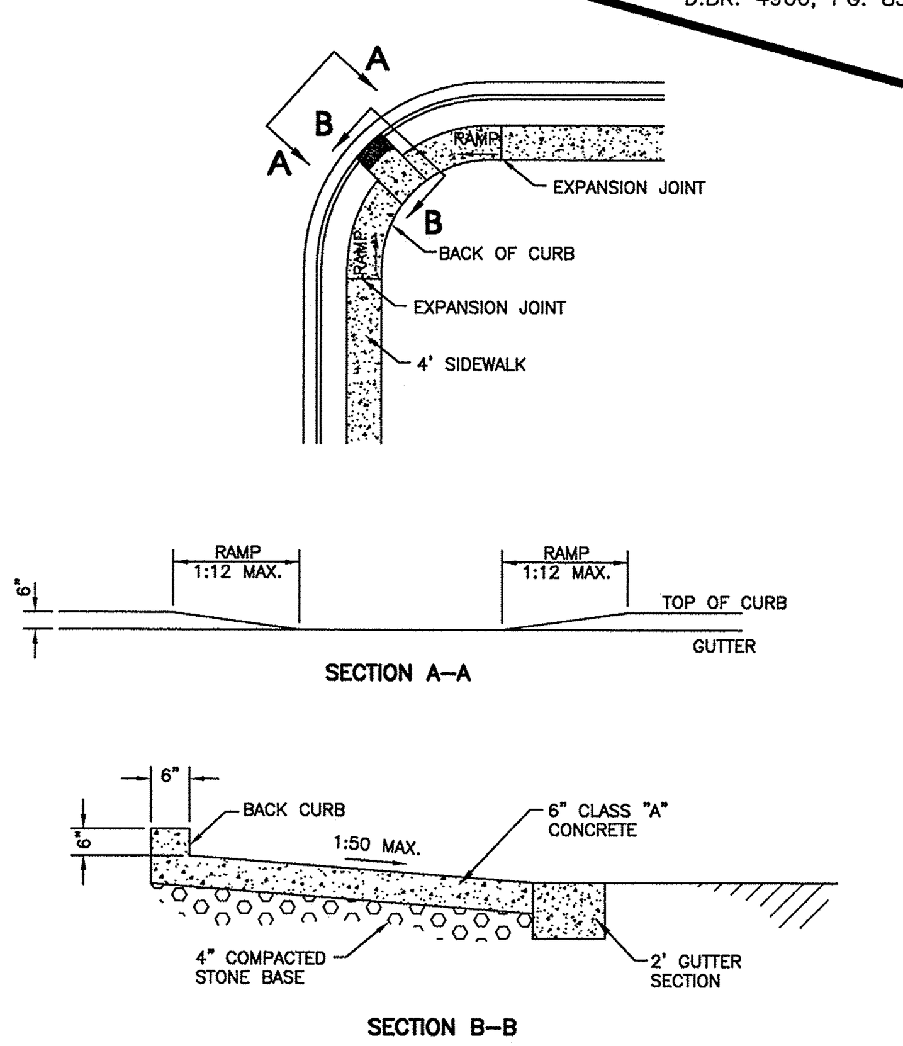
NOTES:

1. Request for 40' Right Of Way width.
2. Request 25 mph design speed for internal subdivision roads.
3. Request slope variance along Big Oak Road.

Use Type:

Single family residences.
Wastewater Treatment Area: 15.64± Acres
Total acreage of original tract: 214.60± Acres
Phase 1 Total Area: 175.87± Acres
Phase 1 Area of R.O.W. dedication: 8.48± Acres
Phase 1 Nolensville Road ROW Dedication=0.87± Ac.
Phase 1 Open Space: 147.13± Acres (83.66%)
Phase 1 Number of lots: 59 Lots

* Critical Lots Will Be Required To Have Engineered Plot Plans Prior To Building Permit.



GENERAL NOTES:

1. LANDING SHALL BE FLUSH WITH EDGE OF PAVEMENT.

2. SURFACE TEXTURE OF THE CURB RAMP SHALL BE STABLE, FIRM, AND SLIP RESISTANT. THE SURFACE SHALL BE COARSE BROOMED FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.

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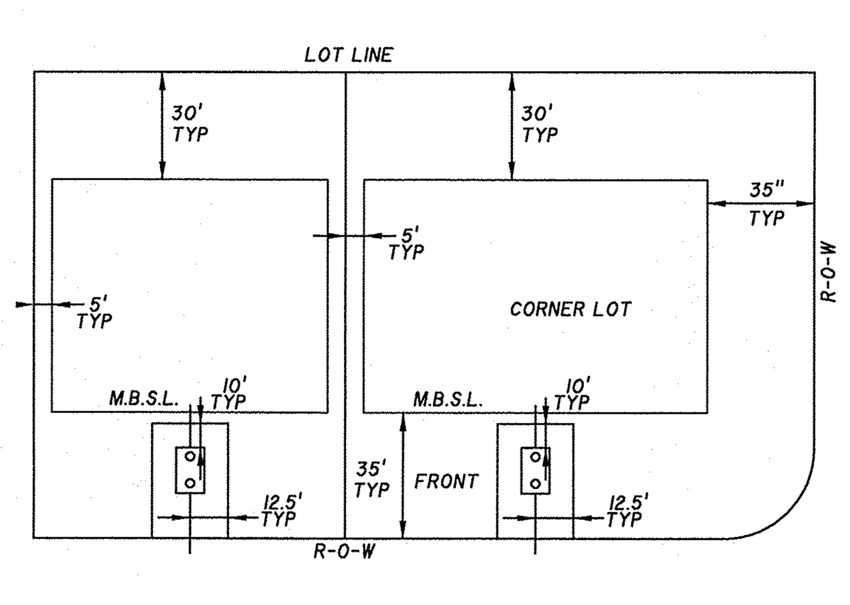
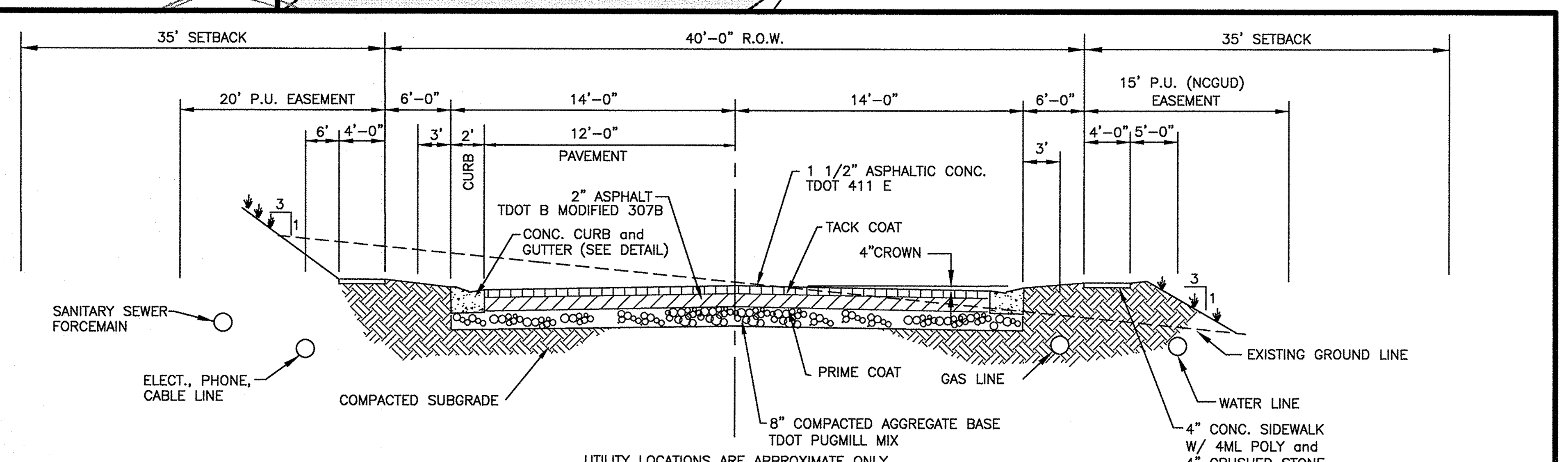
HANDICAP RAMP
SCALE—NONE



MINIMUM BUILDING SETBACKS
SCALE—NONE



TYPICAL 40' R.O.W. SECTION
SCALE—NONE

Legend:

Symbol	Description	Symbol	Description
	EXIST. CONCRETE MONUMENT		INLET PROTECTION FILTER
	IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL
	IRON PIN FOUND (I.P.F.)		HC SIGN
	EXIST. SIGN POST		HEADWALL
	EXIST. SEWER CLEANOUT		WINGED HEADWALL
	EXIST. MANHOLE (SEWER and PHONE)		MANHOLE
	EXIST. CATCH BASIN (STORM SEWER)	63.25 ×	PROPOSED SPOT ELEVATION
	EXIST. WATER/GAS VALVE	(63.25) ×	EXIST. SPOT ELEVATION
	EXIST. TELEPHONE RISER		POST INDICATOR VALVE
	EXIST. GAS RISER		REDUCER
	ELECTRICAL ENCLOSURE		REMOTE FIRE DEPT. CONNECTION
	EXIST. WATER METER		REVISION NUMBER
	EXIST. UTILITY POLE		RIP RAP
	EXIST. FIRE HYDRANT		RUNOFF FLOW ARROW
	BENCHMARK		SEWER/STORM FLOW DIRECTION
	BLOW OFF VALVE		TRAFFIC ARROW
	CONCRETE BOLLARD		TURN LANE ARROWS
	CATCH BASIN	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION
	CURB INLET	W	WATER METER
	AREA DRAIN		WHEEL STOP
	CONCRETE THRUST BLOCK		GREASE TRAP
	DOUBLE DETECTOR CHECK VALVE	#1	DRAINAGE STRUCTURE DESIGNATION
	SOLENOID VALVE	A	DRAINAGE PIPE DESIGNATION
	FIRE HYDRANT		CONCRETE SIDEWALK
G	GAS METER		EXTRUDED CURB
	GATE VALVE and BOX		CURB and GUTTER
	EXTERIOR CLEANOUT		CONCRETE SWALE

Line type	Symbol
EXISTING PHONE	——PH——
EXISTING ELECTRIC	——OH——
BOUNDARY LINE	— — —
EASEMENTS	- - - -
RIGHT OF WAY	——ROW——
EROSION CONTROL SILT FENCE	——SF——SF——
EXISTING TREELINE	
EXISTING FENCELINE	——X——X——
MINIMUM BUILDING SETBACK LINE	——MBSL——
PHASE BOUNDARY	
EXISTING GAS LINE	——GAS——GAS——
PROPOSED GAS LINE	——GAS——GAS——
EXISTING STORM	——STM——STM——
PROPOSED STORM	——STM——STM——
EXISTING CONTOUR LINES	——601——
PROPOSED CONTOUR LINES	——601——
EXISTING SANITARY SEWER	——SS——SS——
PROPOSED SANITARY SEWER	——SS——SS——
EXISTING WATER	——W——W——
PROPOSED WATER	——W——W——

Know what's **below.**
Call before you dig.

N

-200' 0 200' 400'
SCALE: 1"= 200'

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The Enclave at Dove Lake
Phase 1
Williamson County, Tennessee

Revised: 7-28-16 Comments
4-27-17 Profiles

DRAWN: MLG
DATE: 6-14-16
CHECKED: RH
FILE NAME: 14204ProjectP1
SCALE: 1"=200'
JOB NO. 14204

Master Plan

The Enclave @ Dove Lake
Phase 1
Williamson County, Tennessee

Preliminary Plat

Legend:

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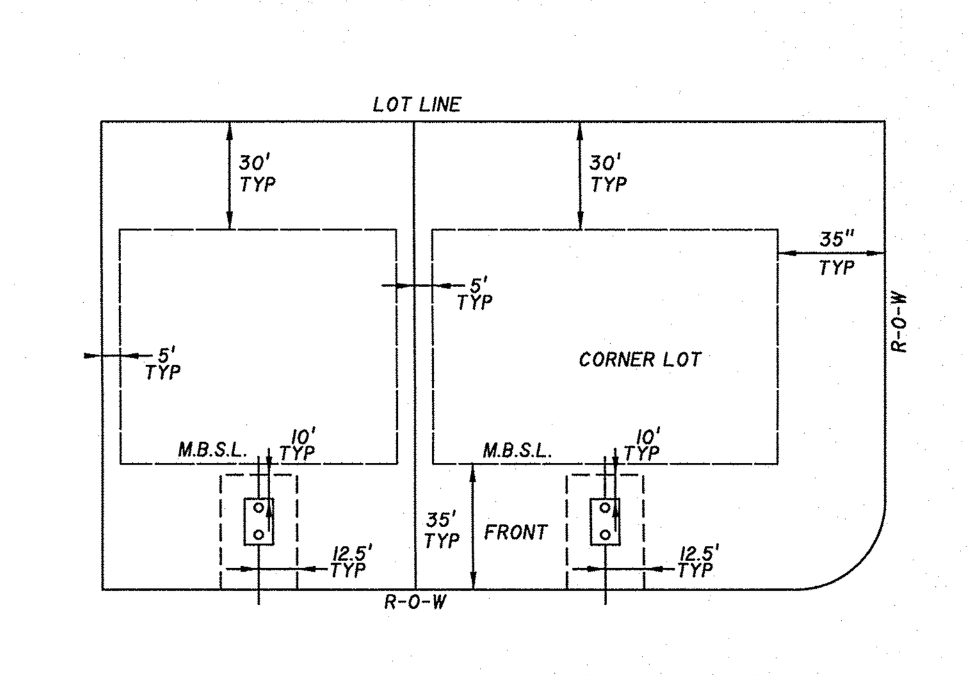
GREASE TRAP	WINGED HEADWALL
EXTERIOR CLEANOUT ECO	CONCRETE SWALE
MANHOLE	TYPE- X- HEADWALL

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF
EROSION EEL	E E E
EXISTING TREELINE	
EXISTING FENCELINE	X X
MINIMUM BUILDING SETBACK LINE	MBSL
PHASE BOUNDARY	
EXISTING GAS LINE	GAS GAS
PROPOSED GAS LINE	GAS GAS
EXISTING STORM	STM STM
PROPOSED STORM	STM STM
EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	SS SS
PROPOSED SANITARY SEWER	SS SS
EXISTING WATER	W W
PROPOSED WATER	W W



MINIMUM BUILDING SETBACKS
SCALE——NONE

ROLAND LANE					
PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
0+77.96	400.00'	122.67'	17°34'15.12"	14°19'26.20"	122.19'

NOTES:
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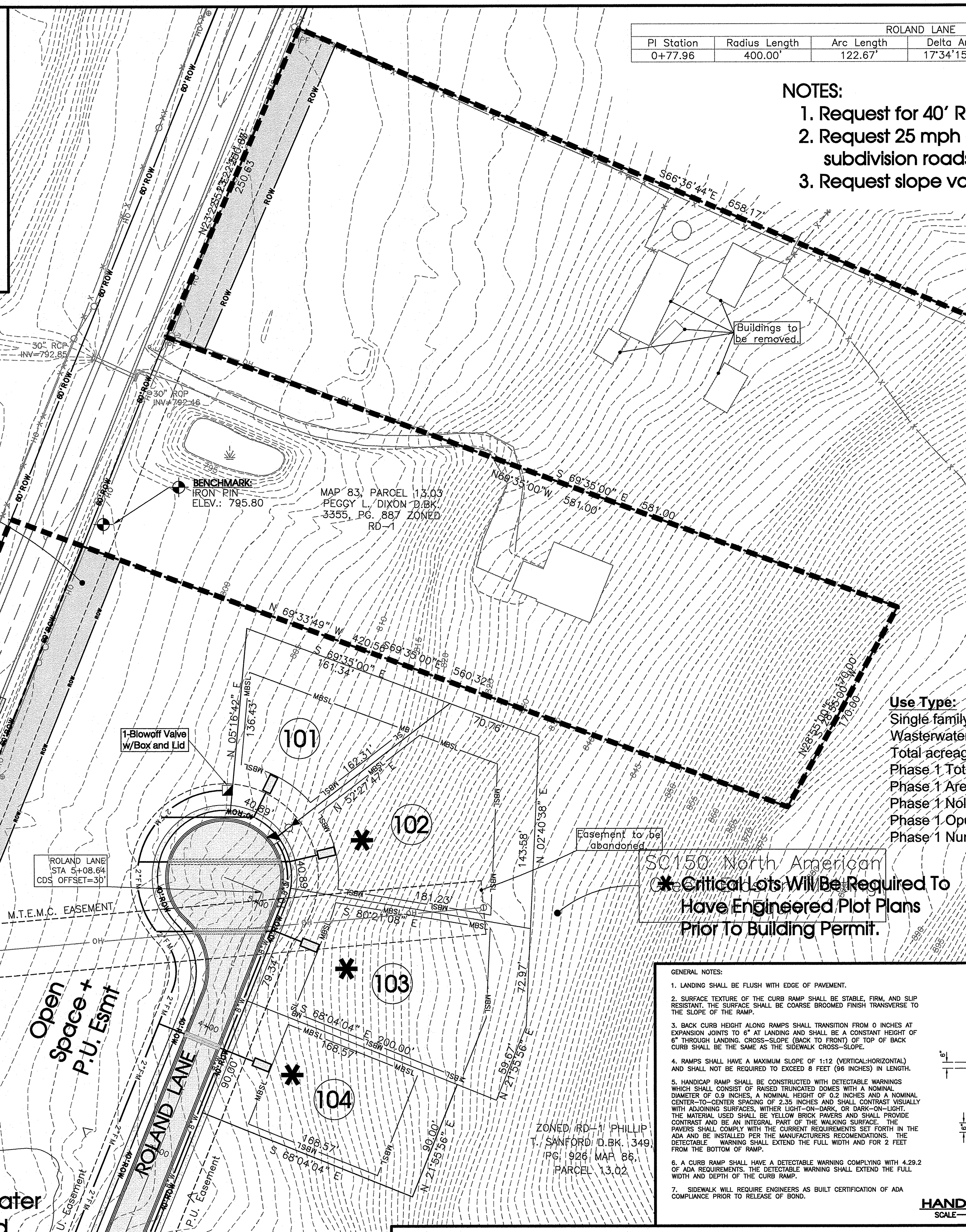
3. Request slope variance along Big Oak Road.



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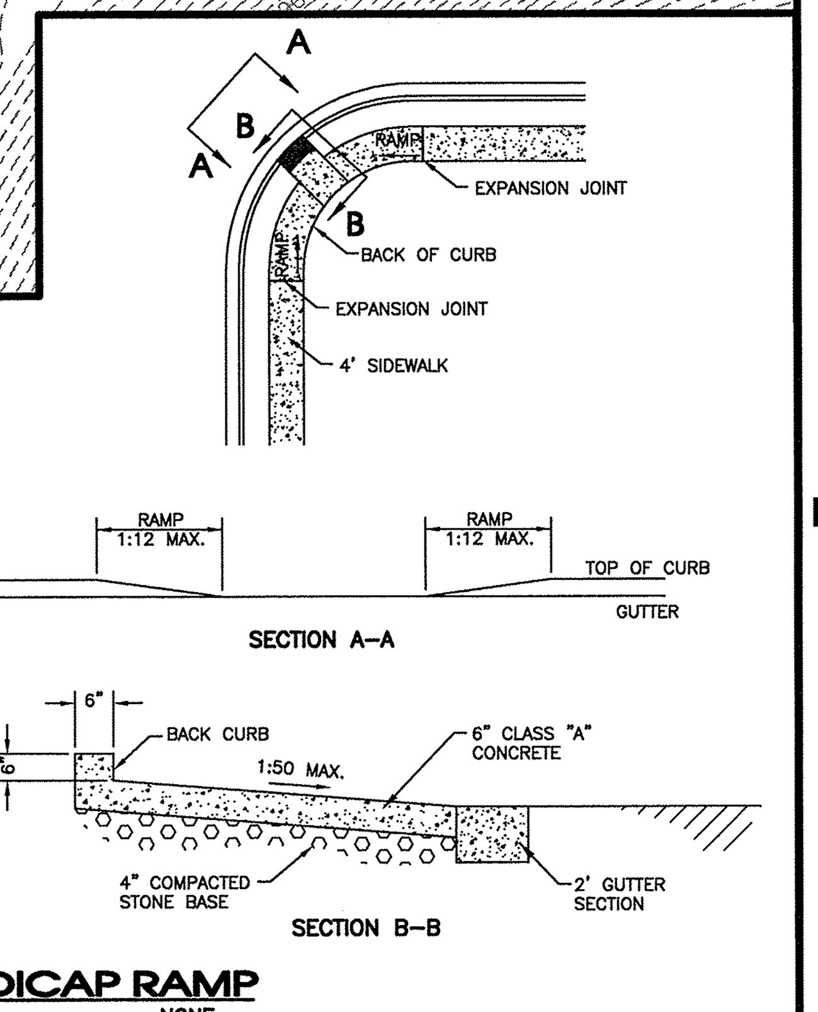
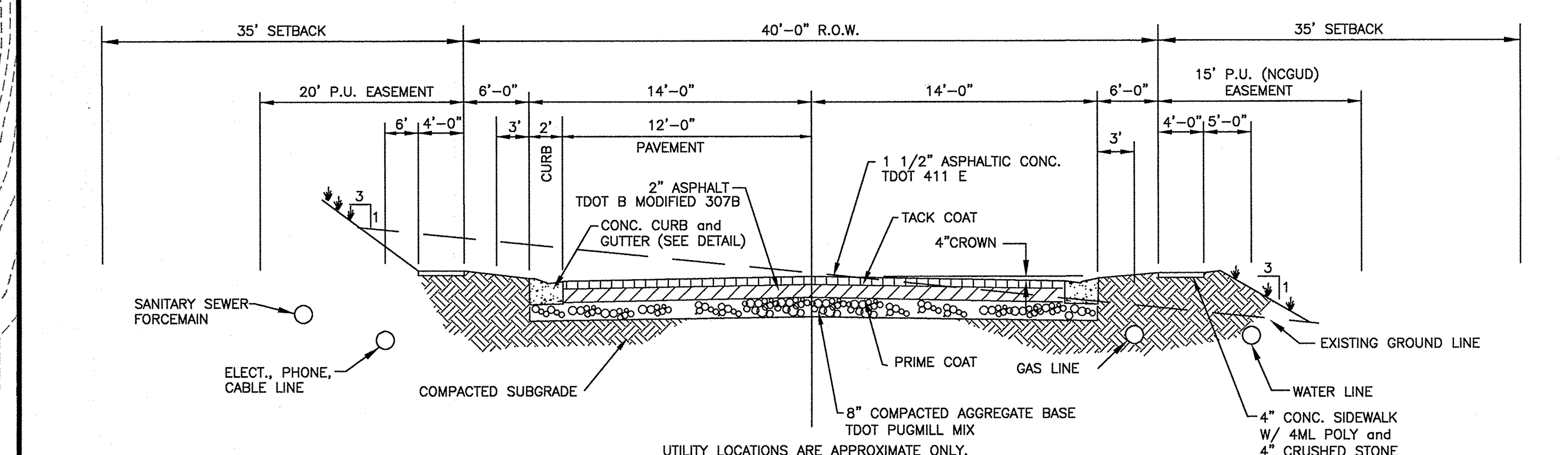


HANDICAP RAMP
SCALE——NONE



TYPICAL 40' R.O.W. SECTION
SCALE——NONE

LOT #	LOT AREA
101	13488
102	21815
103	21516
104	15171
105	10649
106	15783
107	25359
108	18755
109	20211
110	20211
111	20211
112	22229
113	18000
114	20210
115	26410
116	22473
117	19272
118	15000
119	15000
120	15000
121	15210
122	21577
123	15621
124	15880
125	15880
126	15880
127	15880
128	15880
129	15880
130	10579
131	10210
132	10125
133	10125
134	10125
135	10125
136	10125
137	10125
138	10125
139	10125
140	10403
141	10698
142	11250
143	11250
144	15947
145	11398
146	11398
147	11398
148	11373
149	11292
150	11292
151	11292
152	11292
153	11292
154	12161
155	14933
156	15337
157	16103
158	16103
159	16103

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-50' 0 50' 100'
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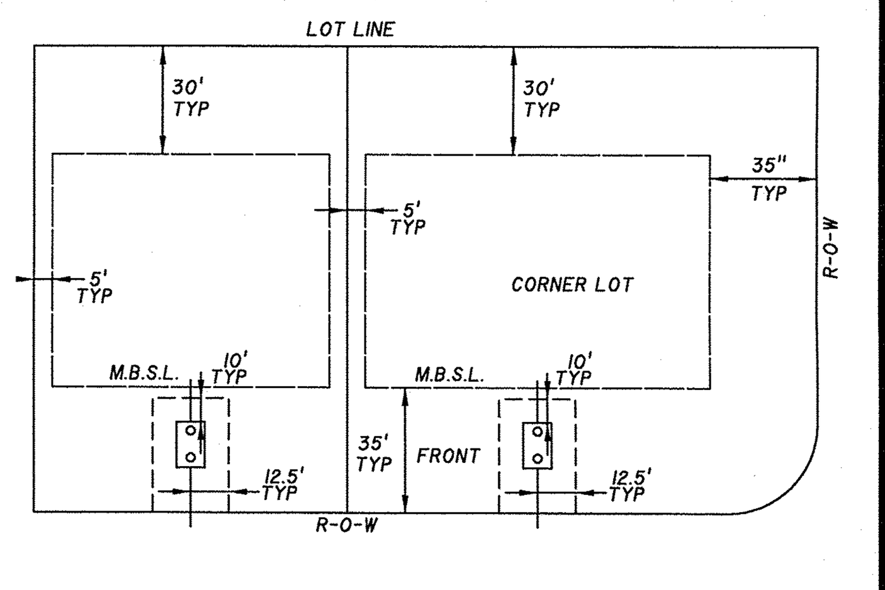
Revised: 7-28-16 Comments

DRAWN:	MLG
DATE:	6-14-16
CHECKED:	RH
FILE NAME:	14204ProjectP1
SCALE:	1"=50'
JOB NO.	14204
SHEET:	7 of 29



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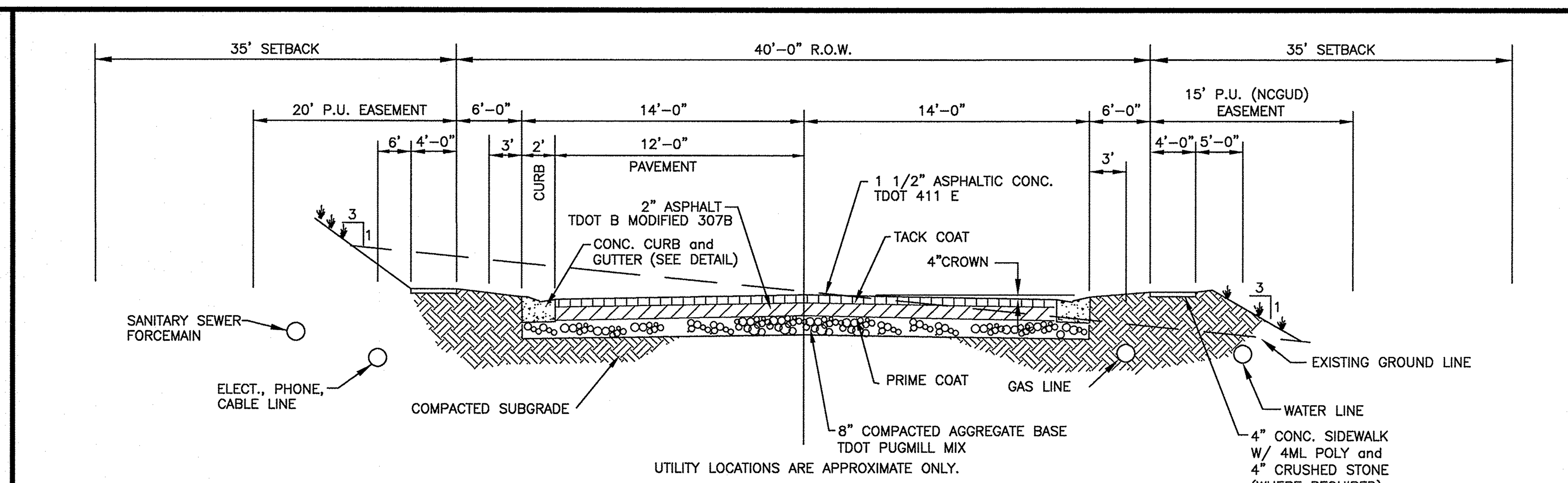

UTILITY LOCATIONS ARE APPROXIMATE ONLY.

TYPICAL 40' R.O.W. SECTION

SCALE——NONE

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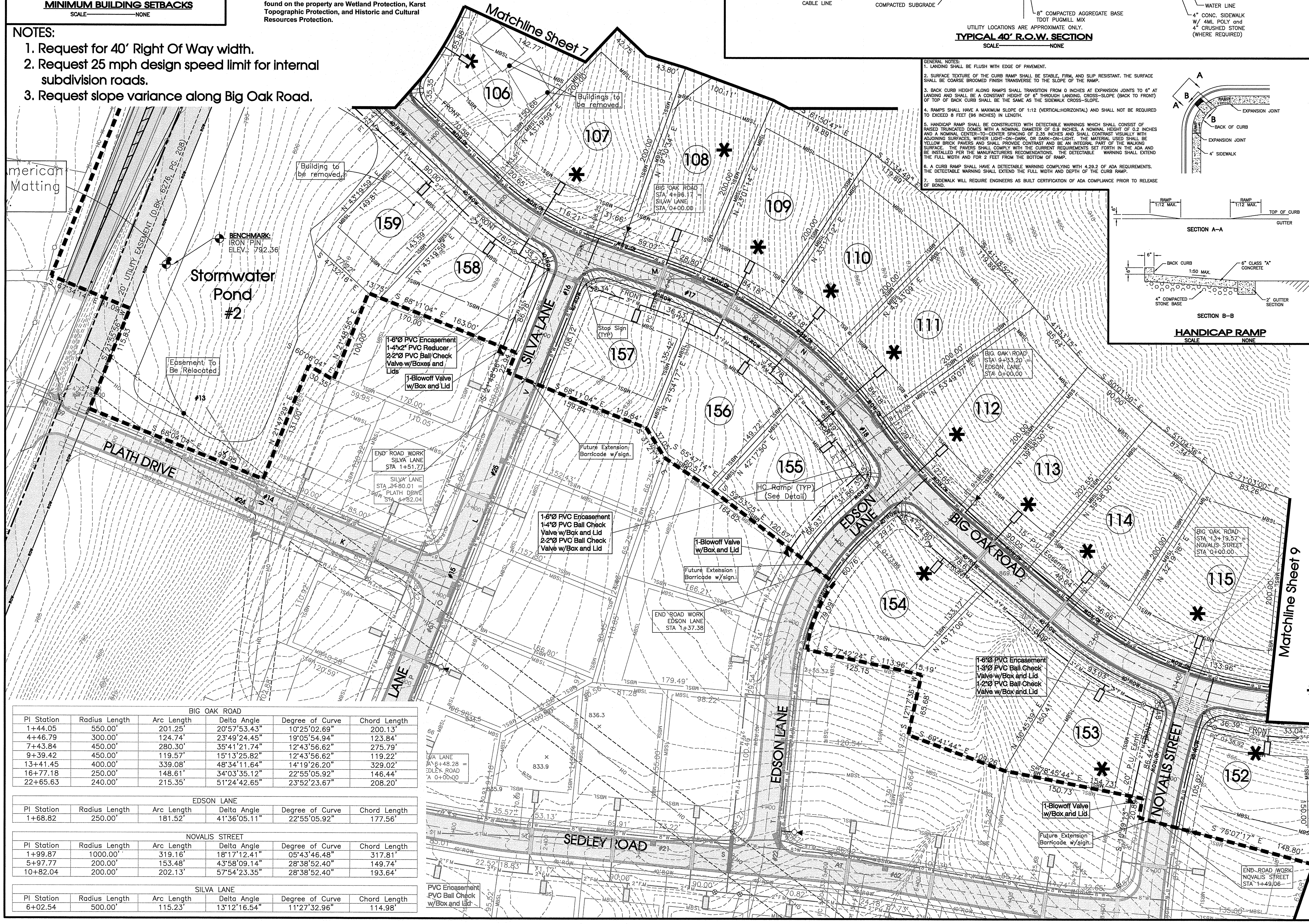
HANDICAP RAMP

SCALE——NONE



BIG OAK ROAD					
PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
1+44.05	550.00'	201.25'	20°57'53.43"	10°25'02.69"	200.13'
4+46.79	300.00'	124.74'	23°49'24.45"	19°05'54.94"	123.84'
7+43.84	450.00'	280.30'	35°41'21.74"	12°43'56.62"	275.79'
9+39.42	450.00'	119.57'	15°13'25.82"	12°43'56.62"	119.22'
13+41.45	400.00'	339.08'	48°34'11.64"	14°19'26.20"	329.02'
16+77.18	250.00'	148.61'	34°03'35.12"	22°55'05.92"	146.44'
22+65.63	240.00'	215.35'	51°24'42.65"	23°52'23.67"	208.20'

EDSON LANE					
PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
1+68.82	250.00'	181.52'	41°36'05.11"	22°55'05.92"	177.56'

NOVALIS STREET					
PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
1+99.87	1000.00'	319.16'	18°17'12.41"	05°43'46.48"	317.81'
5+97.77	200.00'	153.48'	43°58'09.14"	28°38'52.40"	149.74'
10+82.04	200.00'	202.13'	57°54'23.35"	28°38'52.40"	193.64'

SILVA LANE					
PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
6+02.54	500.00'	115.23'	13°12'16.54"	11°27'32.96"	114.98'

✱ Critical Lots Will Be Required To Have Engineered Plot Plans Prior To Building Permit.

Know what's **below.** **Call** before you dig.

SCALE: 1"= 50'

Legend:

EXIST. CONCRETE MONUMENT	BENCHMARK
IRON PIN SET (I.P.S.)	HANDICAP PARKING SYMBOL
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EXIST. WATER/GAS VALVE	CONCRETE SIDEWALK
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EXIST. UTILITY POLE	REVISION NUMBER
EXIST. FIRE HYDRANT	#1 DRAINAGE STRUCTURE DESIGNATION
POST INDICATOR VALVE	DRAINAGE PIPE DESIGNATION
BLOW OFF VALVE	RIP RAP
REDUCER	RUNOFF FLOW ARROW
REMOTE FIRE DEPT. CONNECTION	INLET FILTER PROTECTION
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DOUBLE DETECTOR CHECK VALVE	(63.25) EXIST. SPOT ELEVATION
FIRE DEPT. CONNECTION	SEWER/STORM FLOW DIRECTION
FIRE HYDRANT	CATCH BASIN
GATE VALVE and BOX	CURB INLET
WATER METER	AREA DRAIN
GAS METER	HEADWALL
GREASE TRAP	WINGED HEADWALL
EXTERIOR CLEANOUT ECO	CONCRETE SWALE
MANHOLE	TYPE- X- HEADWALL

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF
EROSION EEL	E
EXISTING TREELINE	
EXISTING FENCELINE	X
MINIMUM BUILDING SETBACK LINE	MBSL
PHASE BOUNDARY	
EXISTING GAS LINE	GAS
PROPOSED GAS LINE	GAS
EXISTING STORM	STM
PROPOSED STORM	STM
EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	SS
PROPOSED SANITARY SEWER	SS
EXISTING WATER	W
PROPOSED WATER	W

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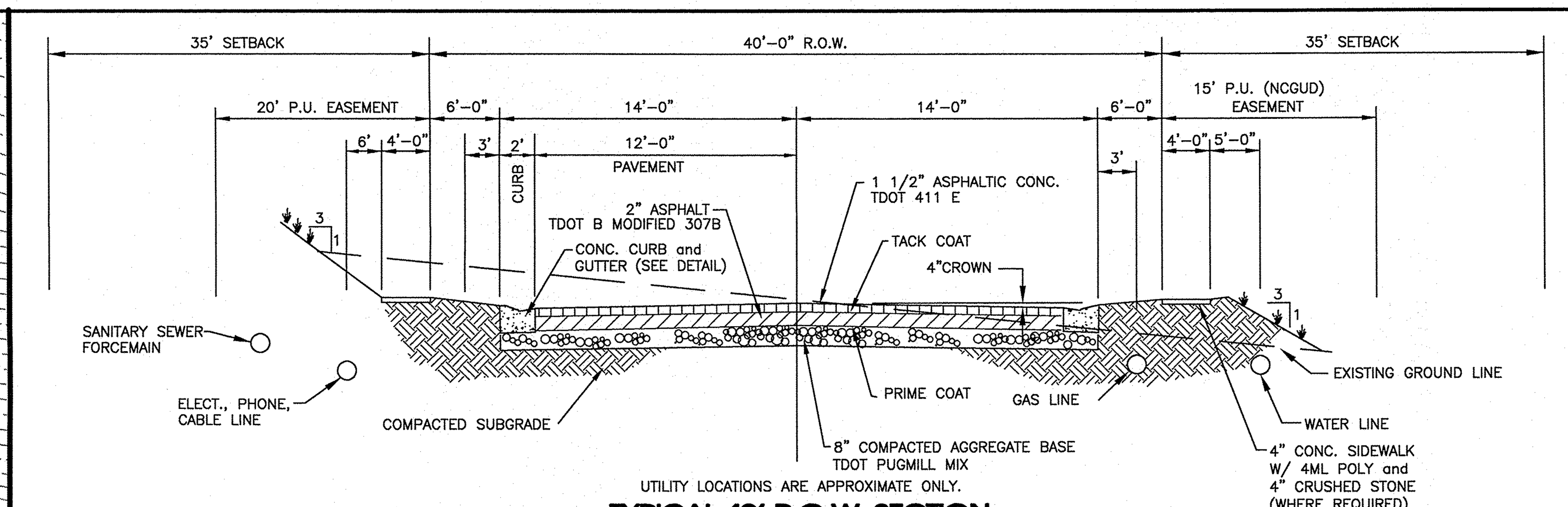
RICHARD HOUZE · STATE OF TENNESSEE

The Enclave @ Dove Lake
Phase 1
Williamson County, Tennessee

Preliminary Plat

Revised: 7-28-16 Comments
4-27-17 Profiles
DRAWN: MLG
DATE: 6-14-16
CHECKED: RH
FILE NAME: 14204ProjectP1
SCALE: 1"=50'
JOB NO. 14204



TYPICAL 40' R.O.W. SECTION

SCALE——NONE

GENERAL NOTES:

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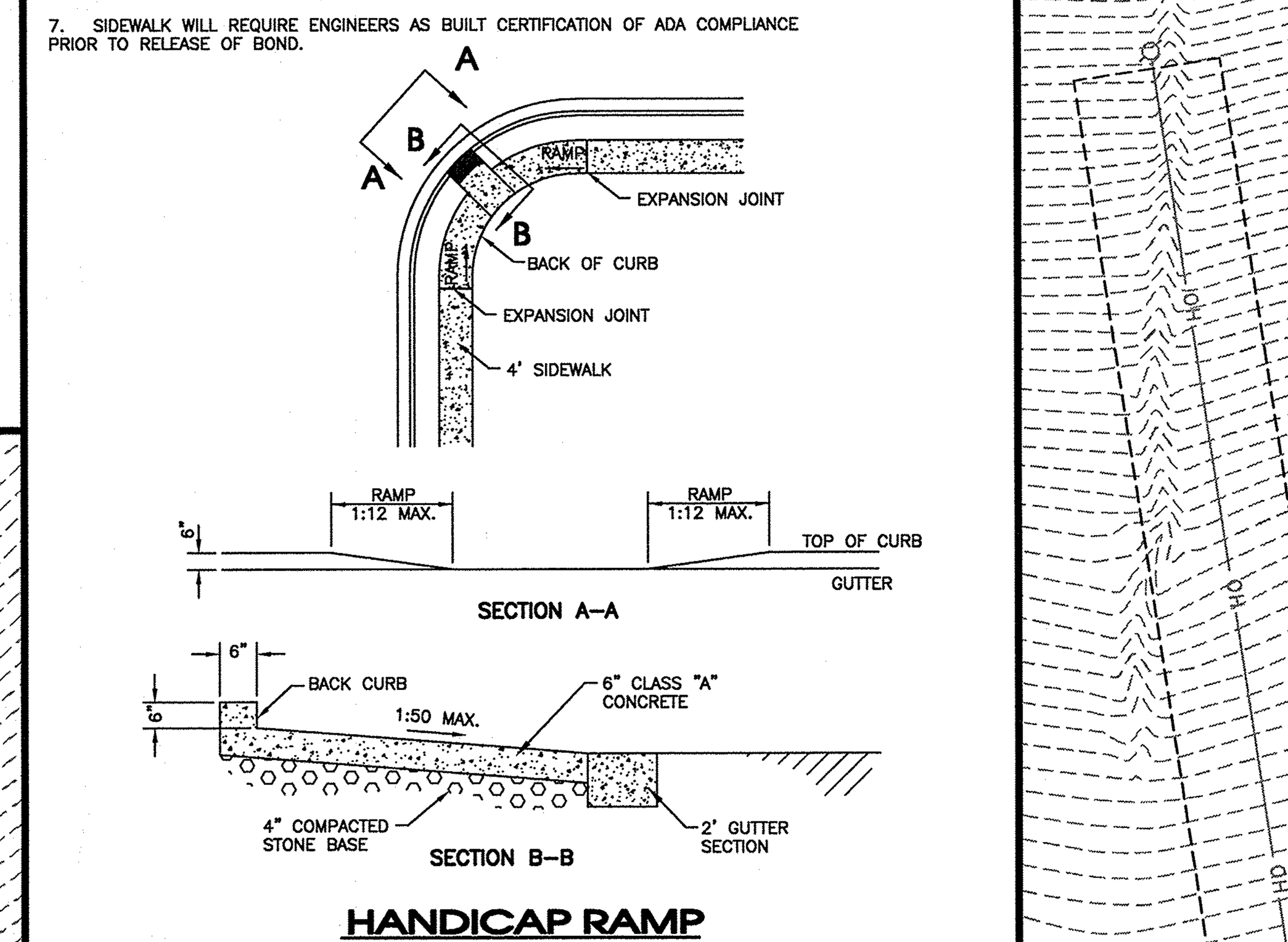
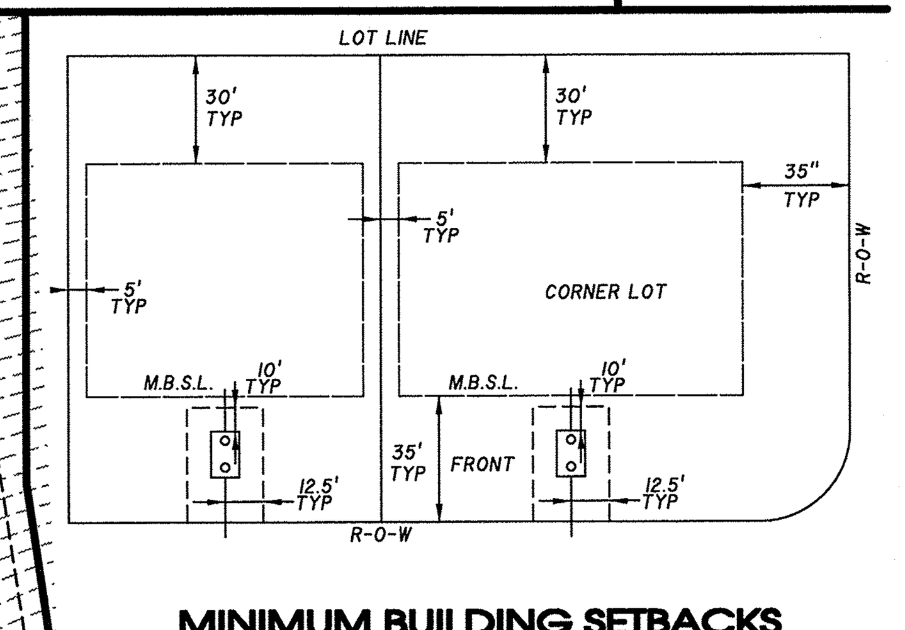


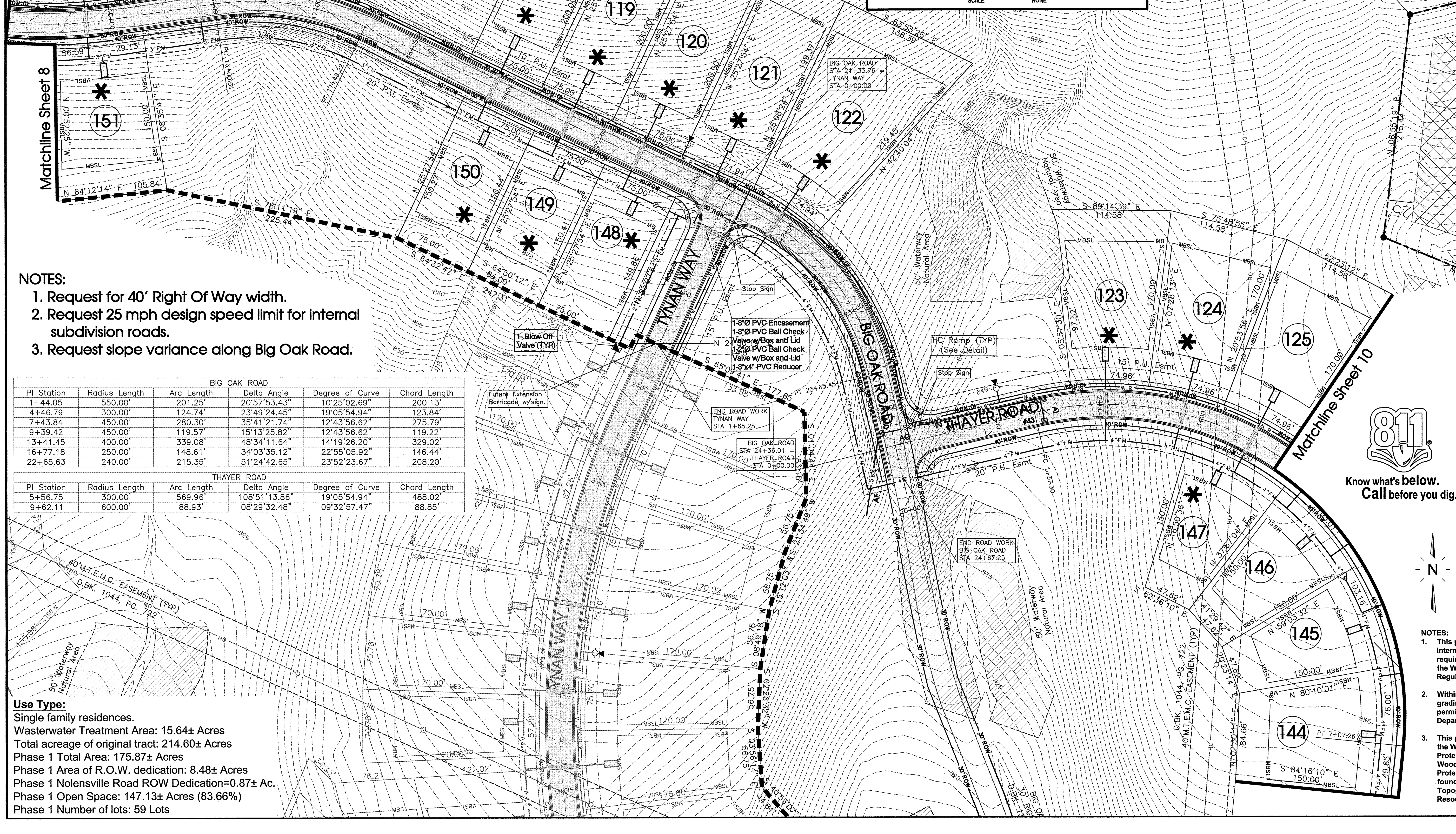
HANDICAP RAMP

SCALE——NONE



MINIMUM BUILDING SETBACKS

SCALE——NONE



NOTES:

1. Request for 40' Right Of Way width.
2. Request 25 mph design speed limit for internal subdivision roads.
3. Request slope variance along Big Oak Road.

BIG OAK ROAD					
PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
1+44.05	550.00'	201.25'	20°57'53.43"	10°25'02.69"	200.13'
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PI Station	Radius Length	Arc Length	Delta Angle	Degree of Curve	Chord Length
5+56.75	300.00'	569.96'	108°51'13.86"	19°05'54.94"	488.02'
9+62.11	600.00'	88.93'	08°29'32.48"	09°32'57.47"	88.85'

Use Type:

Single family residences.
Wasterwater Treatment Area: 15.64± Acres
Total acreage of original tract: 214.60± Acres
Phase 1 Total Area: 175.87± Acres
Phase 1 Area of R.O.W. dedication: 8.48± Acres
Phase 1 Nolensville Road ROW Dedication=0.87± Ac.
Phase 1 Open Space: 147.13± Acres (83.66%)
Phase 1 Number of lots: 59 Lots

Know what's **below.** **Call** before you dig.

N

-50' 0 50' 100'

SCALE: 1"= 50'

NOTES:

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2. Within the Waterway Natural Area, there shall be no clearing, grading, construction or disturbance of vegetation except as permitted by the Williamson County Engineering Department.
3. This property has been evaluated in relation to Article 13 of the Williamson County Zoning Ordinance for Resource Protection. The resources include, but are not limited to, Woodland and Tree Protection, Special Flood Hazard Area Protection, and Waterway Protection. The resources not found on the property are Wetland Protection, Karst Topographic Protection, and Historic and Cultural Resources Protection.

Legend:

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JOB NO. 14204	
SHEET: 9 of 29	

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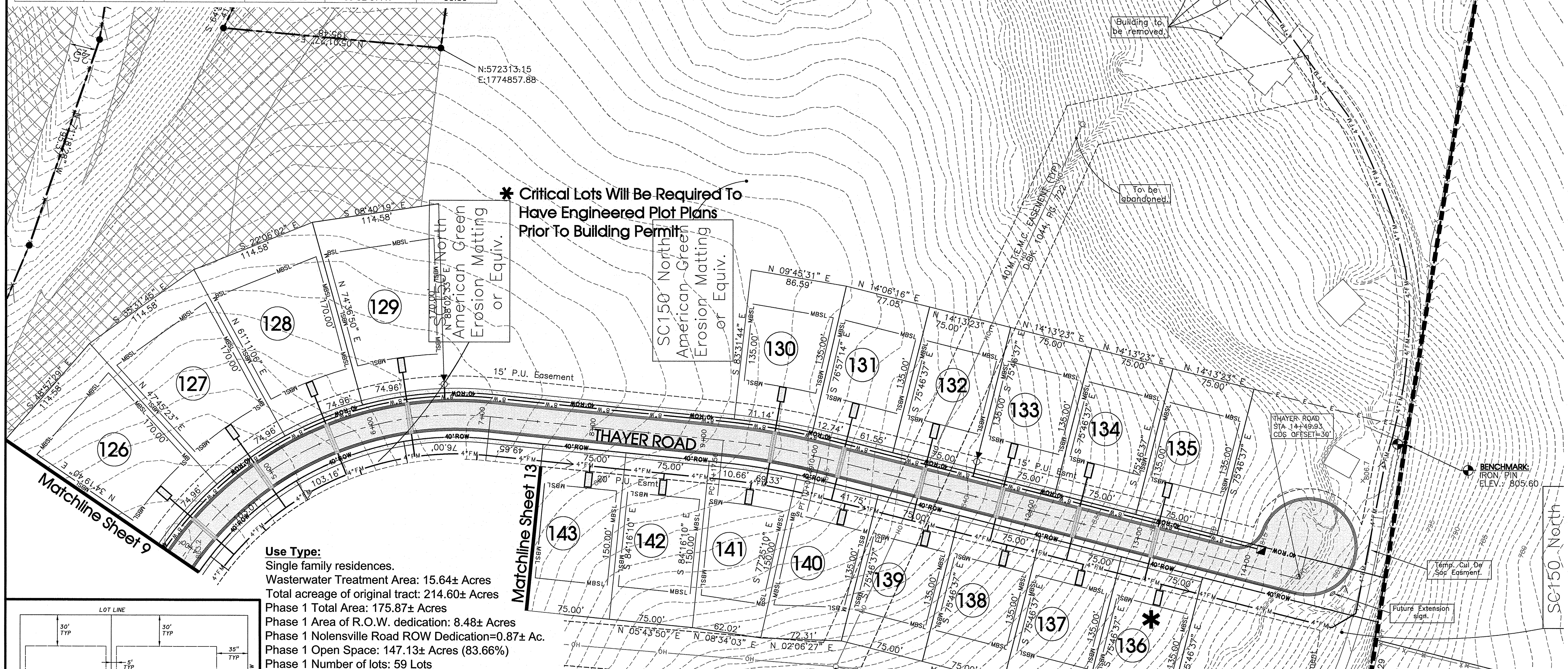

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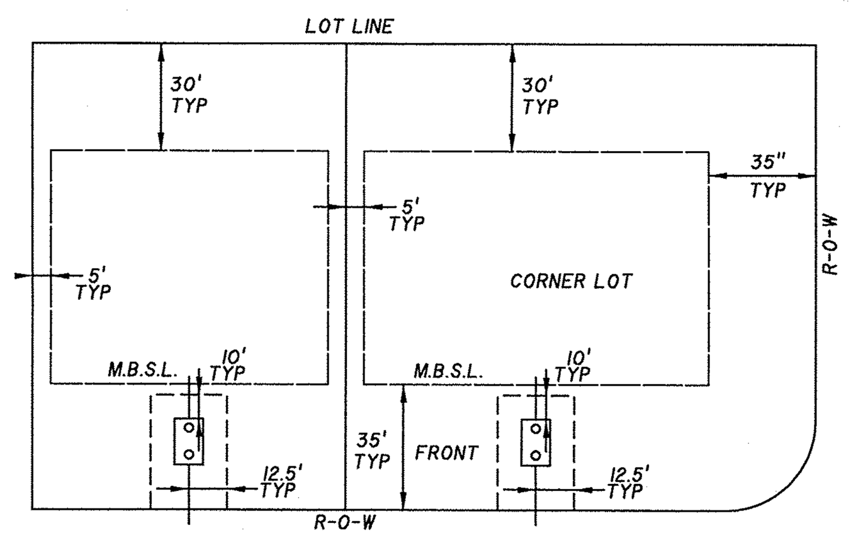

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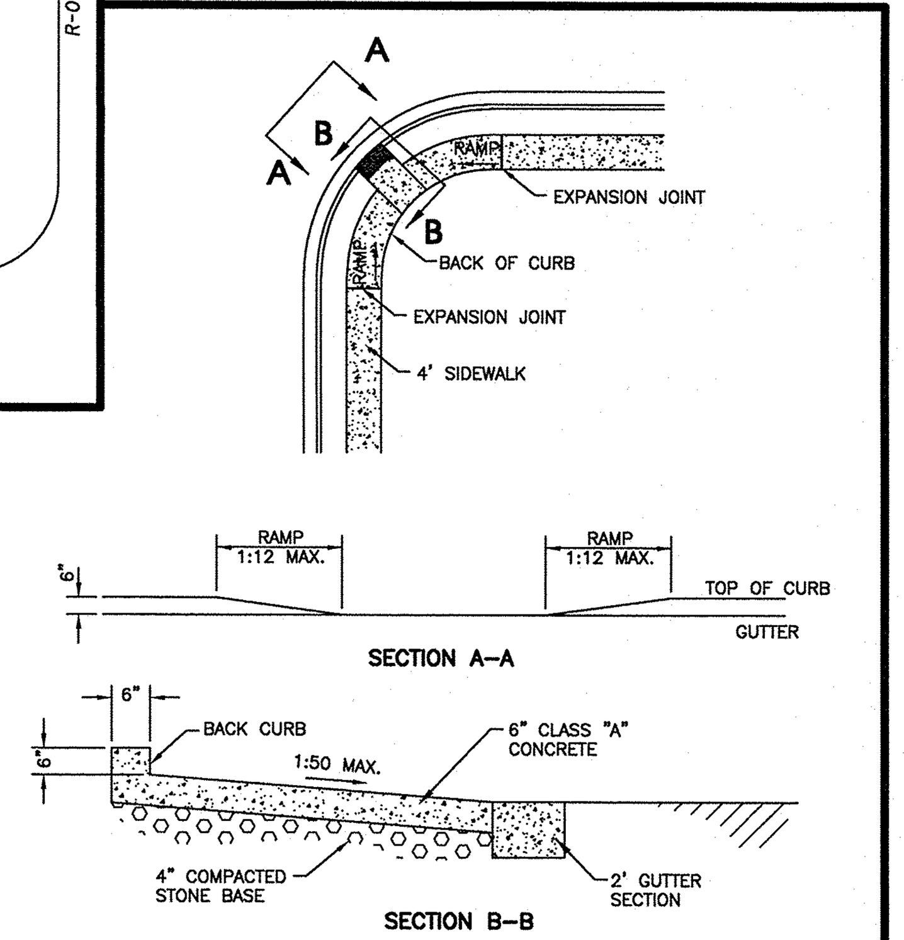

HANDICAP RAMP
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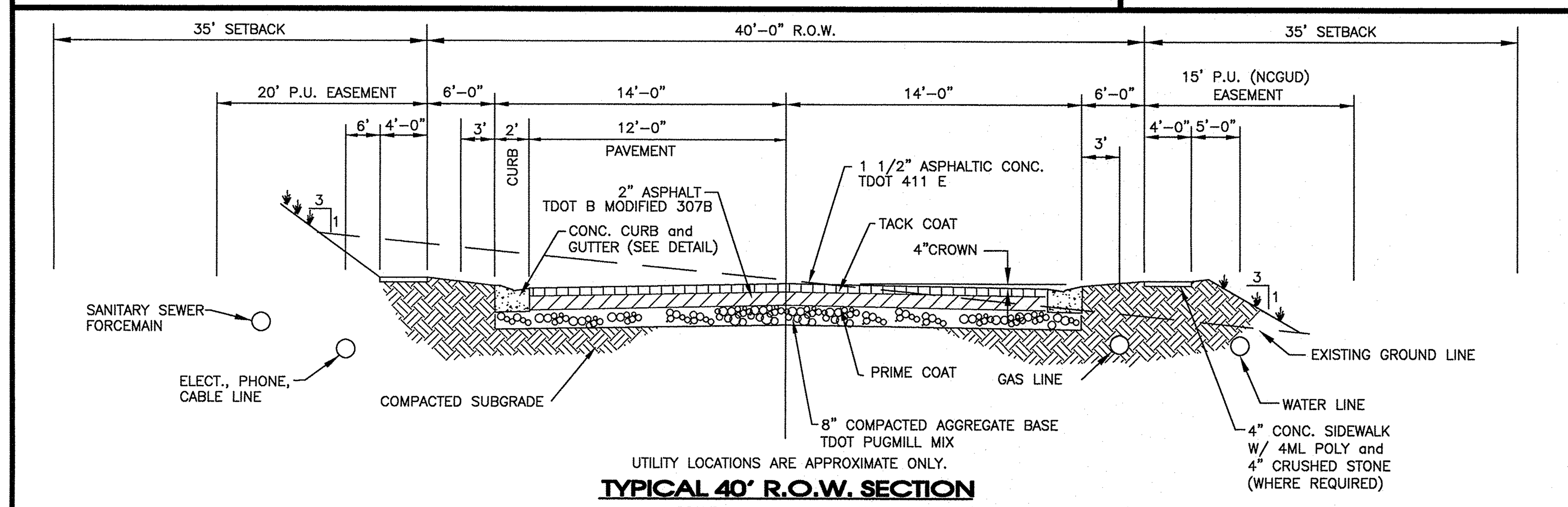

TYPICAL 40' R.O.W. SECTION
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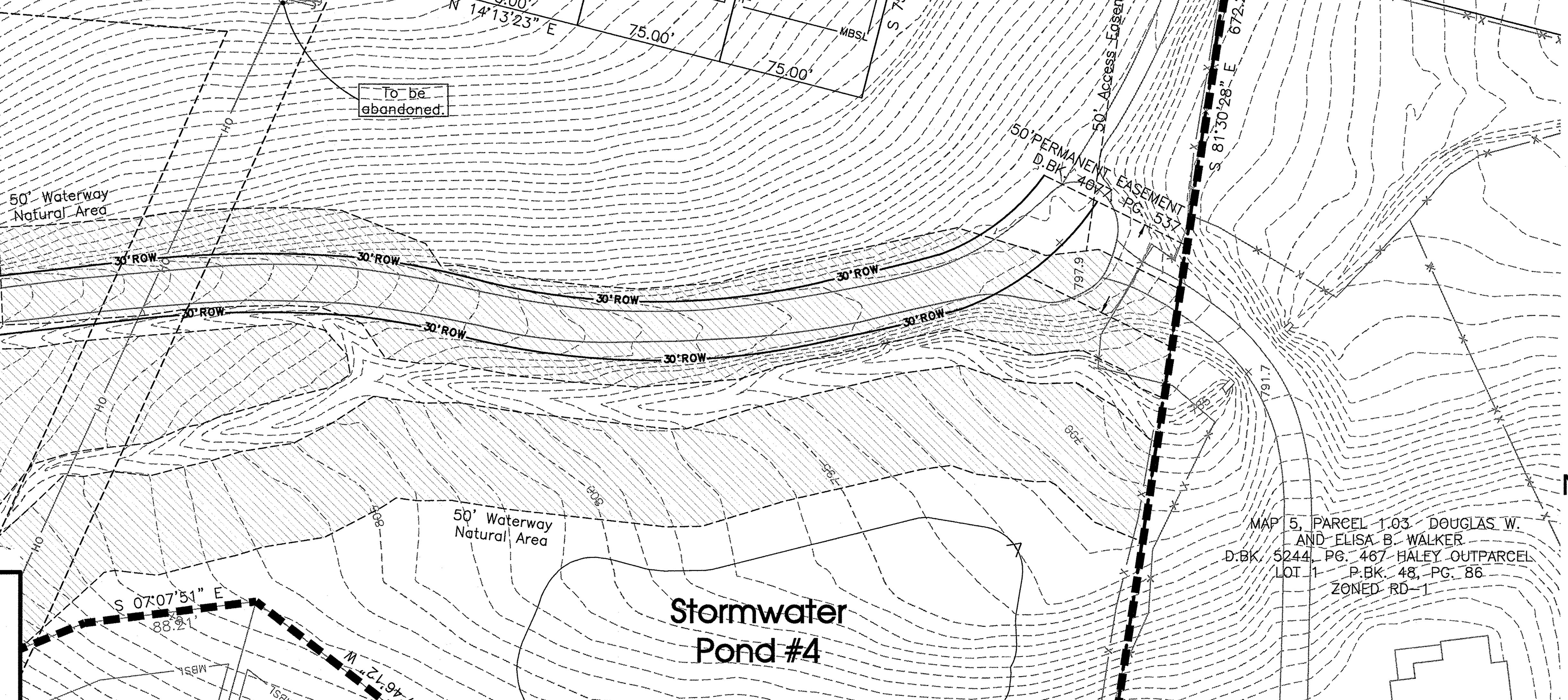

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The site as shown on these construction drawings is intended to achieve specific engineering design criteria and objectives. It is the sole responsibility of the owner/developer to ensure that the construction of the site shown on these construction drawings is in total accordance with the design as noted, described, and illustrated. The engineer assumes no administrative liability or responsibility in the assurance that the site is constructed in accordance with the construction plans.

RICHARD HOUZE · REGISTERED ENGINEER · STATE OF TENNESSEE

The Enclave @ Dove Lake
Phase 1
Williamson County, Tennessee

Revised: 7-28-16 Comments
4-27-17 Profiles

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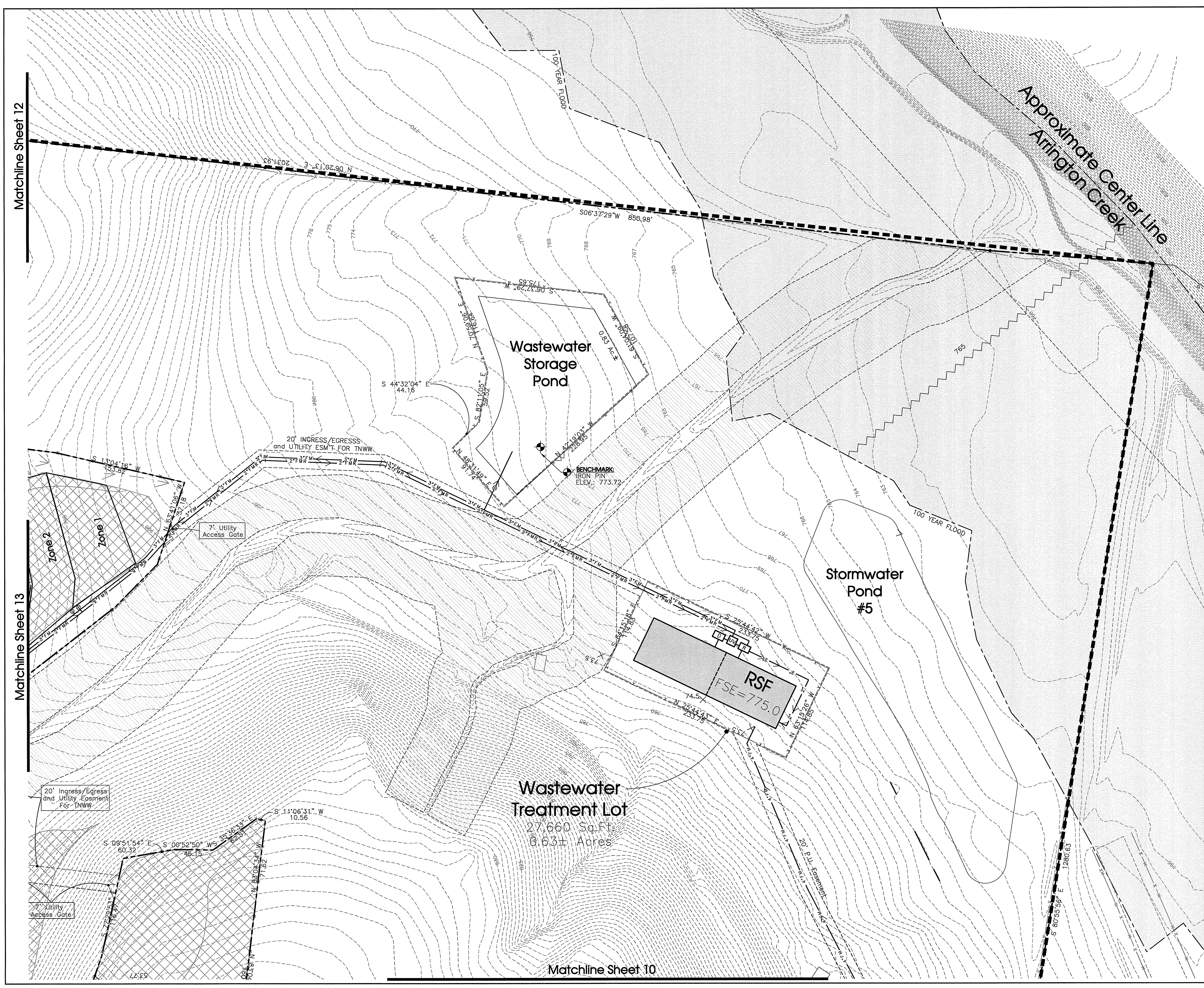

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	DOUBLE DETECTOR CHECK VALVE	(63.25) ×	EXIST. SPOT ELEVATION
	FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION
	FIRE HYDRANT		CATCH BASIN
	GATE VALVE and BOX		CURB INLET
W	WATER METER		AREA DRAIN
G	GAS METER		HEADWALL
	GREASE TRAP		WINGED HEADWALL
	EXTERIOR CLEANOUT ECO		CONCRETE SWALE
	MANHOLE		TYPE- X- HEADWALL

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	
EROSION EEL	
EXISTING TREELINE	
EXISTING FENCELINE	X X
MINIMUM BUILDING SETBACK LINE	MBSL
PHASE BOUNDARY	
EXISTING GAS LINE	GAS GAS
PROPOSED GAS LINE	GAS GAS
EXISTING STORM	STM STM
PROPOSED STORM	
EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	
EXISTING SANITARY SEWER	SS SS
PROPOSED SANITARY SEWER	SS SS
EXISTING WATER	W W
PROPOSED WATER	W W

811
Know what's below. Call before you dig.

N

-50' 0 50' 100'
SCALE: 1"= 50'

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SEC, Inc.
850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: RHOUZE@SEC-CIVIL.COM FAX: (615) 895-2567

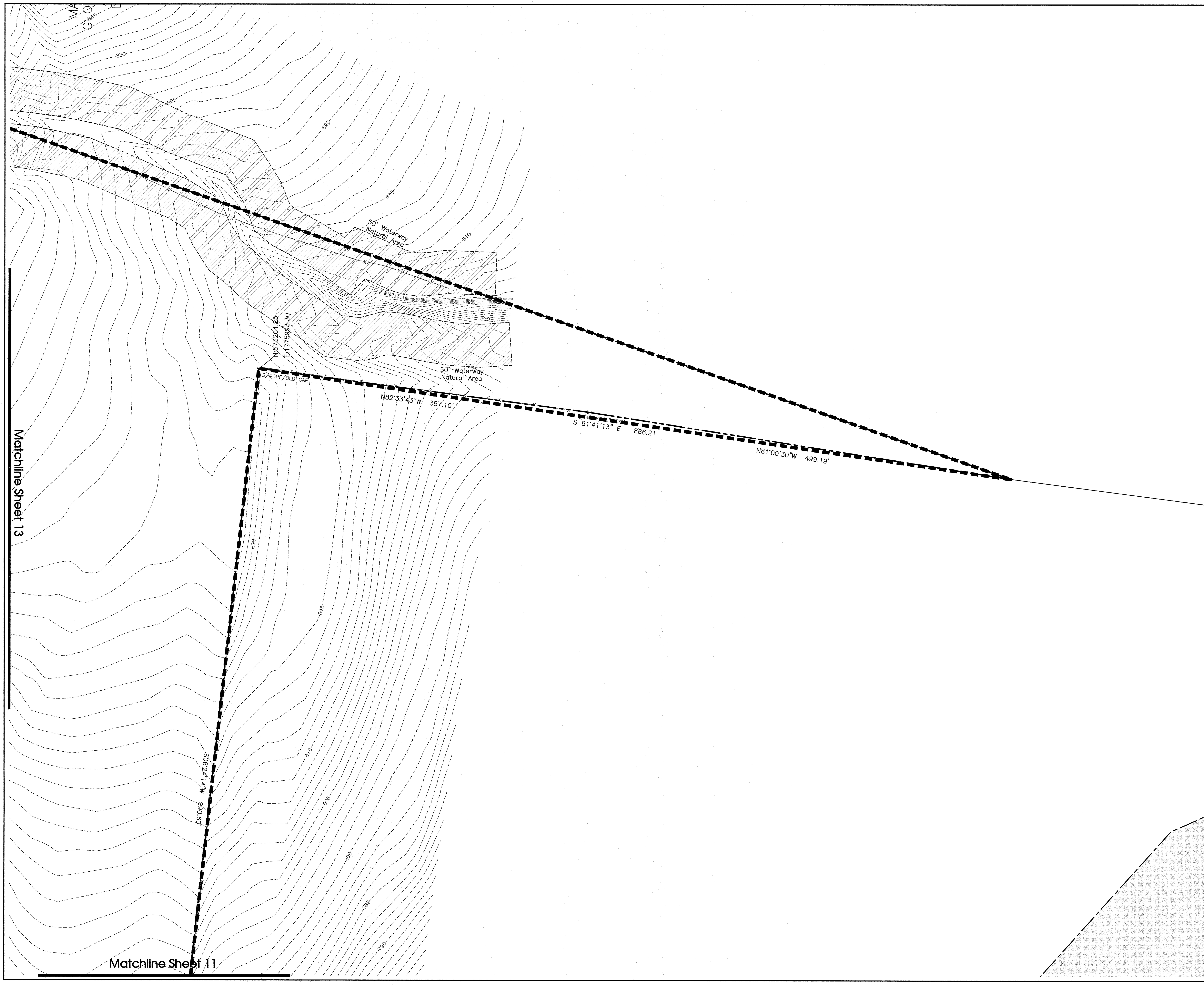
RICHARD HOUZE — STATE OF TENNESSEE

The Enclave @ Dove Lake
Phase 1
Williamson County, Tennessee

Revised: 7-28-16 Comments

Preliminary Plat

DRAWN:	MLG
DATE:	6-14-16
CHECKED:	RH
FILE NAME:	14204ProjectP1
SCALE:	1"=50'
JOB NO.	14204
SHEET:	11 of 29



Legend:

▫	EXIST. CONCRETE MONUMENT		BENCHMARK
●	IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL
○	IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION
	EXIST. SIGN POST		HC SIGN
	EXIST. SEWER CLEANOUT		PROPOSED SIGN POST
	EXIST. MANHOLE (SEWER and PHONE)		CONCRETE BOLLARD
	EXIST. CATCH BASIN (STORM SEWER)		WHEEL STOP
	EXIST. WATER/GAS VALVE		CONCRETE SIDEWALK
	EXIST. TELEPHONE RISER		EXTRUDED CURB
	EXIST. GAS RISER		CURB and GUTTER
	ELECTRICAL ENCLOSURE		TRAFFIC ARROW
	EXIST. WATER METER		TURN LANE ARROWS
	EXIST. UTILITY POLE	1	REVISION NUMBER
	EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION
	POST INDICATOR VALVE	A	DRAINAGE PIPE DESIGNATION
	BLOW OFF VALVE		RIP RAP
	REDUCER		RUNOFF FLOW ARROW
	REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION
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○	EXTERIOR CLEANOUT ECO		CONCRETE SWALE
○	MANHOLE		TYPE- X- HEADWALL

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF
EROSION EEL	E E E E
EXISTING TREELINE	
EXISTING FENCELINE	X X
MINIMUM BUILDING SETBACK LINE	MBSL
PHASE BOUNDARY	
EXISTING GAS LINE	GAS GAS
PROPOSED GAS LINE	GAS GAS
EXISTING STORM	STM STM
PROPOSED STORM	STM STM
EXISTING CONTOUR LINES	601
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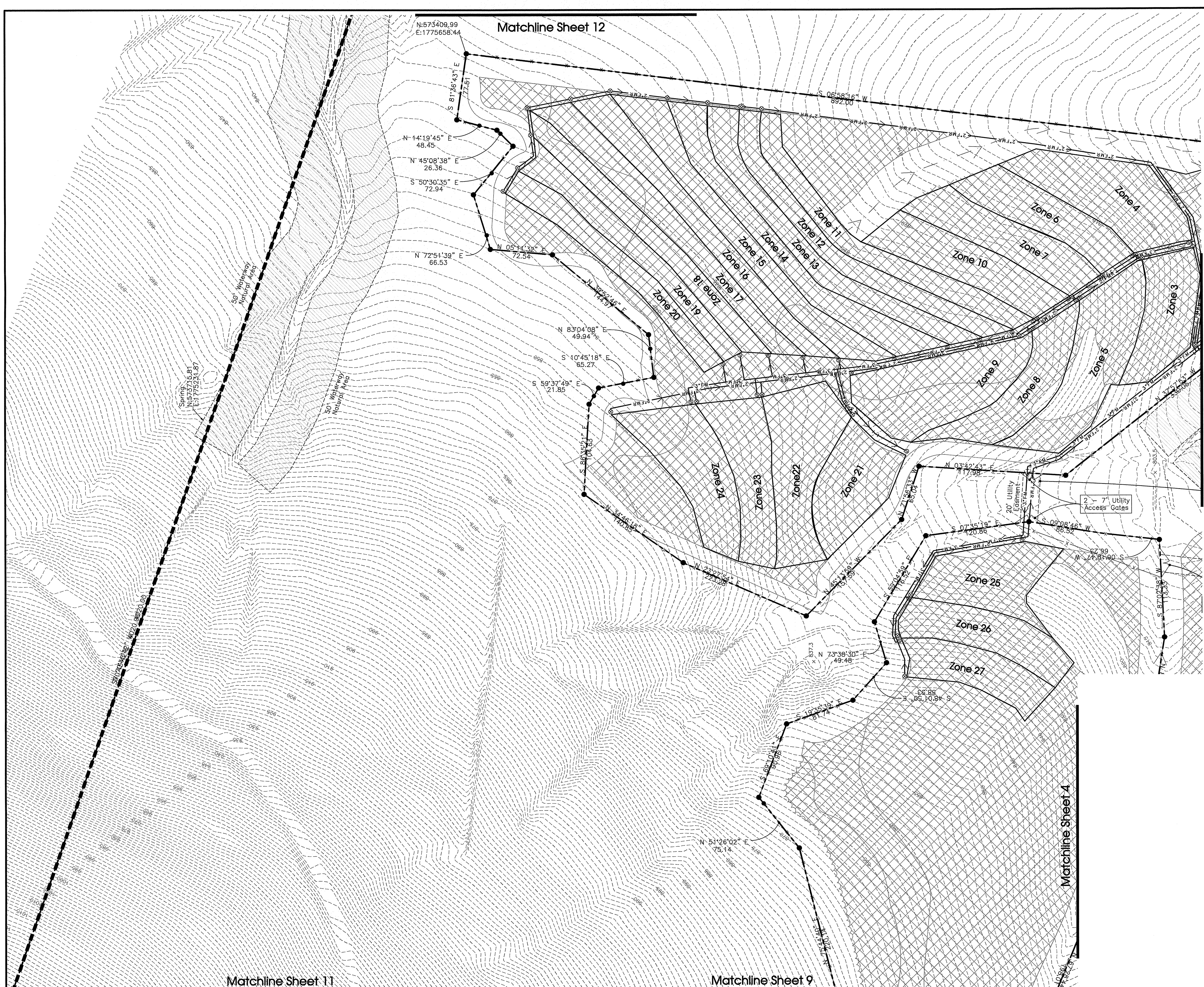

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	EXIST. UTILITY POLE	1	REVISION NUMBER
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EXISTING PHONE	PH
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EROSION CONTROL SILT FENCE	SF SF
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EXISTING TREELINE	
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MINIMUM BUILDING SETBACK LINE	MBSL
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PROPOSED GAS LINE	GAS GAS
EXISTING STORM	STM STM
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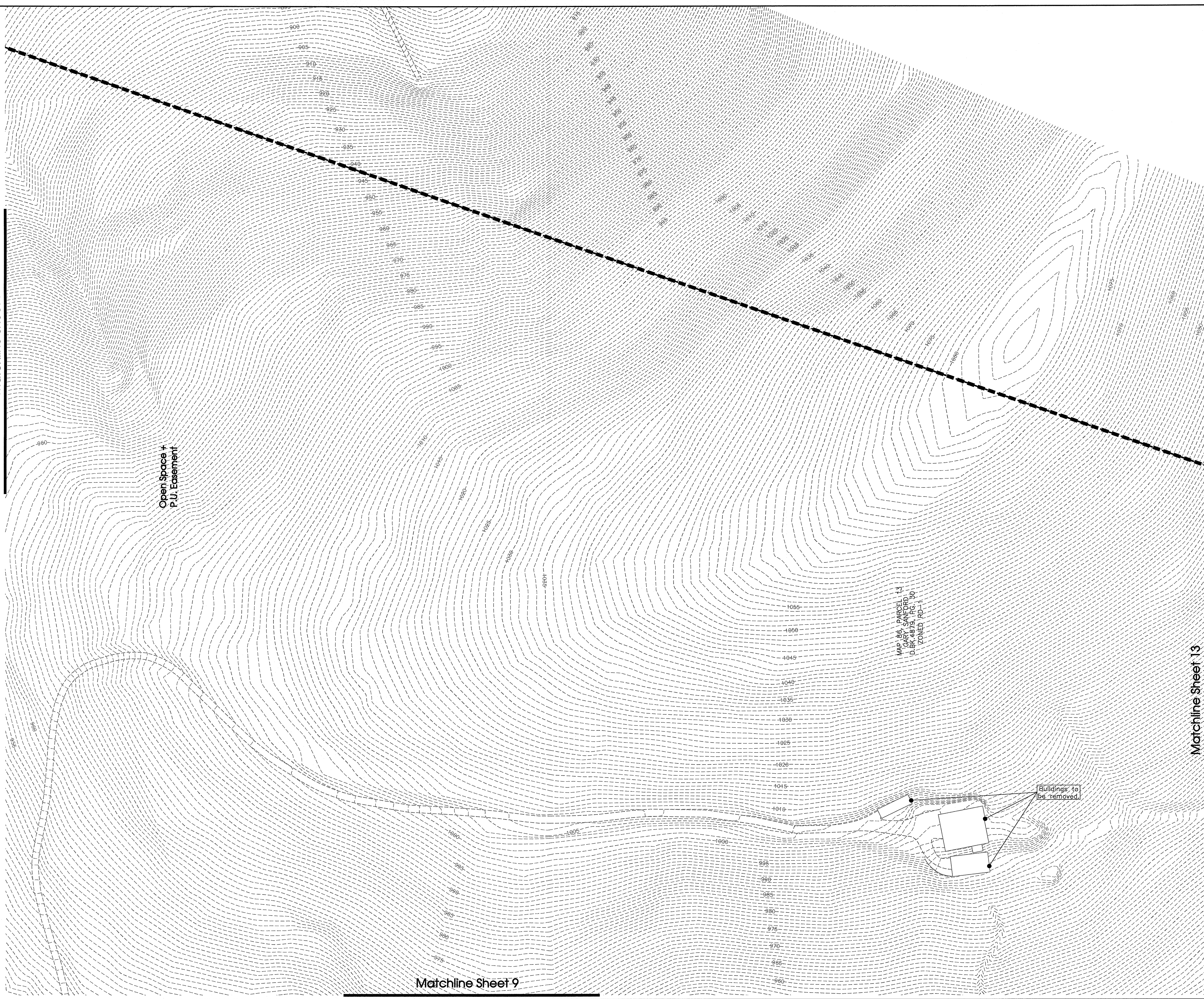

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	EXIST. UTILITY POLE		REVISION NUMBER
	EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION
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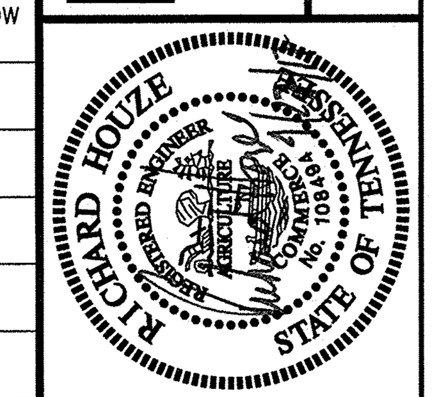

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