



DEVELOPMENT PERMIT APPLICATION

NOTE: Development Permit Application forms must accompany all other Community Development Department land use applications. This form and all documents associated with it are public record once submitted.

To be completed by Applicant	PROPERTY LOCATION												
	Physical Address: 4670 Glacier Highway												
	Legal Description(s) (Subdivision, Survey, Block, Tract, Lot): Lot 1 Ravenwood plat No. 2019-3												
	Parcel Number(s): 7B100115063												
	<input type="checkbox"/> This property is located in the downtown historic district												
	<input type="checkbox"/> This property is located in a mapped hazard area, if so, which _____												
	LANDOWNER/ LESSEE												
	Property Owner: R&S Construction/Misty Sea Charters	Contact Person: Rob Worden											
	Mailing Address: PO Box 210194 Auke Bay 99821	Phone Number(s): 907-321-5015											
	E-mail Address: roblisa@ak.net												
LANDOWNER/ LESSEE CONSENT													
Required for Planning Permits, not needed on Building/ Engineering Permits.													
Consent is required of all landowners/ lessees. If submitted with the application, alternative written approval may be sufficient. Written approval must include the property location, landowner/ lessee's printed name, signature, and the applicant's name.													
I am (we are) the owner(s) (or lessee(s)) of the property subject to this application and I (we) consent as follows:													
A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission.													
B. I (we) grant permission for the City and Borough of Juneau officials/employees to inspect my property as needed for purposes of this application.													
<table border="0"> <tr> <td>R&S Construction</td> <td>owner</td> </tr> <tr> <td>Landowner/Lessee (Printed Name)</td> <td>Title (e.g.: Landowner, Lessee)</td> </tr> <tr> <td></td> <td>December 6 2024</td> </tr> <tr> <td>Landowner/Lessee (Signature)</td> <td>Date</td> </tr> <tr> <td>Landowner/Lessee (Printed Name)</td> <td>Title (e.g.: Landowner, Lessee)</td> </tr> <tr> <td>Landowner/Lessee (Signature)</td> <td>Date</td> </tr> </table>		R&S Construction	owner	Landowner/Lessee (Printed Name)	Title (e.g.: Landowner, Lessee)		December 6 2024	Landowner/Lessee (Signature)	Date	Landowner/Lessee (Printed Name)	Title (e.g.: Landowner, Lessee)	Landowner/Lessee (Signature)	Date
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<p>NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours. We will make every effort to contact you in advance, but may need to access the property in your absence and in accordance with the consent above. Also, members of the Planning Commission may visit the property before a scheduled public hearing date.</p>													
APPLICANT													
If Same as LANDOWNER, write "SAME"													
Applicant (Printed Name): R&S Construction LLC	Contact Person: Rob Worden												
Mailing Address: Po Box 210194 Auke Bay , 99821	Phone Number(s): 907-321-5015												
E-mail Address: roblisa@ak.net													
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DEPARTMENT USE ONLY (FOLLOW THIS USE)

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

(C:\WORK\PLANFORMS\CM, Eval\duft.docx)

Intake Initials 	Case Number AR24-01	Date Received 12/10/24
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Updated 11/2022 Page 1 of 1



ALTERNATIVE RESIDENTIAL SUBDIVISION APPLICATION

See reverse side for more information regarding the permitting process and the materials required for a complete application.

NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

PROJECT SUMMARY

We are proposing a 42 residential home subdivision on the existing 5 plus acre parcel

TYPE OF ALTERNATIVE RESIDENTIAL SUBDIVISION APPROVAL REQUESTED (please see submittal requirements on reverse)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Alternative Residential Subdivision (ARP)
Preliminary Plan Approval | <input type="checkbox"/> Alternative Residential Subdivision (ARF)
Final Plan Approval (or Extension) |
| <input type="checkbox"/> Amendment to Approved (ARP)
Preliminary Plan* | <input type="checkbox"/> Amendment to Approved (ARF)
Final Plan* |

* Minor amendments will be reviewed by the Director; Major amendments will be reviewed by the Planning Commission.

LEGAL DESCRIPTION(S) OF PROPERTY INVOLVED

lot 1 Ravenwood plat no. 2019-3

Number of Existing Parcels 1 Total Land Area 221,678 sq ft Number of Resulting Parcels _____

PROPOSED USE OF LAND AND BUILDING(S)

Zoning District(s) D15 Percent Open Space _____
 Right-of-Way Frontage Proposed _____ Percent Buffer _____
 Number of Dwelling Units Proposed 42 Density Proposed _____
 Parking Proposed _____ Density Bonus YES NO

ALL REQUIRED MATERIALS ATTACHED

- Complete application per CBJ 49.15.940 (preliminary) or CBJ 49.15.950 (final)
- Pre-Application Conference notes
- Narrative including:
 - Current use of land or building(s)
 - Unique characteristics of land or building(s)
 - How the proposed project conforms to the Comprehensive Plan and CBJ Title 49
 - How the proposed project effects public health, safety, and welfare
 - How the proposed project is in harmony with the surrounding neighborhood
- Preliminary development plan (detailed on page 2)
- Density Bonus
 - Open Space
 - Stream Setback
 - Lower Income Households / Workforce Households
 - Unusual Enhancements
 - Public Right-of-Way Access
 - Shared Use Pathways
 - 5-Star Plus Energy Efficiency
 - 6-Star Energy Efficiency
 - High-efficiency Primary Heating Methods

To be completed by Applicant

-----DEPARTMENT USE ONLY BELOW THIS LINE-----

This form and all documents associated with it are public record once submitted.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

Case Number	Date Received

Alternative Residential Subdivision Application Instructions

Alternative Residential Subdivision outlined in CBJ 49.15.900

Each application for an Alternative Residential Subdivision is reviewed by the Planning Commission at a public hearing. The permit procedure is intended to provide the Commission the flexibility necessary to make decisions tailored to individual applications. The Commission may stipulate conditions to mitigate external adverse impacts from the proposed use. If it is determined that these impacts cannot be satisfactorily overcome, the permit shall be denied.

Pre-Application Conference: A pre-application conference is required prior to submitting an application. The applicant will meet with City & Borough of Juneau and Agency staff to discuss the proposed development, the permit procedure, and to determine the application fees. To schedule a pre-application conference, please contact the Permit Center at 586-0770 or via email at Permits@juneau.org.

Application: An application for an Alternative Residential Subdivision will not be accepted by the Community Development Department until it is determined to be complete. The items needed for a complete application are:

1. **Forms:** Completed Alternative Residential Subdivision Application and a Development Permit Application forms.
2. **Fees:** The fee is dependent upon the number of residential structures involved. Any development, work or use done without a permit issued will be subject to double fees. All fees are subject to change.
3. **Project Narrative:** A detailed narrative describing the project.
4. **Plans:** outlined in CBJ 49.15.940(b)(2). (Surveyed Plans Required)
 - a. The amount of land for housing, open space, buffer, access, parking, and pedestrian circulation
 - b. The number and types of housing units and proposed density
 - c. The natural features to be protected and hazards to be avoided
 - d. The public, if any, and private services to be provided

Document Format: All materials submitted as part of an application shall be submitted in either of the following formats:

1. Electronic copies;
2. Paper copies 11" X 17" or smaller (larger paper size may be preapproved by the Community Development Department).

Preliminary Plan Approval

Application Review & Hearing Procedure:

Review: The Community Development Department shall determine when the Alternative Residential Subdivision Application is complete and advise the developer. Within 60 days of determining that an application is complete, the Director shall schedule the preliminary plan for a public hearing.

Hearing: All Alternative Residential Subdivision applications must be reviewed by the Planning Commission. The Commission shall review the preliminary plan and approve, approve with conditions, or deny pursuant to 49.15.940.

Public Notice Responsibilities: As part of the Preliminary Plan Approval, proper public notice must be given as outlined in CBJ 49.15.230 which consists of the following:

The Community Development Department will give notice of the pending Planning Commission meeting and its agenda in the local newspaper a minimum of 10-days prior to the meeting. Furthermore, the department will mail abutters notices to all property owners within 500-feet of the project site.

The Applicant will post a sign on the site at least 14 days prior to the meeting. The sign shall be visible from a public right-of-way or where determined appropriate by CDD. Signs may be produced by the Community Development Department for a preparation fee of \$50, and a \$100 deposit that will be refunded in full if the sign is returned within seven days of the scheduled hearing date. If the sign is returned between eight and 14 days of the scheduled hearing \$50 may be refunded. The Applicant may make and erect their own sign. Please speak with the Community Development Department for more information.

Final Plan Approval

After completion of all conditions and Commission approval of the preliminary plan in accordance with the Conditional Use permit procedures, the final plan shall be submitted for review and approval according to the following:

1. An application, fee, and a final plan must be submitted for Commission review.
2. Formation of a homeowners' association, or similar entity, is required, outlined in CBJ 49.15.950(b)(1)-(4).
3. The Commission may approve the final plan if it substantially conforms to the approved preliminary plan and all requirements of this article.

R&S CONSTRUCTION LLC
PO BOX 210194
AUKE BAY, AK 99821

RAVENWOOD SUBDIVISION NARRATIVE

December 7, 2024,

TO: Community Development

R&S Construction LLC and Misty Sea Charters & Lodging LLC are proposing to build a 42 residential subdivision using the Alternative Residential Subdivision "ARS" code. This property is currently vacant and has been cleared with approved drainage and inspected settling ponds and construction roads to do the brushing. We have purchased the property to continue with the ongoing project and have provided a set of engineering plans to show proposed building lots and streets with utilities. This project was initially designed as a 42 zero lot residential subdivision, but under our pre planning meeting , it was recommended that we change to the Alternate Residential Subdivision design. We feel that this use complies with the Comprehensive Plan but will have to make some small modifications to the design, which in the end, the outcome of 42 residential homes will remain on the same proposed lots. We have provided a topography on the lot with designed city streets that meet cbj code with all utilities. This project will have the required vegetative cover required by the City and Borough of Juneau prior to completion of a final plat. There are current approved projects near this property doing the same type of subdivision as well as construction on adjoining property doing apartment buildings making this project seeming very desirable for the Juneau location. These will be smaller residential homes which are going to be more affordable which seems to be a needed feature of this community. We will also need to put a Homeowners Association together for this property once we have an approval from the Planning Commission.

Sincerely,

R&S Construction LLC,



(907) 586-0715
 CDD_Admin@juneau.gov
 www.juneau.org/community-development
 155 Heritage Way • Juneau, AK 99801

Ravenswood Subdivision

Case Number: PAC2024 0057
 Applicant: Rob and Lisa Worden
 Property Owner: R&S Construction LLC; Misty Sea Charters & Lodging
 Property Address: 4670 Glacier Highway
 Parcel Code Number: 7B100115063

Site Size: 221,678 square feet/5.01 acres
 Zoning: D15 Multifamily
 Existing Land Use: Residence

Conference Date: November 20, 2024
 Report Issued: December 4, 2024

DISCLAIMER: Pre-application conferences are conducted for the purpose of providing applicants with a preliminary review of a project and timeline. Pre-application conferences are not based on a complete application and are not a guarantee of final project approval.

List of Attendees

Note: Copies of the Pre-Application Conference Report will be emailed, instead of mailed, to participants who have provided their email address below.

Name	Title	Email address
Rob Worden	Applicant	RobLisa@AK.net
David Peterson	Planning	David.Peterson@juneau.gov
Jeff Hedges	Building	Jeffrey.Hedges@juneau.gov
Bridget LaPenter	General Engineering	Bridget.LaPenter@juneau.gov
Sydney Hawkins	Permitting	Sydney.Hawkins@juneau.gov

Conference Summary

Questions/issues/agreements identified at the conference that weren't identified in the attached reports.

The following is a list of issues, comments and proposed actions, and requested technical submittal items that were discussed at the pre-application conference.

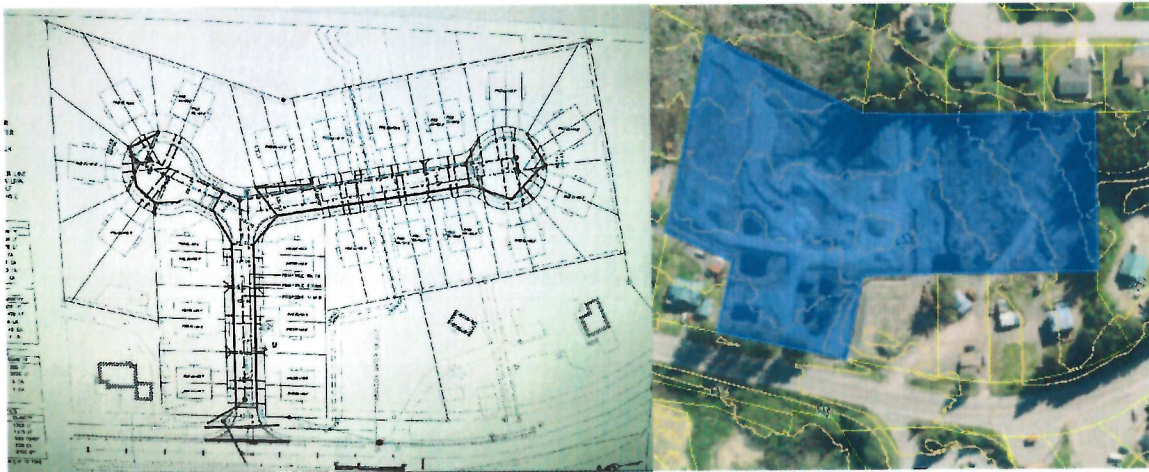
Project Overview

The applicant is proposing a common wall subdivision with 42 dwelling units. Any subdivision involving more than 13 lots is classified as a Major Subdivision and requires approval from the Planning Commission.

A common wall subdivision follows a two-part process. Per 49.65.710, a conditional use permit will be required to approve the development, while a major subdivision preliminary plat will also be required for the subdivision portion.

Staff recommends considering alternative housing products such as condominiums, single-family detached homes, or townhomes, which may be more economically feasible.

Per the table found in T49 49.35.240, a development of 22–52 dwellings, ROW improvements will be required, including a sidewalk on at least one side of the street. For developments of 53–75 dwellings, sidewalks will be required on both sides. Additional infrastructure requirements include a Traffic Impact Analysis, a 24-foot travel way width, streetlights at all intersections, a 60-foot platted ROW width, and paved roads that will be publicly maintained.



Planning Division

1. **Zoning** – Lot is zoned (D15) Multi Family.
 - a. Minimum lot size is 5,000 square feet for standard lots and 3,000 square feet for Bungalow lots.
 - b. Minimum lot width for standard lots is 50 feet. Minimum lot width for Common Wall dwellings is 30 feet. Minimum lot width for bungalow lots is 25 feet.
2. **Table of Permissible Uses** – D15 zoned lots are intended to accommodate densities of 15 dwelling units per acre.

3. Subdivision – 49.15.402 Major subdivisions.

A conditional use permit will be required for the Alternative Residential Subdivision with a major subdivision permit is required for platting the subdivision creating.

Pre-application conference and sketch plat. A pre-application conference and sketch plat (CBJ 49.15.410) is required prior to submitting an application for a major subdivision.

Application for a preliminary plat and conditional use permit shall be on a form provided by the department, accompanied by a draft preliminary plat and the appropriate fee. The draft plat shall meet the standards set forth in CBJ 49.15.411.

Alternative Residential Subdivision

The proposed ARS shall be reviewed according to the requirements of a conditional use permit as an ARP/ARF case type. (See Article IX attachment)

Planning Commission:

Public notice of the application will be sent to neighbors within 500 feet of the property.

The planning commission will confirm the development coincides with the Comprehensive Area Plan and will determine if any of the following will also be required:

1. A Development Schedule.
2. Verify the use coincides with the comprehensive plan.
3. Whether an Owners Association would be required.
4. Any dedications are required.
5. Any bonds for improvements in addition to boning for utilities or improvements.
6. The PC may require a letter from the public utility or public agency legally committing to serve the development.
7. Screening requirements.
8. Lighting requirements.

In issuing its notice of decision on a preliminary plat, the commission may accept, amend, or reject the director's proposed recommendations. The decision of the commission approving or denying a preliminary plat application will be set forth in a notice of decision and will specify any conditions or plat notes required for final plat approval. If the preliminary plat is denied, the applicant may submit a revised plat application, without paying additional application fees, within 180 days from the date of the notice of decision.

Construction plans will be required upon approval of the preliminary plat. Construction plans for all required improvements will be submitted to the department for review by the director of engineering and public works for compliance with CBJ 49.35.140.

An application for a final plat shall be on a form provided by the department, accompanied by a final plat and the appropriate fee. The final plat shall meet the conditions of the preliminary plat and standards set forth in CBJ 49.15.412.

Once the application is deemed complete, the director shall schedule the final plat for commission action. If commission action on the final plat will occur more than 12 months after approval of the preliminary plat, public notice of impending commission action on the final plat may be required.

The director shall prepare and submit a report to the commission that addresses compliance of the final plat with this title and the criteria for final plat approval, and that specifies any conditions of approval or plat notes recommended by the director.

Once it has been confirmed that the applicant has complied with any conditions, plat notes, and standards set forth in CBJ 49.15.412, a Notice of Decision will be sent to the Applicant. The applicant has constructed all required improvements or provided a financial guarantee.

The chair of the commission shall sign the plat upon a determination that the final plat meets all of the requirements of this title, that all plat certificates have been signed and notarized, and that all required documents have been submitted for recording with the final plat in accordance with CBJ 49.15.412. Once property taxes have been paid in full for the current year, the department shall ship the original plat, at the applicant's expense, to be recorded with the State Recorder's Office in Anchorage.

4. **Setbacks** – Minimum setback requirement from property lines are:
 - i. Front: 20 feet
 - ii. Rear: 15 feet
 - iii. Side yard: 5 feet
 - iv. Street Side: 13 feet
 - v. Note: Zero-foot setback for the portion of the dwelling with a common wall, five-foot setback or five-foot wide easement for the portion of the dwelling at the common lot line without a common wall, and five-foot setback for the remaining side yards of the lot.
5. **Height** – Maximum permitted height for primary structures is 35 feet, and 25 feet for accessory and bungalow structures.
6. **Access** – Lots shall have direct and practical access to a publicly maintained right-of-way through their frontage. If not already accepted for public maintenance, shall be improved to the applicable standards for public acceptance and maintenance. It shall be the responsibility of the subdivider to pay the cost of the right-of-way improvements. (49.35.250)
7. **Parking & Circulation** –
 - a. Single-family and duplex: 2 spaces per each dwelling unit.
 - b. Multi family units:
 - i. 1 per one-bedroom unit
 - ii. 1.5 per two-bedroom unit
 - iii. 2 per three-bedroom unit
8. **Lot Coverage** – Maximum lot coverage for permissible and conditional uses is 50%.
9. **Vegetative Coverage** – Minimum vegetative coverage in D15 zones is 30%.
10. **Lighting** – Exterior lighting may not shed light or glare above the roofline of the building or beyond the property line of the site. Industrial and exterior lighting shall not be used in a manner that produces glare on public highways or neighboring property.

Prior to issuance of a building permit, the applicant shall submit a lighting plan illustrating the location and type of exterior lighting proposed for the development. Exterior lighting shall be designed and located to minimize offsite glare. Approval of the plan shall at the discretion of the Community Development Department, according to the requirements at §49.40.230(d) [and Historic District Design Guidelines, if applicable].

All exterior lighting fixtures shall be of a "full cutoff" design.

11. **Noise – Construction of buildings and projects.** It is unlawful to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or similar heavy construction equipment, before 7:00 a.m. or after 10:00 p.m., Monday through Friday, or before 9:00 a.m. or after 10:00 p.m., Saturday and Sunday, unless a permit shall first be obtained from the City and Borough building official.
 12. **Flood** – Per panel 02110C1551E eff. 9/18/2020, N/A.
 13. **Hazard/Mass Wasting/Avalanche/Hillside Endorsement** – A Hillside Endorsement is required if/when excavation of any slope in excess of 18%, or creation of a new slope in excess of 18%.
 14. **Wetlands** – N/A
-

15. **Habitat** – Check with the U.S. Fish and Wildlife on the presence of eagle nests in the area. The presence of eagle nests may impact construction scheduling. No anadromous waterbodies are on the subject parcel, or within 50 feet.
16. **Plat or Covenant Restrictions** – N/A
17. **Traffic** – Per 49.40.300(a)(3) - A development projected to generate more than 250 Average Daily Trips (ADT) but fewer than 500 ADT shall be required to have a *traffic* impact analysis if the Community Development Department Director determines that an analysis is necessary based on the type of development, its location, the likelihood of future expansion, and other factors found relevant by the director.

Per the Trip Generation Manual, 9th Edition, Volume 2, pg.296, the ADT anticipated to be generated by single family housing is expected to be 9.52 ADT/dwelling.

42 dwelling units X 9.52 ADT = 399.84 total ADT generated by this subdivision.

CBJ classifies Glacier Highway as a Collector.

Per 49.35.210(c) (1) *Major collectors*. If a new subdivision involves frontage along a major *collector* street:

- (A) The plat shall note that no lots shall access directly onto the major *collector*.
- (B) Access shall be provided onto an interior access street or a separate frontage road.
- (C) Exception a parcel of land with less than 500 feet of frontage or less than 350 feet of depth may be subdivided so as to allow access directly onto a major *collector* street.

18. **Nonconforming situations** – N/A

Building Division

19. **Building** – No issues with this subdivision.
-

20. **Outstanding Permits** – BLD20170425 – "Grading, pioneer road, and other work to prepare for development."

General Engineering/Public Works

21. Engineering –

- a. To adhere to 49.15.402 (C) (4) (E) we are requesting a submittal of a preliminary construction plan with typical section of the streets, pedestrian ways, and storm water management proposed. At the preliminary phase, these items do not need to be designed by an engineer.
 - b. At the time of preliminary plat submittal, submit an erosion control report explaining the method by which the applicant proposes to control erosion and manage runoff, and potential impacts to adjacent properties or water bodies. The report shall include a plan for preservation of ground cover in areas where runoff and resulting erosion need to be minimized.
 - c. *Construction plans to be submitted after the approval of the preliminary plat and before final plat submission. Construction plans must adhere to [49.35.140](#) and must be signed and stamped by Alaska-licensed engineers for each discipline. Construction plans for this layout of development does not need to include all phases of full buildout of development. For specific requirements, please refer to CBJ code by visiting: <http://www.juneau.org/cddftp/ordinances.php> and referencing chapter 49.35 – Public and Private Improvements.*
 - d. *Prior to final plat, an Engineer's estimate for the installation of public improvements must be submitted. Once this is received, a performance bond amount will be determined and must be paid/posted prior to recording of the final plat. Further discussion regarding the bond can take place once the project phasing is determined. For all options regarding the financial guarantee please refer to 49.55 – Financial Responsibility.*
 - e. *Dependent on the construction plan and schedule an inspection deposit will be required and a private inspector may be hired and managed by CBJ.*
 - f. *Street lighting is required and shall not exceed 250' between poles.*
22. **Drainage** – Drainage report with the submittal of the preliminary plat does not need to be engineered. At time of construction plan submittals, a drainage plan must be submitted and must be signed and stamped by an Alaska-licensed engineer.
23. **Utilities** – (water, power, sewer, etc.) At time of preliminary plat, a draft plan for the proposed water and sewer lines shall be submitted showing existing installed utilities including line sizing and connection points with elevations.

Fire Marshal

24. **Fire Items/Access** – Fire turn-around and fire hydrant locations.

Other Applicable Agency Review

25. Alaska Department of Transportation is requiring a Traffic Impact Analysis (TIA).

List of required applications

Based upon the information submitted for pre-application review, the following list of applications must be submitted in order for the project to receive a thorough and speedy review.

1. Development Permit Application (DPA)
2. Subdivision Application
3. Conditional Use Permit Application

Additional Submittal Requirements

Pre-Application Conference Final Report

Submittal of additional information, given the specifics of the development proposal and site, are listed below. These items will be required in order for the application to be determined Counter Complete.

1. A copy of this pre-application conference report.
2. Preliminary plat (include topography)
3. Hillside endorsement (tentative if slopes in excess of 18% are present).
4. Drainage report
5. Traffic Impact Analysis (TIA)
6. Construction Drawings (After preliminary NOD)

Exceptions to Submittal Requirements

Submittal requirements that staff has determined **not** to be applicable or **not** required, given the specifics of the development proposal, are listed below. These items will **not** be required in order for the application to be reviewed.

1. N/A

Fee Estimates

The preliminary plan review fees listed below can be found in the CBJ code section 49.85.

Based upon the project plan submitted for pre-application review, staff has attempted to provide an accurate estimate for the permits and permit fees which will be triggered by your proposal.

1. 49.85.100(3) and (4) –
 - a. Preliminary Plat is \$110 per lot.
 - b. Final Plat is \$70 per lot.
 - c. Conditional Uses, Class IV uses, \$1,000.

For informational handouts with submittal requirements for development applications, please visit our website at www.juneau.org/community-development.

Submit your Completed Application

You may submit your application(s) online via email to permits@juneau.gov
OR in person with payment made to:

City & Borough of Juneau, Permit Center
230 South Franklin Street
Fourth Floor Marine View Center
Juneau, AK 99801

Phone: (907) 586-0715
Web: www.juneau.org/community-development

Attachments:

Article IX. Alternative Residential Subdivisions 49.15.900
Development-Permit Application (DPA)
Subdivision-Application
Preliminary Plat Checklist

Conditional Use Application (USE)

PART II - CODE OF ORDINANCES
TITLE 49 - LAND USE
Chapter 49.15 - PERMITS
ARTICLE IX. ALTERNATIVE RESIDENTIAL SUBDIVISIONS

ARTICLE IX. ALTERNATIVE RESIDENTIAL SUBDIVISIONS

49.15.900 Purpose.

The general purpose of this article is to provide reasonable minimum standards and procedures for unit-lot residential communities in which all or some of the lots do not substantially conform to the minimum requirements for a traditional subdivided lot. This article provides a housing option to allow dwellings on unit-lots to be conveyed by long-term leases, less than fee-simple ownership, or fee-simple ownership, including condominium and other common-interest communities. The specific purpose of this article is to permit flexibility in the regulation and use of land in order to promote its most appropriate use for unit-lot residential communities; to encourage residential developments that are planned, designed and developed to function as integral units with common facilities; to encourage developments that provide different types of housing options; to encourage development of quality affordable housing; to facilitate the adequate and economical provisions of access and utilities; and to encourage developments that are in harmony with the surrounding area.

(Serial No. 2018-41(c), § 2, 12-17-2018, eff. 1-17-2019)

49.15.910 Application.

The provisions of this article apply when a parent lot is subdivided into developable unit-lots and where a portion of the parent lot remains.

(Serial No. 2018-41(c), § 2, 12-17-2018, eff. 1-17-2019)

49.15.920 General provisions.

- (a) *General.* The requirements of this title apply except as provided in this article.
- (b) *Zoning districts.* An alternative residential subdivision is only allowed in the following zoning districts: RR, D-1, D-3, D-5, D-10SF, D-10, D-15, D-18, and LC.
- (c) *Lot size.* The parent lot shall be at least 150 percent of the minimum lot size for the zoning district in which it is located. There is no minimum size for the unit-lots.
- (d) *Other dimensional standards.* The minimum lot dimensions, lot coverage, and vegetative coverage shall be applied to the parent lot and not the unit-lots.
- (e) *Density.*
 - (1) The number of dwelling units permitted in the development shall be calculated by multiplying the maximum number of dwelling units per gross acre permitted in the underlying zoning district by the number of acres in the alternative residential subdivision and rounding to the nearest whole number.
 - (2) Land and water bodies used in calculating the number of dwelling units permitted shall be delineated on the preliminary and final plans in a manner allowing confirmation of acreage and density computations.

-
- (3) The commission may award a density bonus as an incentive for enhancements to the development. The total bonus shall not exceed 50 percent in the RR, D1, D3, D5, D10 zoning districts, and 25 percent in the D-10SF, D15, D18 and LC zoning districts of the density provided in subsection (e)(1) of this section and rounded to the nearest whole number and shall be the sum of individual density bonuses as follows:
- (A) Five percent for each ten percent increment of open space in excess of that required in the zoning district to a maximum bonus of 15 percent for open space in excess of that required;
 - (B) Five percent for a continuous setback greater than 50 feet or ten percent for a continuous setback greater than 50 feet on both sides of a stream, if applicable, designated in the plan as undisturbed open space along important natural water bodies, including anadromous fish streams, lakes, and wetlands;
 - (C) Fifteen percent for a mixture of housing units restricted by a recorded document for a period of 30 years from the first sale:
 - (i) In which ten percent of the dwelling units are set aside for lower income households earning no more than 80 percent of the area median income; or
 - (ii) In which 20 percent of the dwelling units are set aside for workforce households earning no more than 120 percent of the area median income.
 - (D) Up to ten percent for provision of common facilities and additional amenities that provide an unusual enhancement to the general area, such as siting, landscaped buffers, or the creation or preservation of view corridors;
 - (E) Ten percent for dedication of a public right-of-way accessible to all unit-lots consistent with chapter 49.35;
 - (F) Five percent in the RR, D-1, D-3, D-5, and D-10SF zoning districts, and ten percent in the D-10, D-15, D-18 and LC zoning districts for providing shared use pathways to facilitate safe pedestrian and bicycle movement within the development and to ensure non-vehicular access to open space, common facilities and to public services;
 - (G) Five percent for designing all dwelling structures to a five-star plus energy efficiency rating; ten percent for designing all dwelling structures to a six-star energy efficiency rating; and
 - (H) Up to ten percent for using high-efficiency primary heating methods, such as heat pumps, in all dwelling structures.
- (4) A density bonus may be limited or denied if it will more probably than not:
- (A) Materially endanger public health or safety;
 - (B) Substantially be out of harmony with property in the neighboring area;
 - (C) Lack general conformity with the comprehensive plan or another adopted plan; or
 - (D) Create an excessive burden on roads, sewer, water, schools, or other existing or proposed public facilities.
- (f) *Frontage and access.* The parent lot shall front on and be accessed by a publically maintained right-of-way. Access within the development may be exempted from [chapter] 49.35 and be privately owned and maintained if it complies with the following requirements:
- (1) The access shall be located completely on the parent lot;
 - (2) The access does not endanger public safety or welfare and provides for safe pedestrian and vehicular traffic circulation;

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- (3) The access complies with the emergency service access requirements of CBJ [chapter] 19.10;
- (4) Access to and within the development is paved;
- (5) The developer submits adequate evidence that upon approval of the development, a homeowners' association will be formed, can obtain liability insurance, and is solely responsible for maintaining the private access—including winter maintenance; and
- (6) The alternative residential subdivision does not abut a developable parcel that lacks alternative and practical frontage on a publically maintained right-of-way.
- (g) *Utilities.* An alternative subdivision is required to connect each dwelling unit to public sewer and water. A master meter for water shall be installed by the developer.
- (h) *Parking.* Parking required for each dwelling unit may be located on either the parent lot or the unit-lot.
- (i) *Open space.* Open space is required as follows: 25 percent in the RR and D-1 zoning districts; 20 percent in the D-3, D-5 and D-10 zoning districts; 15 percent in the D-10SF district. Open space is not required in the D-15, D-18, or LC zoning districts.
- (j) *Buffer.* There are no setback requirements on the unit-lots. A perimeter buffer is required in lieu of the setback requirements of this title on the parent lot. The presumptive buffer width shall not be less than the setback set by the underlying zoning district to ensure neighborhood harmony and minimize off-site impacts. The commission may enlarge a buffer or a portion of a buffer up to 25 feet in total width, and the commission may reduce a buffer or a portion of a buffer by 75 percent of the setback for the underlying zoning district. The commission may only enlarge or reduce the buffer width upon considering, but not limited to: type of buffer, location of the subdivision structures and uses therein; the location and type of surrounding uses or development; topography; and the presence of existing visual and sound buffers. A buffer shall be vegetated unless the commission requires non-vegetated screening. A buffer may include fencing, natural berm, or other similar features. No parking areas, dwelling units, unit-lots, or permissible uses may be located within the perimeter buffer. Access to the development may cross a portion of the buffer.
- (k) *Parent lot.* Portions of the parent lot not subdivided into unit-lots shall be owned in common by a homeowners' association, or similar entity, comprised of the owners of the unit-lots located within the parent lot.
- (l) *Stormwater management.* Facilities for the control and disposal of stormwater must be adequate to serve the development and areas draining through the development. Management shall be in accordance with the Stormwater Best Management Practices manual. Where appropriate, natural drainage channels, swales, or other similar areas within the open space may be used for stormwater management at the development. The developer shall provide the CBJ Engineering and Public Works Department with an evaluation of offsite drainage outfalls for the additional runoff contributed by the alternative residential subdivision. The commission may require construction of offsite drainage improvements necessary to accommodate additional runoff from the development.
- (m) *Permitted uses.* No primary uses are permitted on the parent lot except a recreational center, community facility, or a child care center. Consistent with the table of permissible uses, 49.25.300, only residential uses and associated accessory structures are allowed on the unit-lots. Accessory dwelling units are prohibited on the parent lot and on any unit-lots. A home occupation or a child care home is permissible on the unit-lots. If an alternative residential subdivision creates a lot that complies with the table of dimensional standards, 49.25.400, for the underlying zoning district, the accessory dwelling unit prohibition of this subsection does not apply.
- (n) *Street sign.* Street signage is required. The developer shall install a street sign provided by the City and Borough of Juneau at the developer's expense. The director shall determine the type of street sign.
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addresses or street name—upon considering public health, safety, and welfare given the size of the subdivision.

- (o) *Mailboxes.* Upon consultation with the United States Postal Service, the director shall determine the placement location of mailboxes. The director may require additional improvements and design changes to enable efficient mail delivery and to minimize traffic interferences and compliance with CBJ standard details.

(Serial No. 2018-41(c), § 2, 12-17-2018, eff. 1-17-2019)

49.15.930 Alternative residential subdivision review process.

- (a) *General procedure.* A proposed alternative residential subdivision shall be reviewed according to the requirements of section 49.15.330, conditional use permit, and in the case of an application proposing a change in the number or boundaries of unit-lots, section 49.15.402, major subdivisions, except as otherwise provided in this article. Approval shall be a two-step process, preliminary plan approval and final plan approval. In cases involving a change in the number or boundaries of unit-lots, the preliminary and final plat submissions required by section 49.15.402 shall be included with the preliminary and final plan submissions required by this chapter.
- (b) *Preapplication conference.* Prior to submission of an application, the director shall conduct an informal preapplication conference with the developer to discuss the proposed alternative residential subdivision. The purpose of the preapplication conference shall be to exchange general and preliminary information and to identify potential issues and bonuses. The developer may discuss project plans and the director may provide an informal assessment of project permit eligibility, but no statement made by either party shall be regarded as binding, and the result of the conference shall not constitute preliminary approval by the department. The conference shall include a discussion of the zoning, size, topography, accessibility, and adjacent uses of the development site; the uses, density and layout of buildings, parking areas, the open space and landscaping proposed for the development; the common facilities; provision of utilities, including solid waste and recycling collection; the access, the vehicle and pedestrian circulation, and winter maintenance including snow removal locations; the development schedule and the alternative residential subdivision permit procedures. The developer shall provide a sketch of the proposed alternative residential subdivision.

(Serial No. 2018-41(c), § 2, 12-17-2018, eff. 1-17-2019)

49.15.940 Preliminary alternative residential subdivision plan approval.

- (a) *Application.* The developer shall submit to the department one copy of a complete alternative residential subdivision application, which shall include an application form, the required fee, any information required in subsection 49.15.402, the information required by this section, and any other information specified by the director.
- (b) *Required submissions.* The application shall include the following material:
 - (1) *Ownership.* The application shall identify, and shall be signed by or upon, the included written authorization of, all owners, lessees, and optionees of land within the boundaries of all phases of the alternative residential subdivision.
 - (2) *Preliminary development plan.* The application shall include a preliminary development plan, explaining how the proposed alternative residential subdivision will achieve the purposes set forth in section 49.15.900. The preliminary development plan shall summarize the different land uses proposed, including the amount of land for housing, open space, buffer, access, parking and pedestrian circulation; the number and types of housing units and proposed density; the natural features to be protected and hazards to be avoided; and the public, if any, and private services to be provided.

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(Supp. No. 145)

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- (3) *Design.* The application shall describe the design of the alternative residential subdivision, with particular attention to building siting, massing, access, parking, and architectural features; provision of utilities including drainage and trash collection; provision of winter maintenance for access and parking areas; and the circulation of traffic and pedestrians.
 - (4) *Open space, common facilities, and general landscaping.* The preliminary plat shall show and describe common facilities, pedestrian circulation to common facilities and amenities, open space, buffers, landscaping, and similar features.
 - (5) *Request for density bonuses.* If a density bonus is being applied for, the application shall include a narrative describing the justification for the requested bonus, and the application shall show the nature and extent of the requested bonus.
 - (6) *Description of phased development.* The preliminary development plan for a phased alternative residential subdivision shall include:
 - (A) A drawing and development schedule for each phase and for the entire alternative residential subdivision;
 - (B) The size and general location of proposed land uses for each phase at the maximum level of density, including maximum allotment of density bonuses;
 - (C) A description of the access (pedestrian and vehicular) connecting all the phases and where they will connect at the alternative residential subdivision boundaries;
 - (D) A description of how the developer will address the cumulative impacts of the phased development on the neighborhood and the natural environment;
 - (E) A description of the overall design theme unifying the phases;
 - (F) An analysis of how each phase in the project will meet the requirements of subsection 49.15.960(b); and
 - (G) A sketch plat consistent with section 49.15.410.
 - (c) *Department review.* The director shall advise the developer whether the alternative residential subdivision application is complete, and, if not, what the developer must do to make it complete. Within 45 days after determining an application is complete, the director shall schedule the preliminary plan for a public hearing before the commission. The director shall give notice to the developer and the public according to section 49.15.230.
 - (d) *Commission action.* The commission may approve an alternative residential subdivision preliminary plan if it meets the following requirements:
 - (1) The development protects natural features and avoids natural hazards by reserving them as open space;
 - (2) The development is consistent with the land use code;
 - (3) The development incorporates perimeter buffers sufficient to minimize off-site impacts of the subdivision and to maximize harmony with the neighborhood;
 - (4) Utilities proposed for connection to the City and Borough system meet City and Borough standards, and all others are consistent with sound engineering practices, as determined by the City and Borough Engineering and Public Works Department;
 - (5) The configuration of the development provides for economy and efficiency in utilities, housing construction, access, parking and circulation;
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- (6) If the approval is for a phased development, that each phase is consistent with the preliminary development plan and design of the entire alternative residential subdivision;
 - (7) Adequately addresses the cumulative impacts of the phased development on the neighborhood and the natural environment; and
 - (8) If the approval includes an allotment of a density bonus, the density bonus complies with section 49.15.920(e)(4).
- (e) *Expiration.* Approval of a preliminary plan shall expire 18 months after the commission notice of decision unless a final plan for the entire project or, in the case of a phased development, the first phase thereof, is submitted to the department for commission action. An application for extension of a preliminary plan shall be according to section 49.15.250, development permit extension.

(Serial No. 2018-41(c), § 2, 12-17-2018, eff. 1-17-2019)

49.15.950 Final alternative residential subdivision plan approval.

- (a) *Application.* Upon completion of all conditions of the preliminary plan, the developer shall submit an application, fee, and a final plan for commission approval.
- (b) *Homeowners' association.* The formation of a homeowners' association, or similar entity, is required.
 - (1) The articles of incorporation and bylaws of the homeowners' association, required under A.S. 34.08 or this chapter, shall be prepared by a lawyer licensed to practice in the state.
 - (2) The homeowners' association shall be responsible for the maintenance of open space, water and sewer utilities, and stormwater control features and drainages. The association documents shall specify how any other common facilities shall be operated and maintained. The association documents shall require homeowners to pay periodic assessments for the operation, maintenance and repair of common facilities. The documents shall require that the governing body of the association adequately maintain common facilities.
 - (3) If the alternative residential subdivision is phased, the association documents shall specify how the cost to build, operate, and maintain improved open space and common facilities shall be apportioned among homeowners of the initial phase and homeowners of later phases.
 - (4) The homeowners' association documents shall be recorded with the approved final plat.
- (c) *Commission action.* The commission may approve the final plan if it substantially conforms to the approved preliminary plan and all requirements of this article.
- (d) *Expiration.* An approved final plan shall expire 18 months after recording if the applicant fails to obtain an associated building permit and make substantial construction progress. An application for extension of a final plan shall be according to section 49.15.250, development permit extension.

(Serial No. 2018-41(c), § 2, 12-17-2018, eff. 1-17-2019)

49.15.960 Phased development.

- (a) *Phasing allowed.* An applicant may develop an alternative residential subdivision in phases, provided the initial application includes a preliminary development plan sufficient to assess the cumulative effects of the entire alternative residential subdivision on the neighborhood and the environment according to the standards in subsection 49.15.940.

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- (b) *Completion of an individual phase.* Each phase shall be so designed and implemented that, when considered with reference to any previously constructed phases but without reference to any subsequent phases, it meets the design and density standards applicable to the entire alternative residential subdivision. Construction and completion of open space and common facilities serving each phase in an alternative residential subdivision shall proceed at a rate no slower than that of other structures in that phase. No phase shall be eligible for final plan approval until all components of all preceding phases are substantially complete and homeowners' association documents have been approved.
- (c) *Standards for phases.* Each phase of an alternative residential subdivision shall be reviewed according to the provisions of this chapter then current. Each phase of an alternative residential subdivision shall maintain design continuity with earlier phases. At no point during a phased development shall the cumulative density exceed that established in the approved preliminary plan.

(Serial No. 2018-41(c), § 2, 12-17-2018, eff. 1-17-2019)

49.15.970 Amendments to approved alternative residential subdivision plan.

- (a) *Request for amendment.* The developer of an alternative residential subdivision may request an amendment to an approved preliminary or final alternative residential subdivision plan. The request shall state the reasons for the amendment and shall be submitted in writing to the director, who shall inform the developer within 15 days whether the request shall be processed as a minor amendment or major amendment.
- (b) *Minor amendment.* A minor amendment may be submitted without a filing fee and may be approved by the director. For purposes of this section, a minor amendment is a change consistent with the conditions of the original plan approval, and would result in:
- (1) Insignificant change in the outward appearance of the development;
 - (2) Insignificant impacts on surrounding properties;
 - (3) Insignificant modification in the location or siting of buildings or open space;
 - (4) No reduction in the number of parking spaces below that required;
 - (5) A delay of no more than one year in the construction or completion schedule for the project or, in the case of a phased project, the phase for which the amendment is requested.
- (c) *Major amendment.* All other amendments shall be reviewed by the commission upon payment of a filing fee and in accordance with the requirements of the original plan approval.

(Serial No. 2018-41(c), § 2, 12-17-2018, eff. 1-17-2019)



DEVELOPMENT PERMIT APPLICATION

NOTE: Development Permit Application forms must accompany all other Community Development Department land use applications. This form and all documents associated with it are public record once submitted.

To be completed by Applicant	PROPERTY LOCATION		
	Physical Address		
	Legal Description(s) (Subdivision, Survey, Block, Tract, Lot)		
	Parcel Number(s)		
	<input type="checkbox"/> This property is located in the downtown historic district <input type="checkbox"/> This property is located in a mapped hazard area, if so, which _____		
	LANDOWNER/ LESSEE		
	Property Owner		Contact Person
	Mailing Address		Phone Number(s)
	E-mail Address		
	LANDOWNER/ LESSEE CONSENT		
	<p>Required for Planning Permits, not needed on Building/ Engineering Permits. Consent is required of all landowners/ lessees. If submitted with the application, alternative written approval may be sufficient. Written approval must include the property location, landowner/ lessee's printed name, signature, and the applicant's name.</p> <p>I am (we are) the owner(s) or lessee(s) of the property subject to this application and I (we) consent as follows: A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission. B. I (we) grant permission for the City and Borough of Juneau officials/employees to inspect my property as needed for purposes of this application.</p>		
	_____		_____
Landowner/Lessee (Printed Name)		Title (e.g.: Landowner, Lessee)	
X	_____	_____	
	Landowner/Lessee (Signature)	Date	
_____		_____	
Landowner/Lessee (Printed Name)		Title (e.g.: Landowner, Lessee)	
X	_____	_____	
	Landowner/Lessee (Signature)	Date	
<p>NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours. We will make every effort to contact you in advance, but may need to access the property in your absence and in accordance with the consent above. Also, members of the Planning Commission may visit the property before a scheduled public hearing date.</p>			
APPLICANT If same as LANDOWNER, write "SAME"			
Applicant (Printed Name)		Contact Person	
Mailing Address		Phone Number(s)	
E-mail Address			
X	_____	_____	
	Applicant's Signature	Date of Application	

-----DEPARTMENT USE ONLY BELOW THIS LINE-----

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

	Intake Initials
Case Number	Date Received



SUBDIVISION AND DEVELOPMENT PLAN APPLICATION

See subdivision hand-outs for more information regarding the permitting process and the materials required for a complete application.

NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

PROJECT SUMMARY

Number of Existing Parcels _____ Total Land Area _____ Number of Resulting Parcels _____

HAS THE PARCEL BEEN CREATED BY A MINOR SUBDIVISION IN THE PRECEDING 24 MONTHS

NO YES Case Number _____

TYPE OF SUBDIVISION OR PLATTING APPROVAL REQUESTED

<p style="text-align: center;">MINOR DEVELOPMENT (changing or creating 13 or fewer lots)</p> <p><input type="radio"/> Preliminary Plat (MIP)</p> <p><input type="radio"/> Final Plat (MIF)</p> <p><input type="radio"/> Panhandle Subdivision</p> <p><input type="radio"/> Accretion Survey</p> <p><input type="radio"/> Boundary Adjustment</p> <p><input type="radio"/> Lot Consolidation (SLC)</p> <p><input type="radio"/> Bungalow Lot Subdivision</p> <p><input type="radio"/> Common Wall/Zero Lot Subdivision</p> <p><input type="radio"/> Other _____</p>	<p style="text-align: center;">MAJOR DEVELOPMENT (changing or creating 14 or more lots)</p> <p><input type="radio"/> Preliminary Plat (SMP)</p> <p><input type="radio"/> Final Plat (SMF)</p> <p><input type="radio"/> Preliminary Development Plan – PUD (PDP)</p> <p><input type="radio"/> Final Development Plan – PUD (PDF) Preliminary</p> <p><input type="radio"/> Development Plan – ARS (ARP) Final</p> <p><input type="radio"/> Development Plan – ARS (ARF)</p> <p><input type="radio"/> Bungalow Lot Subdivision</p> <p><input type="radio"/> Common Wall/Zero Lot Subdivision</p> <p><input type="radio"/> Other _____</p>
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ALL REQUIRED DOCUMENTS ATTACHED

Pre-application conference notes

Narrative including:

- Legal description(s) of property to be subdivided
- Existing structures on the land
- Zoning district
- Density
- Access
- Current and proposed use of any structures
- Utilities available
- Unique characteristics of the land or structure(s)

Preliminary Plat checklist

To be completed by Applicant

-----DEPARTMENT USE ONLY BELOW THIS LINE-----

SUBDIVISION/PLATTING FEES	Fees	Check No.	Receipt	Date
Application Fees	\$ _____			
Admin. of Guarantee	\$ _____			
Adjustment	\$ _____			
Total Fee	\$ _____			

For assistance filling out this form, contact the Permit Center at 586-0770.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

Case Number	Date Received
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PRELIMINARY PLAT CHECK LIST

Name of Proposed Subdivision: _____

The following items must be included with the initial submittal of a Preliminary Plat:

- Application, filled out completely
- Project Narrative
- Pre-application Conference Report
- Disclosure of all known environmental hazards and any proposed mitigation measures recommended in the applicable environmental document.
- Preliminary Plat Checklist: I have reviewed the checklist and all submittals for completeness and accuracy.
- Application fee (see fee schedule)
- Five (5) – 24" by 36" Copies
- Lot Closure Report

Applicant or Surveyor - Signature

Date

Applicant or Surveyor - Print Name

GENERAL REQUIREMENTS

- The preliminary plat shall be prepared by a professional land surveyor, registered in the State of Alaska
- The preliminary plat shall be submitted on 22 by 34 inch sheets. The director of engineering and public works may approve alternate sheet sizes
- The preliminary plat shall be drawn with black ink to a scale of one-inch to 100 feet or less, or other suitable scale approved by the director of engineering and public works
- The preliminary plat shall be oriented with north toward the top of the sheet.
- A vicinity map shall be located in the upper right-hand corner of the sheet
- The vicinity map shall be oriented in the same direction as the plat
- A suitable north arrow shall be shown for the plat and vicinity map
- All line work and lettering must be of professional quality, and all line widths and lettering sizes must be of such size that all information can be clearly shown without overlap or confusion

GRAPHIC REQUIREMENTS - A preliminary plat shall contain the following information:

Title block - An enclosed title block in the lower right-hand corner containing the following information:

- The proposed name of the subdivision
- The legal description of the parcel to be subdivided including U.S. Survey, U.S. Mineral Survey, A.T.S. number or section, township, and range number, as applicable
- "City and Borough of Juneau, Alaska"
- "State Recorder's Office at Juneau"
- The date the preliminary plat was prepared and revised
- The horizontal scale
- The name and address of the owner of record
- The name, address, and telephone number of the surveyor preparing the preliminary plat

Preliminary Plat Checklist

Updated 1/2018

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Lot, block, and street information:

- The area of each lot
- The dimensions in feet and hundredths of a foot
- An identifying number and letter for lots and blocks
- Lots numbered consecutively, commencing with the number "1," with no omissions or duplications
- If the remainder of an original parcel being subdivided is relatively large, it shall be designated as a "tract" with an identifying number
- All parcels of land intended to be dedicated for public use or reserved for the use of all of the property owners in the proposed subdivision shall be shown as lots, and consecutively numbered. The purpose and any conditions or limitations on the use of the parcel shall be noted on the plat
- Abutting properties shall be shown with dashed lines, numbers, and/or letters
- For resubdivisions or public way vacations, the lines and legal description of the previous lots shall be shown with light dashed lines, numbers, and/or letters, or by a separate plat on the same sheet showing the previous lot lines
 - The minimum data shown for each curve shall be as follows:
 - Length
 - Central angle
 - Radius
 - Bearing and distance of long chord
 - Setbacks shall be shown on all corner lots and any lots with multiple frontage. Setbacks shall be shown on typical lots

Boundary lines:

- All boundary lines of the subdivision with bearings and distances described
- All retraced boundary lines shall show record and measured bearings and distances where they differ. Record dimension information shall be shown within parentheses and include a record source identification
- The exterior boundary lines of the subdivision shall be a solid black opaque line that is of a width that distinguishes it from all other property lines shown on the plat
- If phasing is proposed, then the boundaries and number of each phase, sequential lot numbering, and a subdivision name consistent with previous phases shall be shown

Monumentation:

- The monuments used to establish the basis of bearing
- Each monument found or set shall be identified on the plat by a symbol
- A complete description of the monument, including type and all information printed on the cap. A typical drawing shall be shown for each type of monument cap set
- A legend showing the symbols for all the types of monuments
- The identification, description location, elevation, and datum of the benchmark used to establish vertical control

Site access, circulation, and utilities:

- The widths and names of existing rights-of-way within the subdivision and within 100 feet of the subdivision boundary
- Proposed rights-of-way, including their widths and proposed names
- The grades of existing and proposed streets within these rights-of-way
- The width, ownership, use, and record reference of all proposed and existing easements within the subdivision and within 100 feet of the subdivision boundary
- The width, ownership, and use of all proposed easements

Preliminary Plat Checklist

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- All proposed and existing easements shall have sufficient dimensions shown to determine their location on the ground
- Existing trails or pathways within the subdivision and within 100 feet of the subdivision boundary, including the width of any associated rights-of way or easements
- Proposed trails or pathways and widths of their rights-of-way
- If the plat submitted covers only a part of the tract under the control of the applicant, a sketch plat of the prospective street system of the unplatted part shall be submitted
- The location of any existing or proposed driveways/curb cuts that access or are proposed to access any existing or proposed street

Topographic information:

- For slopes of less than five percent, show one foot contour lines and include spot elevations at all breaks in grade, along all drainage channels or swales, and at selected points not more than 100 feet apart in all directions
- For slopes between five percent and ten percent, show two foot contour lines
- For slopes greater than ten percent, show five foot contour lines
- Every fifth elevation contour shall be distinctive and clearly labeled
- Dashed lines shall represent existing contours
- Mapping shall include any significant features which can materially affect the design of the subdivision, including, but not limited to, structures, fences, walls, and utility poles
- If irregular slopes or special features are present, additional contour information may be required by the director of engineering and public works for planning or construction purposes. Additional required information may include projecting the topography of the site after grading has taken place, showing such items as:
 - Pad elevations and drainage patterns for each lot
 - Tops and toes of all manufactured slopes, including daylight lines
 - Existing and proposed retaining wall locations and heights
- For subdivisions located in hillside areas with slopes greater than eighteen percent, additional requirements apply in accordance with CBJ 49.70, Article II

Sewer and water:

- Existing sewer and water mains within the tract with pipe sizes and grades
- A draft plan for proposed water and sewer lines showing the size, approximate slope, and connection points with elevations for the purpose of determining the feasibility of construction

Multisheet plats:

- When a plat requires more than one sheet, exclusive of a certificate sheet, an index sheet shall be included. When a plat requires more than three sheets, a cover sheet shall also be included, showing the subdivision title, a key map, and all certificates. Each additional sheet shall include the following data:
 - North arrow
 - Legend
 - Surveyor's seal and signature
 - Title block
 - Sheet _____ of _____
 - Scale
 - All plat notes
 - Vicinity map

Preliminary Plat Checklist

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ADDITIONAL MAPPING OR REPORTS- *At the pre-application meeting, it will be determined if any of the following additional mapping or reports are required to be submitted with the preliminary plat. If required, the following additional mapping or reports shall be submitted:*

Hazard and Special Habitat Areas:

- Any portion of a special flood hazard area, landslide or avalanche area, habitat area as defined by CBJ 49.70.310, or watersheds, either existing at the proposed subdivision site or shown on the overlay maps, adopted pursuant to this title, to exist at the proposed subdivision site, must be depicted on the preliminary plat
- The boundaries of any wetland areas must be depicted on the preliminary plat. Boundaries must be determined by a person qualified to perform wetland delineations

Soils report:

- A soils report prepared by an engineer licensed by the State of Alaska shall be required if the proposed subdivision is located farther from the existing public sewer system than specified in CBJ 49.35, and the applicant chooses to provide on-lot waste disposal rather than to connect to the public system. A soils report shall include the following:
 - Certification that the proposed lots are large enough and have soil of sufficient permeability to permit the construction of approved waste treatment systems for on-lot waste disposal
 - The location and size of drain fields for each lot
 - The locations and logs of test borings, percolation test results, and a hydrological evaluation of on-site sewage disposal
 - If the soils report indicates that the soils found on the site are not of sufficient permeability or the lots are not large enough to permit the construction of systems for on-lot waste disposal, the size of the proposed lots must be increased or alternate methods for waste disposal proposed
 - The soils report shall describe the nature of the subsurface soils and any soil conditions that would affect the design of the proposed development. The soils report shall state whether the proposed subdivision plan is feasible and provide general solutions for all known geotechnical conditions or problems

Drainage report:

- A preliminary report specifying the method by which the applicant proposes to manage surface and subsurface drainage for the subdivision and the effect of such method on adjacent areas. Unlike the drainage plan required by CBJ 49.35.510, the preliminary drainage report does not need to be prepared by a licensed engineer. The report must address the following:
 - A calculation of the increase in stormwater runoff resulting from the proposed development as well as the runoff from all drainage areas associated with the site. Runoff calculations shall be based on a fully-developed subdivision and a 25-year storm event
 - How drainage from the proposed subdivision will join an established drainage channel or channels, unless the director of engineering and public works approves use of an alternative drainage way
 - An evaluation of existing drainage ways and structures located between the subdivision and the receiving water body, and verification that the existing drainage ways can accommodate the increased runoff. If the increased runoff cannot be handled, the plan must propose solutions to the problem
 - All required improvements, on or off site, that are shown on the construction plans in accordance with CBJ 49.35, Article V, and that will be constructed as part of the subdivision

Water:

- For subdivisions of five or more lots, including major subdivisions, the following shall be included, where applicable, in accordance with CBJ 49.15.412:
 - If a proposed subdivision is located at greater distance from the existing public water system than specified in CBJ 49.35, Article III, and the applicant chooses not to connect to the public system, a statement that the applicant will provide a community water system or that individual wells will be used

Preliminary Plat Checklist

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- A report by a registered engineer or geologist that clearly supports the legal and physical availability of adequate water. Methods for proof of water availability and the standards for quantity are listed in CBJ 49.35, Article III
- A copy of the State application for a permit to appropriate water in the quantity required to meet the subdivisions demands
- This does not apply to remote subdivisions unless: the subdivider of the remote subdivision chooses to provide potable water, a public water system is available and the subdivision falls within the criteria outlined in CBJ 49.35.310(a), or the subdivision has four or fewer lots.
- The director for minor subdivisions, and the planning commission for major subdivisions, may, for good cause, temporarily waive the requirement to provide a water report and proof of water, and condition the approval of the preliminary plat upon the provision of both documents as part of the final plat application and approval process.

Erosion control:

- A report explaining the method by which the applicant proposes to control erosion and manage runoff, and potential impacts to adjacent properties or water bodies. The report shall include a plan for preservation of ground cover in areas where runoff and resulting erosion need to be minimized.

Traffic study:

- A traffic impact analysis may be required with the preliminary plat in accordance with CBJ 49.40.300.

Shadow plats:

- For subdivisions of five or more lots in transition areas, a shadow plat shall be submitted according to CBJ 49.70.710. The shadow plat shall consist of a sketch superimposed on the proposed subdivision layout. This sketch shall reflect any future resubdivision of the parcels into smaller lots consistent with the higher density and the lot size allowed under the transition zoning.



ALLOWABLE/CONDITIONAL USE PERMIT APPLICATION

See reverse side for more information regarding the permitting process and the materials required for a complete application.

NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

To be completed by Applicant

PROJECT SUMMARY

TYPE OF ALLOWABLE OR CONDITIONAL USE PERMIT REQUESTED

Accessory Apartment – Accessory Apartment Application (AAP)

Use Listed in 49.25.300 – Table of Permissible Uses (USE)

Table of Permissible Uses Category: _____

IS THIS A MODIFICATION or EXTENSION OF AN EXISTING APPROVAL? YES – Case # _____ NO

UTILITIES PROPOSED **WATER:** Public On Site **SEWER:** Public On Site

SITE AND BUILDING SPECIFICS

Total Area of Lot _____ square feet Total Area of Existing Structure(s) _____ square feet

Total Area of Proposed Structure(s) _____ square feet

EXTERNAL LIGHTING

Existing to remain No Yes – Provide fixture information, cutoff sheets, and location of lighting fixtures

Proposed No Yes – Provide fixture information, cutoff sheets, and location of lighting fixtures

ALL REQUIRED DOCUMENTS ATTACHED

Narrative including:

- Current use of land or building(s)
- Description of project, project site, circulation, traffic etc.
- Proposed use of land or building(s)
- How the proposed use complies with the Comprehensive Plan

Plans including:

- Site plan
- Floor plan(s)
- Elevation view of existing and proposed buildings
- Proposed vegetative cover
- Existing and proposed parking areas and proposed traffic circulation
- Existing physical features of the site (e.g.: drainage, habitat, and hazard areas)

If this is a modification or extension include:

- Notice of Decision and case number
- Justification for the modification or extension
- Application submitted at least 30 days before expiration date

-----DEPARTMENT USE ONLY BELOW THIS LINE-----

ALLOWABLE/CONDITIONAL USE FEES				
	Fees	Check No.	Receipt	Date
Application Fees	\$ _____			
Admin. of Guarantee	\$ _____			
Adjustment	\$ _____			
Pub. Not. Sign Fee	\$ _____			
Pub. Not. Sign Deposit	\$ _____			
Total Fee	\$ _____			

This form and all documents associated with it are public record once submitted.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

Case Number	Date Received

Allowable/Conditional Use Permit Application Instructions

Allowable Use permits are outlined in CBJ 49.15.320, Conditional Use permits are outline in CBJ 49.15.330

Pre-Application Conference: A pre-application conference is required prior to submitting an application. There is no fee for a pre-application conference. The applicant will meet with City & Borough of Juneau and Agency staff to discuss the proposed development, the permit procedure, and to determine the application fees. To schedule a pre-application conference, please contact the Permit Center at 586-0770 or via e-mail at permits@juneau.org.

Application: An application for an Allowable/Conditional Use Permit will not be accepted by the Community Development Department until it is determined to be complete. The items needed for a complete application are:

1. **Forms:** Completed Allowable/Conditional Use Permit Application and Development Permit Application forms.
2. **Fees:** Fees generally range from \$350 to \$1,600. Any development, work, or use done without a permit issued will be subject to double fees. All fees are subject to change.
3. **Project Narrative:** A detailed narrative describing the project.
4. **Plans:** All plans are to be drawn to scale and clearly show the items listed below:
 - A. Site plan, floor plan and elevation views of existing and proposed structures
 - B. Existing and proposed parking areas, including dimensions of the spaces, aisle width and driveway entrances
 - C. Proposed traffic circulation within the site including access/egress points and traffic control devices
 - D. Existing and proposed lighting (including cut sheets for each type of lighting)
 - E. Existing and proposed vegetation with location, area, height and type of plantings
 - F. Existing physical features of the site (i.e. drainage, eagle trees, hazard areas, salmon streams, wetlands, etc.)

Document Format: All materials submitted as part of an application shall be submitted in either of the following formats:

1. Electronic copies in the following formats: .doc, .txt, .xls, .bmp, .pdf, .jpg, .gif, .xlm, .rtf (other formats may be preapproved by the Community Development Department).
2. Paper copies 11" X 17" or smaller (larger paper size may be preapproved by the Community Development Department).

Application Review & Hearing Procedure: Once the application is determined to be complete, the Community Development Department will initiate the review and scheduling of the application. This process includes:

Review: As part of the review process the Community Development Department will evaluate the application for consistency with all applicable City & Borough of Juneau codes and adopted plans. Depending on unique characteristics of the permit request the application may be required to be reviewed by other municipal boards and committees. During this review period, the Community Development Department also sends all applications out for a 15-day agency review period. Review comments may require the applicant to provide additional information, clarification, or submit modifications/alterations for the proposed project.

Hearing: All Allowable/Conditional Use Permit Applications must be reviewed by the Planning Commission for vote. Once an application has been deemed complete and has been reviewed by all applicable parties the Community Development Department will schedule the requested permit for the next appropriate meeting.

Public Notice Responsibilities: Allowable/Conditional Use requests must be given proper public notice as outlined in CBJ 49.15.230:

The Community Development Department will give notice of the pending Planning Commission meeting and its agenda in the local newspaper a minimum of 10-days prior to the meeting. Furthermore, CDD will mail notices to all property owners within 500-feet of the project site.

The Applicant will post a sign on the site at least 14 days prior to the meeting. The sign shall be visible from a public right-of-way or where determined appropriate by CDD. Signs may be produced by the Community Development Department for a preparation fee of \$50, and a \$100 deposit that will be refunded in full if the sign is returned within seven days of the scheduled hearing date. If the sign is returned between eight and 14 days of the scheduled hearing \$50 may be refunded. The Applicant may make and erect their own sign. Please contact the Community Development Department for more information.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING ELECTRIC
- EXISTING DRIVEWAY
- EXISTING STORM DRAIN
- EXISTING CREEK
- EXISTING SEWER LINE
- EXISTING WATER LINE
- PROPOSED VALLEY GUTTER
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE
- PROPOSED 8" PVC SEWER LINE
- PROPOSED 4" SEWER LATERAL
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE

STORM QUANTITIES

SIZE/TYPE	QUANTITY
18" CORRUGATED POLY.	484 LF
12" CORRUGATED POLY.	978 LF
TYPE III CATCH BASIN	5 EA
TYPE IV CATCH BASIN	11 EA
STD. CBU 310 AREA DRAIN	13 EA
STD. 305 STORM DRAIN MH	2 EA

WATER QUANTITIES

SIZE/TYPE	QUANTITY
8" HDPE	835 LF
1" TYPE "K" SERVICE LINE	1470 LF
FIRE HYDRANT	4 EA
WATER METER	42 EA
MAINLINE VALVE	7 EA

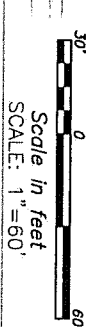
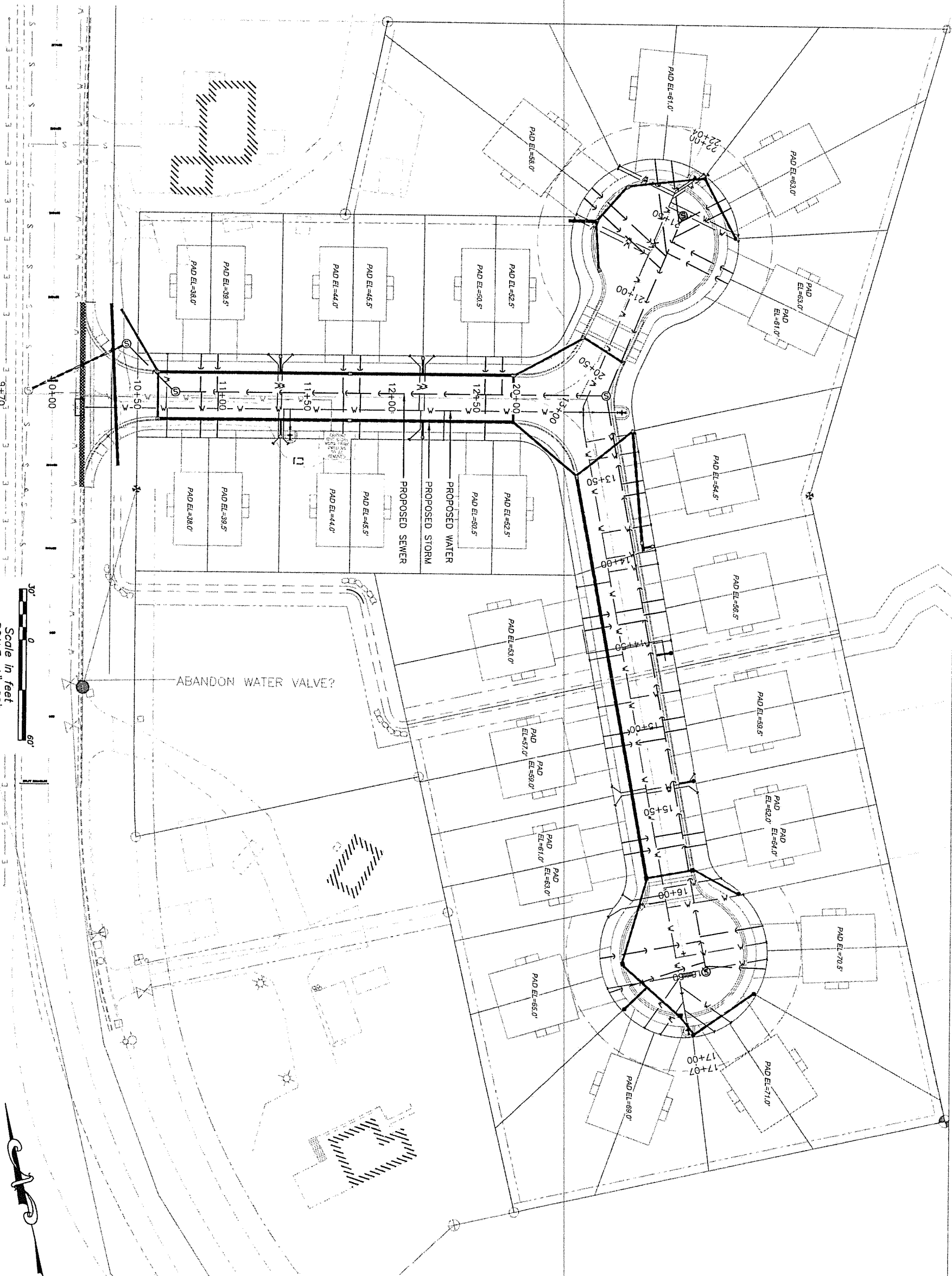
SEWER QUANTITIES

SIZE/TYPE	QUANTITY
8" SDR 35 PVC	855 LF
4" SDR 35 PVC SIDE SEWER	2320 LF
TYPE I MANHOLE	5 EA
DOT K-16 MANHOLE	1 EA

ROADWAY QUANTITIES

SIZE/TYPE	QUANTITY
CURB & GUTTER	1705 LF
5' SIDEWALK	1375 LF
ASPHALT PAVING	500 TONS*
2" MINUS BASE	750 CY
SHOT ROCK	2100 CY

*USING 2.0 CONVERSION FACTOR (CY TO TON)



REV	DATE	BY	DESCRIPTION

MOORE ENGINEERING
 P.O. BOX 397 CRAIG, ALASKA 99921
 (907) 530-7008
TRACY MOORE, P.E.
 REGISTERED PROFESSIONAL CIVIL ENGINEER

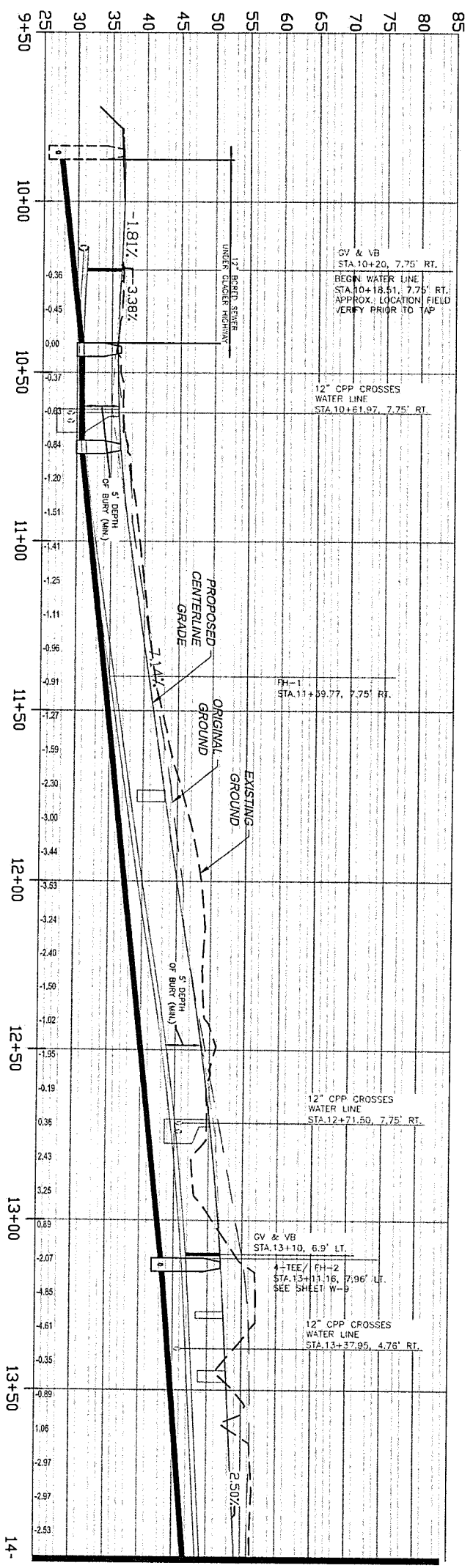
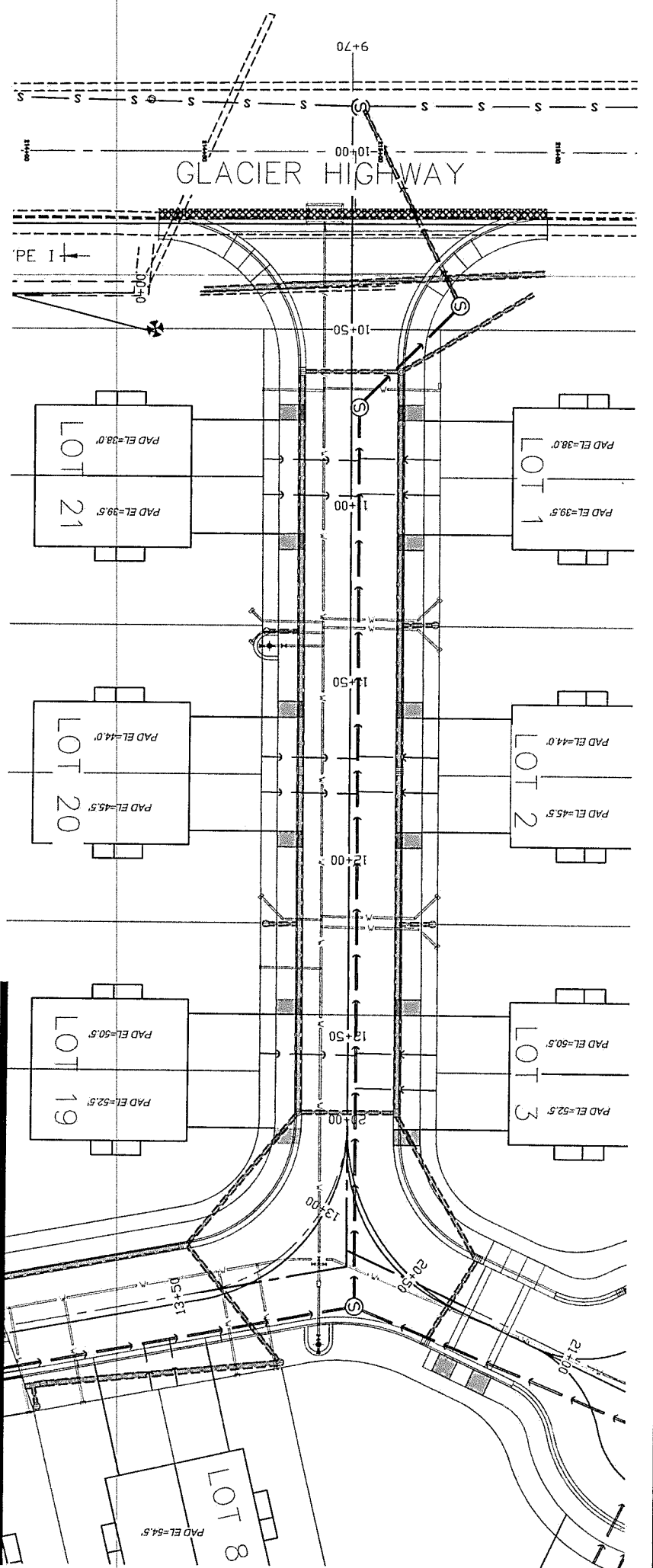
RAVENWOOD SUBDIVISION

OVERALL UTILITY PLAN
RAVENS WAY

SHEET ---
 OF ---

LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING WATER LINE
- EXISTING WATER LINE
- EXISTING WATER LINE
- EXISTING ELECTRIC
- EXISTING DRIVEWAY
- EXISTING STORM DRAIN
- EXISTING CREEK
- EXISTING SEWER LINE
- EXISTING WATER LINE
- PROPOSED VALLEY GUTTER
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE
- PROPOSED STORMDRAIN
- PROPOSED UNDERDRAIN
- PROPOSED CATCH BASIN
- PROPOSED AREA DRAIN
- PROPOSED UNDERDRAIN
- PROPOSED 8" PVC SEWER LINE
- PROPOSED 4" SEWER LATERAL
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- PROPOSED 8" DI WATER LINE
- PROPOSED 1" WATER LINE SERVICE
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED THRUST BLOCK
- EXISTING SEWER MANHOLE



FILE: Ravenswood_P&P_VE1.dwg	NO.	DATE	BY
PROJECT: 24-RAVEN	5		
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DETAILED BY: ---	3		
DESIGNED BY: ---	2		
	1		

REVISION	NO.	DATE	BY

Vector
ENGINEERING INC.

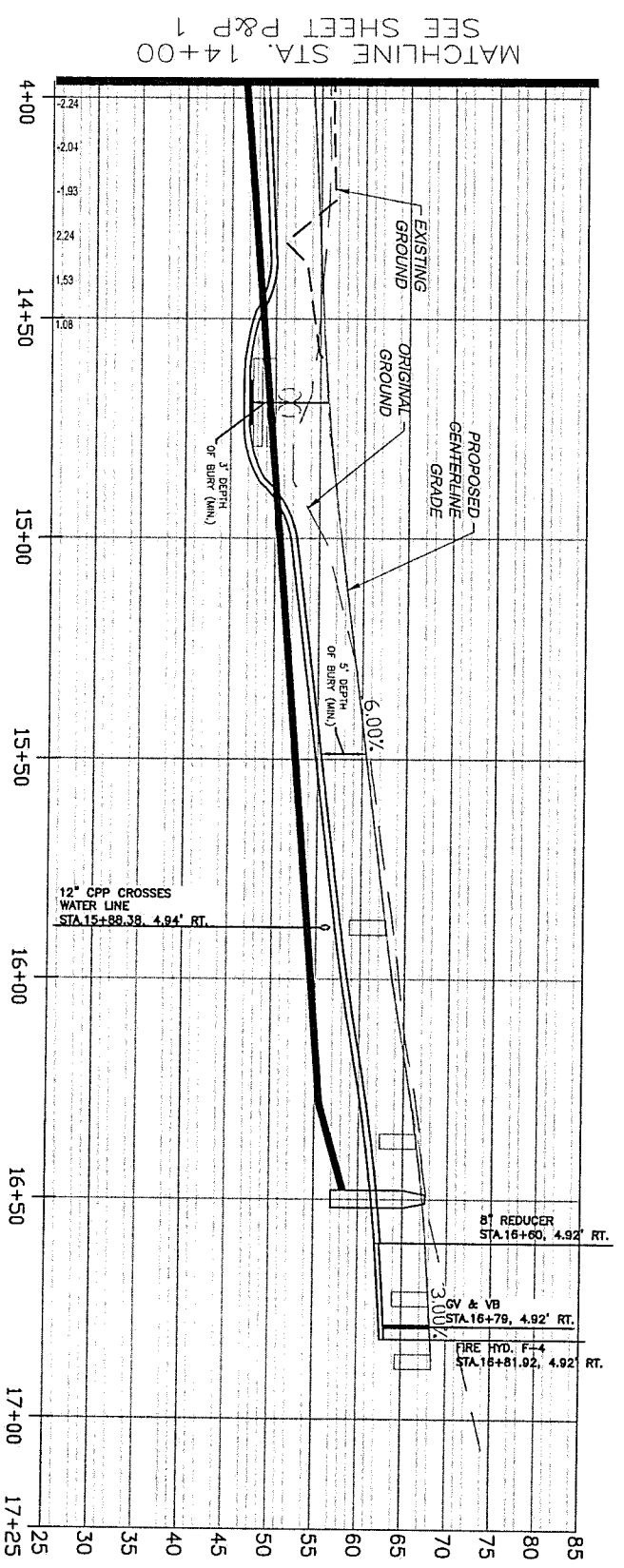
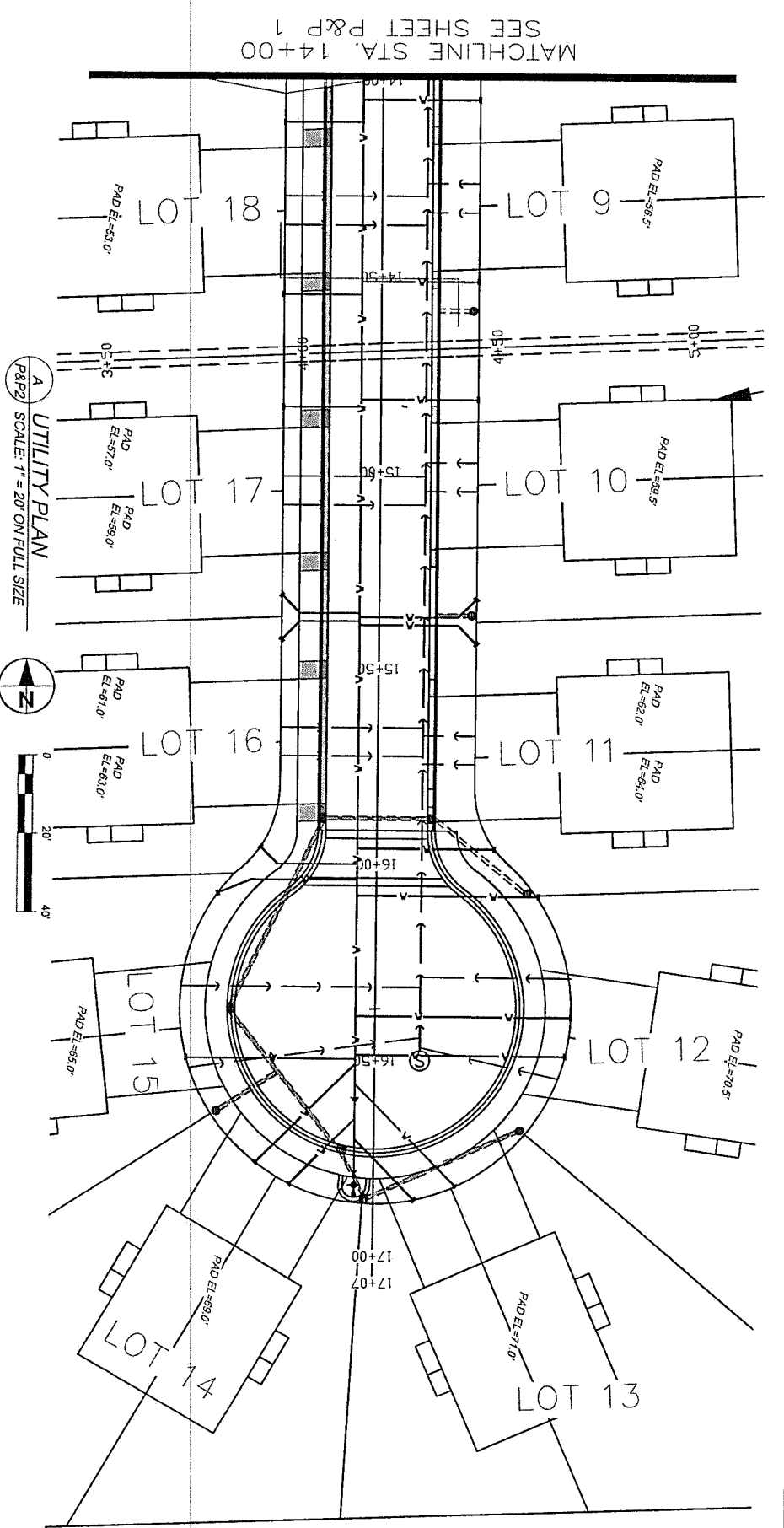
2724 Black Lake Boulevard SW, Suite 202
Turnwater, WA 98572
Tel: (360) 352-2477 Fax: (360) 352-0179 E-mail: admin@vectorengineeringinc.com

RAVENSWOOD P&P
JUNEAU, AK

P&P 1
UTILITY PLAN & PROFILE
SHT 1 OF 6

LEGEND

- SURVEYED UNSURVEYED CENTERLINE
- EASEMENT
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING ELECTRIC
- EXISTING DRIVEWAY
- EXISTING STORM DRAIN
- EXISTING CREEK
- EXISTING SEWER LINE
- EXISTING WATER LINE
- PROPOSED VALLEY GUTTER WITH CURB INLET
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- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED THRUST BLOCK
- EXISTING SEWER MANHOLE



FILE: Ravenswood_P&P_VEL.dwg	5
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DETAILED BY: ---	2
DESIGNED BY: ---	1

REVISION	NO.	DATE	BY

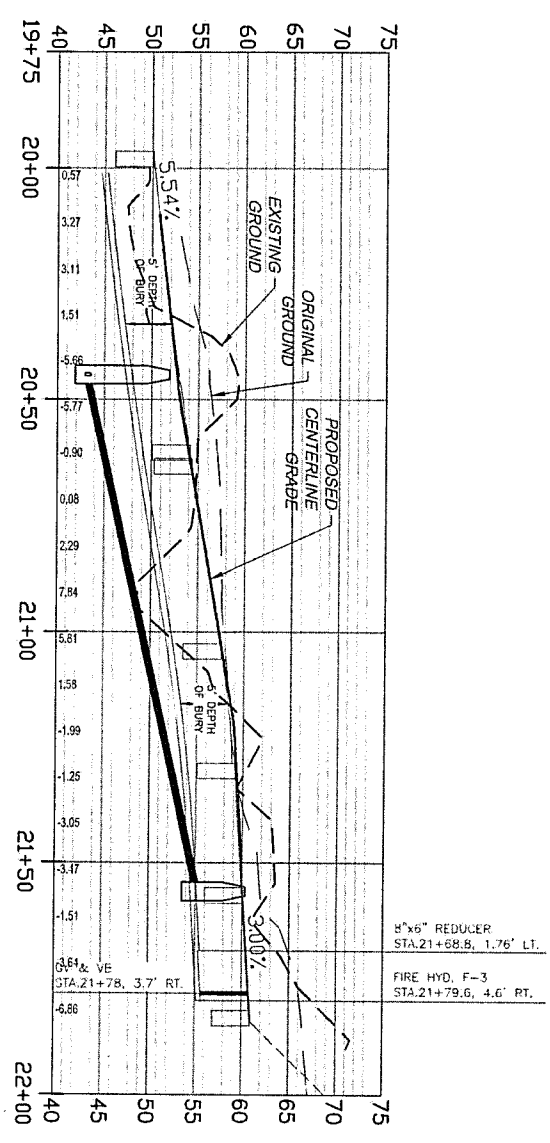
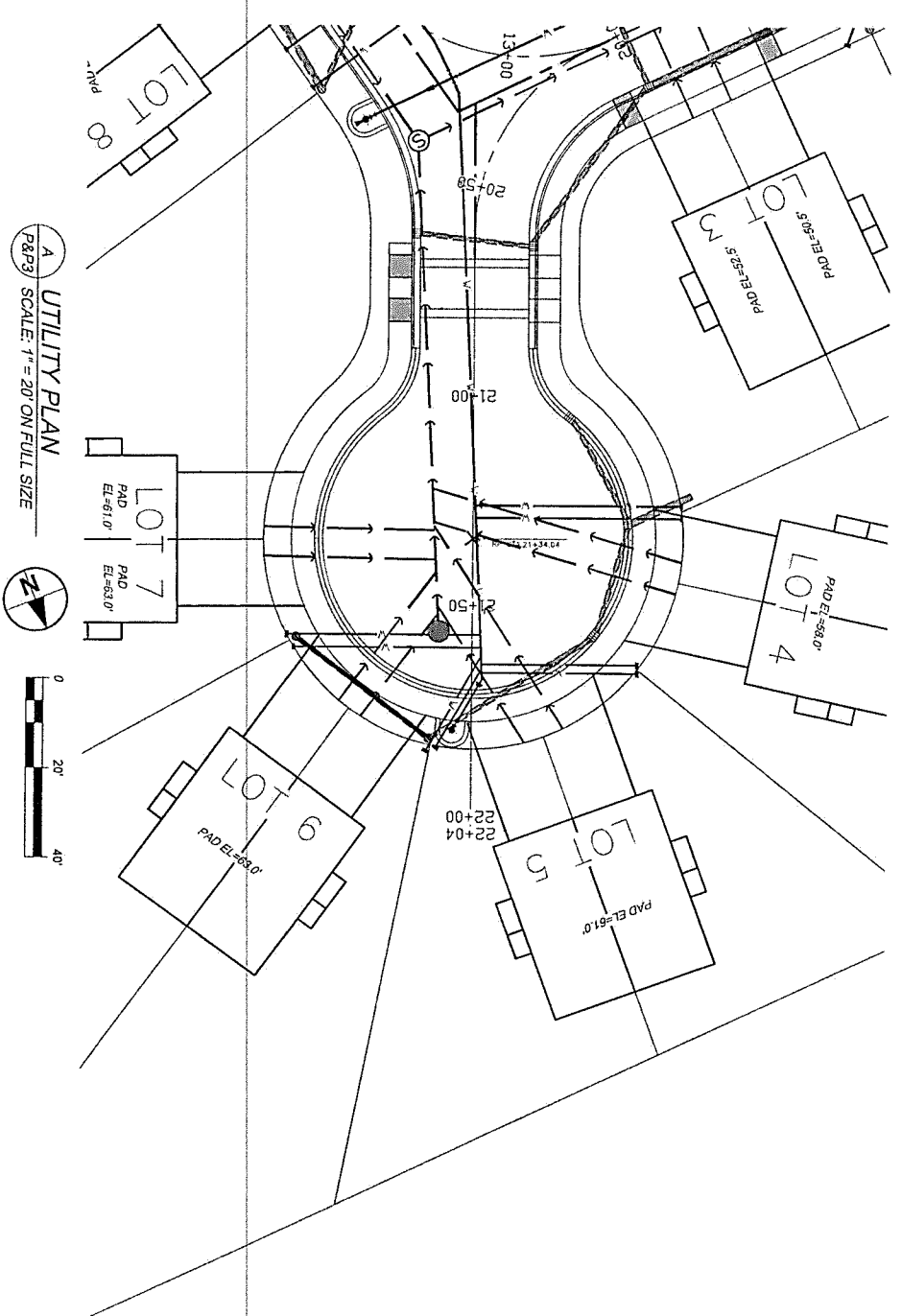
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Tumwater, WA 98512
ph: (360) 352-2477 fax: (360) 352-0179 E-mail: admin@vectorengineering.com

RAVENSWOOD P&P
JUNEAU, AK

LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING WATER LINE
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- PROPOSED THRUST BLOCK
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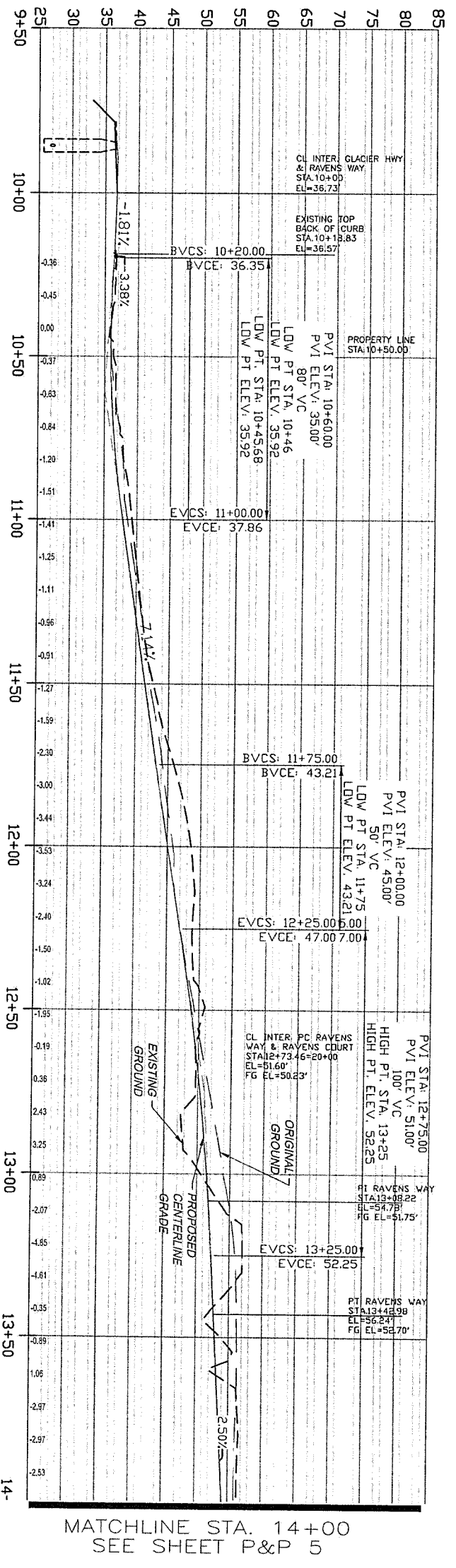
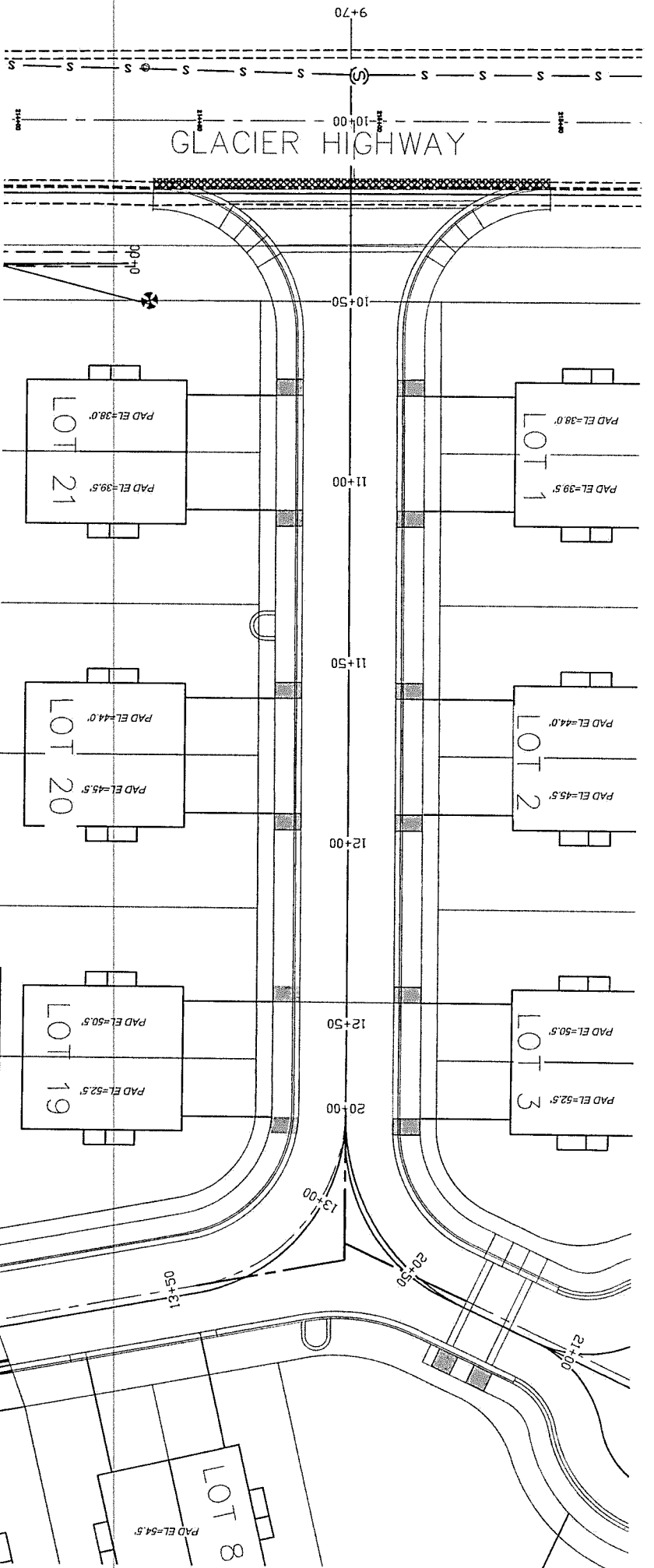


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PROJECT: 24-RAVEN			
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DATE	NO.	REVISION	BY

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2724 Black Lake Boulevard SW, Suite 202
Tumwater, WA 98512
ph: (360) 352-2477 fax: (360) 352-0179 E-mail: admin@vectorengineering.com

LEGEND

	UNSURVEYED CENTERLINE
	EASEMENT
	EXISTING WATER LINE
	EXISTING SEWER LINE
	EXISTING ELECTRIC
	EXISTING DRIVEWAY
	EXISTING STORM DRAIN
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	PROPOSED CURB & GUTTER WITH CURB INLET
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	PROPOSED CUT SLOPE
	PROPOSED FILL SLOPE



FILE: Ravenswood_P&P_VEL.dwg	NO.	DATE	REVISION	BY
PROJECT: 24-RAVEN	1			
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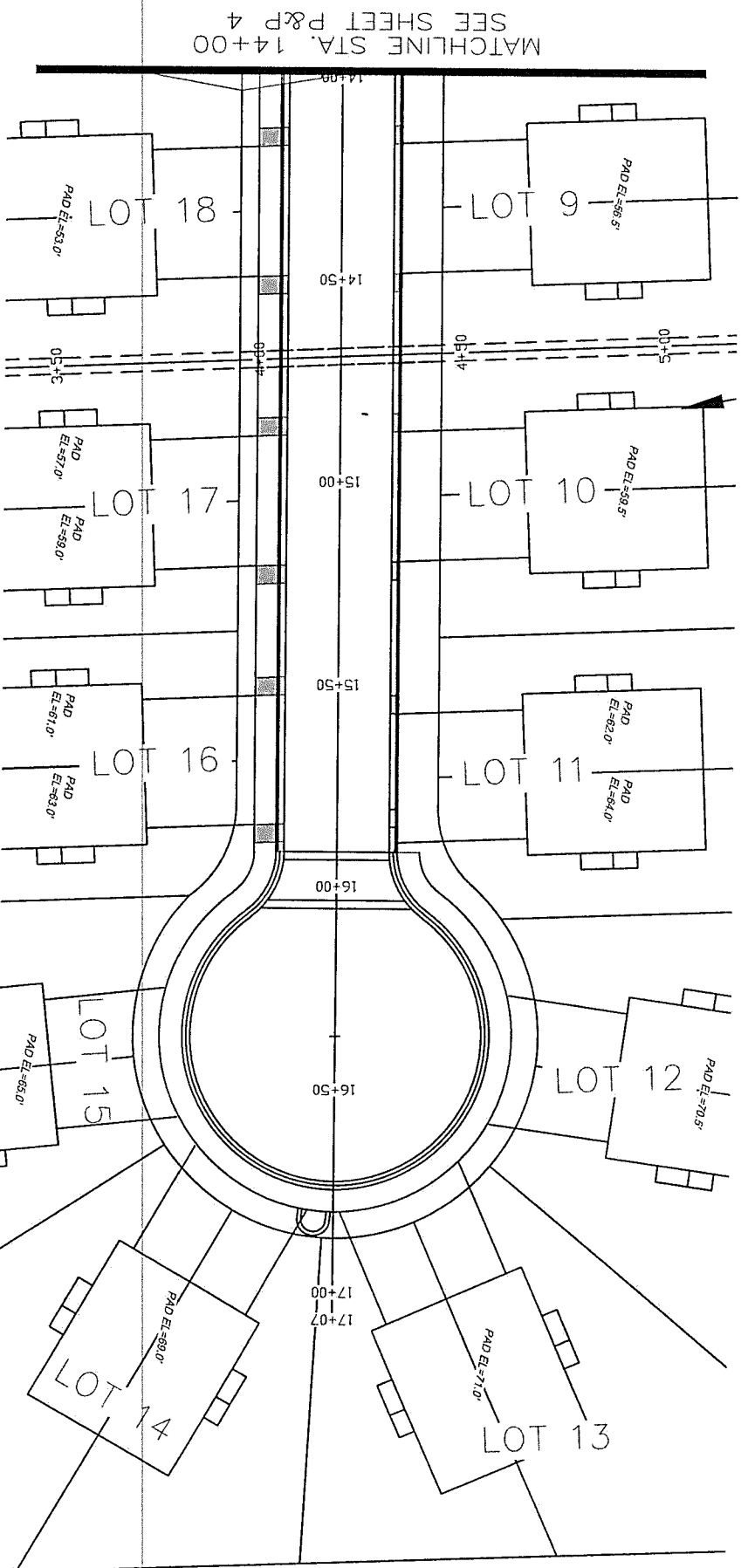
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ph: (360) 352-2477 fax: (360) 352-0179 E-mail: admin@vectorengineeringinc.com

RAVENSWOOD P&P
JUNEAU, AK

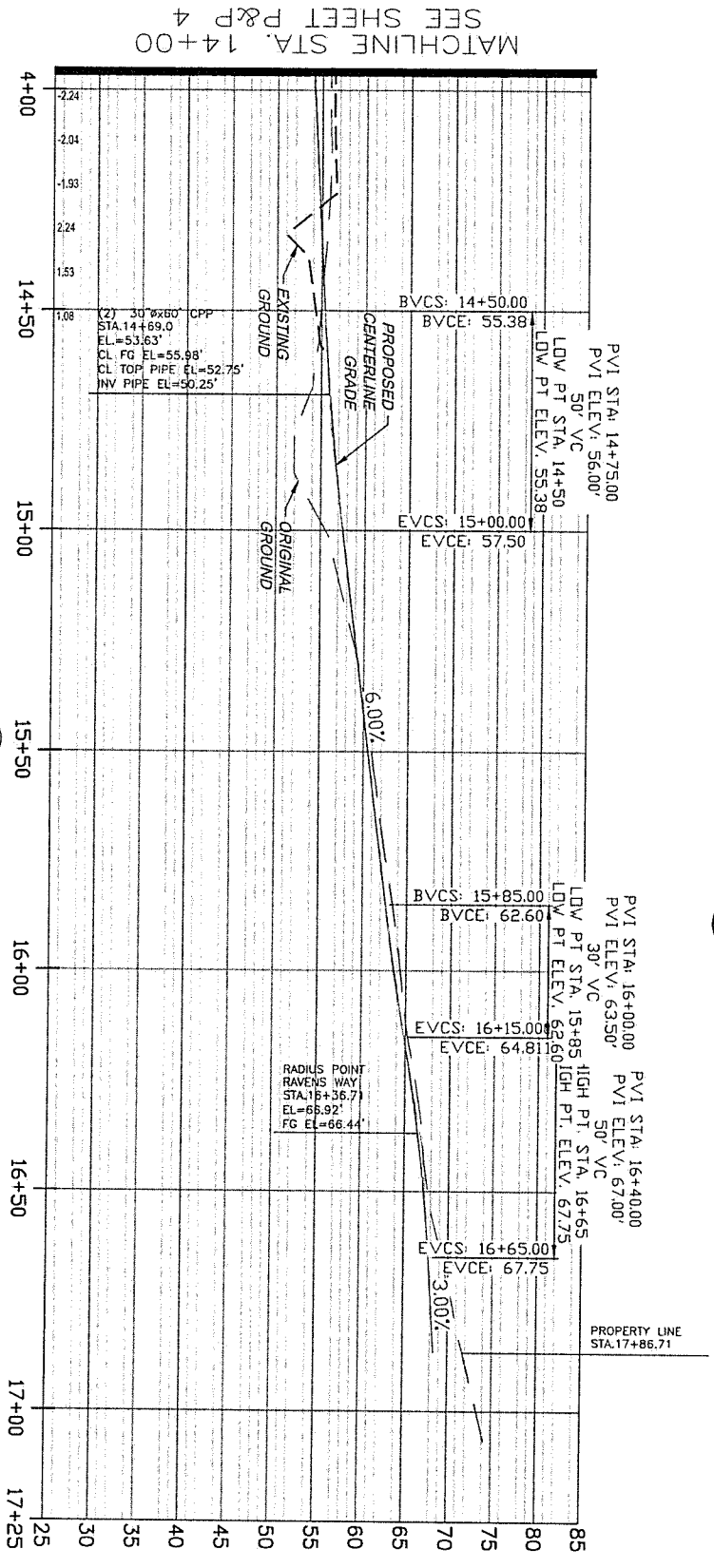
P&P 4
PLAN & PROFILE
SHT 4 OF 6

LEGEND	
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	EASEMENT
	EXISTING WATER LINE
	EXISTING SEWER LINE
	EXISTING ELECTRIC
	EXISTING DRIVEWAY
	EXISTING STORM DRAIN
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	EXISTING WATER LINE
	PROPOSED VALLEY GUTTER
	PROPOSED CURB & GUTTER WITH CURB INLET
	PROPOSED BACK SIDEWALK
	PROPOSED CUT SLOPE
	PROPOSED FILL SLOPE



MATCHLINE STA. 14+00
SEE SHEET P&P 4

A PLAN
SCALE: 1" = 20' ON FULL SIZE



B PROFILE
SCALE: 1" = 20' ON FULL SIZE

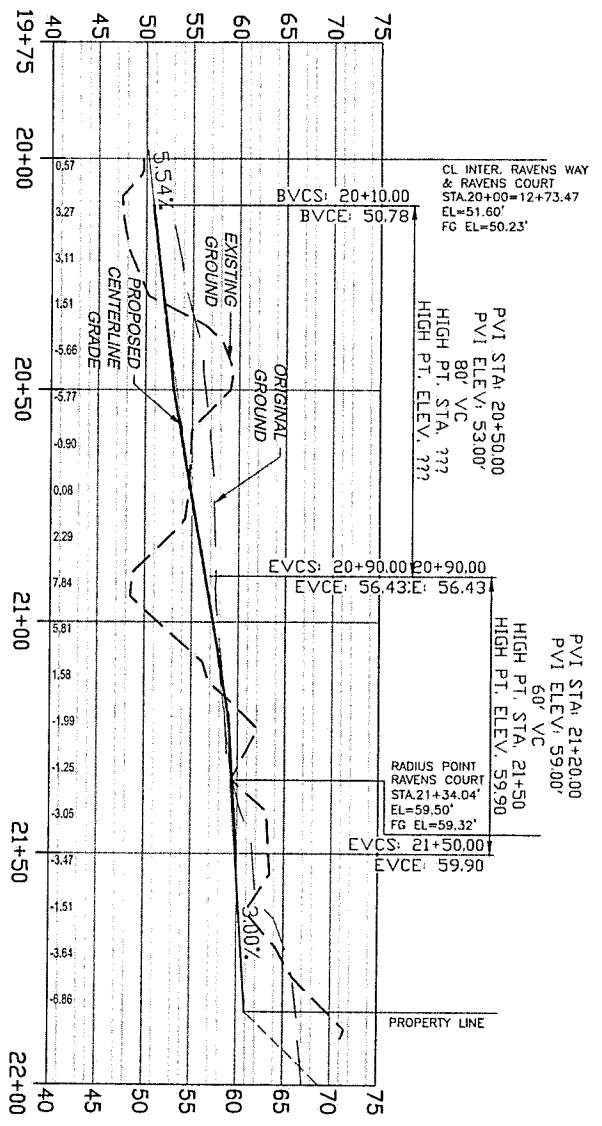
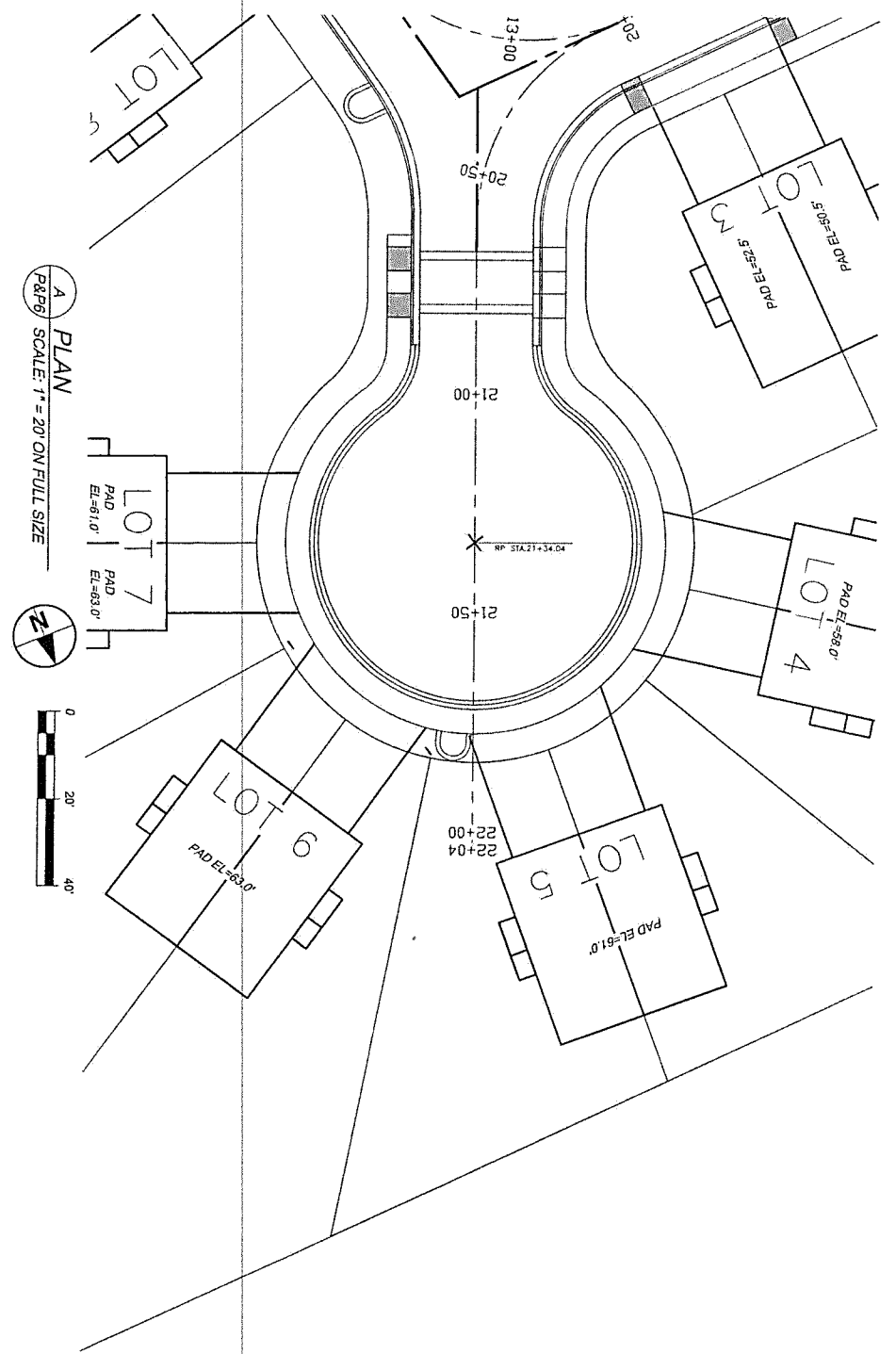
MATCHLINE STA. 14+00
SEE SHEET P&P 4

FILE: Ravenswood_P&P_VEL.dwg	
PROJECT: 24-RAVEN	
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DETAILED BY: ---	3
DESIGNED BY: ---	1
DATE	NO
REVISION	BY

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2724 Black Lake Boulevard SW, Suite 202
Turnwater, WA 98512
ph: (360) 352-2477 fax: (360) 352-0779 E-mail: admin@vectorengineeringinc.com

LEGEND

	SURVEYED
	UNSERVED
	CENTERLINE
	EASEMENT
	EXISTING WATER LINE
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	EXISTING STORM DRAIN
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	PROPOSED CUT SLOPE
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DATE	NO.	REVISION	BY

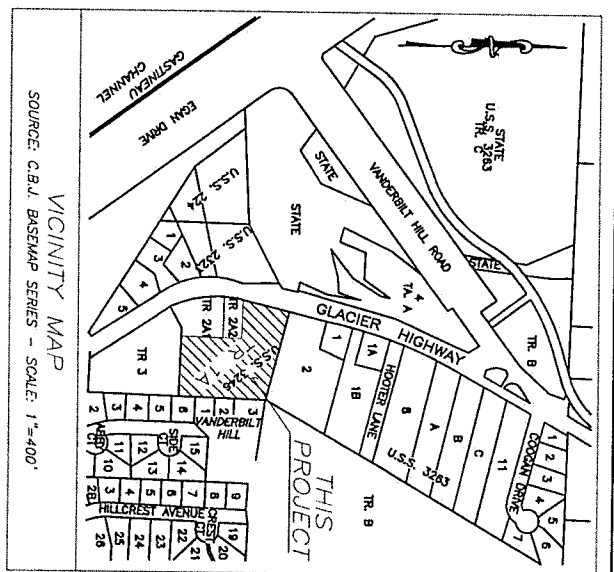
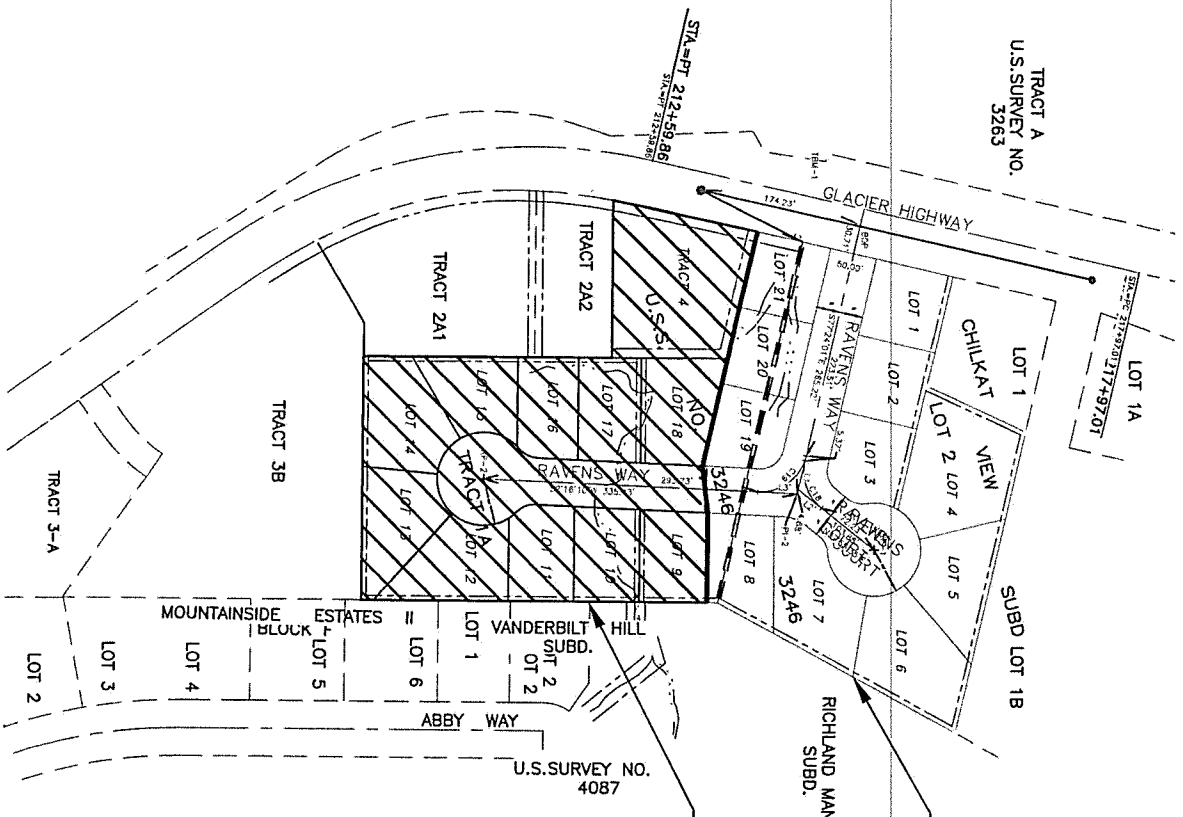
Vector
 ENGINEERING INC.
 2724 Black Lake Boulevard SW, Suite 202
 Tumwater, WA 98512
 ph: (360) 352-4177 fax: (360) 352-0179 E-mail: admin@vectorengineeringinc.com

RAVENSWOOD P&P
 JUNEAU, AK

P&P 6
 PLAN & PROFILE
 SHIT 6 OF 6

RAVENSWOOD SUBDIVISION PHASE I JUNEAU, ALASKA 99801 JUNE, 2016

PROJECT DATA:
 LOCATION: APPROX. 4.5 MILE OLD GLACIER HIGHWAY CITY & BOROUGH OF JUNEAU
 ZONING: R-15
 SITE AREA: 5.59 ACRES - PHASE I & PHASE II
 NO. OF LOTS: 42 TOWNHOMES (ZERO LOT LINES) 21 DETACHED
 AVG. LOT SIZE: 8,406 S.F.
 MIN. LOT SIZE: 6,720 S.F.
 MEAN NET DENSITY: UNITS/ACRE
 PARKING: 2 PER UNIT
 DRAINAGE: CONTROLLED STORM DRAIN
 SEWER: PUBLIC-CITY & BOROUGH OF JUNEAU
 WATER: PUBLIC-CITY & BOROUGH OF JUNEAU
 ELECTRIC: AEL&P
 ACCESS PERMIT: STATE OF ALASKA ADOT/PF # _____



PHASE I
(2016-2017)
(13 LOTS)

PHASE II
(2024-2025) TENTATIVE
(8 LOTS)

- NOTES
 CONSTRUCTION INSPECTION
 1. CITY & BOROUGH JUNEAU AND/OR CONTRACTOR SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT CBJ STANDARD DETAILS AND CBJ STANDARD SPECIFICATIONS FOR ENGINEERING AND SUBDIVISION IMPROVEMENTS

FOR: CITY & BOROUGH OF JUNEAU
 DEVELOPER: LOAFETE CONSTRUCTION, INC.
 PO Box 34939
 JUNEAU, ALASKA 99803
 (907) 789-5025
 ATTN: RICH PETERSON

BID PLAN SET DATED: MAY, 2016

SHEET INDEX

SHEET NO.	SHEET NO.	DESCRIPTION
G1	G1 OF X	COVER SHEET
G2	G2 OF X	LEGEND, ABBREVIATION, AND GENERAL NOTES
G3	G3 OF X	ROADWAY TRAP SECTIONS
T1	T1 OF X	TRAFFIC CONTROL PLAN
B1	B1 OF X	SURVEY CONTROL SHEET
EC1	EC1 OF X	STORM WATER SEDIMENT CONTROL PLAN
EC2	EC2 OF X	STORM WATER SEDIMENT CONTROL PLAN DETAILS
SR1	SL1 OF X	STREAM LOCATION PLAN
SR2	D2 OF X	STREAM LOCATION PROFILE
P1	P1 OF X	ROADWAY PLAN STA. 10+00 TO 12+00
P2	P2 OF X	ROADWAY PLAN STA. 12+00 TO 14+00, STA. 20+00 TO 20+85
P2A	P2A OF X	INTERSECTION GRADE CONTROL
P3	P3 OF X	ROADWAY PLAN STA. 20+00 TO 21+82.87
P4	P4 OF X	ROADWAY PROFILE STA. 10+00 TO 12+00
P5	P5 OF X	ROADWAY PROFILE STA. 12+00 TO 14+00
P6	P6 OF X	ROADWAY PROFILE STA. 20+00 TO 20+85
P7	P7 OF X	ROADWAY PROFILE STA. 20+85 TO 21+82.87
P8	P8 OF X	ROADWAY PLAN STA. 14+00 TO 17+00
P9	P9 OF X	ROADWAY PROFILE STA. 14+00 TO 17+00
U1	U1 OF X	ROADWAY AND UTILITIES PLAN STA. 10+00 TO 12+00
U2	U2 OF X	ROADWAY AND UTILITIES PLAN STA. 12+00 TO 14+00, STA. 20+00 TO 20+85
U3	U3 OF X	ROADWAY AND UTILITIES PLAN STA. 14+00 TO 17+00
U4	U4 OF X	ROADWAY AND UTILITIES PROFILE STA. 10+00 TO 12+00
U5	U5 OF X	ROADWAY AND UTILITIES PROFILE STA. 12+00 TO 14+00
U6	U6 OF X	ROADWAY AND UTILITIES PROFILE STA. 20+00 TO 20+85
U7	U7 OF X	ROADWAY AND UTILITIES PROFILE STA. 20+85 TO 21+82.87
U8	U8 OF X	ROADWAY AND UTILITIES PLAN STA. 14+00 TO 17+00
U9	U9 OF X	ROADWAY AND UTILITIES PROFILE STA. 14+00 TO 17+00
SD1	SD1 OF X	STORM DRAIN PLAN STA. 10+00 TO 12+00
SD2	SD2 OF X	STORM DRAIN PLAN STA. 12+00 TO 14+00, STA. 20+00 TO 20+85
SD3	SD3 OF X	STORM DRAIN PLAN STA. 120+85 TO 21+82.87
SD4	SD4 OF X	STORM DRAIN PROFILE STA. 10+00 TO 12+00
SD5	SD5 OF X	STORM DRAIN PROFILE STA. 12+00 TO 14+00
SD6	SD6 OF X	STORM DRAIN PROFILE STA. 20+00 TO 20+85
SD7	SD7 OF X	STORM DRAIN PROFILE STA. 20+85 TO 21+82.87
SD8	SD8 OF X	STORM DRAIN PLAN STA. 14+00 TO 17+00
SD9	SD9 OF X	STORM DRAIN PROFILE STA. 14+00 TO 17+00
W1	W1 OF X	WATERLINE PLAN STA. 10+00 TO 12+00
W2	W2 OF X	WATERLINE PLAN STA. 12+00 TO 14+00, STA. 20+00 TO 20+85
W3	W3 OF X	WATERLINE PLAN STA. 20+85 TO 21+82.87
W4	W4 OF X	WATERLINE PROFILE STA. 10+00 TO 12+00
W5	W5 OF X	WATERLINE PROFILE STA. 12+00 TO 14+00
W6	W6 OF X	WATERLINE PROFILE STA. 20+00 TO 20+82.87
W7	W7 OF X	WATERLINE PROFILE STA. 20+85 TO 21+82.87
W8	W8 OF X	WATERLINE PLAN STA. 14+00 TO 17+00
W9	W9 OF X	WATERLINE PROFILE STA. 14+00 TO 17+00
W10	W10 OF X	WATERLINE DETAILS
WS1	WS1 OF X	WATER & SEWER SERVICES
SS1	SS1 OF X	SANITARY SEWER PLAN STA. 10+00 TO 12+00
SS2	SS2 OF X	SANITARY SEWER PLAN STA. 12+00 TO 14+00, STA. 20+00 TO 20+85
SS3	SS3 OF X	SANITARY SEWER PLAN STA. 20+85 TO 21+82.87
SS4	SS4 OF X	SANITARY SEWER PROFILE STA. 10+00 TO 12+00
SS5	SS5 OF X	SANITARY SEWER PROFILE STA. 12+00 TO 14+00
SS6	SS6 OF X	SANITARY SEWER PROFILE STA. 20+00 TO 20+85
SS7	SS7 OF X	SANITARY SEWER PROFILE STA. 20+85 TO 21+82.87
SS8	SS8 OF X	SANITARY SEWER PLAN STA. 14+00 TO 17+00
SS9	SS9 OF X	SANITARY SEWER PROFILE STA. 14+00 TO 17+00
DT2	DT2 OF X	STREAM CHANNEL RELOCATION DETAILS
DT3	DT3 OF X	PROPERTY LINE SLOPES & TRENCH DETAIL
DT4	DT4 OF X	CBJ STANDARD DETAILS
DT5	DT5 OF X	CBJ STANDARD DETAILS
DT6	DT6 OF X	CBJ STANDARD DETAILS
W11	DT11 OF X	DETAILS
W12	DT12 OF X	DETAILS
E1	E1 OF X	ELECTRICAL PLANS
E2	E2 OF X	ELECTRICAL PLANS

ABBREVIATIONS

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED POLYETHYLENE PIPE
CO	CLEANOUT
CONC	CONCRETE
CTE	CONNECT TO EXISTING
DI	DUCTILE IRON
DIA	DIAMETER
EOP	END OF PROJECT
FG	FINISHED GRADE
FH	FIRE HYDRANT
GV	GRATE VALVE
INV	INVERT
LG	LIP OF GUTTER
LT	LEFT
MH	MANHOLE
MTE	MATCH TO EXISTING
NO	NUMBER
NTS	NOT TO SCALE
PC	POINT OF CURVATURE
PT	POINT OF TANGENT
PVI	POINT OF VERTICAL INTERSECTION
PVC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PVC	POLYVINYL CHLORIDE PIPE
RT	RIGHT
STA	STATION
STD	STANDARD
TBC	TOP BACK OF CURB
TBVC	TOP BACK OF VALLEY GUTTER
TP	TOP OF PAVEMENT
UD	UNDERDRAIN
VG	VALLEY GUTTER

ABBREVIATIONS TO USED WITHOUT PERIODS

LEGEND:

DESCRIPTION	EXISTING	REMOVE	PROPOSED
SURVEYED	---		---
UNSURVEYED	---		---
CENTERLINE	---		---
EASEMENT	---		---
CUT SLOPE	---		---
FILL SLOPE	---		---
WATER LINE	---		---
SEWER LINE	---		---
STORM DRAIN	---		---
FENCE	---		---
TELEPHONE	---		---
CABLE	---		---
CURB INLET	---		---
WATER VALVE	---		---
POWER POLE	---		---
FIRE HYDRANT	---		---
SANITARY MANHOLE	---		---
CLEANOUT	---		---

NOTES:

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY AND BOROUGH OF JUNEAU STANDARDS AND THE MOST CURRENT COPY OF THE STATE OF ALASKA STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION (AKDOT/PF).
- ALL SAFETY STANDARDS AND REQUIREMENTS SHALL BE AS SET FORTH BY OSHA, AKDOT/PF AND ALASKA STATE DEPARTMENT OF LABOR.
- TEMPORARY EROSION/WATER POLLUTION MEASURES SHALL BE REQUIRED IN ACCORDANCE WITH CURRENT SPECIFICATIONS.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT (907) 586-1333. A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

OWNER:
Lowpete Construction, INC.
PO Box 34939
Juneau, AK 99803
(907) 789-5025

PROJECT TEAM

ENGINEER:
Moore Engineering, INC.
PO Box 397
Craig, AK 99921
907 530-7008 P1
FOC: Tracy Moore, P.E.

SURVEYOR
JW Bean, INC.
Professional Surveyor
1070 Arctic Circle
Juneau, AK 9980
907 723-3610 Cell
POC: JW Bean

MOORE ENGINEERING
P.O. BOX 397 CRAIG, ALASKA 99921
(907) 530-7008

RAVENWOOD SUBDIVISION

TRACY MOORE, P.E.
REGISTERED PROFESSIONAL CIVIL ENGINEER

SHEET
G2
2 OF 64

TRAFFIC CONTROL PLAN

SHOULDER WORK - TWO LANE TRAFFIC

TRACT 4

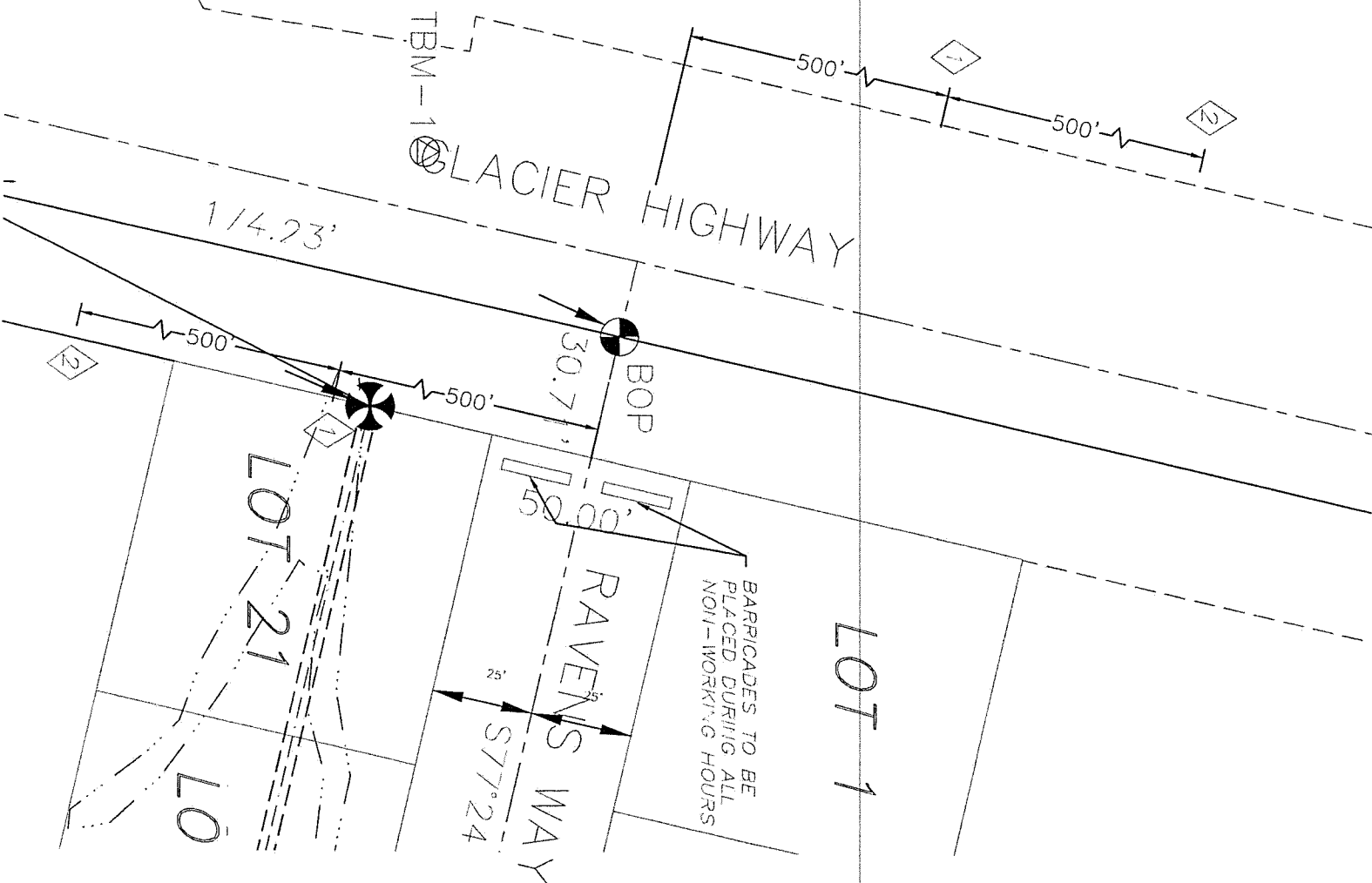


- NOTES:
1. CONE OFF SHOULDER AND REDUCE LANE TO 10' WHILE WORKING ON SHOULDER.
 2. WORK LIMITS 5am TO 3pm (MONDAY THRU FRIDAY)

LEGEND

- 1 ROAD CONSTRUCTION AHEAD
- 2 TRUCK TURNING AHEAD
- 3 ROADWAY NARROWS MEN & EQUIPMENT ON SHOULDER

TRAFFIC CONTROL PLAN



SURVEY CONTROL SHEET

TRACT A
U.S. SURVEY NO.
3263

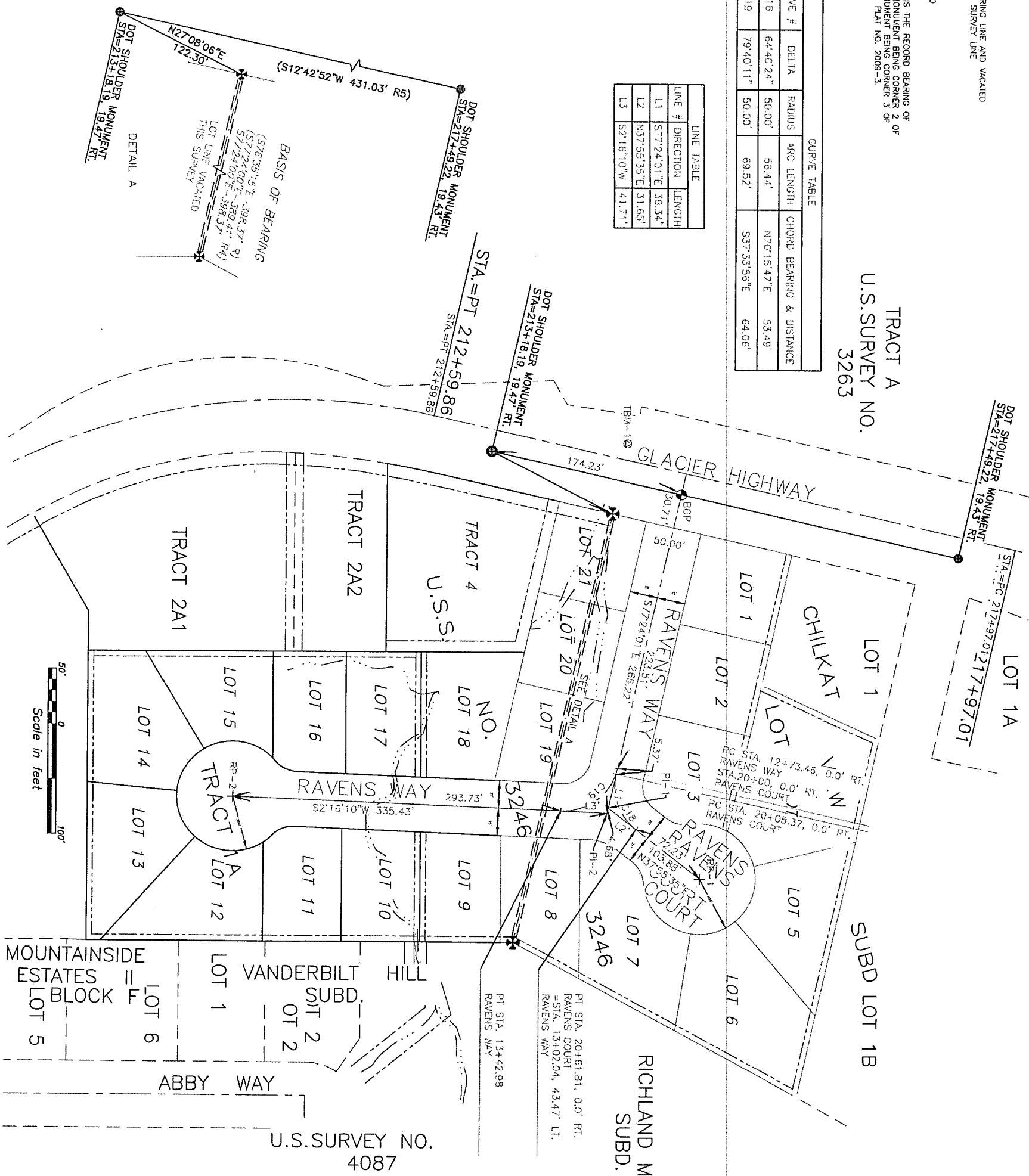
- LEGEND**
- ⊗ B.L.M. 2-1/2" BRASS MONUMENT RECOVERED THIS SURVEY
 - ⊕ PRIMARY DOT SHOULDER MONUMENT IN CASING RECOVERED THIS SURVEY
 - ⊙ 2" BRASS CAP, NO MARKINGS
 - ⊕ PRIMARY MONUMENT RE-SET THIS SURVEY
 - ⊕ ALUMINUM MONUMENT, JW BEAN
 - ⊙ SURVEY NAIL SET THIS SURVEY
 - PK NAIL W/ STAINLESS STEEL WASHER, J.W. BEAN
 - SURVEYED
 - UNSURVEYED
 - CENTERLINE
 - SURVEY TIE
 - EASEMENT
 - BASIS OF BEARING LINE AND VACATED LOT LINE THIS SURVEY LINE

(R) = AS PER PLAT NO. 2009-3
(RA) = AS PER PLAT NO. 2005-20

BASIS OF BEARING
BASIS OF BEARING FOR THIS PLAT IS THE RECORD BEARING OF 576°35'15"E FROM A FOUND BLM MONUMENT BEING CORNER 2 OF U.S.S. 3263 TO A FOUND BLM MONUMENT BEING CORNER 3 OF U.S.S. 3263 AS SHOWN ON RECORD PLAT NO. 2009-3.

CURVE TABLE				
CURVE #	DELTA	RADIUS	ARC LENGTH	CHORD BEARING & DISTANCE
C18	64°40'24"	50.00'	56.44'	N70°15'47"E 53.49'
C19	79°40'11"	50.00'	69.52'	S37°33'58"E 64.06'

LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	S77°24'01"E	36.34'
L2	N37°55'35"E	31.65'
L3	S2°16'10"W	41.71'



STA=217+49.22, 19.43' FT.
GLACIER HWY MON.
STA. 10+19.39, 256.79' LT.
H=6311.7522
E=3036.4987
ELEV.=28.93'

STA=213+18.19, 19.47' RT.
GLACIER HWY MON.
STA. 10+19.14, 174.23' RT.
N=5891.1613
E=2944.2250
ELEV.=43.69'

PK. NAIL/W. WASHER
STA. 9+85.23, 57.15' RT.
N=6012.8211
E=2336.6712
ELEV.=38.67'

BOP
GLACIER HWY & RAVENS WAY
STA. 13+00
N=6061.1759
E=2982.3319
ELEV.=36.73'

PI-1
PI RAVENS WAY & RAVENS COURT
STA. 20+33.59, 9.18' RT.
=STA. 13+05.33, 12.22' LT.
N=5997.6445
E=3266.5618
FG. ELEV.=51.85'

PI-2
ANG. PT. PI RAVENS WAY
STA. 13+08.22, 15.11' LT.
N=5996.6224
E=3271.1342
FG. ELEV.=51.75'

RP-1
RAVENS COURT RADIUS POINT
STA. 21+34.04, RT. 0.0'
N=6079.3914
E=3330.4228
CL. FG. ELEV.=59.32'

RP-2
RAVENS WAY RADIUS POINT
STA. 16+36.71, RT. 0.0'
N=5661.4528
E=3257.8515
CL. FG. ELEV.=67.00'

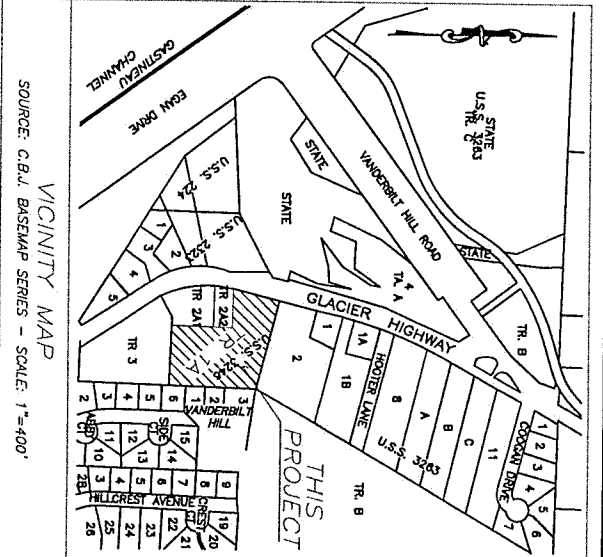
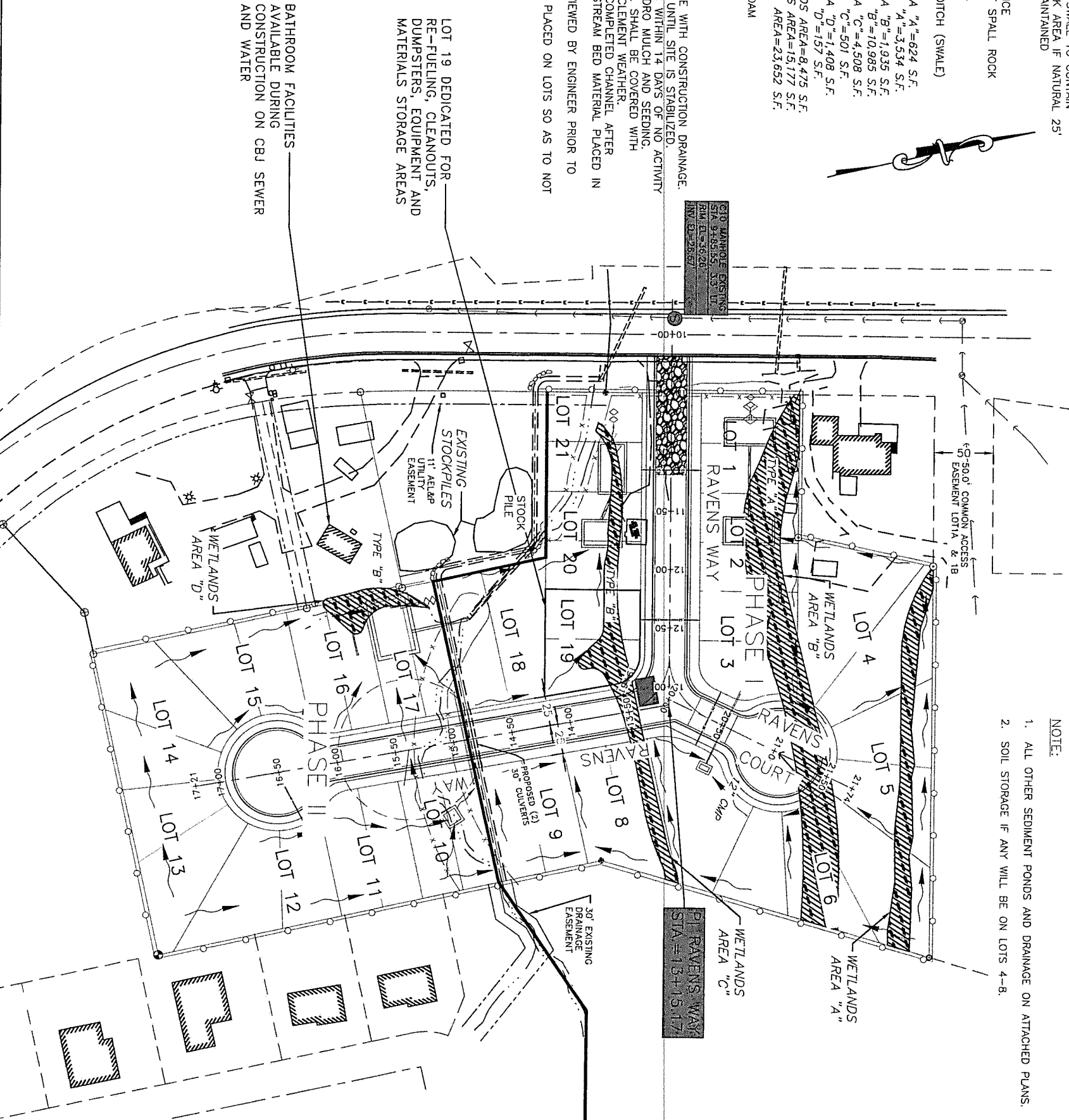
- LEGEND**
- x—x— SILT FENCE, BRUSH BERM, 1" ROCK BERM OR TEMP. CONTROL SWALE TO CONTAIN RUNOFF WITHIN WORK AREA IF NATURAL 25' BUFFER CAN NOT MAINTAINED
 - o-o- FLAGGED BOUNDARY
 - CONTROLLED ENTRANCE / EXIT CONTAINMENT SPALL ROCK
 - TEMPORARY WATER DITCH (SWALE)
 - TEMPORARY WATER CULVERT
 - WETLANDS AREA "A"=624 S.F.
 - WETLANDS AREA "B"=1,935 S.F.
 - WETLANDS AREA "C"=4,508 S.F.
 - WETLANDS AREA "D"=1,408 S.F.
 - WETLANDS AREA "D"=157 S.F.
 - TOTAL WETLANDS AREA=8,475 S.F.
 - TOTAL WETLANDS AREA=15,177 S.F.
 - TOTAL AREA=23,652 S.F.

CONSTRUCTION NOTES:

- DO NOT MIX EXISTING DRAINAGE WITH CONSTRUCTION DRAINAGE. KEEP SEPARATE AT ALL TIMES UNTIL SITE IS STABILIZED.
- COVER ALL DISTURBED SLOPES WITHIN 14 DAYS OF NO ACTIVITY OR FINISH CONDITION WITH HYDRO MULCH AND SEEDING. STOCKPILE OF WASTE MATERIAL SHALL BE COVERED WITH PLASTIC SHEATHING DURING INCLEMENT WEATHER.
- TRANSFER DRAINAGE TO NEW COMPLETED CHANNEL AFTER SLOPES ARE STABILIZED AND STREAM BED MATERIAL PLACED IN STREAM RELOCATION AREA.
- CONTRACTOR SWPP TO BE REVIEWED BY ENGINEER PRIOR TO IMPLEMENTATION.
- ANY SNOW STORAGE WILL BE PLACED ON LOTS SO AS TO NOT BLOCK DRAINAGE OR BERM.



- NOTE:**
- ALL OTHER SEDIMENT PONDS AND DRAINAGE ON ATTACHED PLANS.
 - SOIL STORAGE IF ANY WILL BE ON LOTS 4-8.

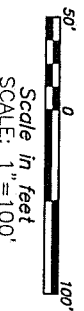


PHASE I - WORK PLAN

CONSTRUCT RAVENS WAY TO STA.=14+00 AND RAVENS COURT INCLUDING TEMPORARY CUL=DE=SAC AT STA.=15+38.
CONSTRUCT WATER, SEWER, POWER AND STORM DRAIN FROM GLACIER HIGHWAY.
CONSTRUCT RELOCATED STREAM CHANNEL INSTALL CULVERTS.

PHASE II - WORK PLAN

FINISH RAVENS WAY FROM STA.=14+00 TO END INCLUDING ALL UTILITIES.



REV	DATE	BY	DESCRIPTION

SCALE GRAPHIC
DESIGNED: ###
DRAWN: ###
CHECKED: ###
DATE September 30, 2024

MOORE ENGINEERING
P.O. BOX 397 CRAIG, ALASKA 99921
(907) 530-7008
TRACY MOORE, P.E.
REGISTERED PROFESSIONAL CIVIL ENGINEER

RAVENWOOD SUBDIVISION

SHEET EC1
SHEET NO. 6 OF 64

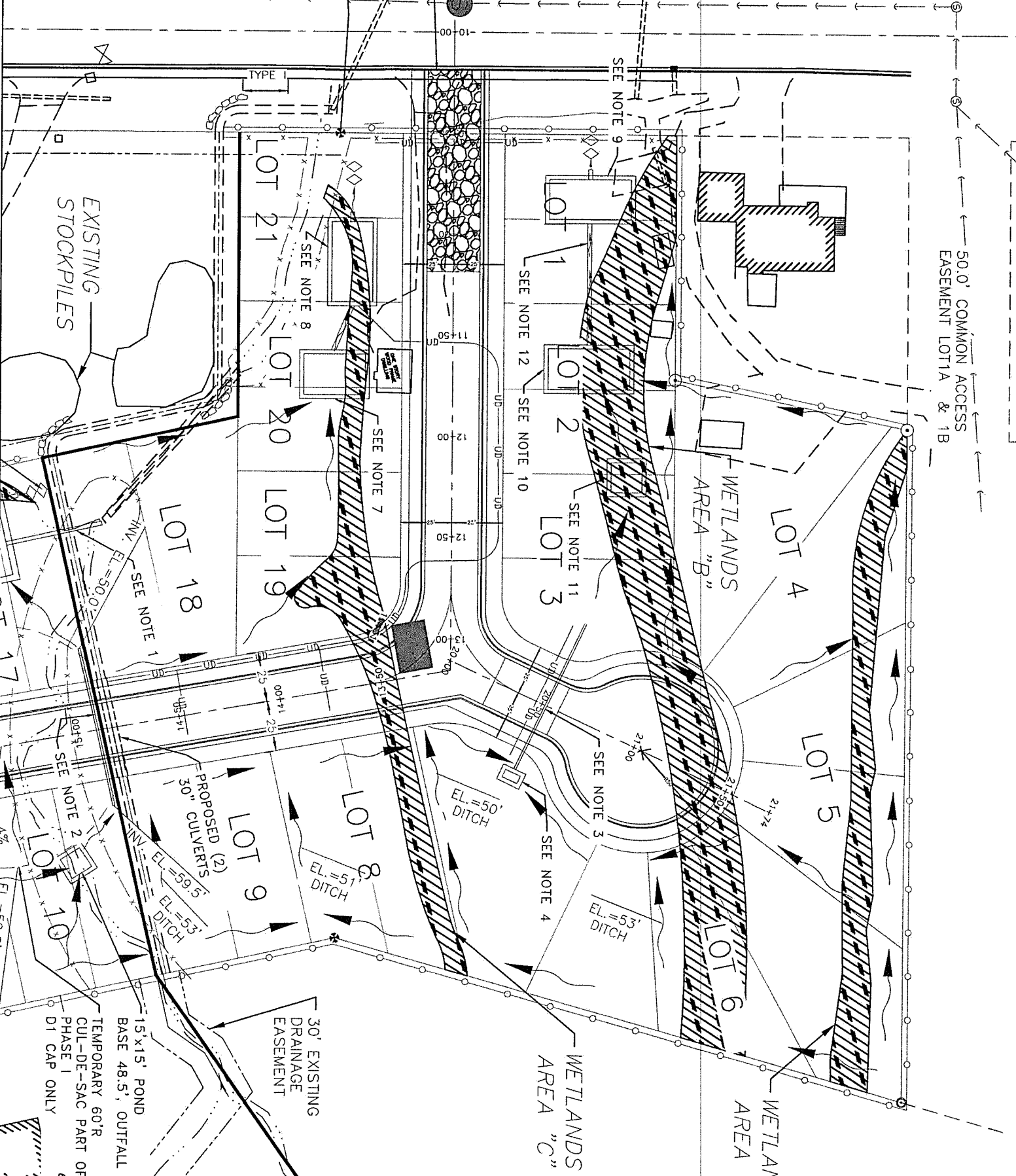
LEGEND

- x—x— SILT FENCE, BRUSH BERM, ROCK BERM OR TEMP. CONTROL SWALE TO CONTAIN RUNOFF WITHIN WORK AREA IF NATURAL 25' BUFFER CAN NOT MAINTAINED
- o-o- FLAGGED BOUNDARY
- CONTROLLED ENTRANCE
- / EXIT CONTAINMENT SPALL ROCK
- ▬ TEMPORARY CULVERT
- ▬ TEMPORARY WATER DITCH (SWALE)
- ▨ WETLANDS AREA "A" = 624 S.F.
- ▨ WETLANDS AREA "B" = 1,935 S.F.
- ▨ WETLANDS AREA "C" = 4,508 S.F.
- ▨ WETLANDS AREA "D" = 501 S.F.
- ▨ WETLANDS AREA "D" = 1,408 S.F.
- ▨ TOTAL WETLANDS AREA = 8,475 S.F.
- ▨ TOTAL UPLANDS AREA = 15,177 S.F.
- ▨ TOTAL AREA = 23,652 S.F.
- ◇◇◇ TEMPORARY CHECK DAM

- NOTES:**
1. TEMP 12" CULVERT OUTFALL 6" BELOW OVER OUTFALL PIPE CAN BE REMOVED AFTER STREAM LOCATION, BUT CAN STAY TILL LOT 18 DEVELOPED.
 2. 12"x80" CULVERT ABANDON WHEN NOT NEEDED. 12" UNDER DRAIN UNDER CULVERT.
 3. 12"x80" CPP, ABANDON AT END OFF CONSTRUCTION.
 4. 12"x8" POND (BASE), INV. EL.=46', OUTFALL EL.=49'.
 5. ALL OTHER SEDIMENT PONDS AND DRAINAGE ON ATTACHED PLANS.
 6. LOT 17 TO BE LAST LOT BUILT ON PHASE 2 TO KEEP SETTLING POND IN PLACE TILL END OF PROJECT.
 7. 20'x30' SEDIMENT POND (BASE), INV. EL.=39', OUTFALL EL.=43'.
 8. 20'x40' SEDIMENT POND (BASE), INV. EL.=29', OUTFALL EL.=32'.
 9. 20'x40' SEDIMENT POND, INV. EL.=30', OUTFALL EL.=33'.
 10. 20'x40' SEDIMENT POND, INV. EL.=39', OUTFALL EL.=42'.
 11. 15'x15' POND, INV. EL.=41', OUTFALL EL.=45'.
 12. 4" ROCK LINER ON THE TWO LOWER PONDS. ON LOTS 1, 17 & 21 AND DRAINAGE TO POND ABOVE.
 13. LOT 1 AND LOT 21 TO BE LAST LOTS BUILT ON AND LOWER SEDIMENT PONDS TO BE REMAIN TILL ALL EXCAVATION ABOVE IS COMPLETE.
 14. UNDER DRAIN INSTALLED DURING ROAD CONSTRUCTION.

EXISTING
 6" MANHOLE
 STA 9+85.55 3 3 11
 R/W EL.=36.26
 INV. EL.=26.67'

100' STABILIZED
 CONSTRUCTION EXIT
 4" CLEAN SHOT
 ROCK 6" DEPTH



PHASE I - WORK PLAN

CONSTRUCT RAVENS WAY TO STA.=14+00 AND RAVENS COURT INCLUDING TEMPORARY CUL-DE-SAC AT STA.=15+38.
 CONSTRUCT WATER, SEWER, POWER AND STORM DRAIN FROM GLACIER HIGHWAY.
 CONSTRUCT RELOCATED STREAM CHANNEL INSTALL CULVERTS.

PHASE II - WORK PLAN

FINISH RAVENS WAY FROM STA.=14+00 TO END INCLUDING ALL UTILITIES.



REV	DATE	BY	DESCRIPTION

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RAVENWOOD SUBDIVISION

SHEET	EC2
SHEET NO.	7 OF 64

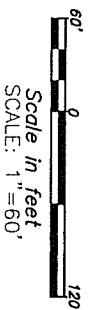
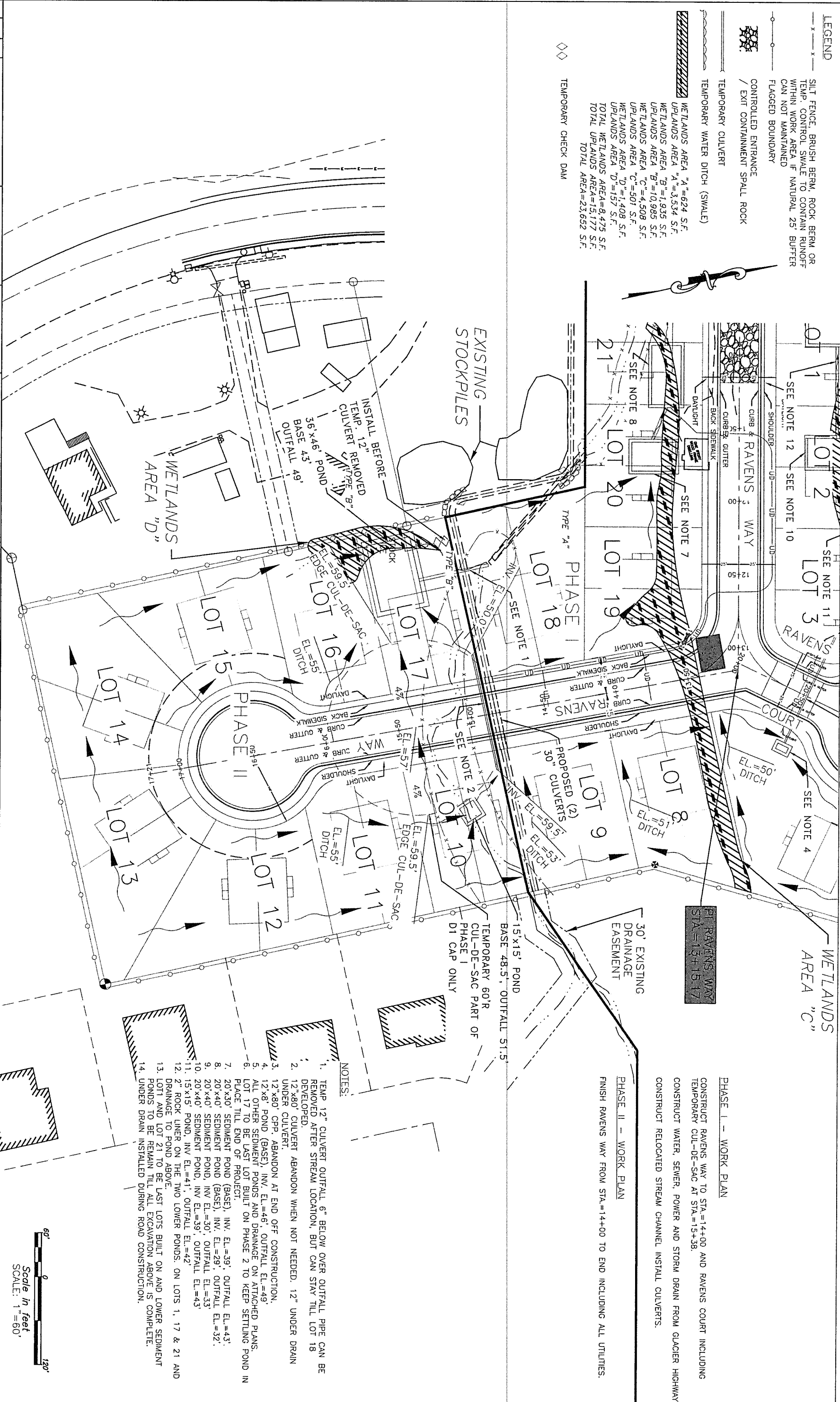
REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

MOORE ENGINEERING
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RAVENWOOD SUBDIVISION

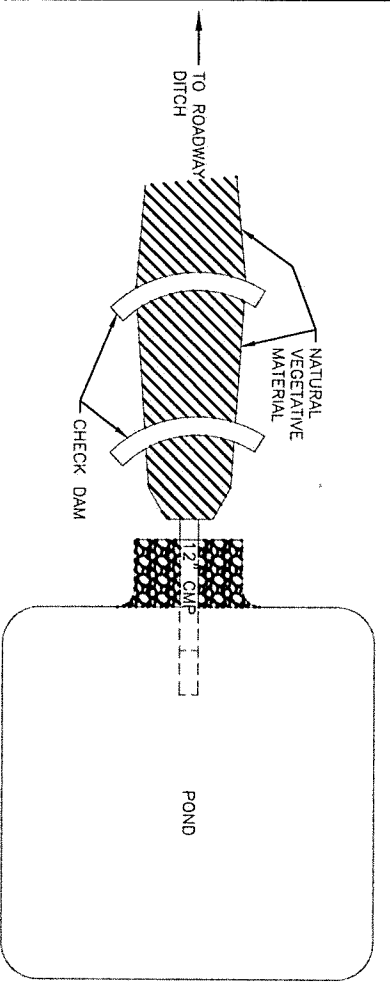
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SHEET NO.	8 OF 64



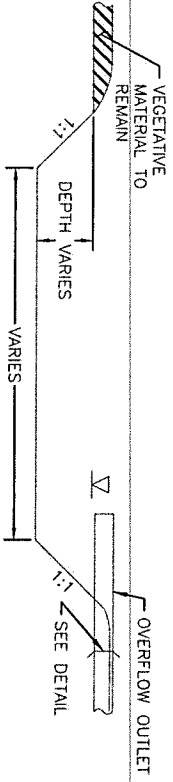
- NOTES:**
- TEMP 12" CULVERT OUTFALL 6" BELOW OVER OUTFALL PIPE CAN BE REMOVED AFTER STREAM LOCATION, BUT CAN STAY TILL LOT 18 DEVELOPED.
 - 12"x80" CULVERT ABANDON WHEN NOT NEEDED. 12" UNDER DRAIN UNDER CULVERT.
 - 12"x80" CPP. ABANDON AT END OFF CONSTRUCTION.
 - 12"x8" POND (BASE), INV. EL.=46', OUTFALL EL.=49'
 - ALL OTHER SEDIMENT POND AND DRAINAGE ON ATTACHED PLANS.
 - LOT 17 TO BE LAST LOT BUILT ON PHASE 2 TO KEEP SETTLING POND IN PLACE TILL END OF PROJECT.
 - 20'x30' SEDIMENT POND (BASE), INV. EL.=39', OUTFALL EL.=43'
 - 20'x40' SEDIMENT POND (BASE), INV. EL.=29', OUTFALL EL.=32'
 - 20'x40' SEDIMENT POND, INV EL.=30', OUTFALL EL.=33'
 - 20'x40' SEDIMENT POND, INV EL.=39', OUTFALL EL.=43'
 - 15'x15' POND, INV EL.=41', OUTFALL EL.=42'
 - 2" ROCK LINER ON THE TWO LOWER PONDS: ON LOTS 1, 17 & 21 AND DRAINAGE TO POND ABOVE.
 - LOT 1 AND LOT 21 TO BE LAST LOTS BUILT ON AND LOWER SEDIMENT PONDS TO BE REMAIN TILL ALL EXCAVATION ABOVE IS COMPLETE.
 - UNDER DRAIN INSTALLED DURING ROAD CONSTRUCTION.

PHASE I - WORK PLAN
CONSTRUCT RAVENS WAY TO STA=14+00 AND RAVENS COURT INCLUDING TEMPORARY CUL-DE-SAC AT STA.=15+39.
CONSTRUCT WATER, SEWER, POWER AND STORM DRAIN FROM GLACIER HIGHWAY.
CONSTRUCT RELOCATED STREAM CHANNEL INSTALL CULVERTS.

PHASE II - WORK PLAN
FINISH RAVENS WAY FROM STA.=14+00 TO END INCLUDING ALL UTILITIES.

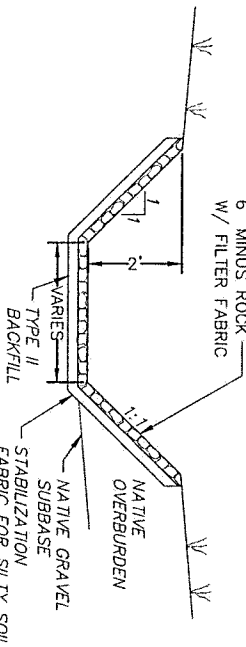


OVERFLOW OUTLET DETAIL
SCALE: 1"=10'

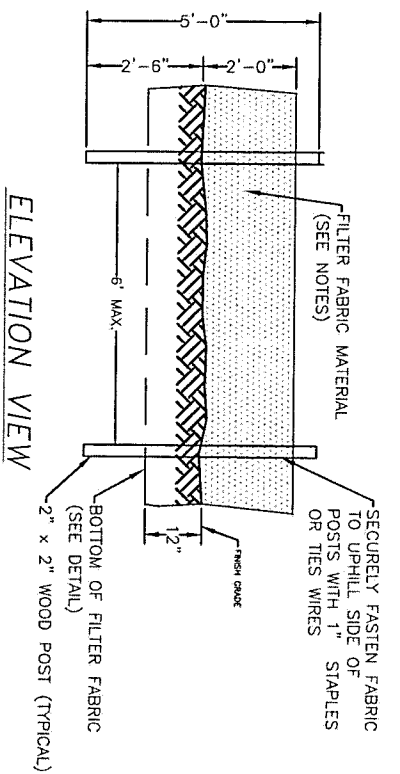


SEDIMENT POND DETAIL
SCALE: 1"=10'

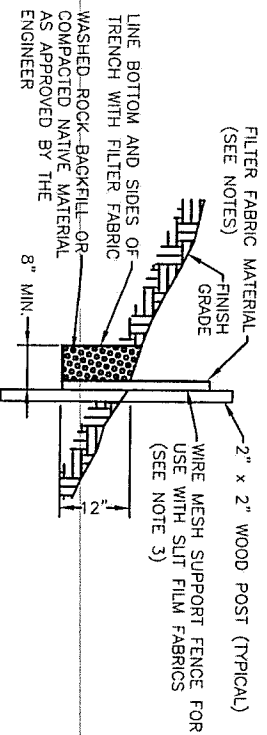
- NOTES:**
- 1. CLEAN OUT AND HAUL SILT TO APPROVED WASTER SITE OFF PROJECT AS NECESSARY.
 - 2. IF OVERFLOW IS INTERMITTED ADDITIONAL SETTLEMENT IS NECESSARY AND STORM WATER TO BE PUMPED TO PRIMARY SETTLEMENT POND 3.



TYPICAL DRAINAGE DITCH SECTION TYPE A
SCALE: 1"=4'



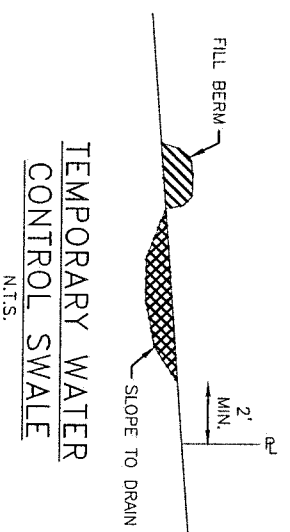
ELEVATION VIEW



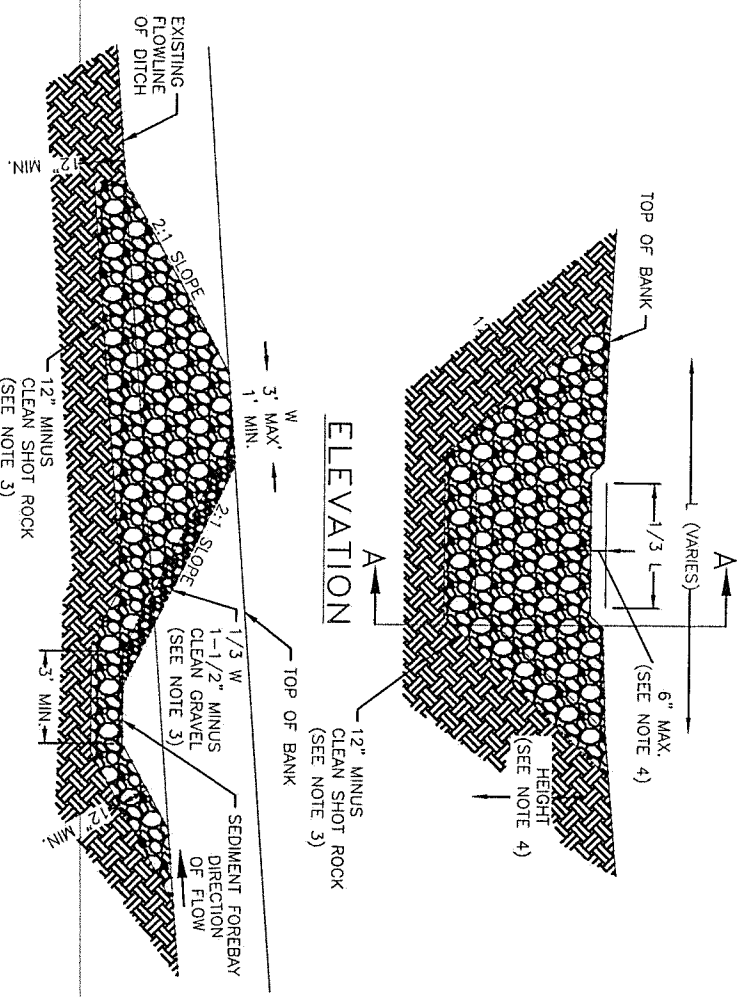
SIDE VIEW

- NOTES:**
- 1. INSTALL FENCE AT THE APPROPRIATE LOCATION BY CONSIDERING TERRAIN, SLOPE, WATER FLOW AND DISTURBANCE AREA. PLACE THE FENCE AWAY FROM THE TOE OF SLOPE LEAVING ROOM TO ACCUMULATE SEDIMENT AND PERFORM WORK.
 - 2. SILT FENCE FABRIC SHALL BE UV RESISTANT POLYPROPYLENE WITH OPENINGS LESS THAN A NO. 30 SIEVE, OR APPROVED BY THE ENGINEER.
 - 3. SILT FENCE FABRIC SHALL BE CUT FROM A CONTINUOUS ROLL WITH JOINTS KEPT TO A MINIMUM. JOINTS SHALL BE SECURED AT SUPPORT POSTS WITH A MINIMUM OF 6" OF OVERLAP. LESS POSTS MAY BE INSTALLED WHEN WIRE MESH IS USED TO SUPPORT THE SILT FENCE FABRIC AS APPROVED BY THE ENGINEER.
 - 4. AN 8" WIDE BY 2" DEEP TRENCH SHALL BE CONSTRUCTED ALONG THE ENTIRE LENGTH OF THE UPHILL SIDE OF THE SILT FENCE. THE TRENCH SHALL BE BACKFILLED WITH WASHED ROCK OR COMPACTED NATIVE MATERIAL.
 - 5. THE SILT FENCE SHALL BE MAINTAINED UNTIL THE ENTIRE DISTURBANCE AREA HAS BEEN STABILIZED. THE SILT FENCE MAY BE REMOVED ONLY AFTER THE RETAINED MATERIALS HAVE BEEN PROPERLY DISPOSED OF.
 - 6. ALTERNATE COMPRESSED 36" HIGH BRUSH BURM OR 18" HIGH 1" ROCK BURM MAY BE USED.

311-SILT FENCE
SCALE: 1"=4'



TEMPORARY WATER CONTROL SWALE
N.T.S.



SECTION A-A

ROCK CHECK DAM SPACING TABLE

AMOUNT ROCK SIZE	ROCK CHECK DAM SPACING TABLE
100% < 12"	DITCH GRADE
100% > 2"	SPACING
	1% 200 FT
	2% 100 FT
	4% 50 FT
	6% 33 FT
	8% 25 FT
UPSTREAM FACE OF STORMWATER MANAGEMENT ROCK CHECK DAM TO BE CLEAN 1-1/2" MINUS GRAVEL.	DITCH SLOPES GREATER THAN 8% SPACING MUST BE APPROVED BY THE ENGINEER

- NOTES:**
- 1. ROCK CHECK DAMS ARE NOT ALLOWED IN ANDROMONIOUS FISH STREAMS WITHOUT PERMISSION OF THE APPLICABLE STATE & FEDERAL AGENCIES AND THE CBU DEPARTMENT OF ENGINEERING.
 - 2. ROCK CHECK DAMS DESIGNATED AS STORMWATER MANAGEMENT ITEMS ARE TO REMAIN IN PLACE. TEMPORARY ROCK CHECK DAMS INSTALLED FOR SEDIMENT CONTROL DURING CONSTRUCTION MUST REMAIN IN PLACE UNTIL SOILS ARE STABILIZED AND REVEGATION IS COMPLETE AS APPROVED BY THE ENGINEER.
 - 3. STORM WATER MANAGEMENT ROCK CHECK DAMS SHALL BE CONSTRUCTED WITH CLEAN, WELL-GRADED MATERIAL (NO FINES), PER ROCK SIZE TABLE AND FACED ON THE UPSTREAM SIDE WITH CLEAN 1-1/2" MINUS GRAVEL. TEMPORARY ROCK CHECK DAMS MAY OMIT THE 1-1/2 GRAVEL FACE.
 - 4. THE HEIGHT OF THE ROCK CHECK DAM SPILLWAY SHALL BE NO GREATER THAN 3'. THE TOP OF DAM SHALL BE NO MORE THAN 3'-6". THE HEIGHT OF THE SPILLWAY SHALL BE PROPORTIONATE TO THE HEIGHT OF THE DAM BUT NO LESS THAN 2".
 - 5. ALL ROCK CHECK DAMS SHALL BE SPACED PER TABLE ABOVE AT A MINIMUM OR AS DIRECTED BY THE ENGINEER.

312-ROCK CHECK DAM
SCALE: 1"=6'

REV	DATE	BY	DESCRIPTION

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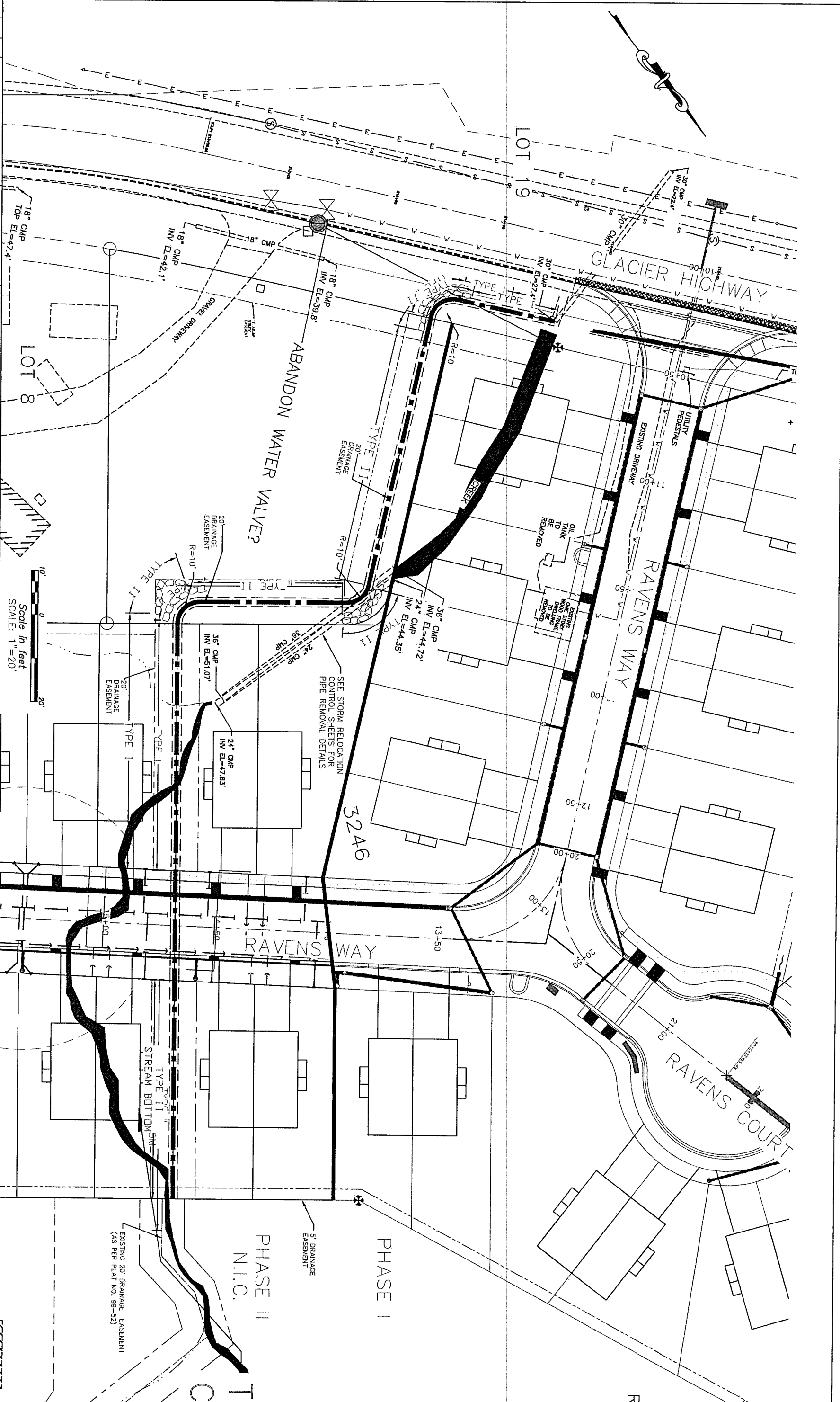
RAVENWOOD SUBDIVISION

REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	###
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CHECKED	###
DATE	September 30, 2024

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TRACY MOORE, P.E.
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RAVENWOOD SUBDIVISION
 SHEET
 SR1
 SHEET NO.
 10 OF 64

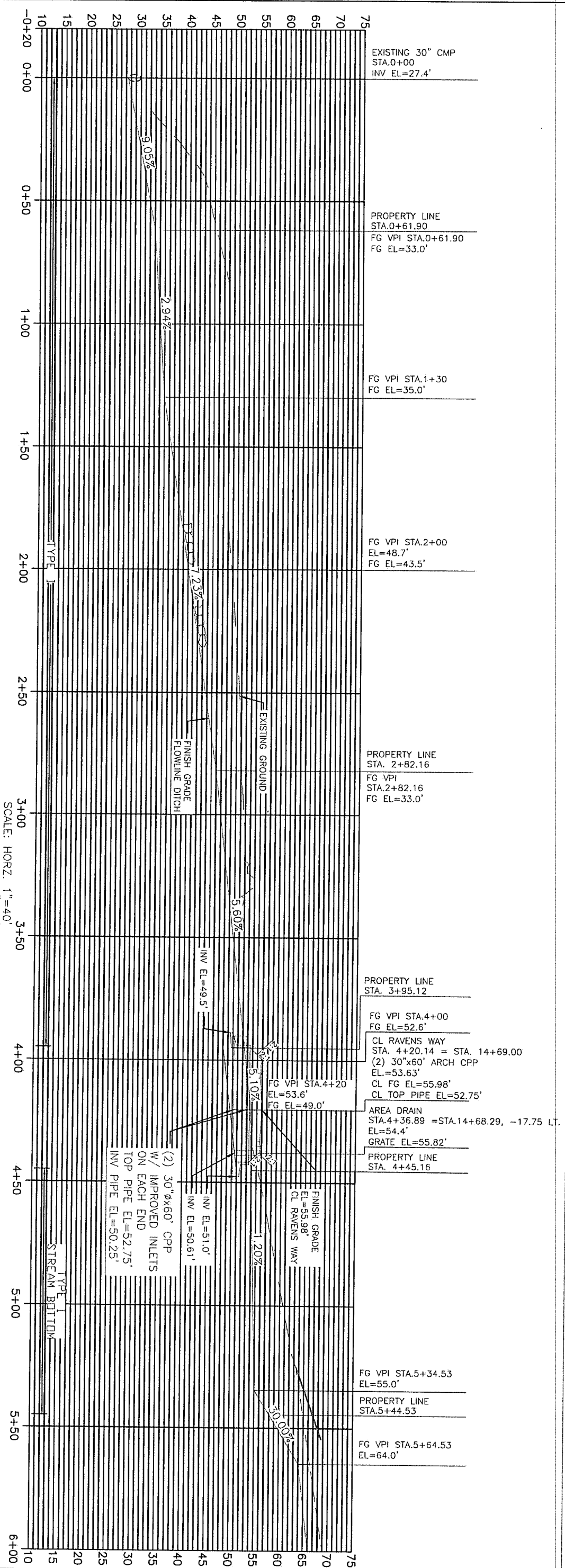


REV	DATE	BY	DESCRIPTION

SCALE _____ GRAPHIC
 DESIGNED: ###
 DRAWN: ###
 CHECKED: ###
 DATE: September 30, 2024

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 REGISTERED PROFESSIONAL CIVIL ENGINEER

RAVENSWOOD SUBDIVISION



75	EXISTING 30" CMP STA.0+00 INV EL=27.4'
70	
65	
60	
55	
50	
45	
40	
35	
30	
25	
20	
15	
10	
0+20	
0+50	PROPERTY LINE STA.0+61.90 FG VPI STA.0+61.90 FG EL=33.0'
1+00	
1+50	FG VPI STA.1+30 FG EL=35.0'
2+00	FG VPI STA.2+00 EL=48.7' FG EL=43.5'
2+50	
3+00	PROPERTY LINE STA. 2+82.16 FG VPI STA.2+82.16 FG EL=33.0'
3+50	
4+00	PROPERTY LINE STA. 3+95.12 FG VPI STA.4+00 FG EL=52.6' CL RAVENS WAY STA. 4+20.14 = STA. 14+69.00 (2) 30"x60' ARCH CPP EL=53.63' CL FG EL=55.98' CL TOP PIPE EL=52.75' AREA DRAIN STA.4+36.89 =STA.14+68.29, -17.75 LT. EL=54.4' GRATE EL=55.82'
4+50	PROPERTY LINE STA. 4+45.16 FINISH GRADE EL=55.98' CL RAVENS WAY INV EL=51.0' INV EL=50.61' (2) 30"x60' CPP W/ IMPROVED INLETS ON EACH END TOP PIPE EL=52.75' INV PIPE EL=50.25'
5+00	
5+50	FG VPI STA.5+34.53 EL=55.0' PROPERTY LINE STA.5+44.53 FG VPI STA.5+64.53 EL=64.0'
6+00	

SCALE: HORZ. 1"=40'
 VERT. 1"=20'

LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING ELECTRIC
- EXISTING DRIVEWAY
- EXISTING STORM DRAIN
- EXISTING CREEK
- PROPOSED VALLEY GUTTER
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE

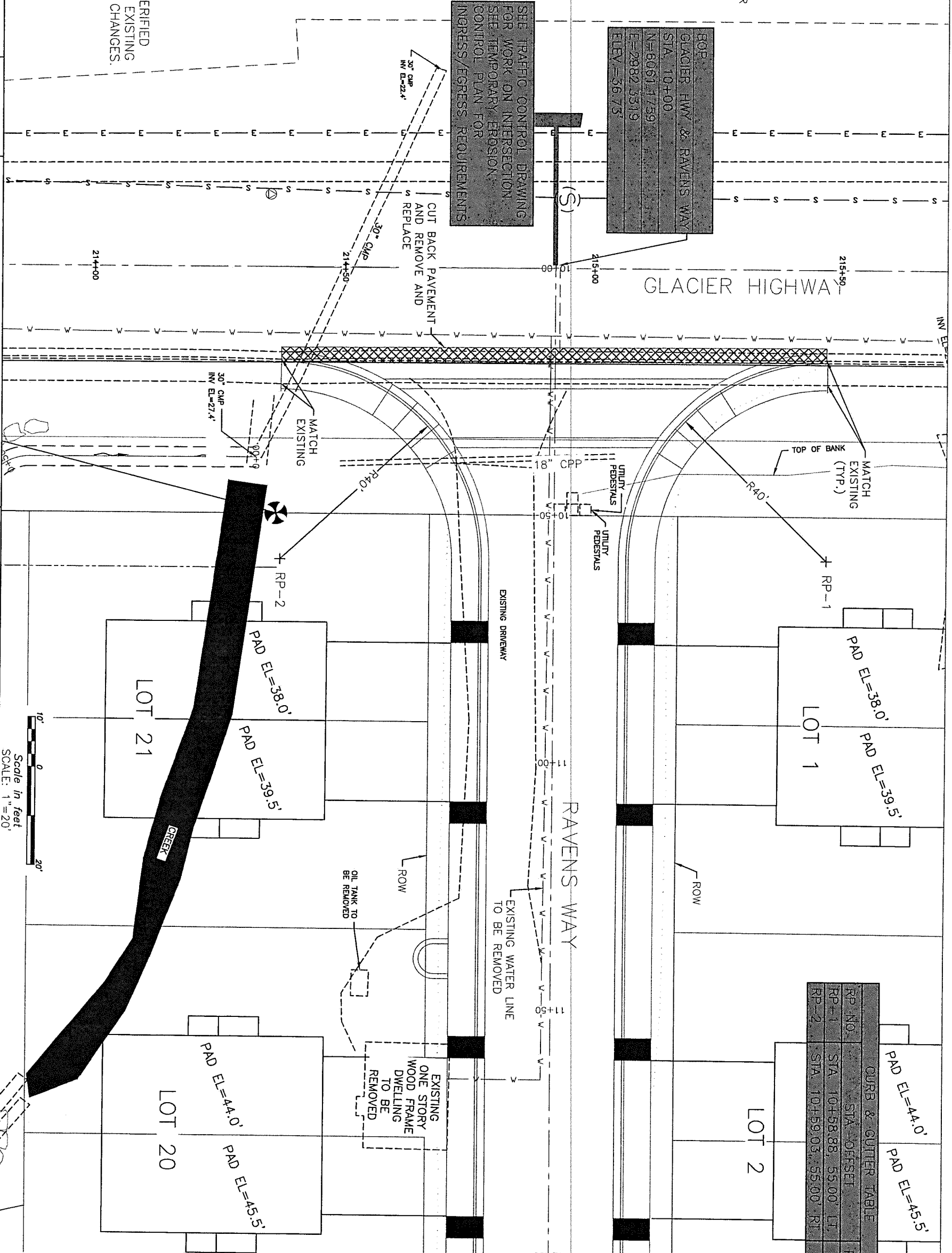


OVERALL ROADWAY QUANTITIES	
SIZE/TYPE	QUANTITY
CURB & GUTTER	410 LF
5' SIDEWALK	410 LF

CONSTRUCTION NOTES:
 1. UNDERGROUND NEEDS TO BE VERIFIED BY CONTRACTOR LOCATION AND EXISTING IS NOT WELL DEFINED. EXPECT CHANGES.

BOP	
GLACIER HWY & RAVENS WAY	
STA.	10+00
N=	6061.1759
E=	2982.3519
ELEV.	36.75

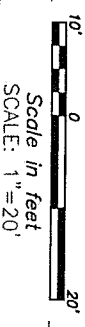
SEE TRAFFIC CONTROL DRAWING FOR WORK ON INTERSECTION. SEE TEMPORARY EROSION CONTROL PLAN FOR INGRESS/EGRESS REQUIREMENTS



RP NO.	STA. OFFSET	RADIUS
RP-1	STA. 10+58.88, 55.00' LT	40.00'
RP-2	STA. 10+59.03, 55.00' RT	55.00'

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MATCHLINE STA. 12+00
 SEE SHEET P-2

REV	DATE	BY	DESCRIPTION

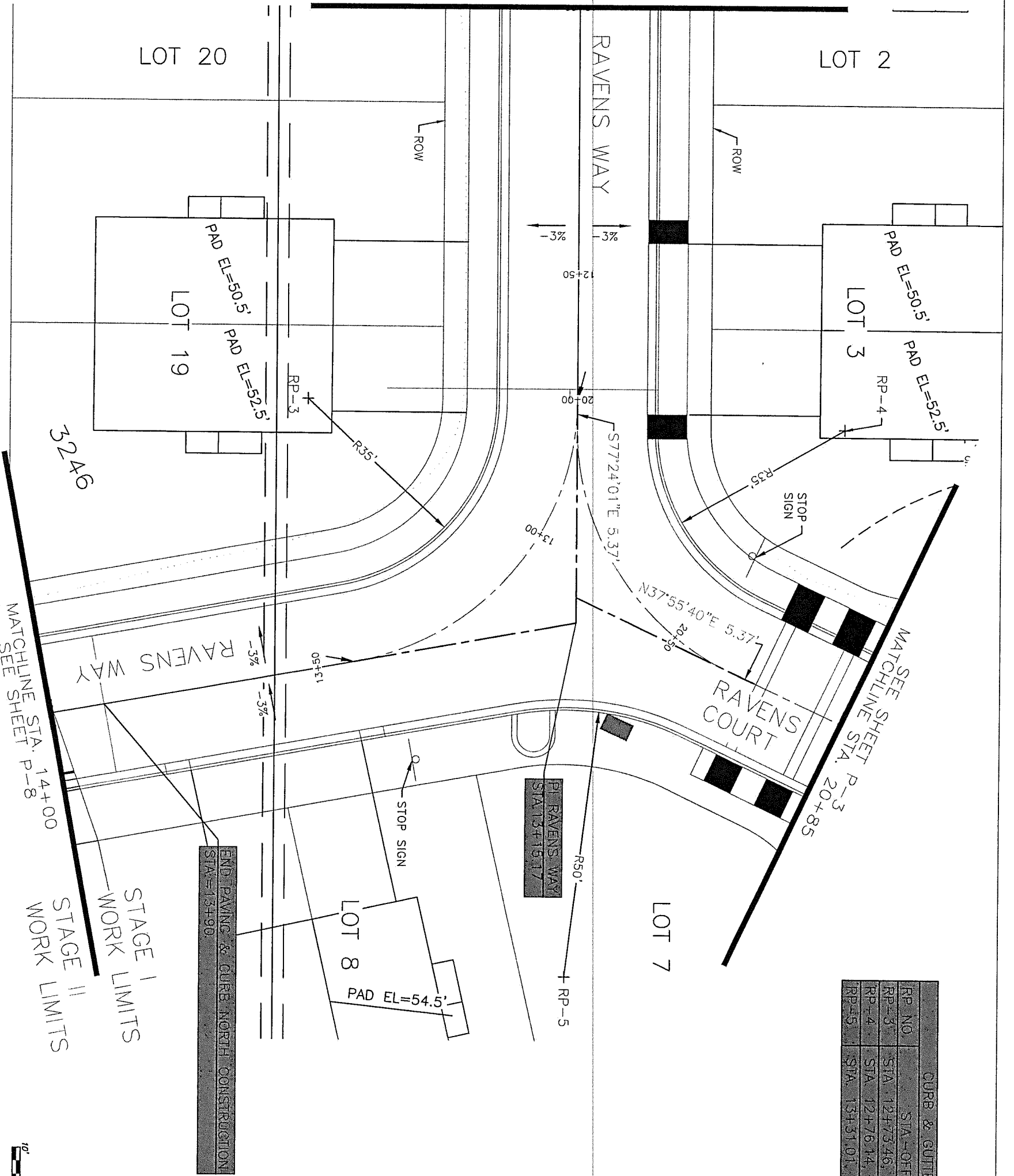
SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

LEGEND

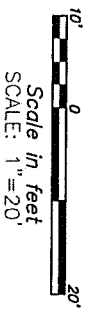
- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING ELECTRIC
- EXISTING DRIVEWAY
- EXISTING STORM DRAIN
- EXISTING CREEK
- PROPOSED VALLEY GUTTER
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE

SEE SHEET P-1
MATCHLINE STA. 12+00

OVERALL ROADWAY QUANTITIES	
SIZE/TYPE	QUANTITY
CURB & GUTTER	470 LF
5' SIDEWALK	470 LF



RP NO.	STA.-OFFSET	RADIUS
RP-3	STA. 12+73.46, 50.00' LT	35.00'
RP-4	STA. 12+76.14, 50.14' LT	35.00'
RP-5	STA. 13+31.01, 68.38' LT	50.00'



REV	DATE	BY	DESCRIPTION

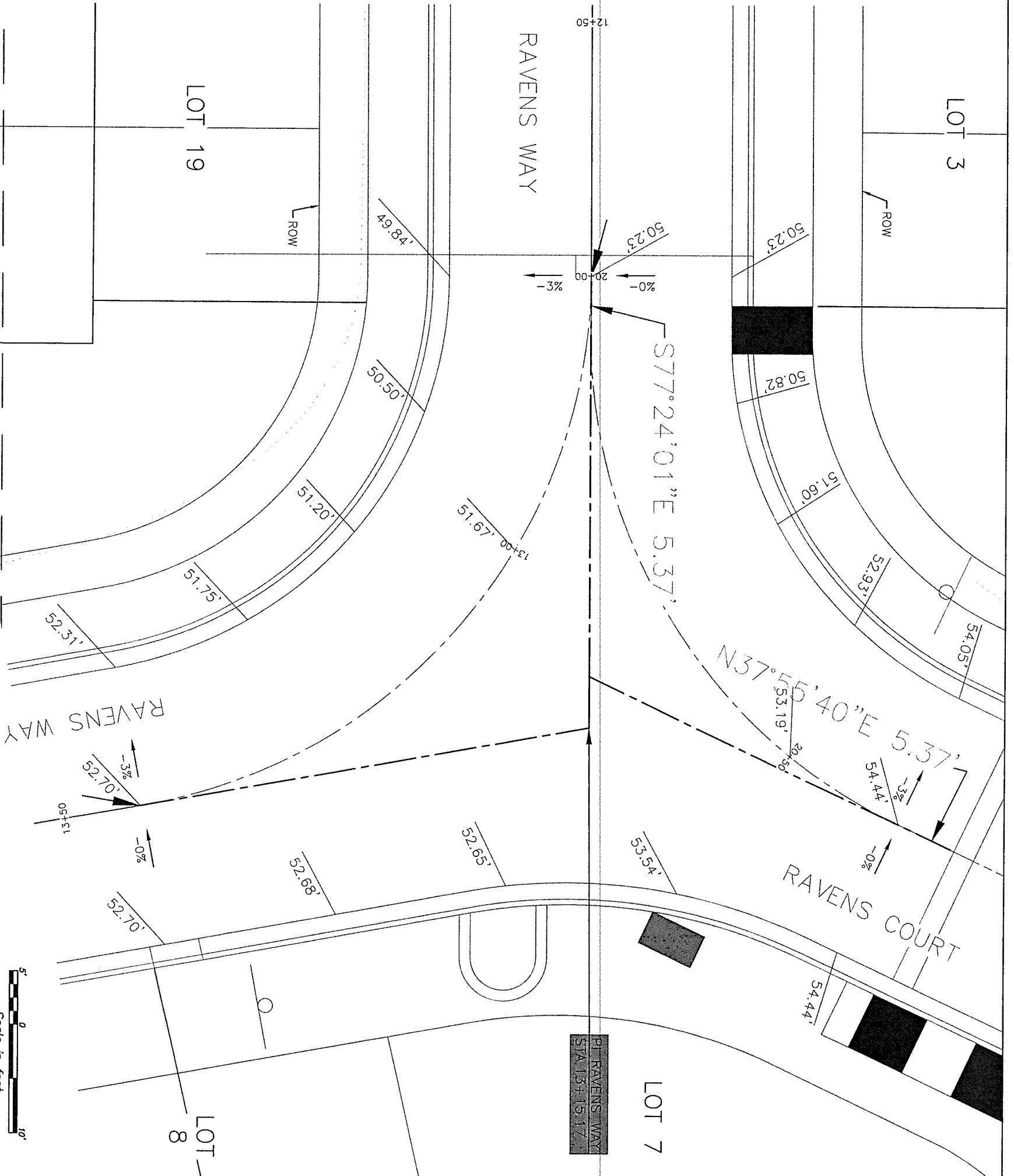
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SHEET P2
SHEET NO. 13 OF 64

LEGEND

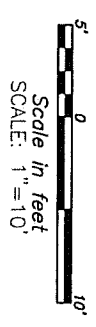
---	SURVEYED
- - - - -	UNSURVEYED
---	CENTERLINE
---	EASEMENT
---	EXISTING WATER LINE
---	EXISTING SEWER LINE
---	EXISTING ELECTRIC
---	EXISTING DRIVEWAY
---	EXISTING STORM DRAIN
---	EXISTING CREEK
---	EXISTING SEWER LINE
---	EXISTING WATER LINE
---	PROPOSED VALLEY GUTTER
---	PROPOSED CURB & GUTTER WITH CURB INLET
---	PROPOSED BACK SIDEWALK
---	PROPOSED CUT SLOPE
---	PROPOSED FILL SLOPE



CROSS SLOPE TABLE
CHANGES TO NORMAL CROWN

STA.	RT.	LT.
12+73.46		0.00%
13+42.95		0.00%
20+51.81	0.00%	
21+00	3.00%	
21+34.74	3.00%	
14+00		3.00%
16+36		3.00%

STRAIGHT LINE TRANSITIONS BETWEEN STATIONS UNLESS CURB GRADES ARE DIFFERENT (CURB GRADES CONTROL)



REV	DATE	BY	DESCRIPTION

SCALE _____ GRAPHIC
 DESIGNED _____
 DRAWN _____
 CHECKED _____
 DATE September 30, 2024

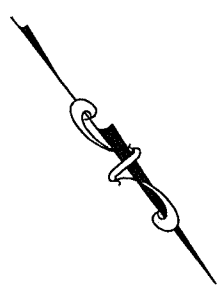
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SHEET P2A
 SHEET NO. 14 OF 64

LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING ELECTRIC
- EXISTING DRIVEWAY
- EXISTING STORM DRAIN
- EXISTING CREEK
- EXISTING SEWER LINE
- EXISTING WATER LINE
- PROPOSED VALLEY GUTTER
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE



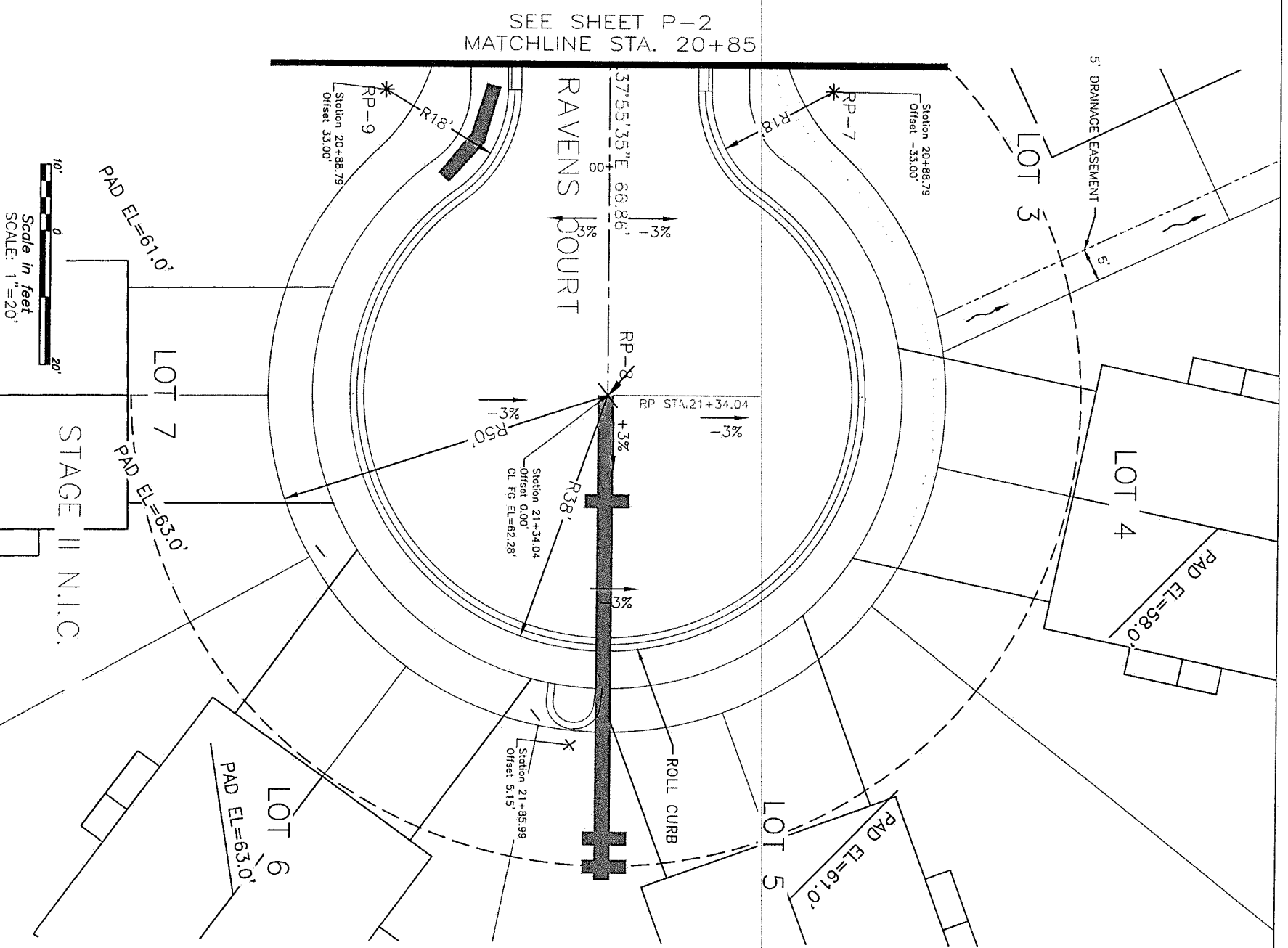
OVERALL ROADWAY QUANTITIES	
SIZE/TYPE	QUANTITY
CURB & GUTTER	225 LF
5' SIDEWALK	225 LF

REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED: ###	
DRAWN: ###	
CHECKED: ###	
DATE: September 30, 2024	

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RP NO	STA-OFFSET	RADIUS
RP-7	STA. 20+88.79, 33.00' LT.	18.00'
RP-8	STA. 20+88.79, 33.00' RT.	18.00'
RP-9	STA. 21+34.04, 0.00' RT.	38.00'

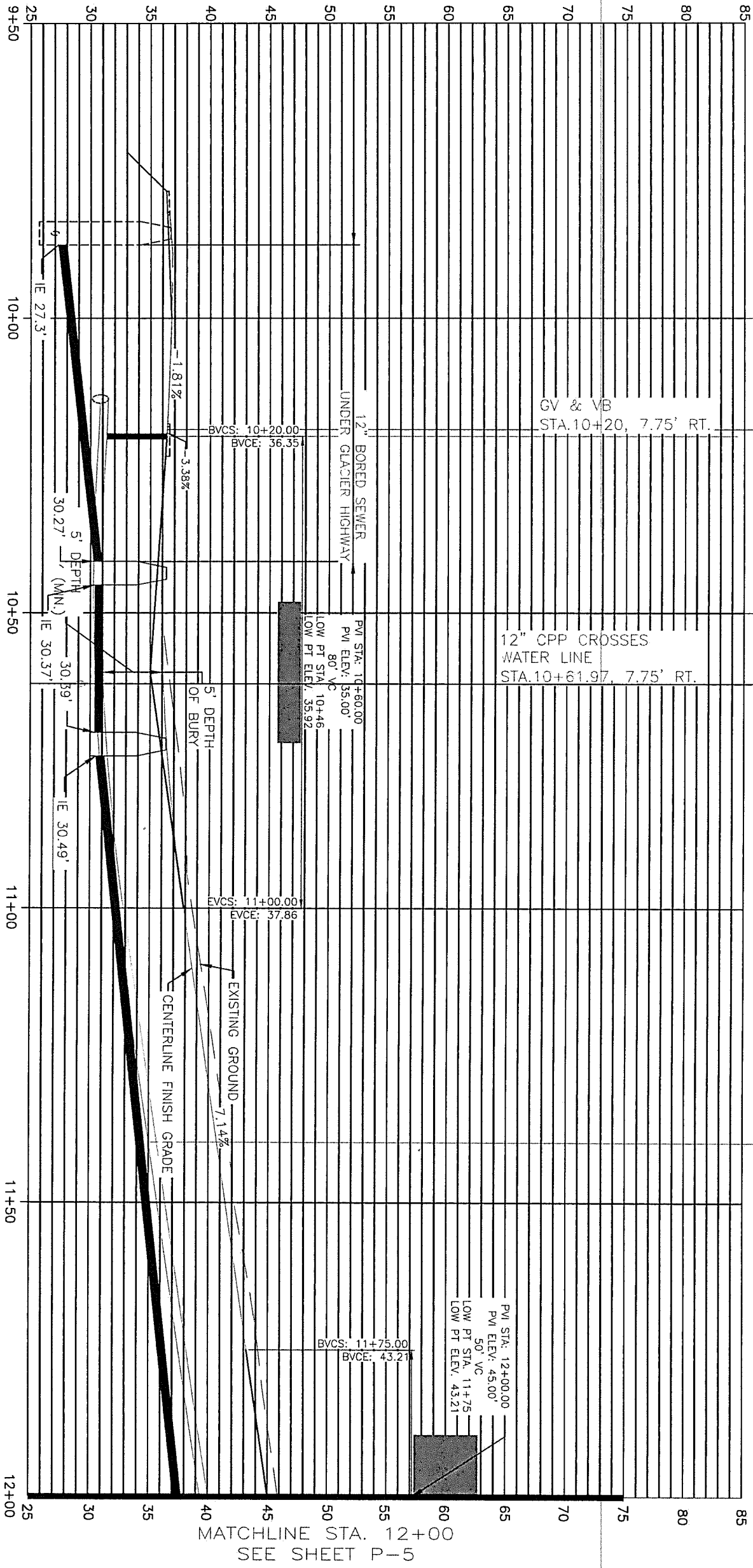
REV	DATE	BY	DESCRIPTION

SCALE GRAPHIC
 DESIGNED: ###
 DRAWN: ###
 CHECKED: ###
 DATE September 30, 2024

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SCALE: HORZ. 1"=20'
 VERT. 1"=10'



CL INTER. GLACIER HWY & RAVENS WAY
 STA. 10+00
 EL=36.73'

EXISTING TOP BACK OF CURB
 STA. 10+18.83
 EL=36.57'

BEGIN WATER LINE
 STA. 10+18.51, 7.75' RT.
 APPROX. LOCATION FIELD VERIFY PRIOR TO TAP

PROPERTY LINE
 STA. 10+50.00

12" CPP CROSSES WATER LINE
 STA. 10+61.97, 7.75' RT.

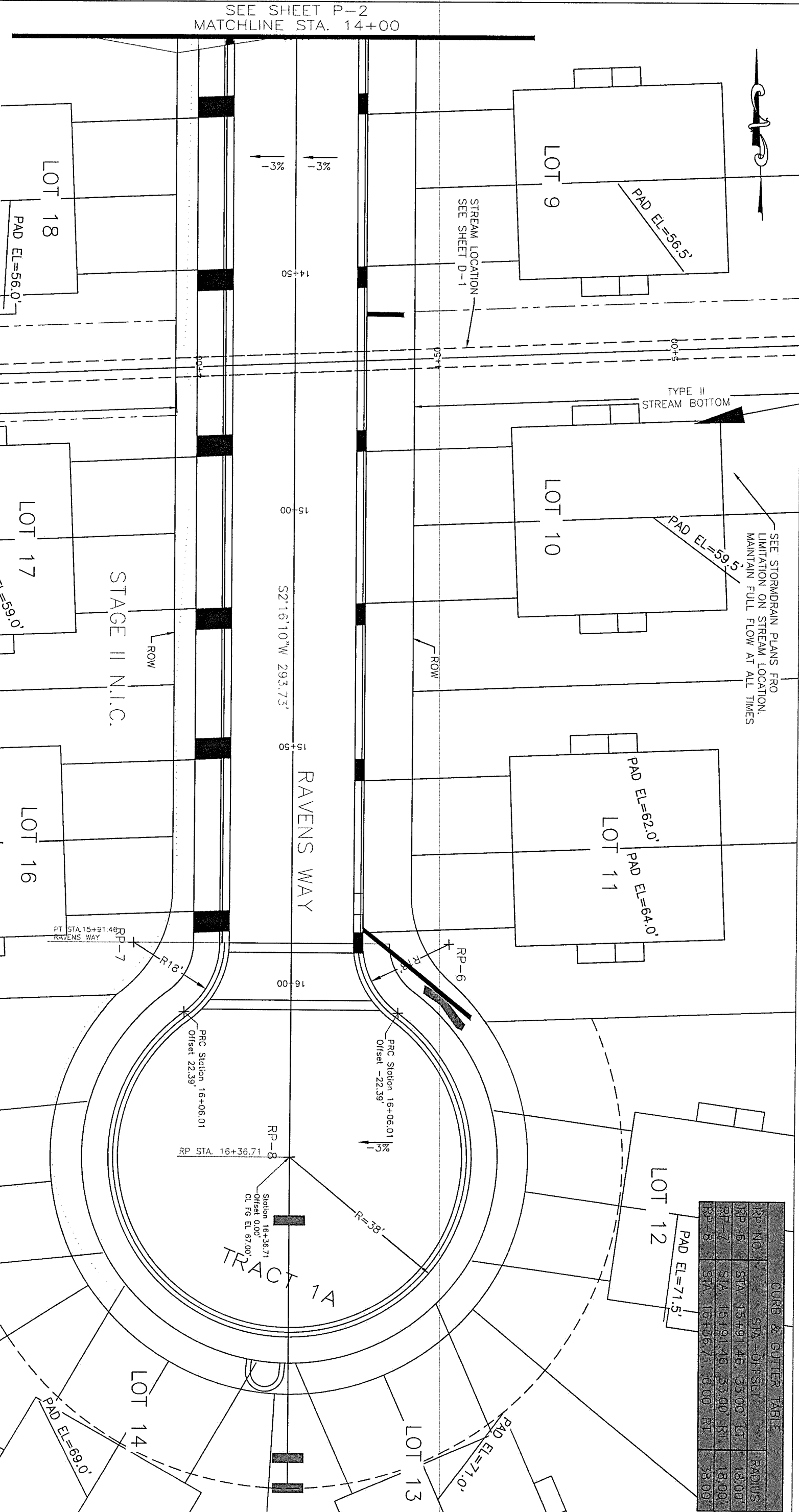
FH-1
 STA. 11+39.77, 7.75' RT.

MATCHLINE STA. 12+00
 SEE SHEET P-5

SEE SHEET P-2
MATCHLINE STA. 14+00

REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024



LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING CREEK
- PROPOSED VALLEY GUTTER
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK

Scale in feet
SCALE: 1"=20'

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CURB & GUTTER TABLE

RP NO.	STA - OFFSET	RADIUS
RP-6	STA 15+91.46, 33.00' LT	18.00'
RP-7	STA 15+91.46, 33.00' RT	18.00'
RP-8	STA 16+36.71, 0.00' RT	38.00'

OVERALL ROADWAY QUANTITIES

SIZE/TYPE	QUANTITY
CURB & GUTTER	600 LF
5' SIDEWALK	600 LF

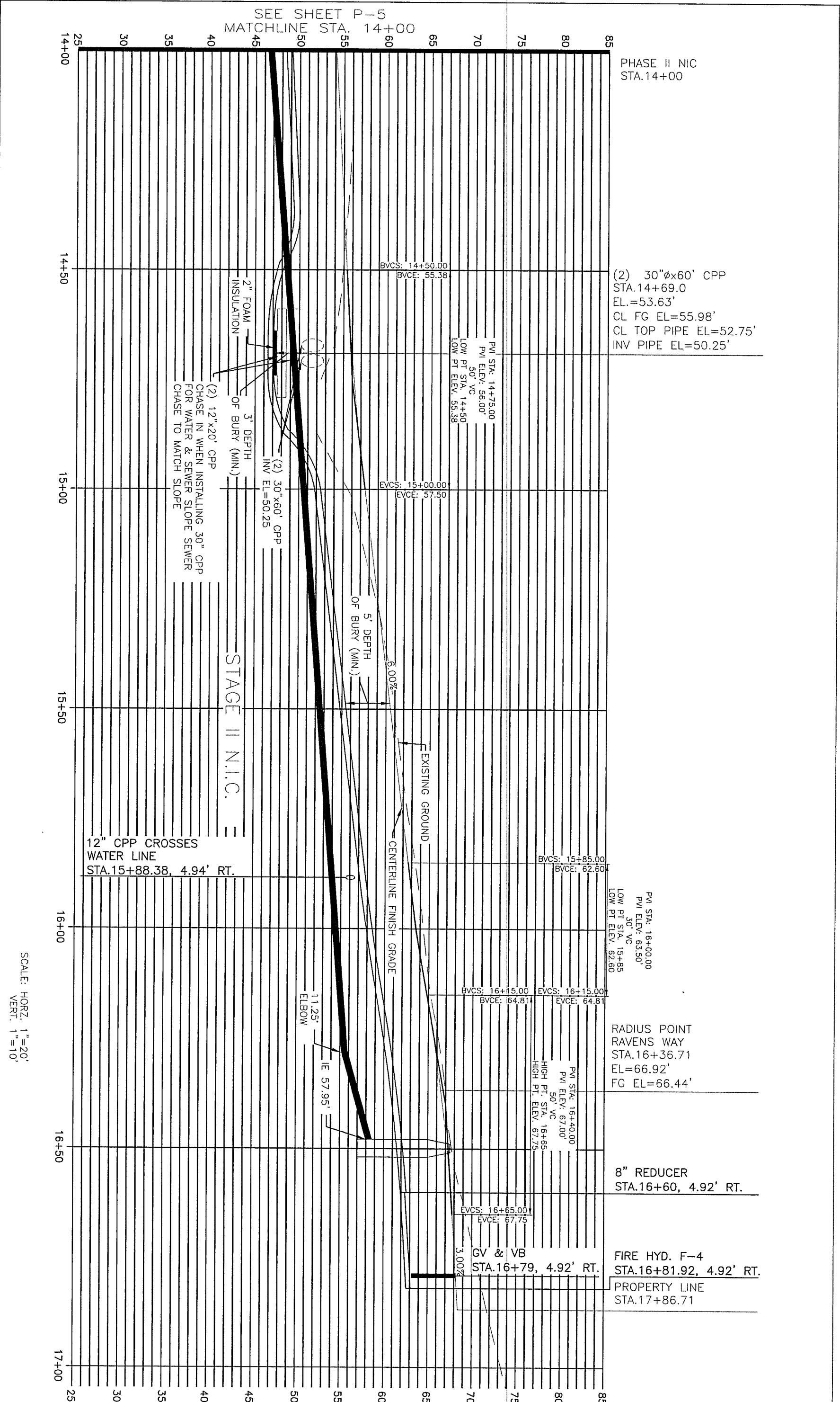
REV	DATE	BY	DESCRIPTION

SCALE GRAPHIC
 DESIGNED ###
 DRAWN ###
 CHECKED ###
 DATE September 30, 2024

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SHEET P9
 SHEET NO. 21 OF 64



LEGEND

- SURVEYED CENTERLINE
- EASEMENT
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING ELECTRIC
- EXISTING DRIVEWAY
- EXISTING STORM DRAIN
- EXISTING CREEK
- PROPOSED VALLEY GUTTER
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE
- PROPOSED 8" PVC SEWER LINE
- PROPOSED 4" SEWER LATERAL
- PROPOSED 8" DI WATER LINE
- PROPOSED 3/4" WATER LINE SERVICE
- PROPOSED STORM DRAIN
- PROPOSED UNDERDRAIN
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED CATCH BASIN
- PROPOSED AREA DRAIN
- PROPOSED UNDERDRAIN

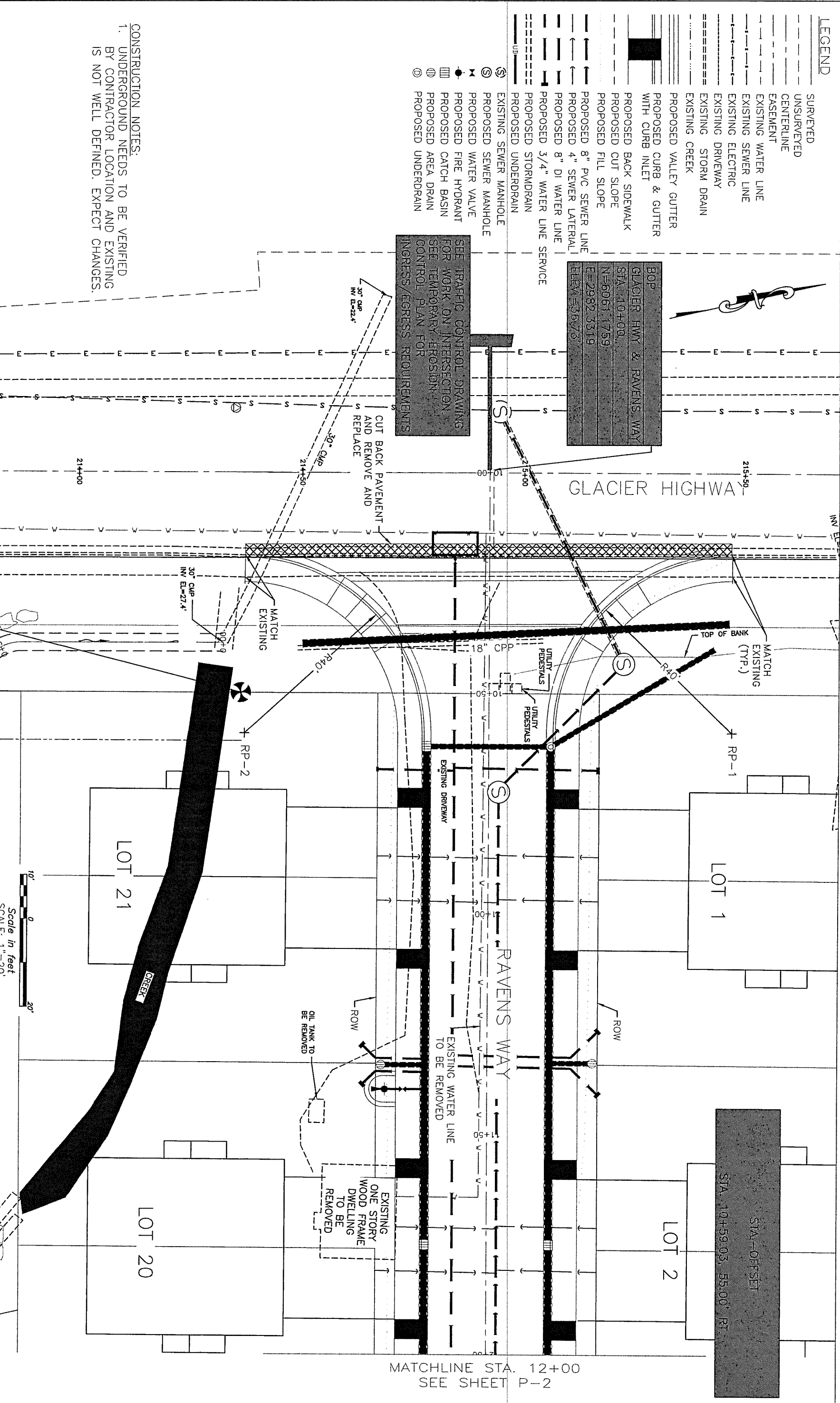
CONSTRUCTION NOTES:
 1. UNDERGROUND NEEDS TO BE VERIFIED BY CONTRACTOR LOCATION AND EXISTING IS NOT WELL DEFINED. EXPECT CHANGES.

REV.	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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SEE TRAFFIC CONTROL DRAWING FOR WORK ON INTERSECTION SEE TEMPORARY EROSION CONTROL PLAN FOR INGRESS/EGRESS REQUIREMENTS

BOP
 GLACIER HWY & RAVENS WAY
 STA. 10+00
 N=60061.1759
 E=29882.5319
 ELEV.=36.73

STA. 10+59.03, 55.00' RT

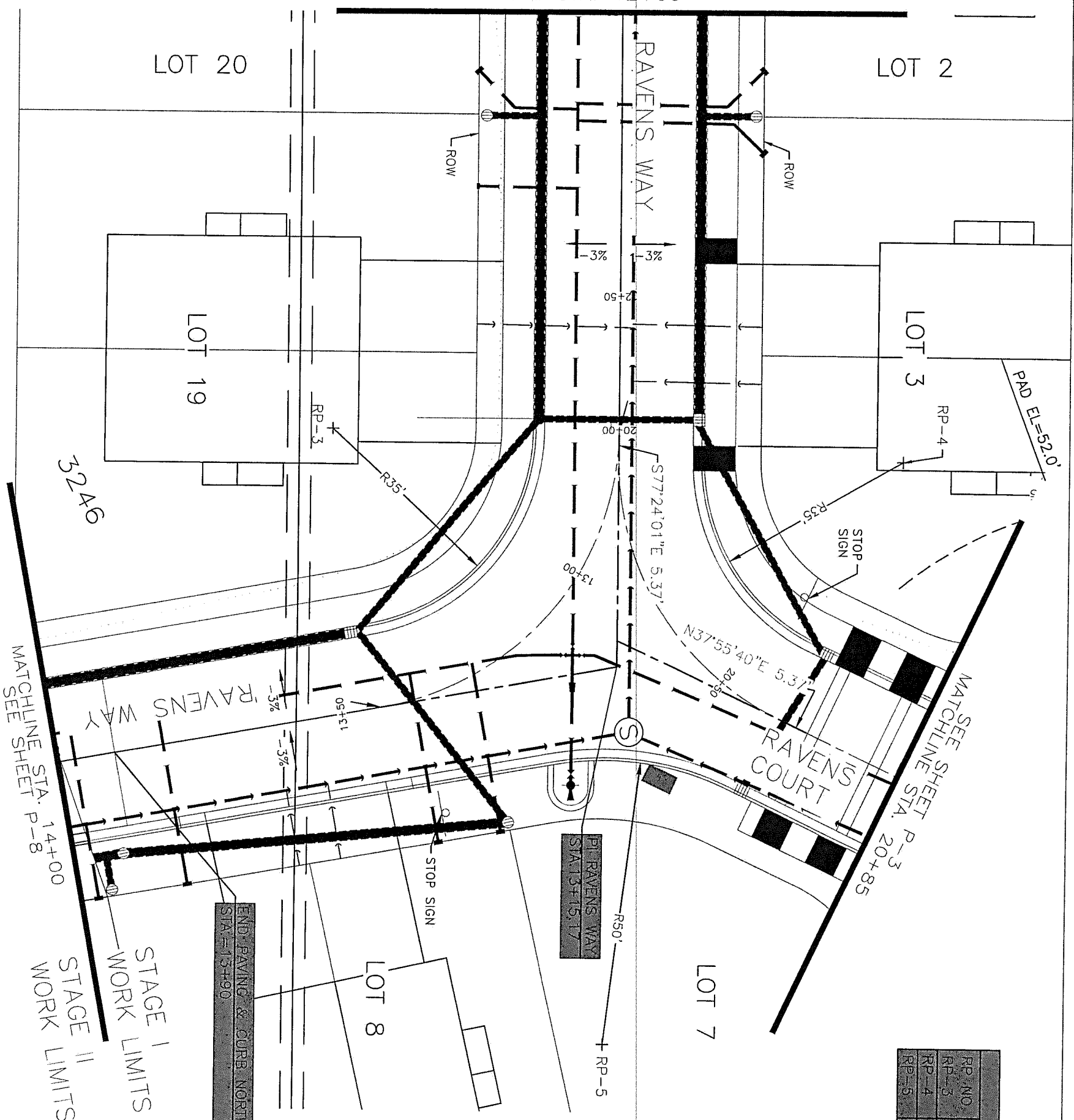
MATCHLINE STA. 12+00
 SEE SHEET P-2

LEGEND

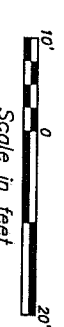
- SURVEYED
- - - UNSURVEYED
- - - CENTERLINE
- - - EASEMENT
- - - EXISTING WATER LINE
- - - EXISTING SEWER LINE
- - - EXISTING ELECTRIC
- - - EXISTING DRIVEWAY
- - - EXISTING STORM DRAIN
- - - EXISTING CREEK
- - - PROPOSED VALLEY GUTTER
- - - PROPOSED CURB & GUTTER WITH CURB INLET
- - - PROPOSED BACK SIDEWALK
- - - PROPOSED CUT SLOPE
- - - PROPOSED FILL SLOPE
- - - PROPOSED 8" PVC SEWER LINE
- - - PROPOSED 4" SEWER LATERAL
- - - PROPOSED 8" DI WATER LINE
- - - PROPOSED 3/4" WATER LINE SERVICE
- - - PROPOSED STORMDRAIN
- - - PROPOSED UNDERDRAIN
- ⊙ EXISTING-SEWER-MANHOLE
- ⊙ PROPOSED SEWER MANHOLE
- ⊙ PROPOSED WATER VALVE
- ⊙ PROPOSED FIRE HYDRANT
- ⊙ PROPOSED CATCH BASIN
- ⊙ PROPOSED AREA DRAIN
- ⊙ PROPOSED UNDERDRAIN



SEE SHEET P-1
MATCHLINE STA. 12+00



RP NO.	S/A-OFFSET	RADIUS
RP-3	STA 12+73.46, 50.00' LT	35.00'
RP-4	STA 12+76.14, 50.14' LT	35.00'
RP-5	STA 13+51.01, 68.38' LT	50.00'



REV	DATE	BY	DESCRIPTION

SCALE: GRAPHIC
DESIGNED: ###
DRAWN: ###
CHECKED: ###
DATE: September 30, 2024

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RAVENWOOD SUBDIVISION

STAGE I
WORK LIMITS

STAGE II
WORK LIMITS

MATCHLINE STA. 14+00
SEE SHEET P-8

END PAVING & CURB NORTH CONSTRUCTION
STA=13+90

LOT 20

LOT 2

LOT 3

LOT 7

LOT 8

LOT 19

RAVENS WAY

RAVENS COURT

STOP SIGN

STOP SIGN

RP-3

RP-4

RP-5

ROW

SEE SHEET P-1
MATCHLINE STA. 12+00

SEE SHEET P-3
MATCHLINE STA. 20+85

SEE SHEET P-8
MATCHLINE STA. 14+00

SCALE: 1"=20'

SHEET U2
SHEET NO. 23 OF 64

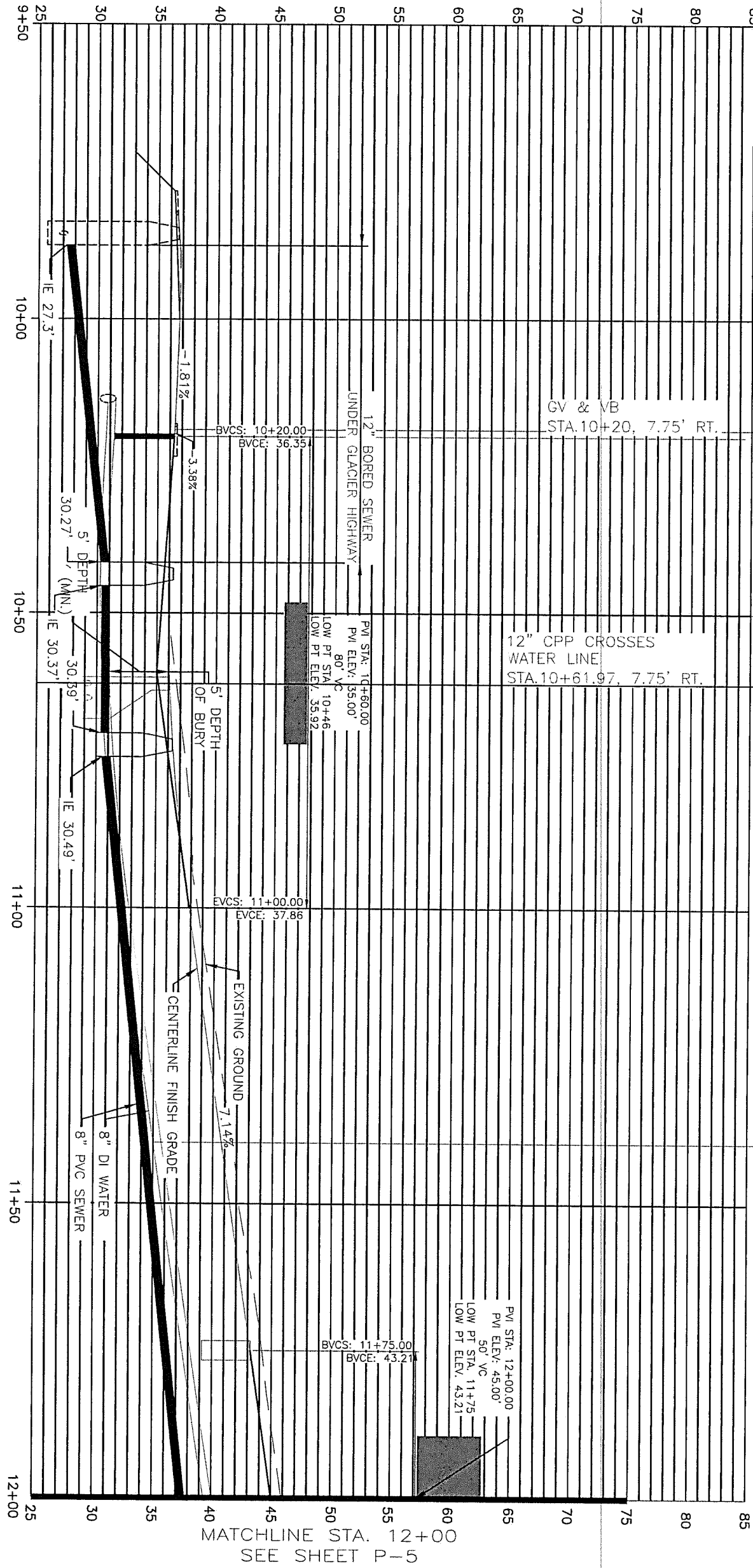
REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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SCALE: HORZ. 1"=20'
 VERT. 1"=10'



SHEET	U4
SHEET NO.	25 OF 64

REV	DATE	BY	DESCRIPTION

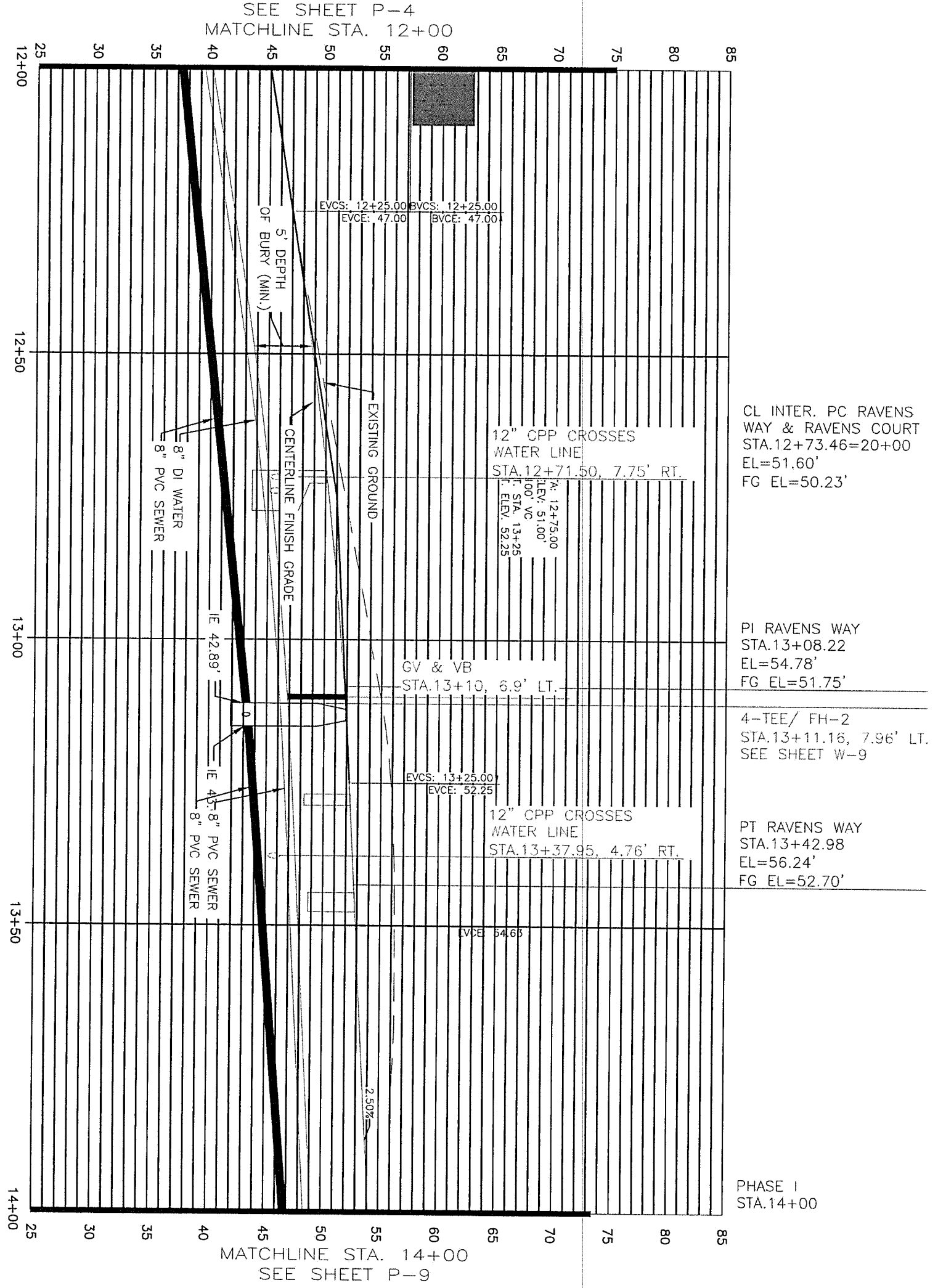
SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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SHEET
 U5
 SHEET NO.
 26 OF 64

SCALE: HORZ. 1"=20'
 VERT. 1"=10'



REV	DATE	BY	DESCRIPTION

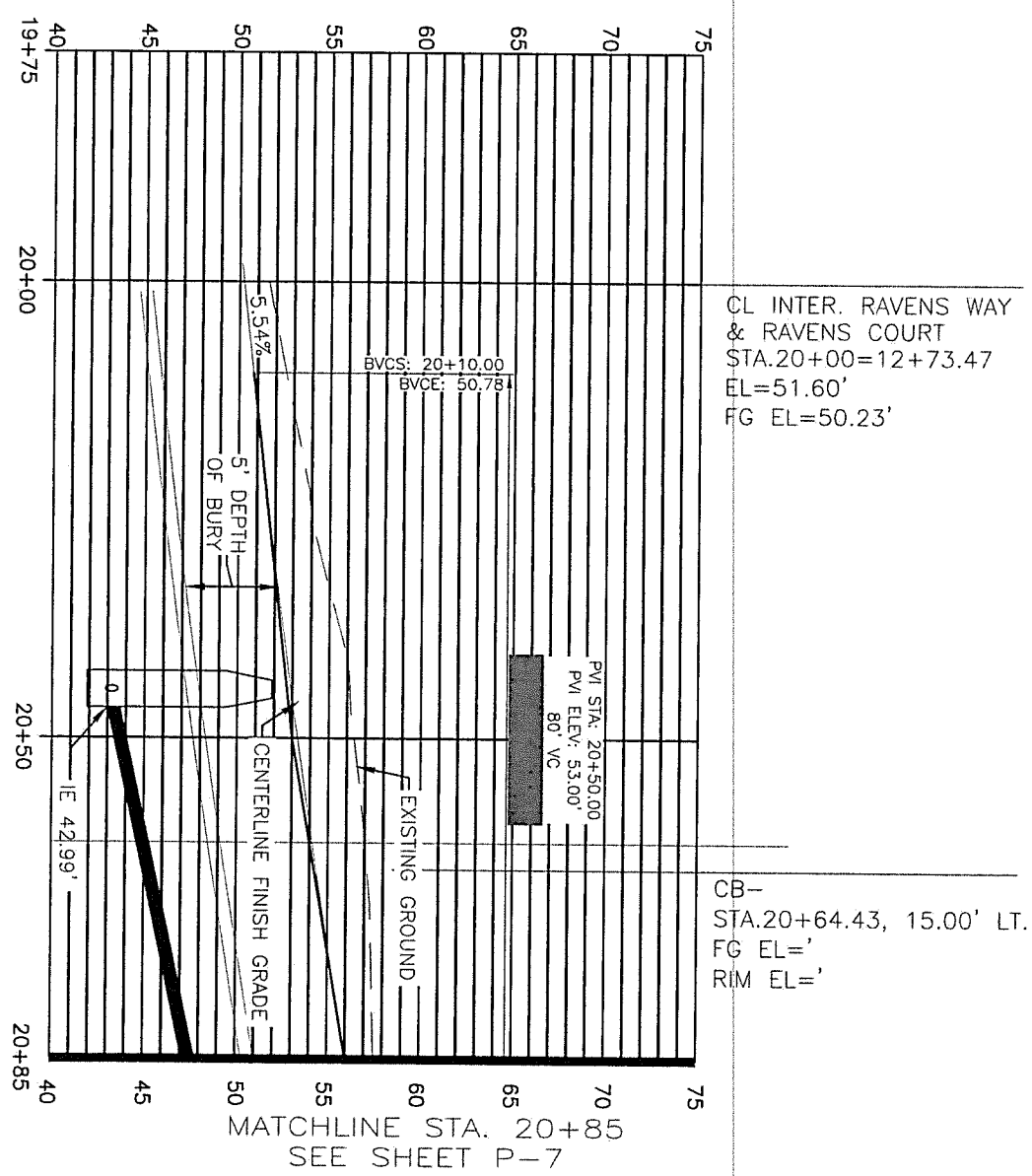
SCALE _____ GRAPHIC _____
 DESIGNED _____ ###
 DRAWN _____ ###
 CHECKED _____ ###
 DATE September 30, 2024

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SHEET U6
 SHEET NO. 27 OF 64

SCALE: HORIZ. 1"=20'
 VERT. 1"=10'



REV	DATE	BY	DESCRIPTION

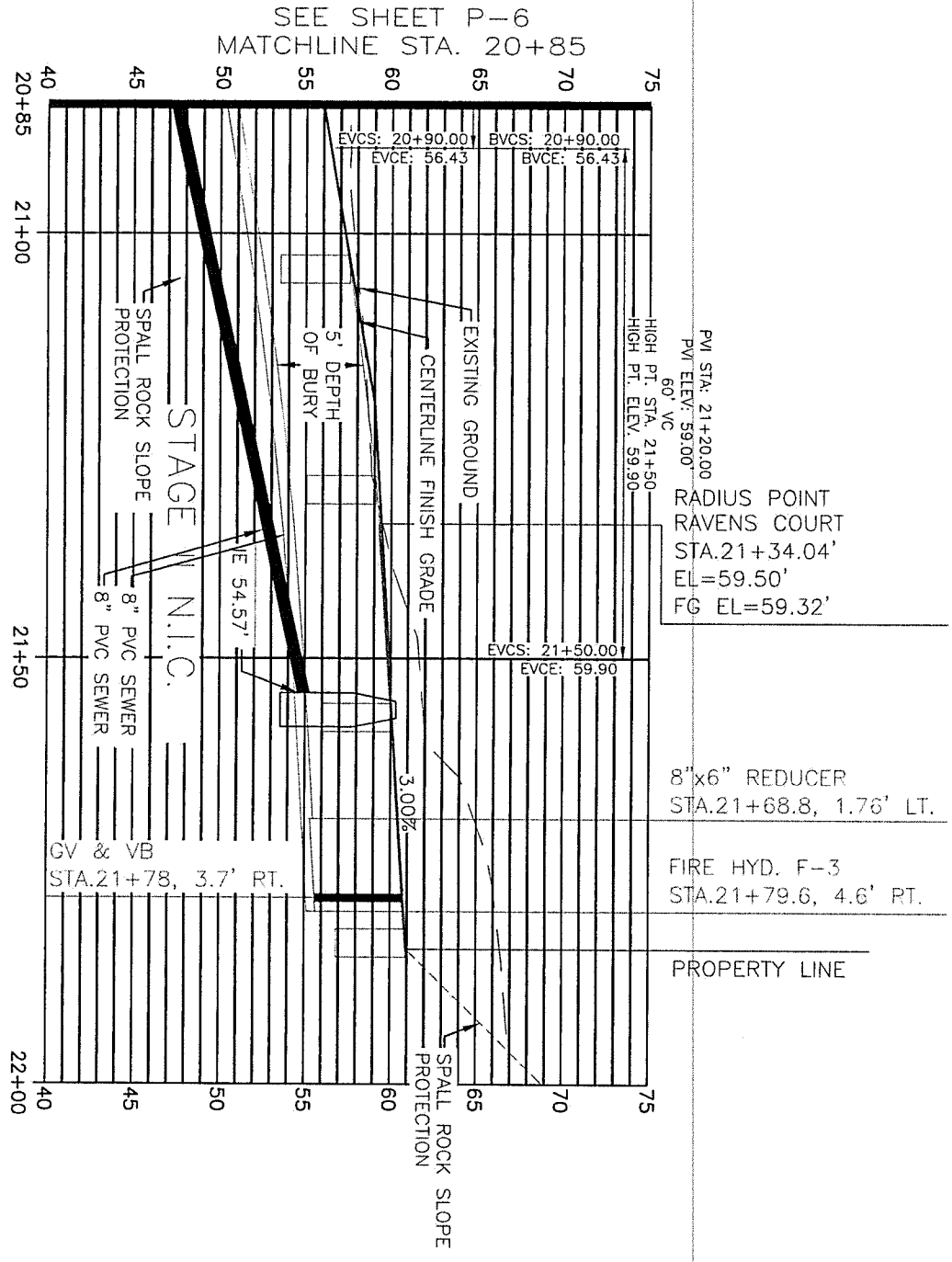
SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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SHEET U7
 SHEET NO. 28 OF 64

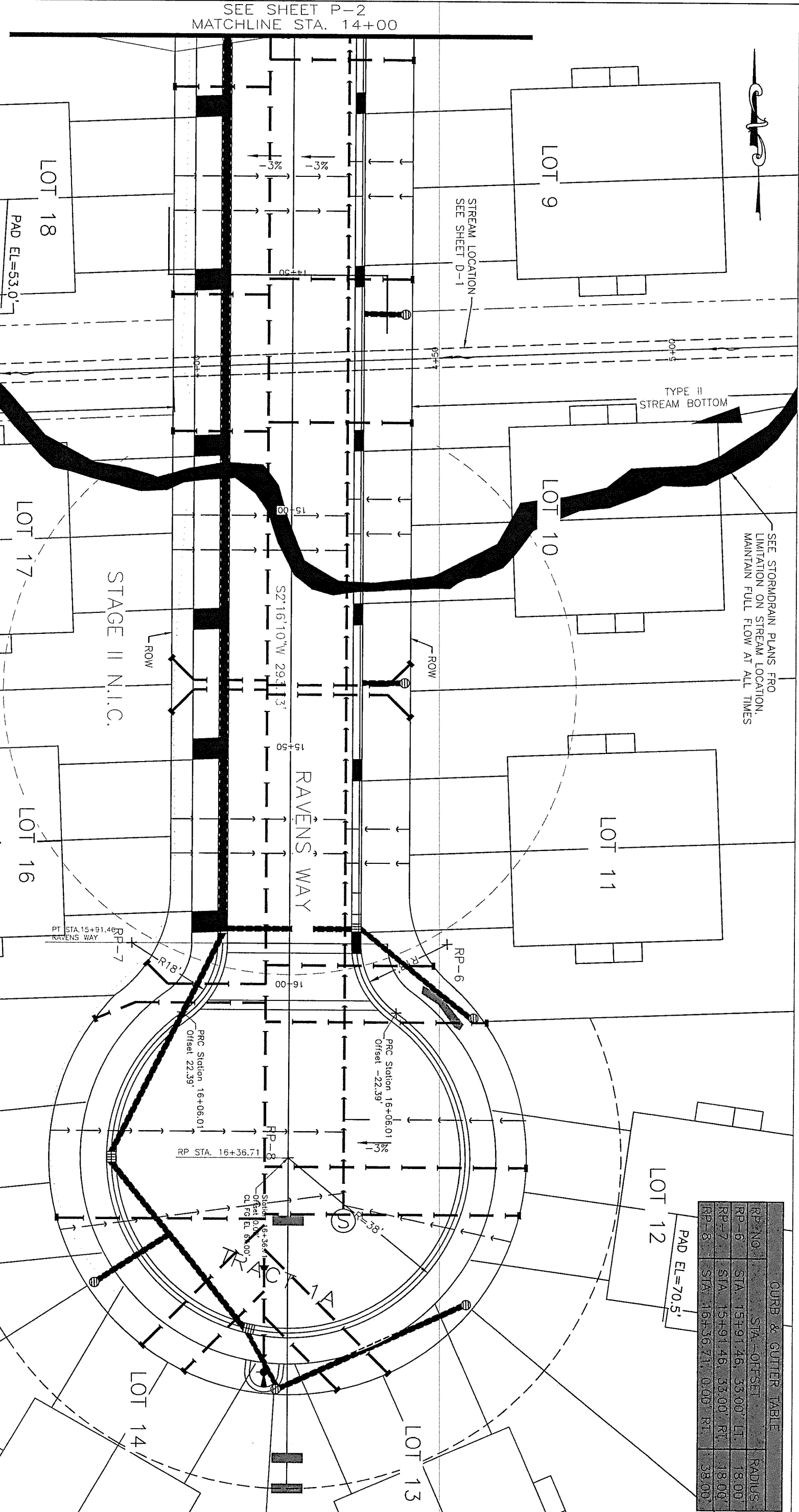
SCALE: HORZ. 1"=20'
 VERT. 1"=10'



SEE SHEET P-2
MATCHLINE STA. 14+00

REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

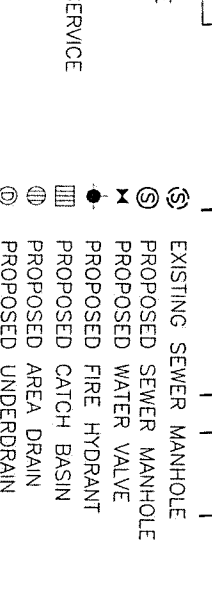


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RAVENWOOD SUBDIVISION

LEGEND

	SURVEYED CENTERLINE
	UNSURVEYED CENTERLINE
	EASEMENT
	EXISTING CREEK
	PROPOSED VALLEY GUTTER
	PROPOSED CUT SLOPE
	PROPOSED FILL SLOPE
	PROPOSED CURB & GUTTER WITH CURB INLET
	PROPOSED BACK SIDEWALK
	PROPOSED 8" PVC SEWER LINE
	PROPOSED 4" SEWER LATERAL
	PROPOSED 8" DI WATER LINE
	PROPOSED 3/4" WATER LINE SERVICE
	PROPOSED STORMDRAIN
	PROPOSED UNDERDRAIN
	EXISTING SEWER MANHOLE
	PROPOSED SEWER MANHOLE
	PROPOSED WATER VALVE
	PROPOSED FIRE HYDRANT
	PROPOSED CATCH BASIN
	PROPOSED AREA DRAIN
	PROPOSED UNDERDRAIN



RP-NO.	STA-OFFSET	RADIUS
RP-6	STA. 15+91.46, 33.00' LT	18.00'
RP-7	STA. 15+91.46, 33.00' RT	18.00'
RP-8	STA. 16+36.71, 0.00' RT	38.00'

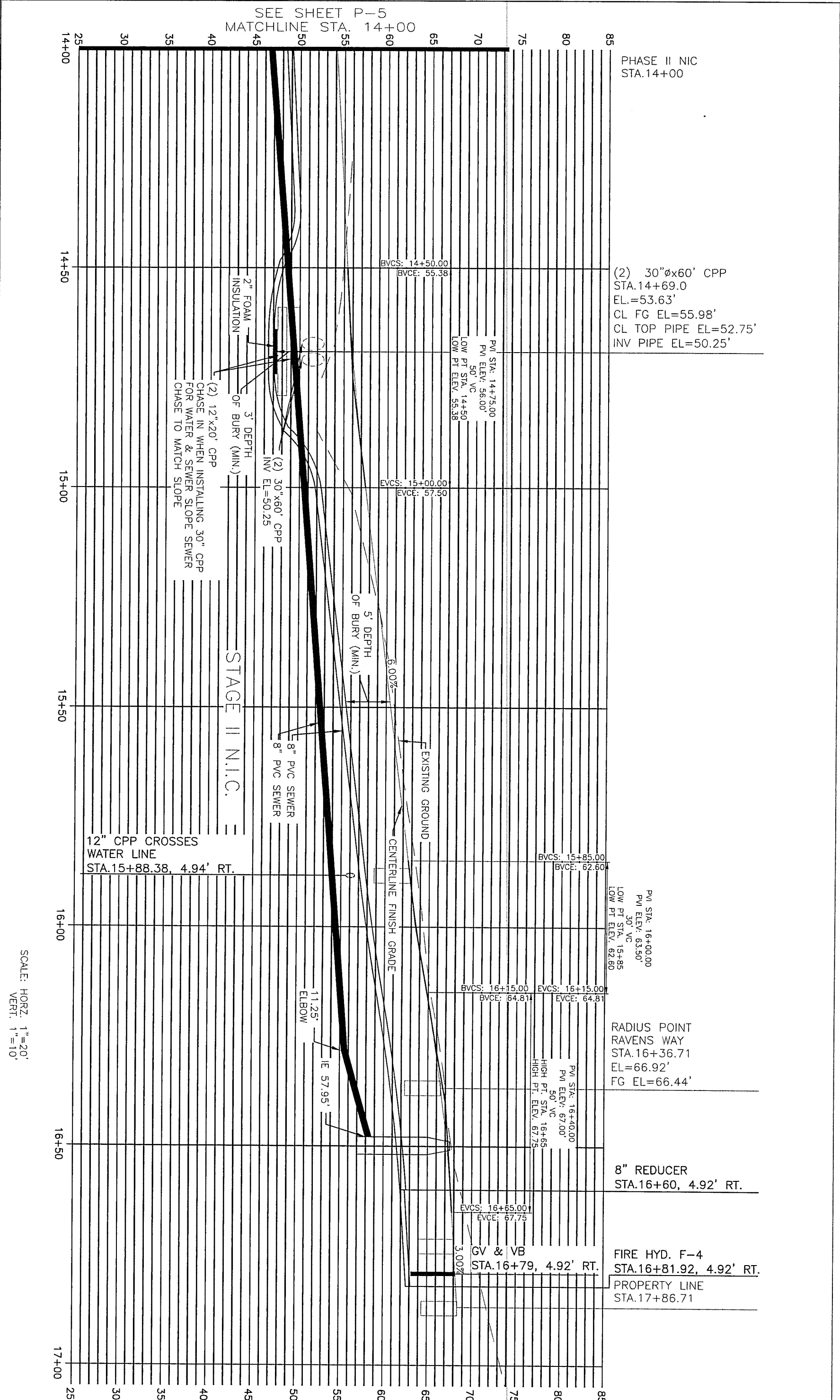
REV	DATE	BY	DESCRIPTION

SCALE _____ GRAPHIC _____
 DESIGNED _____
 DRAWN _____
 CHECKED _____
 DATE September 30, 2024

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SHEET U9
 SHEET NO. 30 OF 64



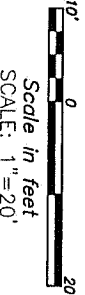
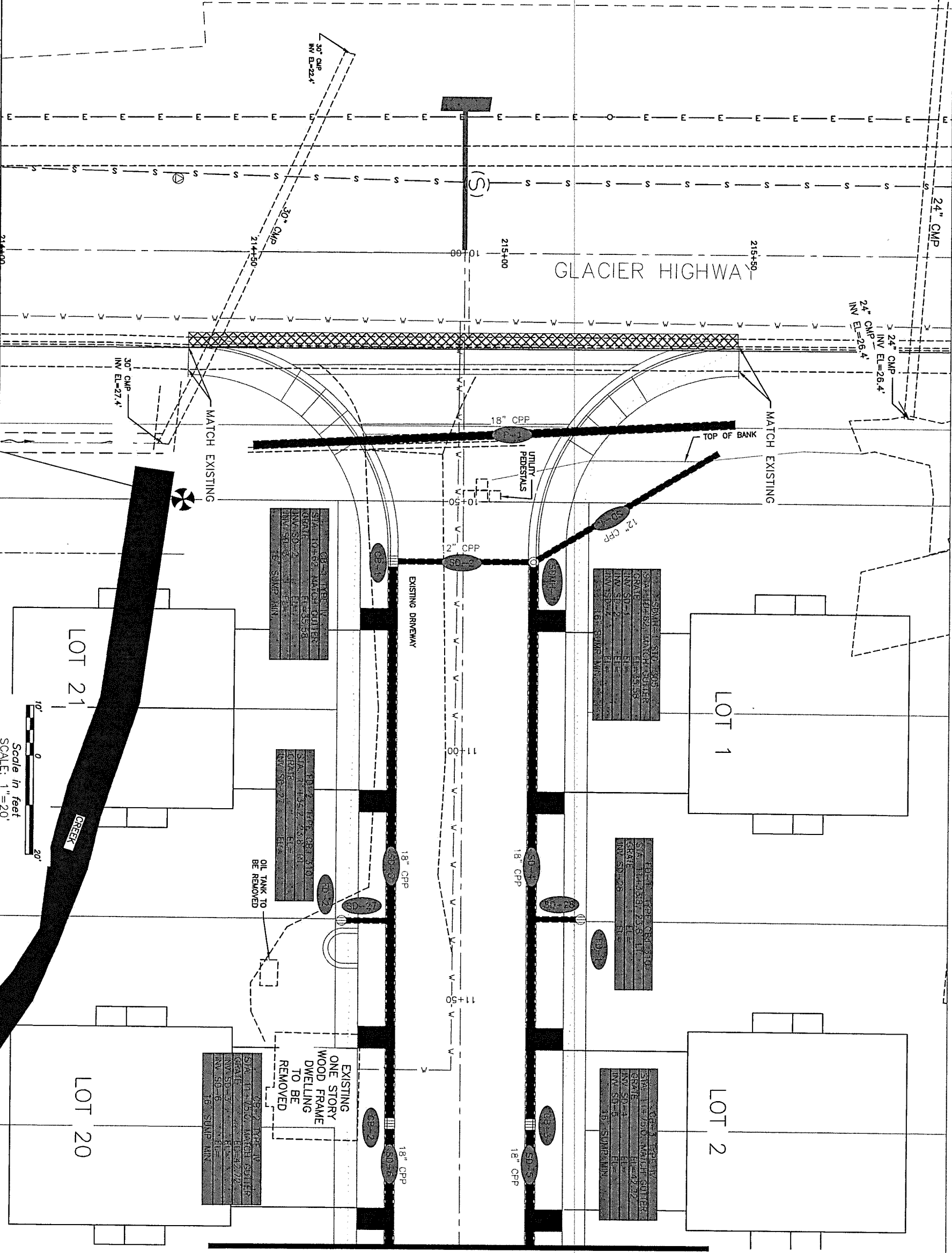
SCALE: HORZ. 1"=20'
 VERT. 1"=10'

LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING ELECTRIC
- EXISTING DRIVEWAY
- EXISTING STORM DRAIN
- EXISTING CREEK
- EXISTING SEWER LINE
- EXISTING WATER LINE
- PROPOSED VALLEY GUTTER
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE
- PROPOSED STORMDRAIN
- PROPOSED UNDERDRAIN
- PROPOSED CATCH BASIN
- PROPOSED AREA DRAIN
- PROPOSED UNDERDRAIN



SIZE/TYPE	QUANTITY
18" CORRUGATED POLY.	370 LF
12" CORRUGATED POLY.	86 LF
TYPE IV CATCH BASIN	3 EA
TYPE CBU 310 AREA DRAIN	2 EA
STD. 305 STORM DRAIN MH	1 EA



REV	DATE	BY	DESCRIPTION

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RAVENWOOD SUBDIVISION

MATCHLINE STA. 12+00
 SEE SHEET SD-2

LEGEND

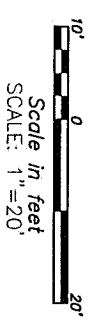
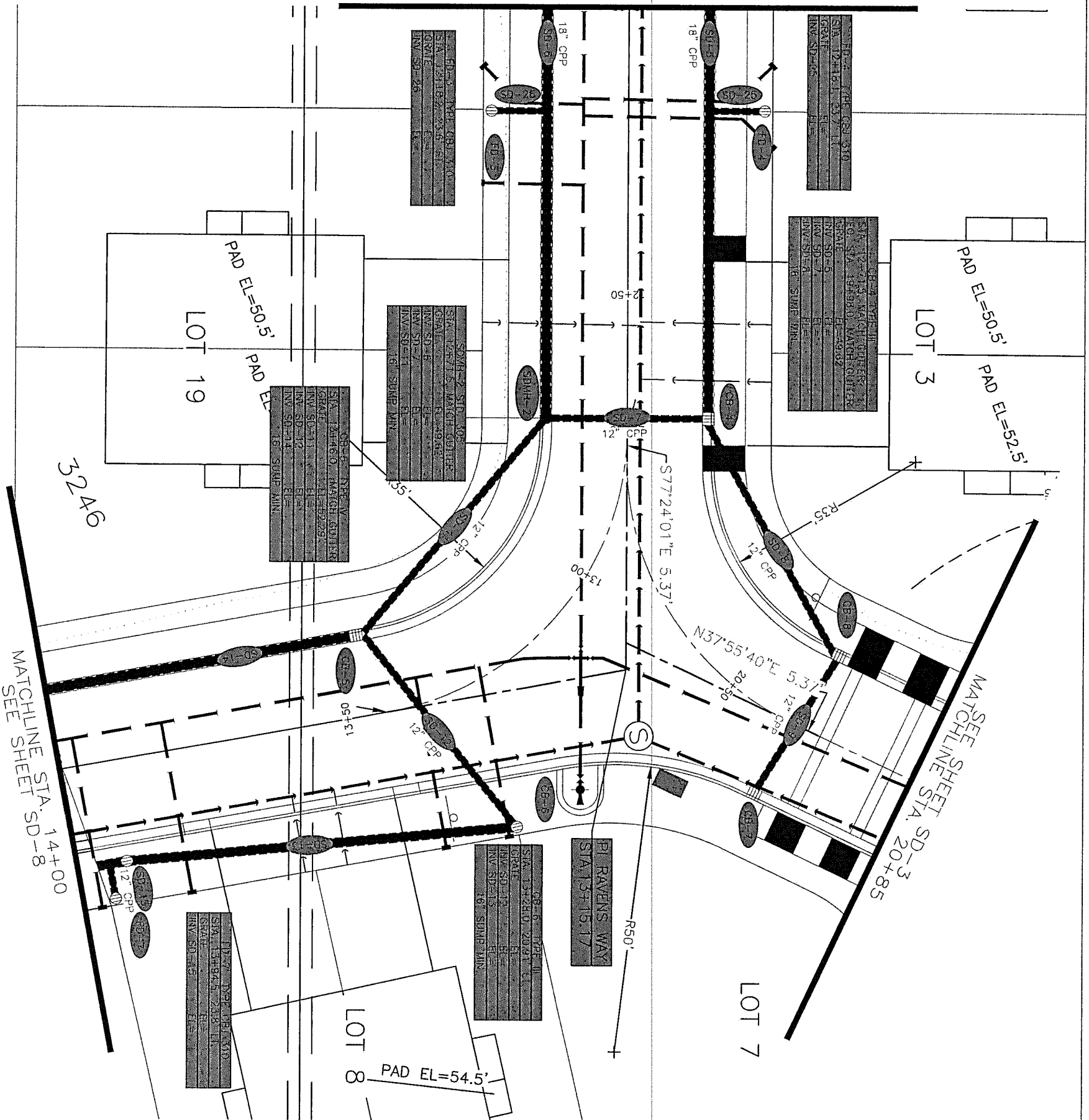
- SURVEYED
- - - UNSURVEYED
- CENTERLINE
- - - EASEMENT
- - - EXISTING WATER LINE
- - - EXISTING SEWER LINE
- - - EXISTING ELECTRIC
- - - EXISTING DRIVEWAY
- - - EXISTING STORM DRAIN
- - - EXISTING CREEK
- - - EXISTING SEWER LINE
- - - EXISTING WATER LINE
- - - PROPOSED VALLEY GUTTER
- - - PROPOSED CURB & GUTTER WITH CURB INLET
- - - PROPOSED BACK SIDEWALK
- - - PROPOSED CUT SLOPE
- - - PROPOSED FILL SLOPE
- - - PROPOSED STORMDRAIN
- - - PROPOSED UNDERDRAIN
- - - PROPOSED CATCH BASIN
- - - PROPOSED AREA DRAIN
- - - PROPOSED UNDERDRAIN



STORM QUANTITIES

SIZE/TYPE	QUANTITY
18" CORRUGATED POLY.	114 LF
12" CORRUGATED POLY.	317 LF
TYPE III CATCH BASIN	5 EA
TYPE IV CATCH BASIN	1 EA
TYPE CBU 310 AREA DRAIN	3 EA
STD. 305 STORM DRAIN MH	1 EA

SEE SHEET SD-1
MATCHLINE STA. 12+00



REV	DATE	BY	DESCRIPTION

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RAVENWOOD SUBDIVISION

SHEET SD2
SHEET NO. 32 OF 64

REV	DATE	BY	DESCRIPTION

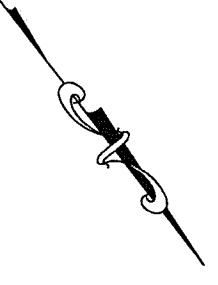
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GRAPHIC	###
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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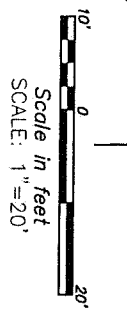
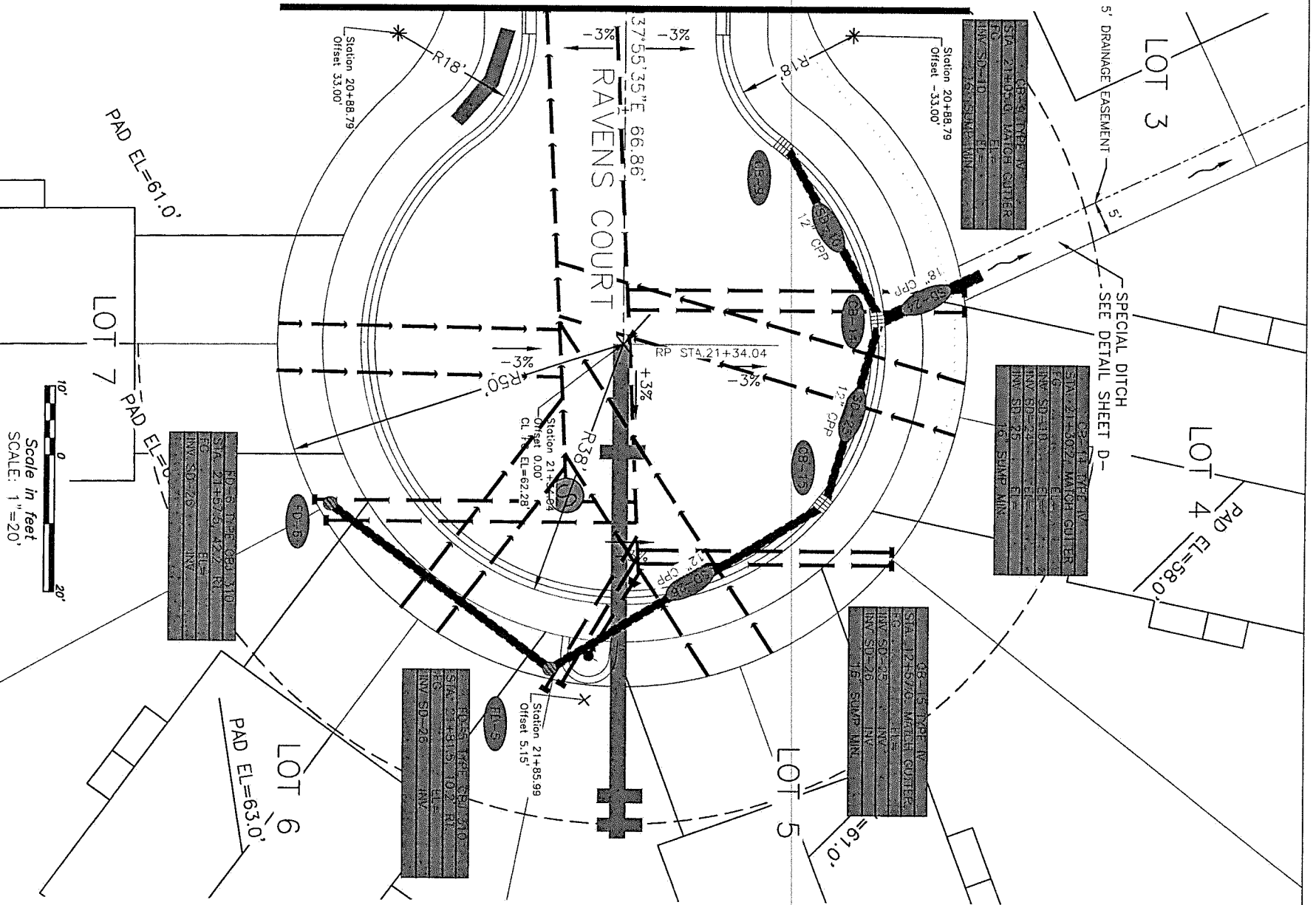
STORM QUANTITIES	
SIZE/TYPE	QUANTITY
12" CORRUGATED POLY.	150 LF
TYPE IV CATCH BASIN	3 EA
TYPE CBU 310 AREA DRAIN	2 EA

LEGEND

	SURVEYED
	UNSURVEYED
	CENTERLINE
	EASEMENT
	EXISTING WATER LINE
	EXISTING SEWER LINE
	EXISTING ELECTRIC
	EXISTING DRIVEWAY
	EXISTING STORM DRAIN
	EXISTING CREEK
	EXISTING SEWER LINE
	EXISTING WATER LINE
	PROPOSED VALLEY GUTTER
	PROPOSED CURB & GUTTER WITH CURB INLET
	PROPOSED BACK SIDEWALK
	PROPOSED CUT SLOPE
	PROPOSED FILL SLOPE
	PROPOSED STORMDRAIN
	PROPOSED UNDERDRAIN
	PROPOSED CATCH BASIN
	PROPOSED AREA DRAIN
	PROPOSED UNDERDRAIN



SEE SHEET SD-3
 MATCHLINE STA. 20+85



SHEET SD3
 SHEET NO. 33 OF 64

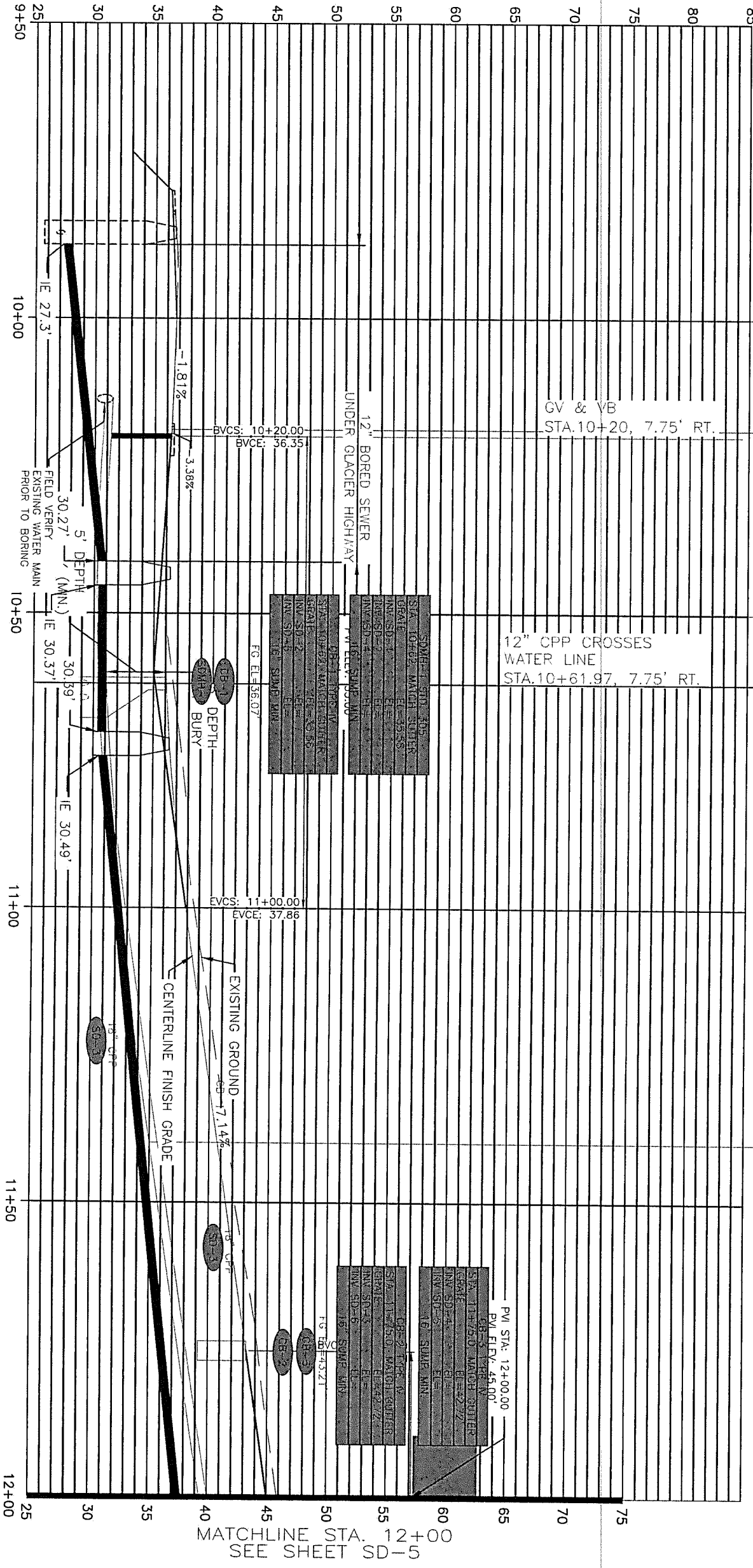
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SCALE GRAPHIC
 DESIGNED ###
 DRAWN ###
 CHECKED ###
 DATE September 30, 2024

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RAVENWOOD SUBDIVISION

SCALE: HORZ. 1"=20'
 VERT. 1"=10'



CL INTER. GLACIER HWY & RAVENS WAY
 STA.10+00
 EL=36.73'

EXISTING TOP BACK OF CURB
 STA.10+18.83
 EL=36.57'

BEGIN WATER LINE
 STA.10+18.51, 7.75' RT.
 APPROX. LOCATION FIELD VERIFY PRIOR TO TAP

PROPERTY LINE
 STA.10+50.00

12" CPP CROSSES WATER LINE
 STA.10+61.97, 7.75' RT.

FH-1
 STA.11+39.77, 7.75' RT.

MATCHLINE STA. 12+00
 SEE SHEET SD-5

SHEET SD4

SHEET NO. 34 OF 64

REV	DATE	BY	DESCRIPTION

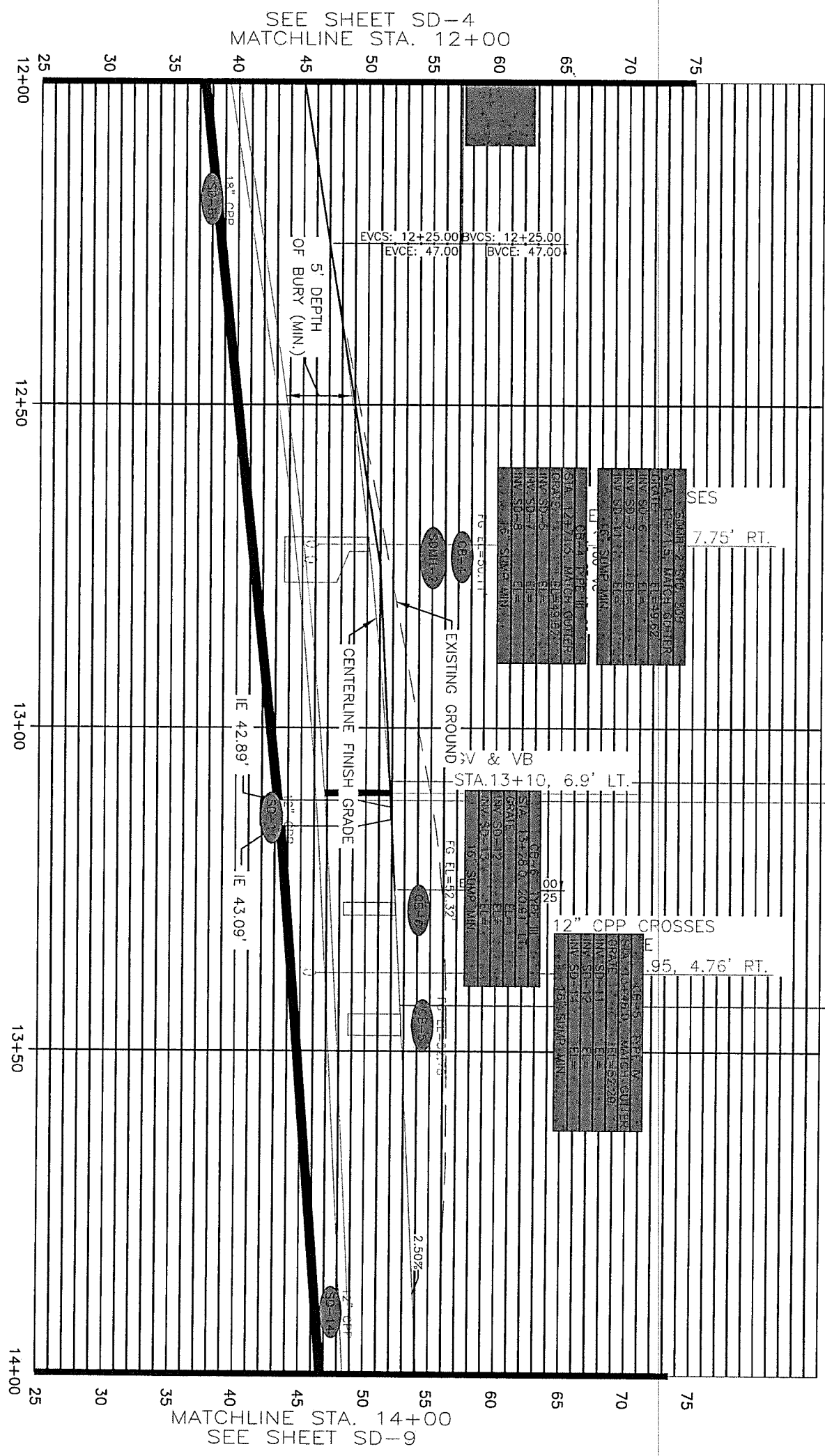
SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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RAVENWOOD SUBDIVISION

SHEET
 SDS
 SHEET NO.
 35 OF 64

SCALE: HORIZ. 1"=20'
 VERT. 1"=10'



CL INTER. PC RAVENS
 WAY & RAVENS COURT
 STA.12+73.46=20+00
 EL=51.60'
 FG EL=50.23'

PI RAVENS WAY
 STA.13+08.22
 EL=54.78'
 FG EL=51.75'

4-TREE/ FH-2
 STA.13+11.16, 7.96' LT.
 SEE SHEET W-9

PT RAVENS WAY
 STA.13+42.98
 EL=56.24'
 FG EL=52.70'

PHASE I
 STA.14+00

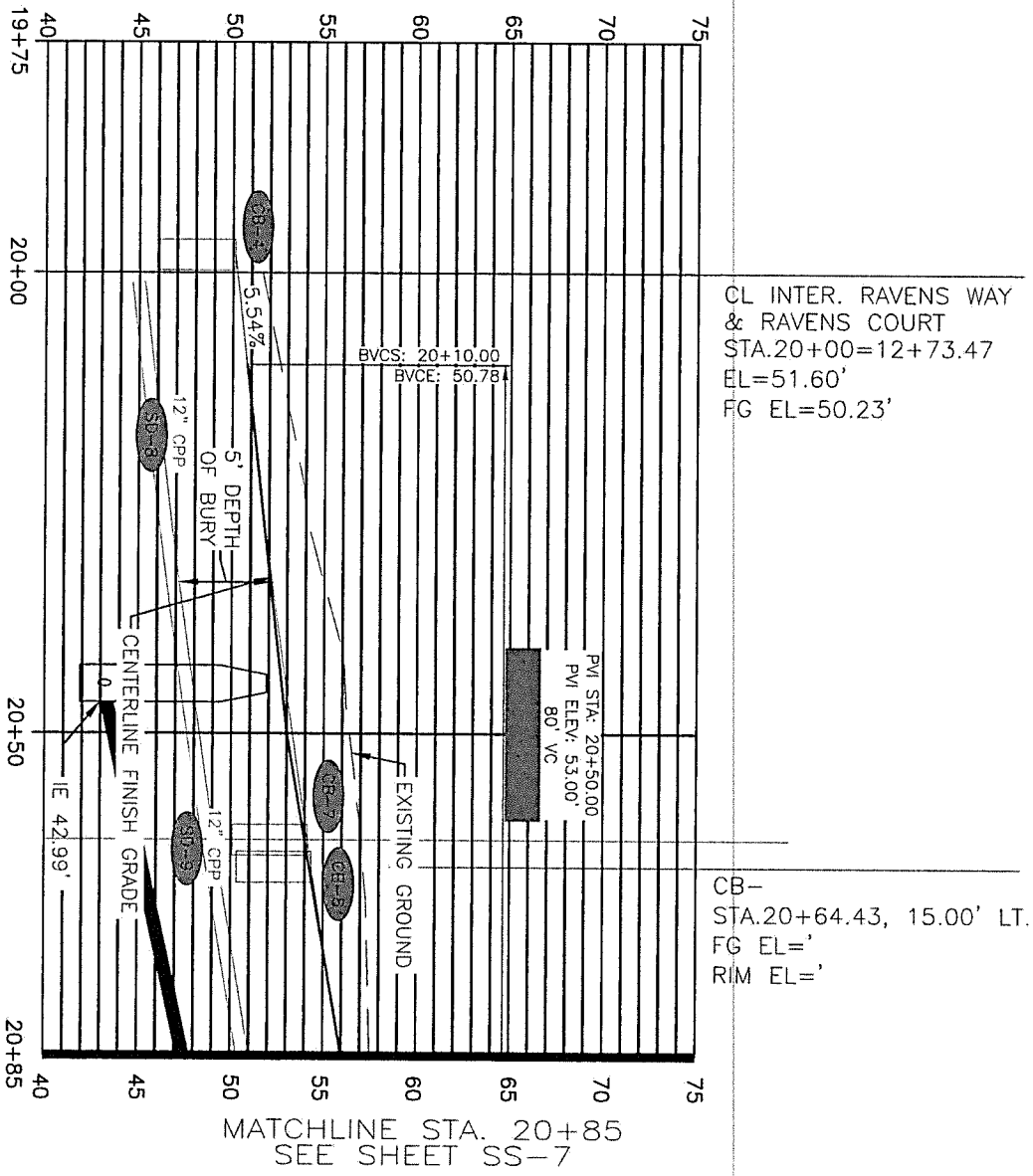
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SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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RAVENWOOD SUBDIVISION

SCALE: HORZ. 1"=20'
 VERT. 1"=10'



MATCHLINE STA. 20+85
 SEE SHEET SS-7

DATE	9/27/24
BY	J.S. SMITH
FOR	TRACY MOORE, P.E.
PROJECT	RAVENWOOD SUBDIVISION
SHEET NO.	SD6
TOTAL SHEETS	64

REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

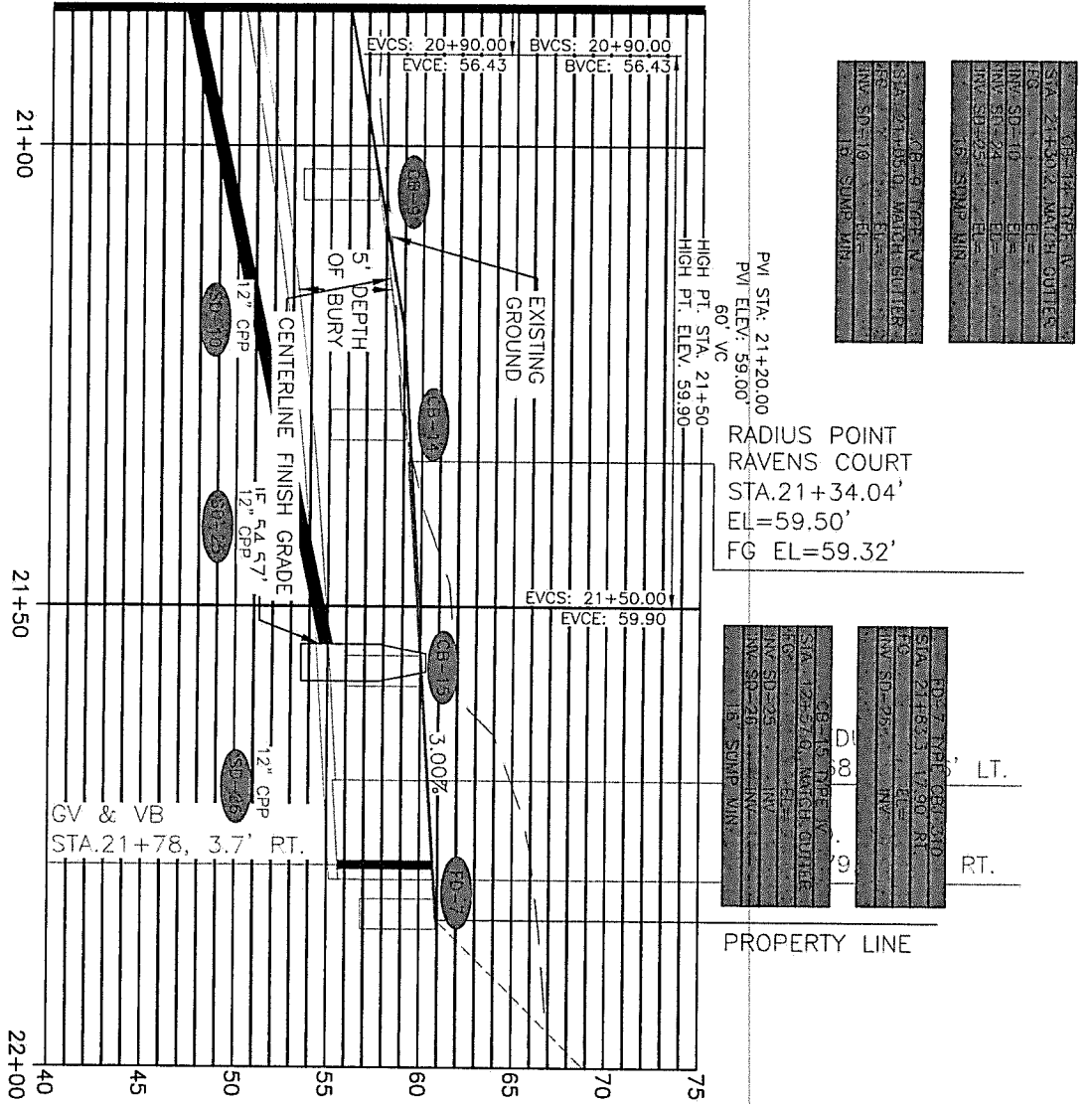
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RAVENWOOD SUBDIVISION

SHEET SD7
 SHEET NO. 37 OF 64

SCALE: HORZ. 1"=20'
 VERT. 1"=10'

SEE SHEET SD-6
 MATCHLINE STA. 20+85



STATION	TYPE	INVERT	ELEVATION	FINISHED GRADE
21+34.04	RAVENS COURT	EL	59.50	59.32
21+00	12" C/P	EL	54.57	
21+50	12" C/P	EL	59.90	
22+00	12" C/P	EL		

STATION	TYPE	INVERT	ELEVATION	FINISHED GRADE
21+34.04	RAVENS COURT	EL	59.50	59.32
21+50	12" C/P	EL	59.90	
22+00	12" C/P	EL		

SEE SHEET SD-2
MATCHLINE STA. 14+00

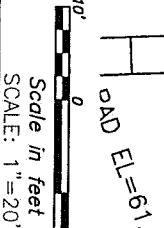
LEGEND

---	SURVEYED
---	UNSURVEYED
---	CENTERLINE
---	EASEMENT
---	EXISTING CREEK
---	PROPOSED VALLEY GUTTER
---	PROPOSED CUT SLOPE
---	PROPOSED FILL SLOPE
---	PROPOSED CURB & GUTTER WITH CURB INLET
---	PROPOSED BACK SIDEWALK
---	PROPOSED STORMDRAIN
---	PROPOSED UNDERDRAIN
---	PROPOSED CATCH BASIN
---	PROPOSED AREA DRAIN
---	PROPOSED UNDERDRAIN

SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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RAVENWOOD SUBDIVISION

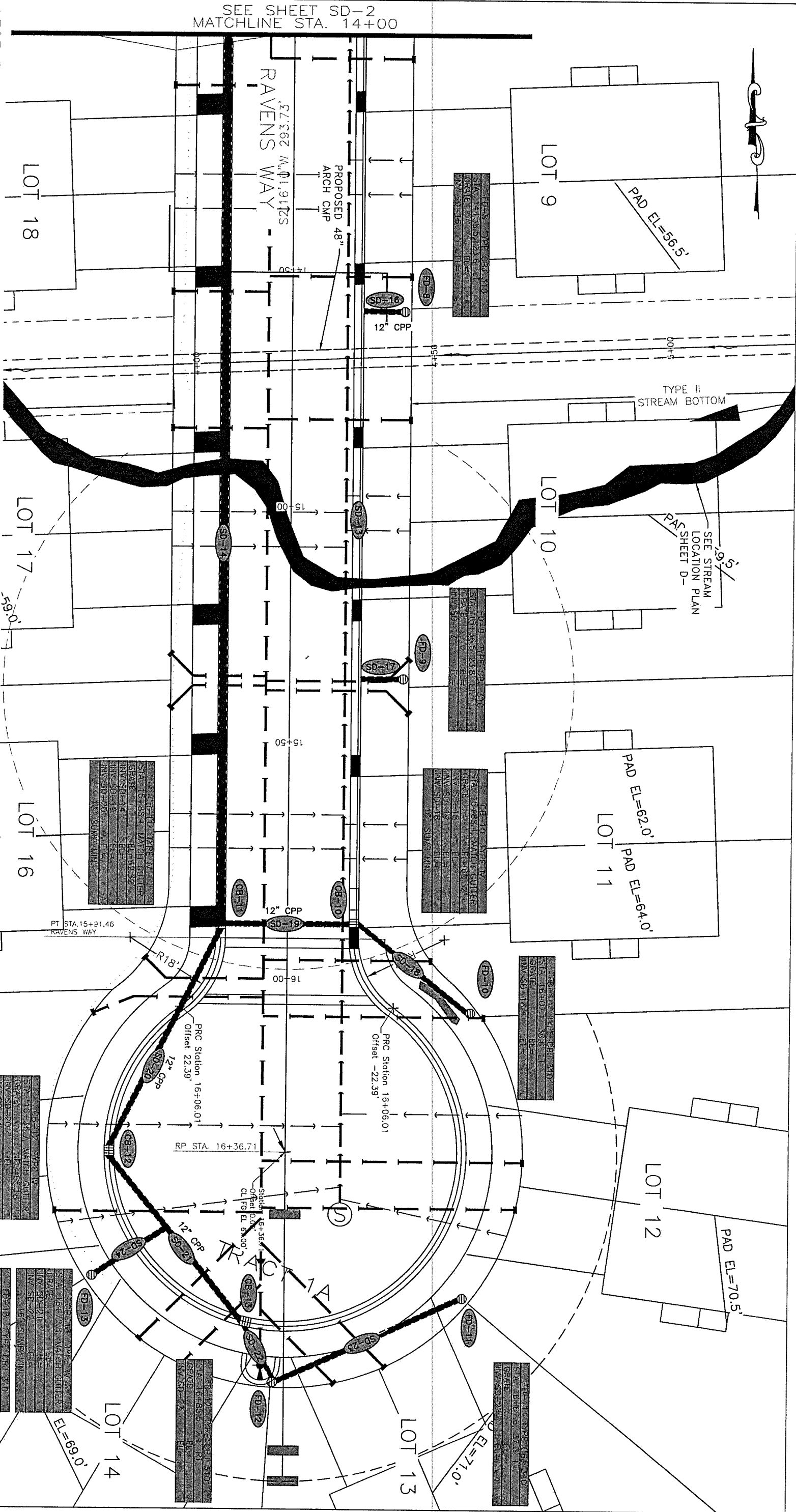


STORM QUANTITIES	QUANTITY
12" CORRUGATED POLY. TYPE IV CATCH BASIN	425 LF
12" CORRUGATED POLY. TYPE IV CATCH BASIN	4 EA
TYPE CBU 310 AREA DRAIN	6 EA

TR-12 TYPE IV GRAVE	STA. 15+87.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'
TR-12 TYPE IV GRAVE	STA. 16+96.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'
TR-12 TYPE IV GRAVE	STA. 16+96.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'
TR-12 TYPE IV GRAVE	STA. 16+96.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'

TR-12 TYPE IV GRAVE	STA. 16+96.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'
TR-12 TYPE IV GRAVE	STA. 16+96.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'
TR-12 TYPE IV GRAVE	STA. 16+96.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'
TR-12 TYPE IV GRAVE	STA. 16+96.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'

TR-12 TYPE IV GRAVE	STA. 16+96.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'
TR-12 TYPE IV GRAVE	STA. 16+96.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'
TR-12 TYPE IV GRAVE	STA. 16+96.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'
TR-12 TYPE IV GRAVE	STA. 16+96.7 MATCH GUTTER	EL=65.0'
TR-20 TYPE IV GRAVE	STA. 16+20.0 MATCH GUTTER	EL=65.0'



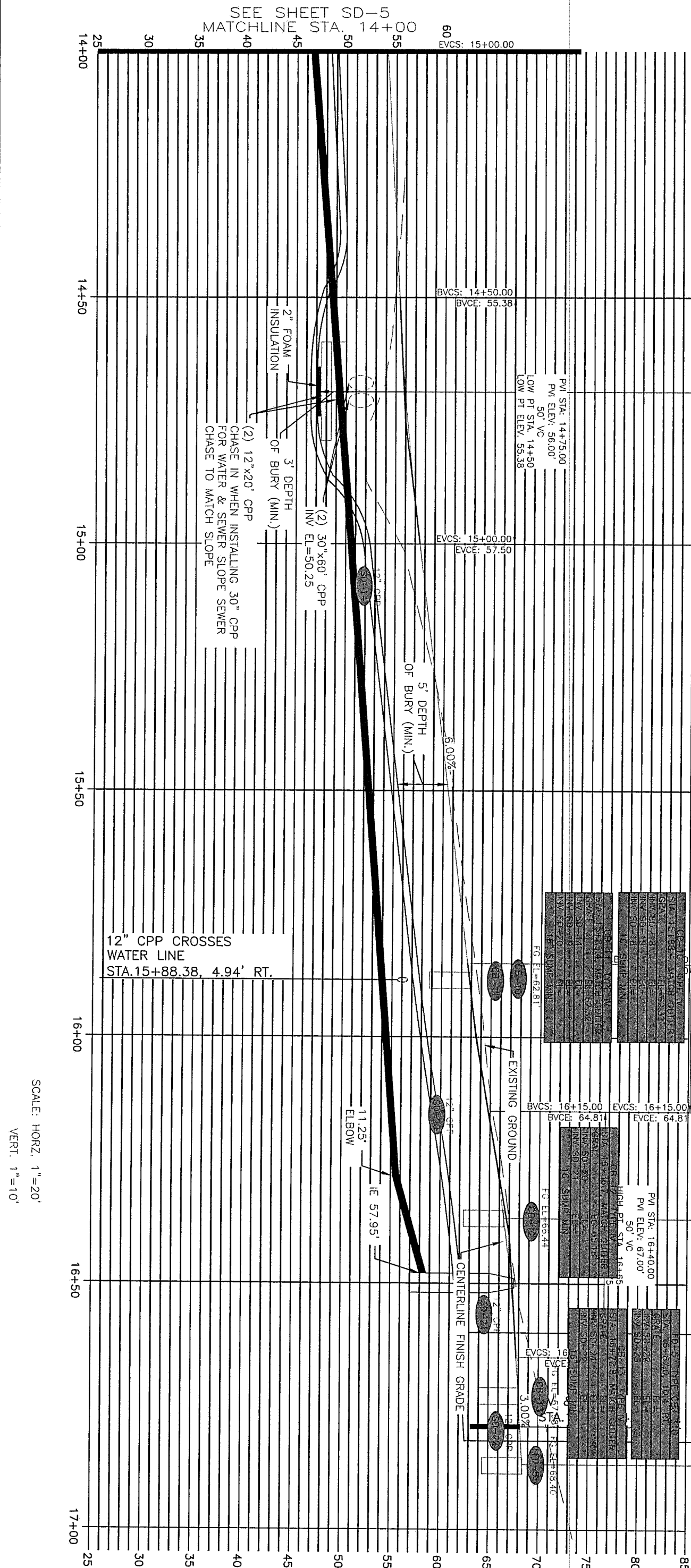
REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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RAVENWOOD SUBDIVISION

SHEET SD9
 SHEET NO. 39 OF 64



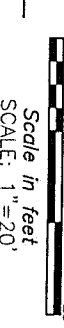
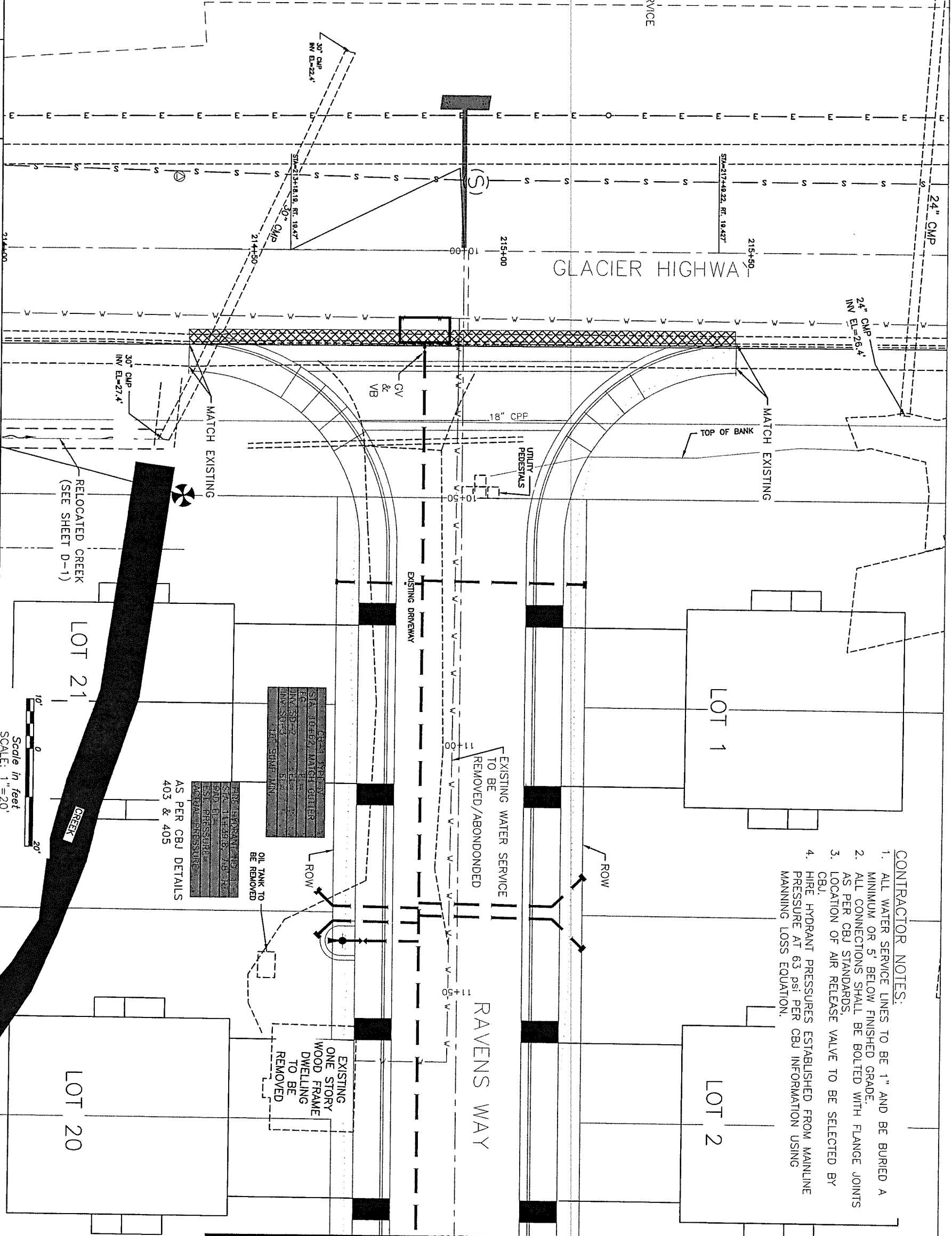
SCALE: HORZ. 1"=20'
 VERT. 1"=10'

LEGEND

---	SURVEYED
---	UNSURVEYED
---	CENTERLINE
---	EASEMENT
---	EXISTING WATER LINE
---	EXISTING SEWER LINE
---	EXISTING ELECTRIC
---	EXISTING DRIVEWAY
---	EXISTING STORM DRAIN
---	EXISTING CREEK
---	PROPOSED VALLEY GUTTER
---	PROPOSED CURB & GUTTER WITH CURB INLET
---	PROPOSED BACK SIDEWALK
---	PROPOSED CUT SLOPE
---	PROPOSED 8" DI WATER LINE
---	PROPOSED 1" WATER LINE SERVICE
---	PROPOSED WATER VALVE
---	PROPOSED FIRE HYDRANT
---	PROPOSED THRUST BLOCK
---	EXISTING SEWER MANHOLE

WATER QUANTITIES

SIZE/TYPE	QUANTITY
8" HDPE	200 LF
1" TYPE "K" SERVICE LINE	150 LF
FIRE HYDRANT	1 EA
WATER METER	6 EA
MAINLINE VALVE	2 EA



- CONTRACTOR NOTES:**
1. ALL WATER SERVICE LINES TO BE 1" AND BE BURIED A MINIMUM OR 5' BELOW FINISHED GRADE.
 2. ALL CONNECTIONS SHALL BE BOLTED WITH FLANGE JOINTS AS PER CBJ STANDARDS.
 3. LOCATION OF AIR RELEASE VALVE TO BE SELECTED BY CBJ.
 4. HIRE HYDRANT PRESSURES ESTABLISHED FROM MAINLINE PRESSURE AT 63 PSI PER CBJ INFORMATION USING MANNING LOSS EQUATION.

MATCHLINE STA. 12+00
SEE SHEET W-2

REV	DATE	BY	DESCRIPTION

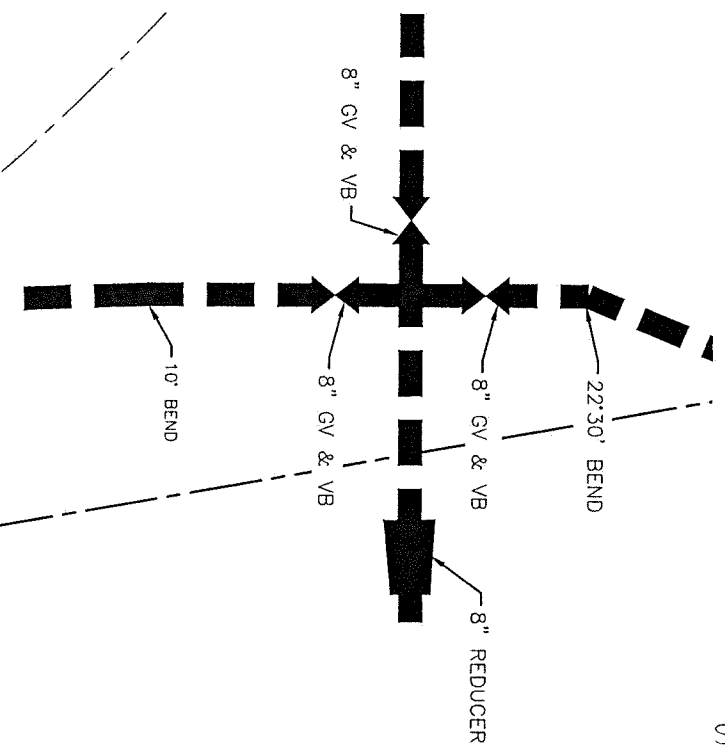
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RAVENWOOD SUBDIVISION

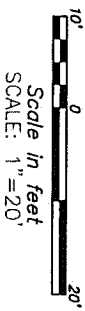
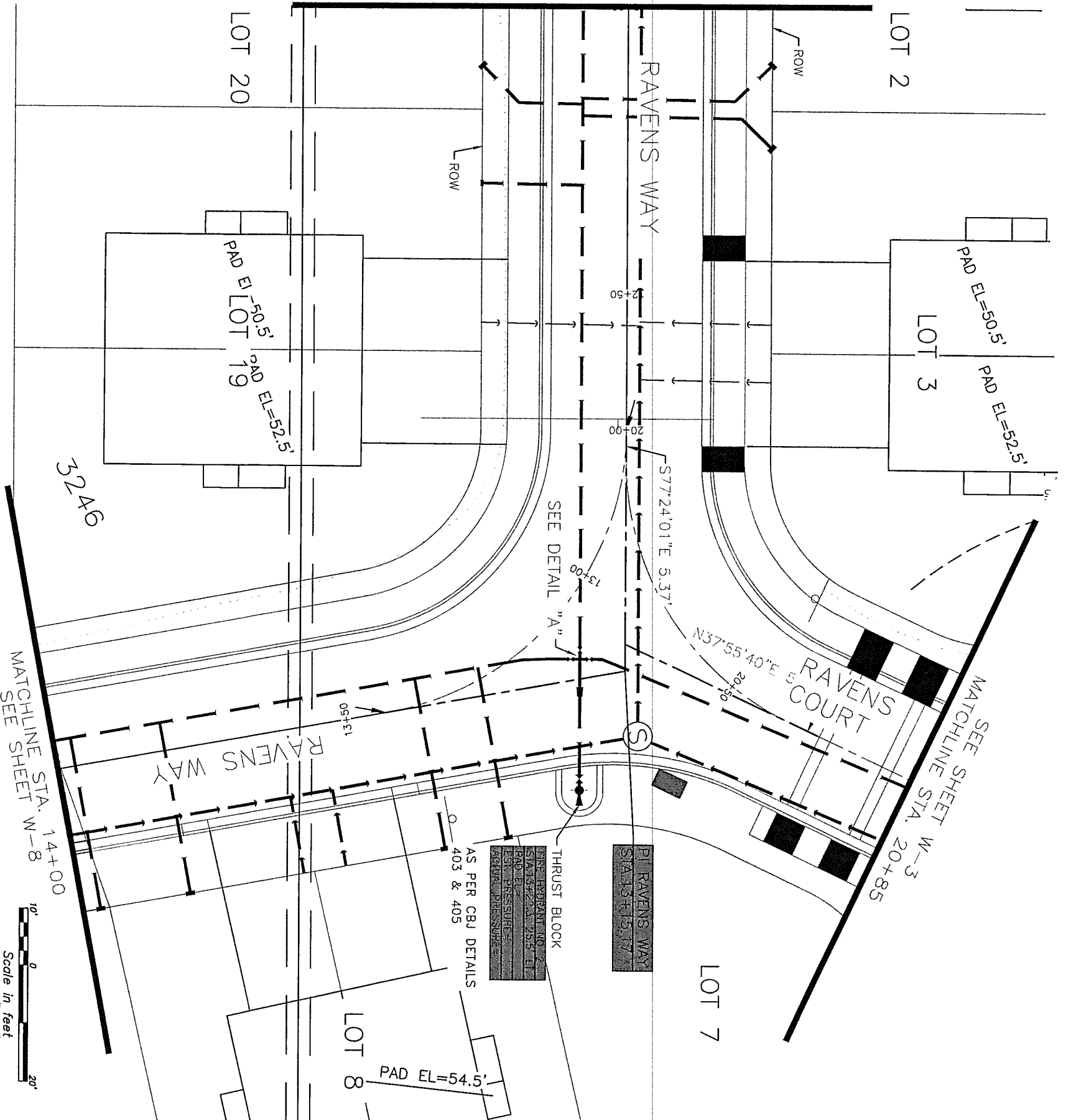
LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING CREEK
- PROPOSED VALLEY GUTTER
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE
- PROPOSED 8" DI WATER LINE
- PROPOSED 1" WATER LINE SERVICE
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED THRUST BLOCK

WATER QUANTITIES	
SIZE/TYPER	QUANTITY
8" HDPE	295 LF
1" TYPE "K" SERVICE LINE	270 LF
FIRE HYDRANT	1 EA
WATER METER	8 EA
MANLINE VALVE	3 EA



SEE SHEET W-1
MATCHLINE STA. 12+00



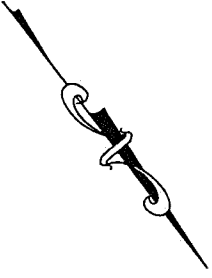
REV	DATE	BY	DESCRIPTION	SCALE	GRAPHIC

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RAVENWOOD SUBDIVISION

SHEET
W2
SHEET NO.
41 OF 64

LEGEND	
	SURVEYED
	UNSERVED
	CENTERLINE
	EASEMENT
	EXISTING WATER LINE
	EXISTING SEWER LINE
	EXISTING ELECTRIC
	EXISTING DRIVEWAY
	EXISTING STORM DRAIN
	EXISTING CREEK
	EXISTING SEWER LINE
	EXISTING WATER LINE
	PROPOSED VALLEY GUTTER
	PROPOSED CURB & GUTTER WITH CURB INLET
	PROPOSED BACK SIDEWALK
	PROPOSED CUT SLOPE
	PROPOSED FILL SLOPE
	PROPOSED 8" DI WATER LINE
	PROPOSED 3/4" WATER LINE SERVICE
	PROPOSED WATER VALVE
	PROPOSED FIRE HYDRANT

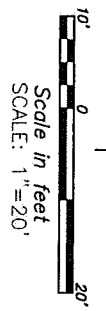
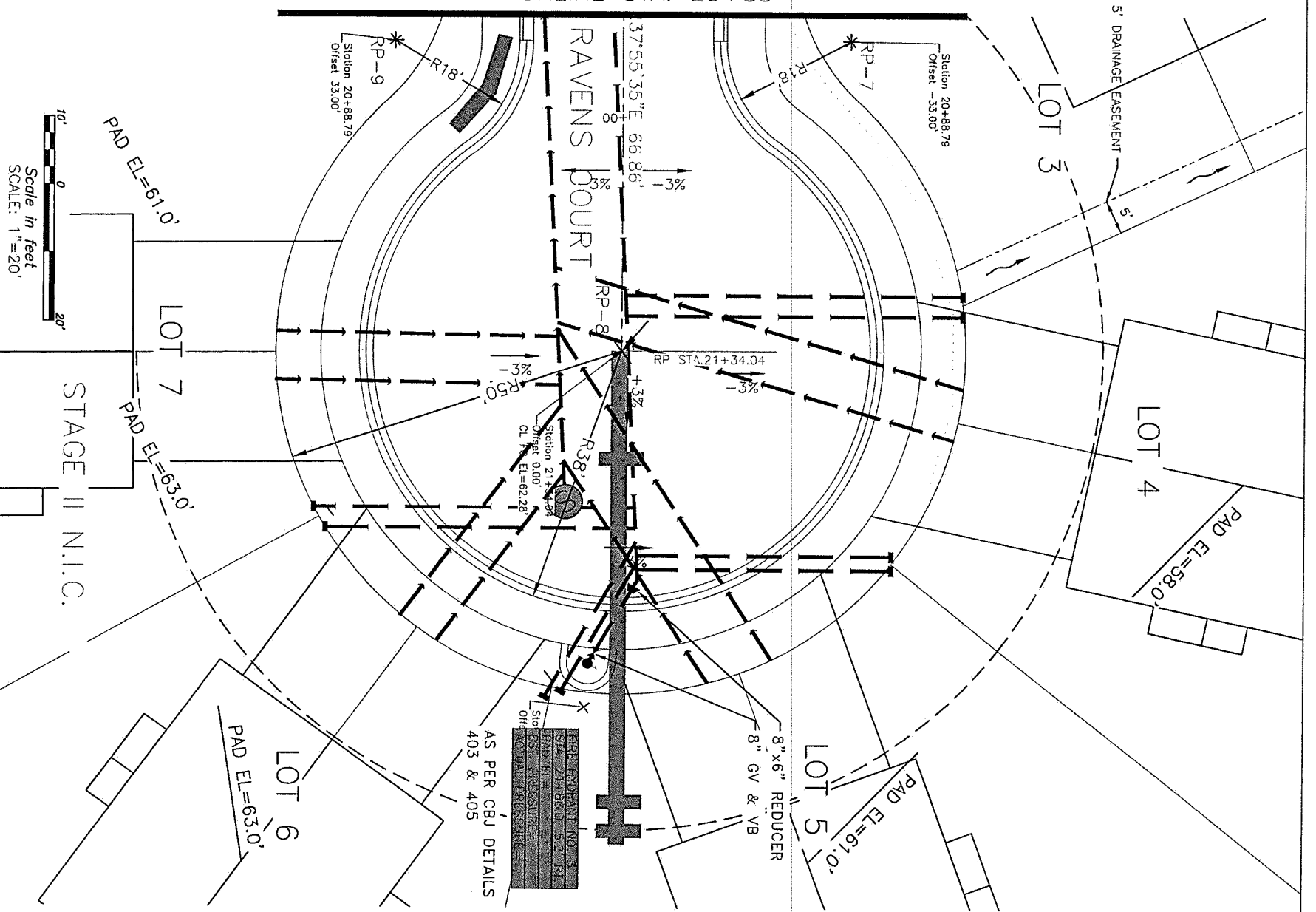


WATER QUANTITIES	
SIZE/TYPE	QUANTITY
8" HDPE	70 LF
1" TYPE "K" SERVICE LINE	400 LF
FIRE HYDRANT	1 EA
WATER METER	8 EA
MAINLINE VALVE	1 EA

REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

SEE SHEET W-2
MATCHLINE STA. 20+85



CURB & GUTTER TABLE		
RP NO.	STA.-OFFSET	RADIUS
RP-7	STA 20+88.79 33.00' LT.	18.00'
RP-8	STA 20+88.79 33.00' RT.	18.00'
RP-9	STA 21+34.04 0.00' RT.	38.00'

FIRE HYDRANT NO. 5
STA 21+86.0 5'x7' RT.
8" DI PRESSURE
OFF. TO CURB REDUCER
AS PER CBU DETAILS
403 & 405

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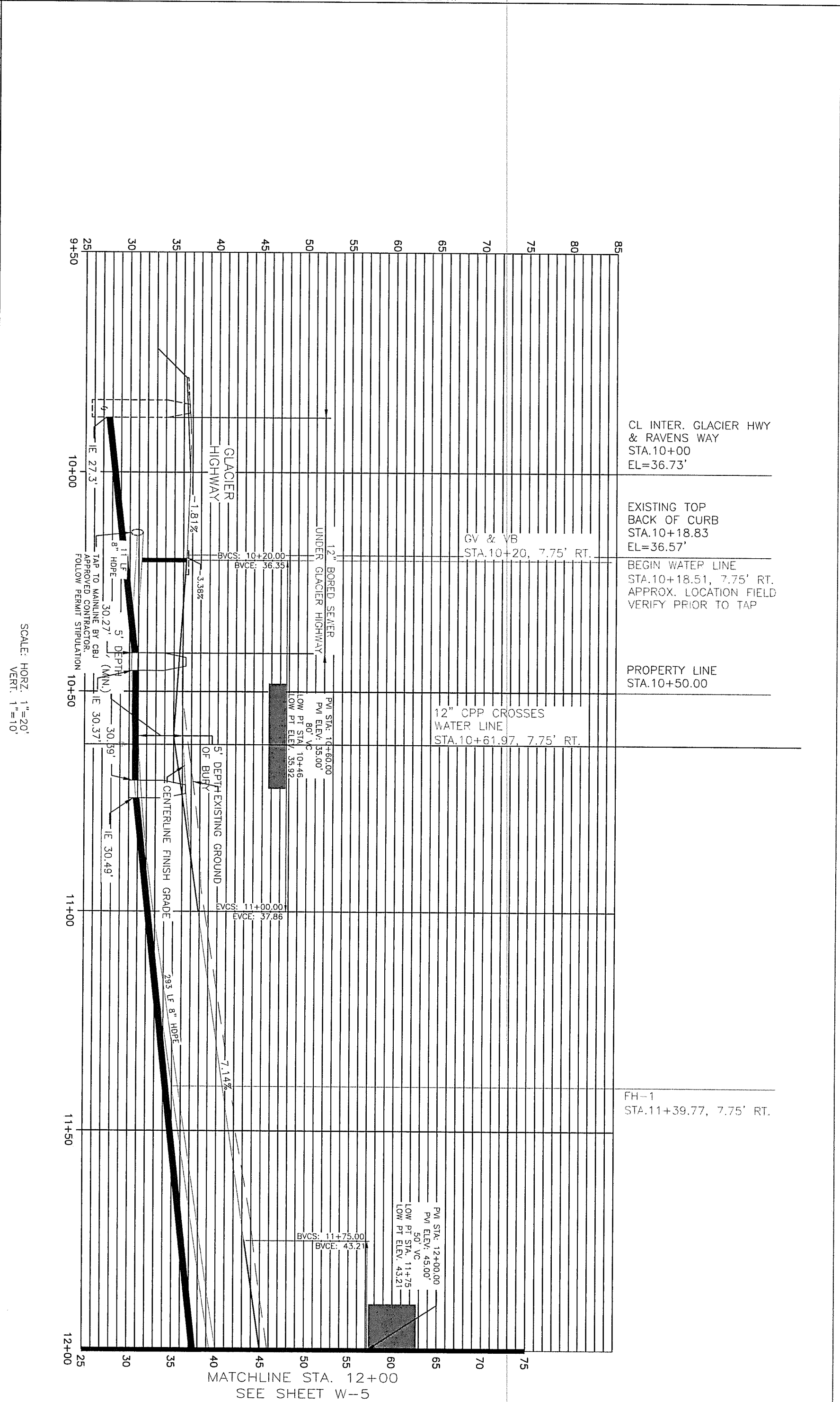
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REV	DATE	BY	DESCRIPTION

SCALE GRAPHIC
 DESIGNED: ###
 DRAWN: ###
 CHECKED: ###
 DATE September 30, 2024

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RAVENWOOD SUBDIVISION



SCALE: HORZ. 1"=20'
 VERT. 1"=10'

MATCHLINE STA. 12+00
 SEE SHEET W-5

SHEET	W4
SHEET NO.	43 OF 64

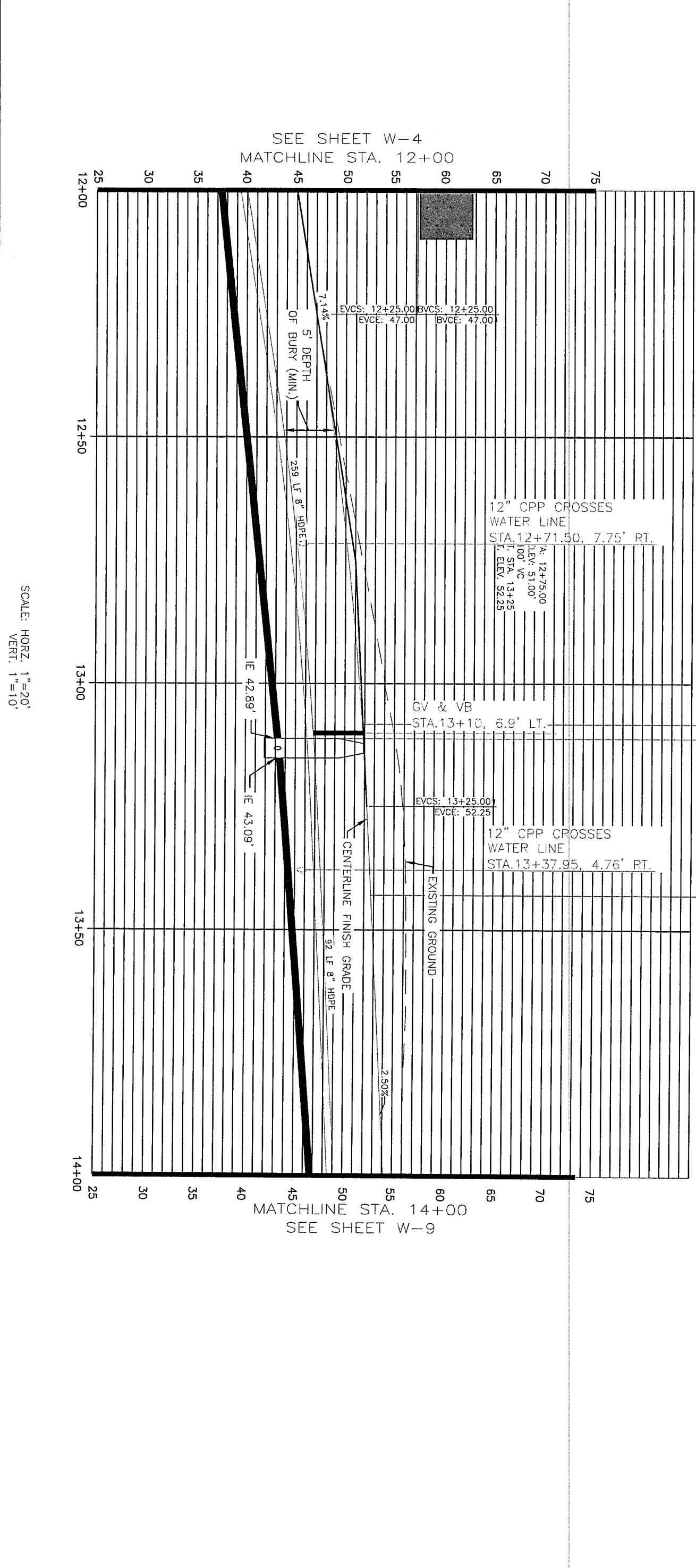
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SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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RAVENWOOD SUBDIVISION

SHEET
W5
SHEET NO.
44 OF 64



CL INTER. PC RAVENS WAY & RAVENS COURT
STA. 12+73.46=20+00
EL=51.60'
FG EL=50.23'

PI RAVENS WAY
STA. 13+08.22
EL=54.78'
FG EL=51.75'

4-TREE/ FH-2
STA. 13+11.16, 7.96' LT.
SEE SHEET W-9

PT RAVENS WAY
STA. 13+42.98
EL=56.24'
FG EL=52.70'

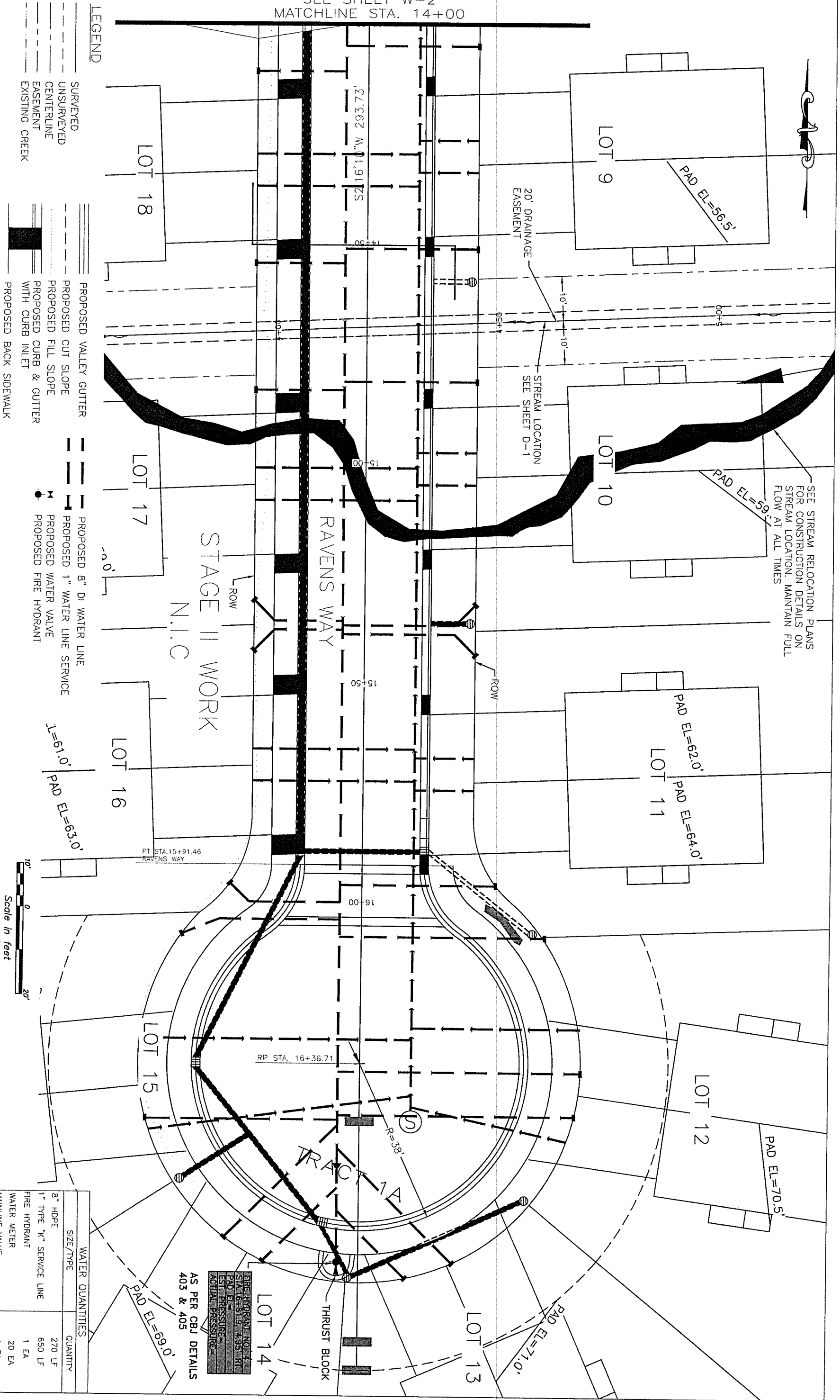
PHASE I
STA. 14+00

SCALE: HORZ. 1"=20'
VERT. 1"=10'

SEE SHEET W-4
MATCHLINE STA. 12+00

MATCHLINE STA. 14+00
SEE SHEET W-9

SEE SHEET W-2
MATCHLINE STA. 14+00



LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING CREEK

PROPOSED VALLEY GUTTER

PROPOSED CUT SLOPE

PROPOSED FILL SLOPE

PROPOSED CURB & GUTTER WITH CURB INLET

PROPOSED BACK SIDEWALK

PROPOSED 8" DI WATER LINE

PROPOSED 1" WATER LINE SERVICE

PROPOSED WATER VALVE

PROPOSED FIRE HYDRANT

WATER QUANTITIES

SIZE/TYPE	QUANTITY
8" HDPE	270 LF
1" TYPE "K" SERVICE LINE	650 LF
FIRE HYDRANT	1 EA
WATER METER	20 EA
MAINLINE VALVE	1 EA

Scale in feet
SCALE: 1"=20'

AS PER CBJ DETAILS
405 & 405

REV	DATE	BY	DESCRIPTION

SCALE GRAPHIC

DESIGNED: ###

DRAWN: ###

CHECKED: ###

DATE: September 30, 2024

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RAVENWOOD SUBDIVISION

SHEET W8

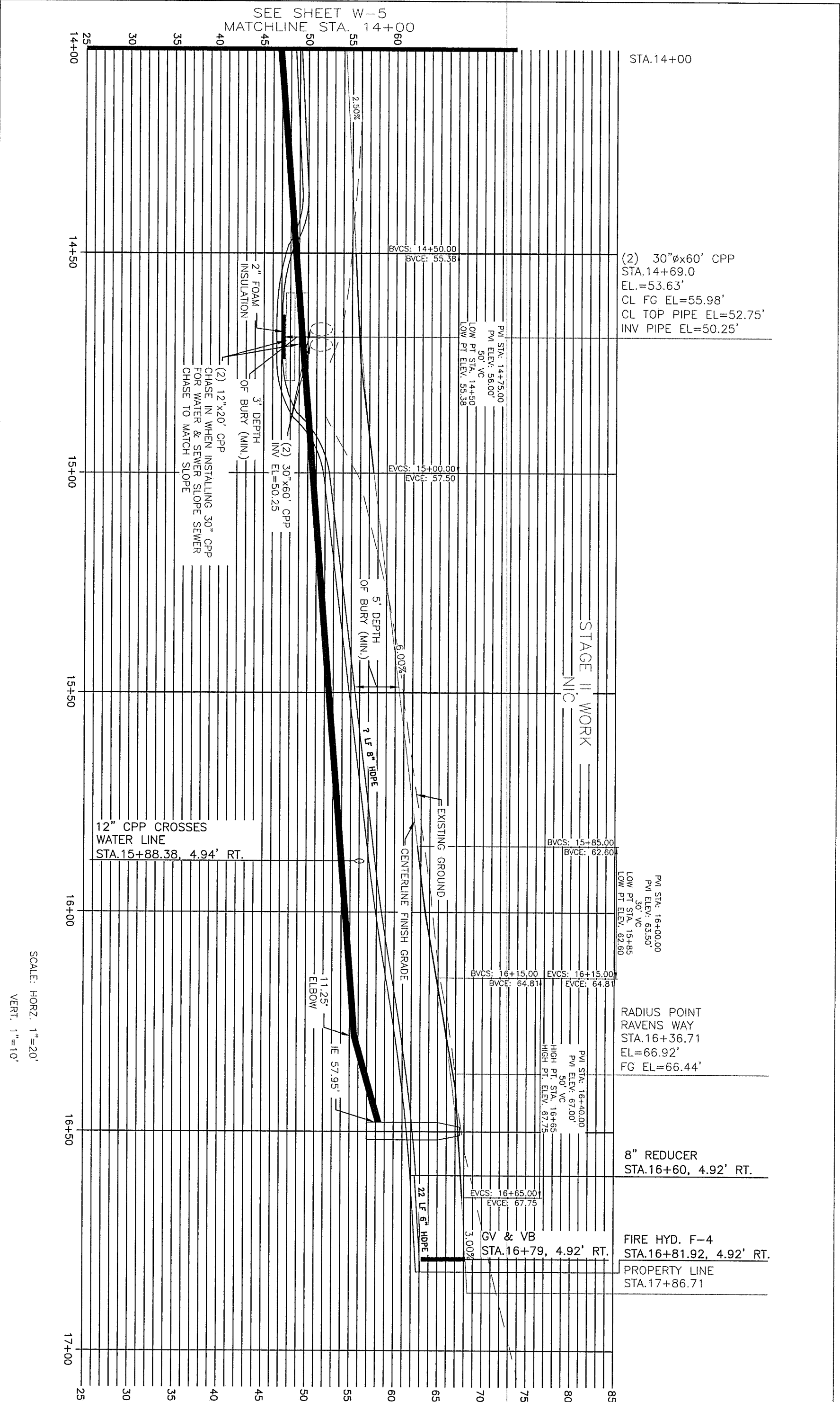
SHEET NO. 47 OF 64

REV	DATE	BY	DESCRIPTION

SCALE GRAPHIC
 DESIGNED ###
 DRAWN ###
 CHECKED ###
 DATE September 30, 2024

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SHEET	W9
SHEET NO.	48 OF 64

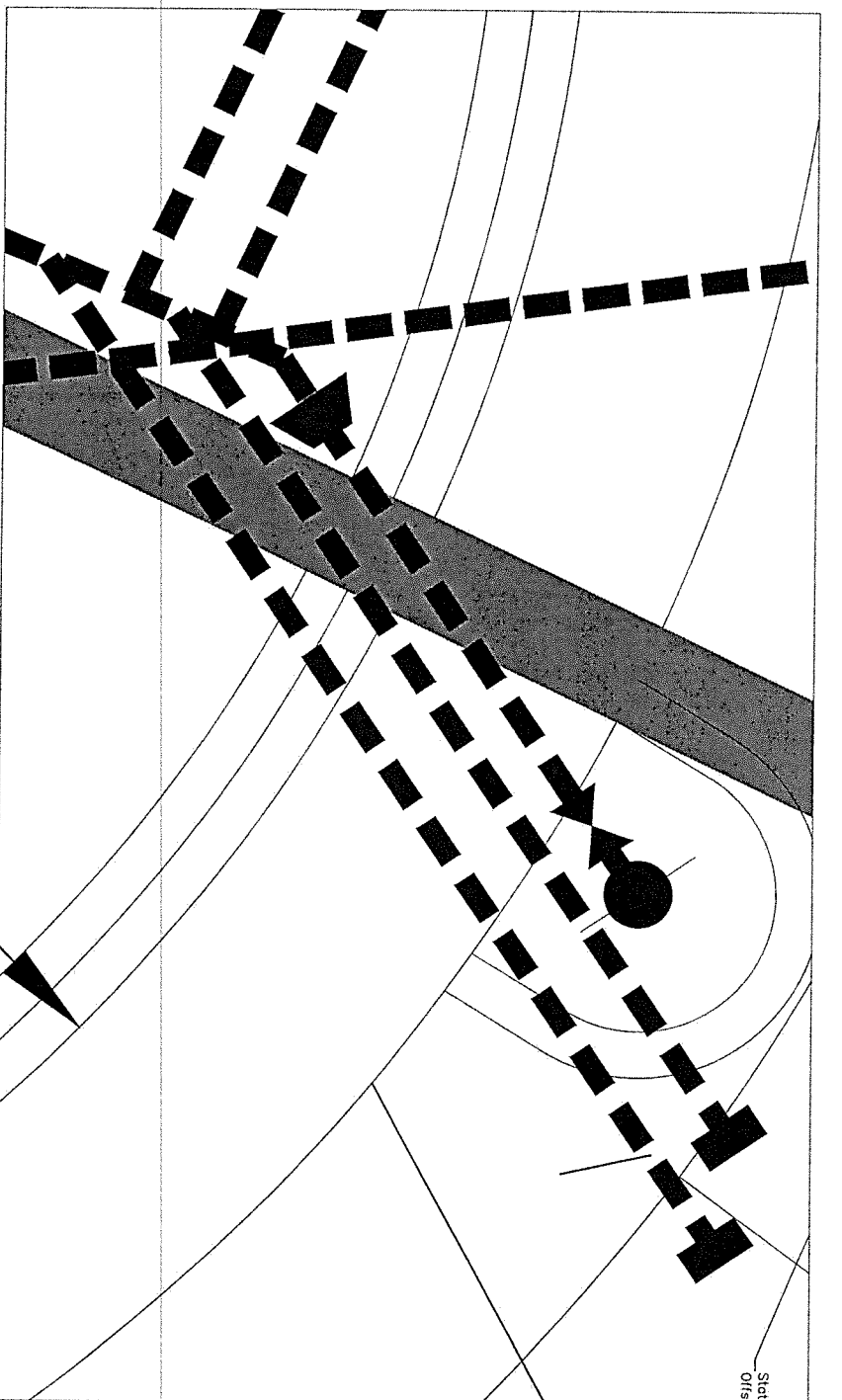
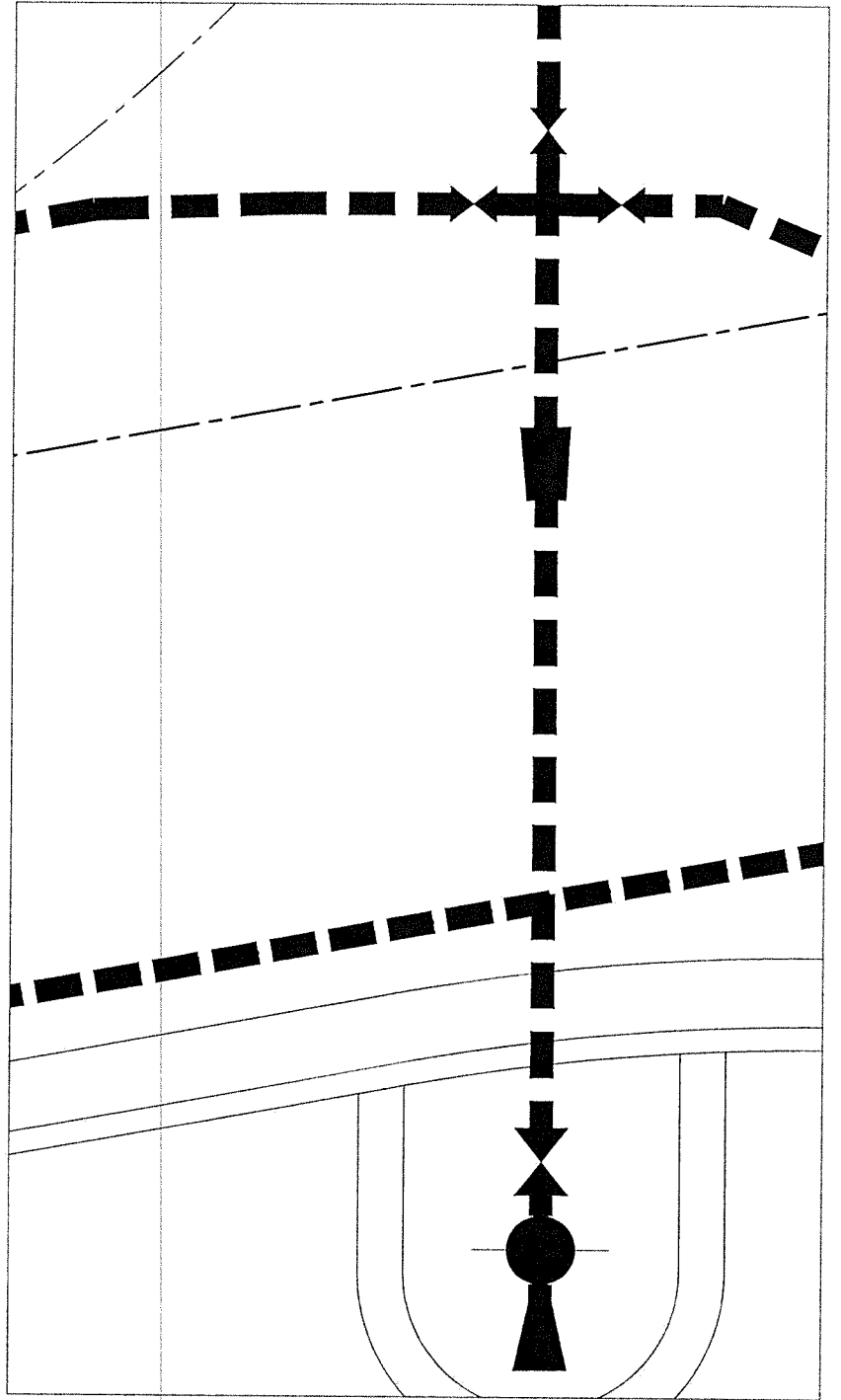
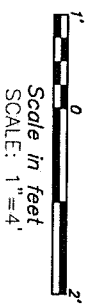
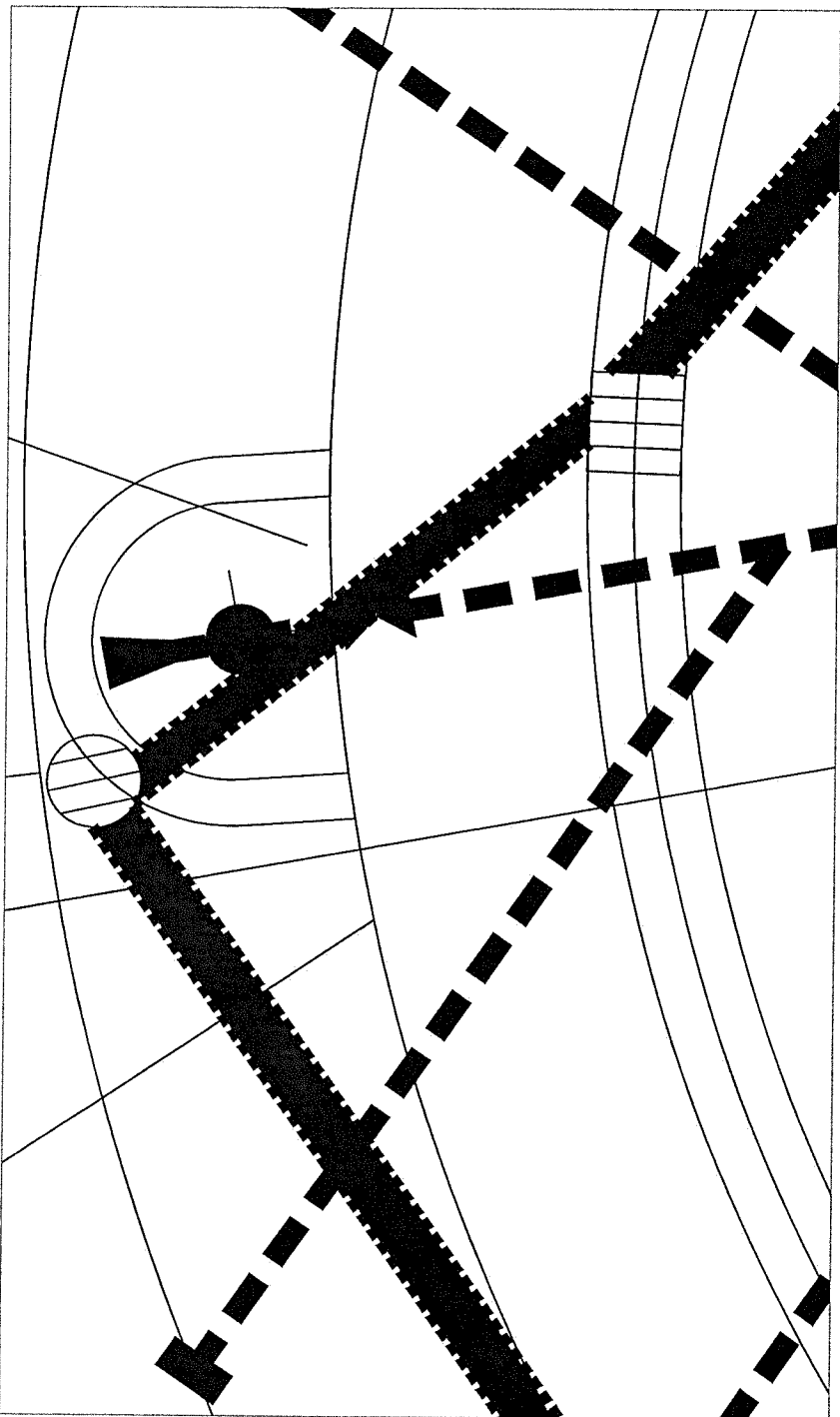
REV	DATE	BY	DESCRIPTION

SCALE _____ GRAPHIC
DESIGNED _____
DRAWN _____
CHECKED _____
DATE September 30, 2024

MOORE ENGINEERING
P.O. BOX 397 CRAIG, ALASKA 99921
(907) 530-7008
TRACY MOORE, P.E.
REGISTERED PROFESSIONAL CIVIL ENGINEER

RAVENWOOD SUBDIVISION

SHEET W10
SHEET NO. 49 OF 64



State
Office

PHASE 1 - RAVENS WAY WATER SERVICE LOCATION TABLE	
EXISTING 16" WATER	STA.10+13.68
CV & VB	STA.10+20.22, 7.75' RT. EL=
SERVICE LOT 1	STA.10+78, 7.75' RT.
SERVICE LOT 21	STA.10+80, 7.75' RT.
SERVICE LOT 1	STA.11+32, 7.75' RT.
SERVICE LOT 21	STA.11+33, 7.75' RT.
SERVICE LOT 2	STA.11+35, 7.75' RT.
SERVICE LOT 22	STA.11+36, 7.75' RT.
SERVICE LOT 2	STA.12+16, 7.75' RT.
SERVICE LOT 20	STA.12+17, 7.75' RT.
SERVICE LOT 3	STA.12+19, 7.75' RT.
SERVICE LOT 19	STA.12+20, 7.75' RT.
SERVICE LOT 7	STA.13+22, 0.72' RT.
SERVICE LOT 8	STA.13+25, 1.92' RT.
SERVICE LOT 8	STA.13+94, 4.98' RT.
SERVICE LOT 9	STA.13+97, 4.98' RT.
SERVICE LOT 10	STA.14+97.6, 11.6' LT.
SERVICE LOT 17	STA.15+01.1, 11.6' LT.
SERVICE LOT 10	STA.15+04.9, 11.6' LT.
SERVICE LOT 17	STA.15+08.4, 11.6' LT.

PHASE 1 - RAVENS COUPT WATER SERVICE LOCATION TABLE	
SERVICE LOT 3	STA.21+26, 0.6' LT.
SERVICE LOT 4	STA.21+29, 0.7' LT.
SERVICE LOT 7	STA.21+57, 2.0' LT.
SERVICE LOT 6	STA.21+60, 2.1' LT.
SERVICE LOT 6	STA.21+62, 2.2' LT.
SERVICE LOT 4	STA.21+65, 2.3' LT.
SERVICE LOT 5	STA.21+65, 2.4' LT.
SERVICE LOT 5	STA.21+66, 2.4' LT.

PHASE II - RAVENS WAY WATER SERVICE LOCATION TABLE	
SERVICE LOT 18	STA.14+05, 4.98' RT.
SERVICE LOT 9	STA.14+65, 4.98' RT.
SERVICE LOT 18	STA.14+66, 4.98' RT.
SERVICE LOT 10	STA.14+72, 4.79' RT.
SERVICE LOT 17	STA.14+73, 4.97' RT.
SERVICE LOT 17	STA.15+36, 4.95' RT.
SERVICE LOT 10	STA.15+37, 4.95' RT.
SERVICE LOT 16	STA.15+38, 4.95' RT.
SERVICE LOT 11	STA.15+39, 4.95' RT.
SERVICE LOT 16	STA.16+00, 4.94' RT.
SERVICE LOT 15	STA.16+04, 4.94' RT.
SERVICE LOT 11	STA.16+06, 4.94' RT.
SERVICE LOT 12	STA.16+08, 4.94' RT.
SERVICE LOT 12	STA.16+42, 4.93' RT.
SERVICE LOT 12	STA.16+45, 4.93' RT.
SERVICE LOT 15	STA.16+63, 4.92' RT.
SERVICE LOT 14	STA.16+65, 4.92' RT.
SERVICE LOT 13	STA.16+67, 4.92' RT.
SERVICE LOT 14	STA.16+70, 4.92' RT.

PHASE 1 - RAVENS WAY SEWER SERVICE LOCATION TABLE	
SERVICE LOT 1	STA.10+86.7, 2.2' LT.
SERVICE LOT 21	STA.10+87.40, 2.2' RT.
SERVICE LOT 1	STA.10+96.7, 2.2' LT.
SERVICE LOT 21	STA.10+97.4, 2.2' LT.
SERVICE LOT 2	STA.11+70.8, 2.2' LT.
SERVICE LOT 20	STA.11+74.4, 2.2' LT.
SERVICE LOT 2	STA.11+80.7, 2.2' LT.
SERVICE LOT 20	STA.11+81.4, 2.2' LT.
SERVICE LOT 3	STA.12+54.8, 2.2' LT.
SERVICE LOT 19	STA.12+55.4, 2.2' LT.
SERVICE LOT 3	STA.12+64.7, 2.2' LT.
SERVICE LOT 19	STA.12+65.44, 2.2' LT.
SERVICE LOT 8	STA.13+54.4, 11.6' LT.
SERVICE LOT 8	STA.13+61.7, 11.6' LT.

PHASE 1 - RAVENS COUPT SEWER SERVICE LOCATION TABLE	
SERVICE LOT 4	STA.21+22, 9.69' RT.
SERVICE LOT 4	STA.21+30, 9.3' RT.
SERVICE LOT 5	STA.21+31, 9.3' RT.
SERVICE LOT 7	STA.21+32, 9.2' RT.
SERVICE LOT 7	STA.21+39, 8.9' RT.
SERVICE LOT 6	STA.21+42, 8.7' RT.
SERVICE LOT 5	STA.21+50, 8.3' RT.
SERVICE LOT 6	STA.21+52, 8.2' RT.

PHASE II - RAVENS WAY SEWER SERVICE LOCATION TABLE	
SERVICE LOT 9	STA.14+26.5, 11.6' LT.
SERVICE LOT 18	STA.14+29.6, 11.6' LT.
SERVICE LOT 9	STA.14+33.8, 11.6' LT.
SERVICE LOT 18	STA.14+36.9, 11.6' LT.
SERVICE LOT 16	STA.15+65.2, 11.6' LT.
SERVICE LOT 11	STA.15+67.2, 11.6' LT.
SERVICE LOT 16	STA.15+72.5, 11.6' LT.
SERVICE LOT 11	STA.15+74.5, 11.6' LT.
SERVICE LOT 15	STA.16+31.2, 11.6' LT.
SERVICE LOT 12	STA.16+36.6, 11.6' LT.
SERVICE LOT 15	STA.16+44.0, 11.6' LT.
SERVICE LOT 12	STA.16+46.6, 11.6' LT.

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RAVENWOOD SUBDIVISION

SHEET
 WS1
 SHEET NO.
 50 OF 64

LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING ELECTRIC
- EXISTING DRIVEWAY
- EXISTING STORM DRAIN
- EXISTING CREEK
- EXISTING SEWER LINE
- EXISTING WATER LINE
- PROPOSED VALLEY GUTTER
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE
- PROPOSED 8" PVC SEWER LINE
- PROPOSED 4" SEWER LATERAL
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE



SEWER QUANTITIES	
SIZE/TYPE	QUANTITY
8" SDR 35 PVC	220 LF
4" SDR 35 PVC SIDE SEWER	370 LF
TYPE I MANHOLE	2 EA
DOT K-16 MANHOLE	1 EA

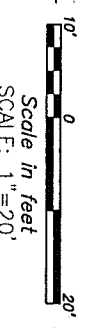
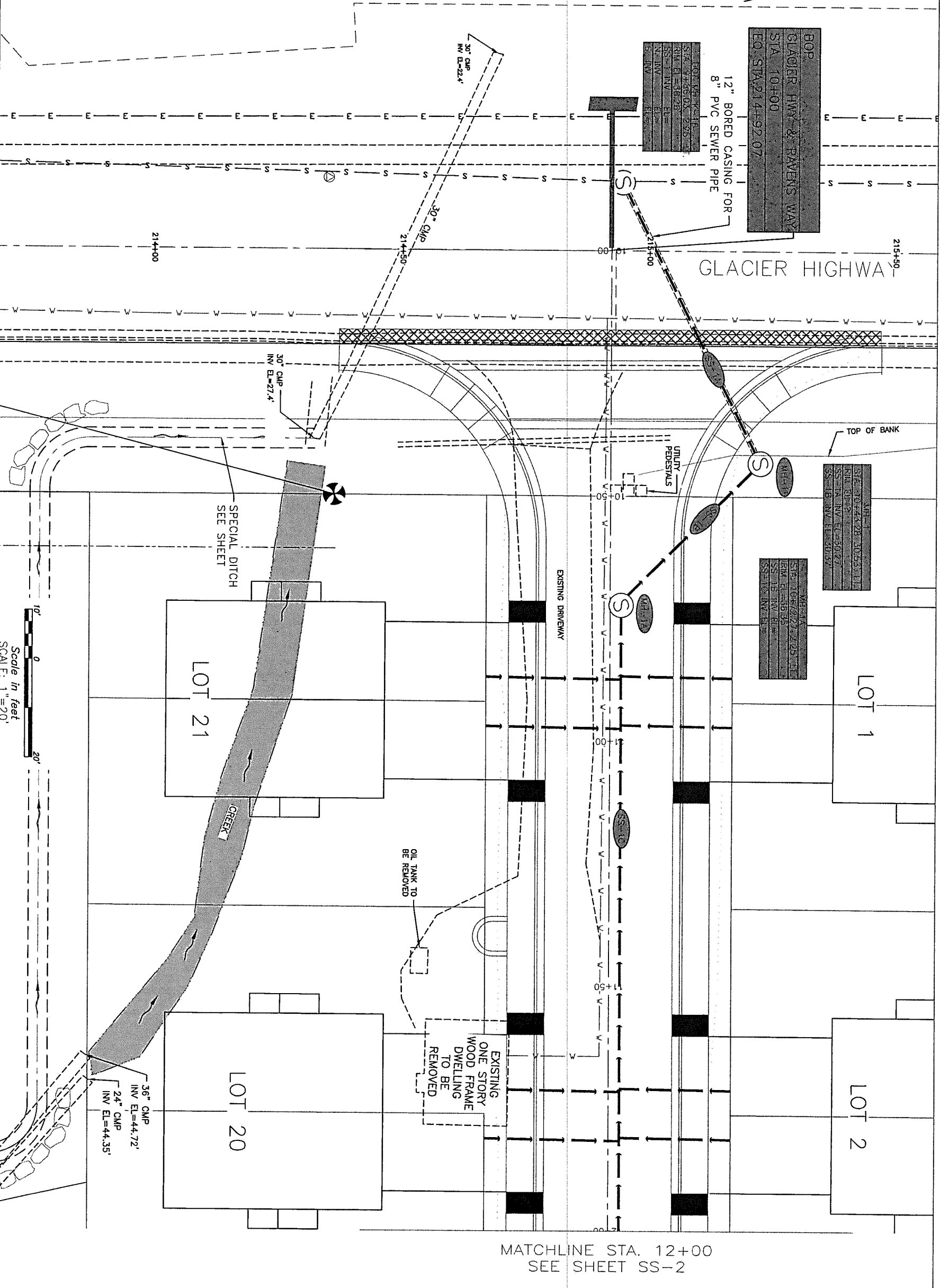
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SHEET SS1
 SHEET NO. 51 OF 64



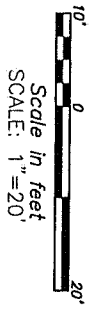
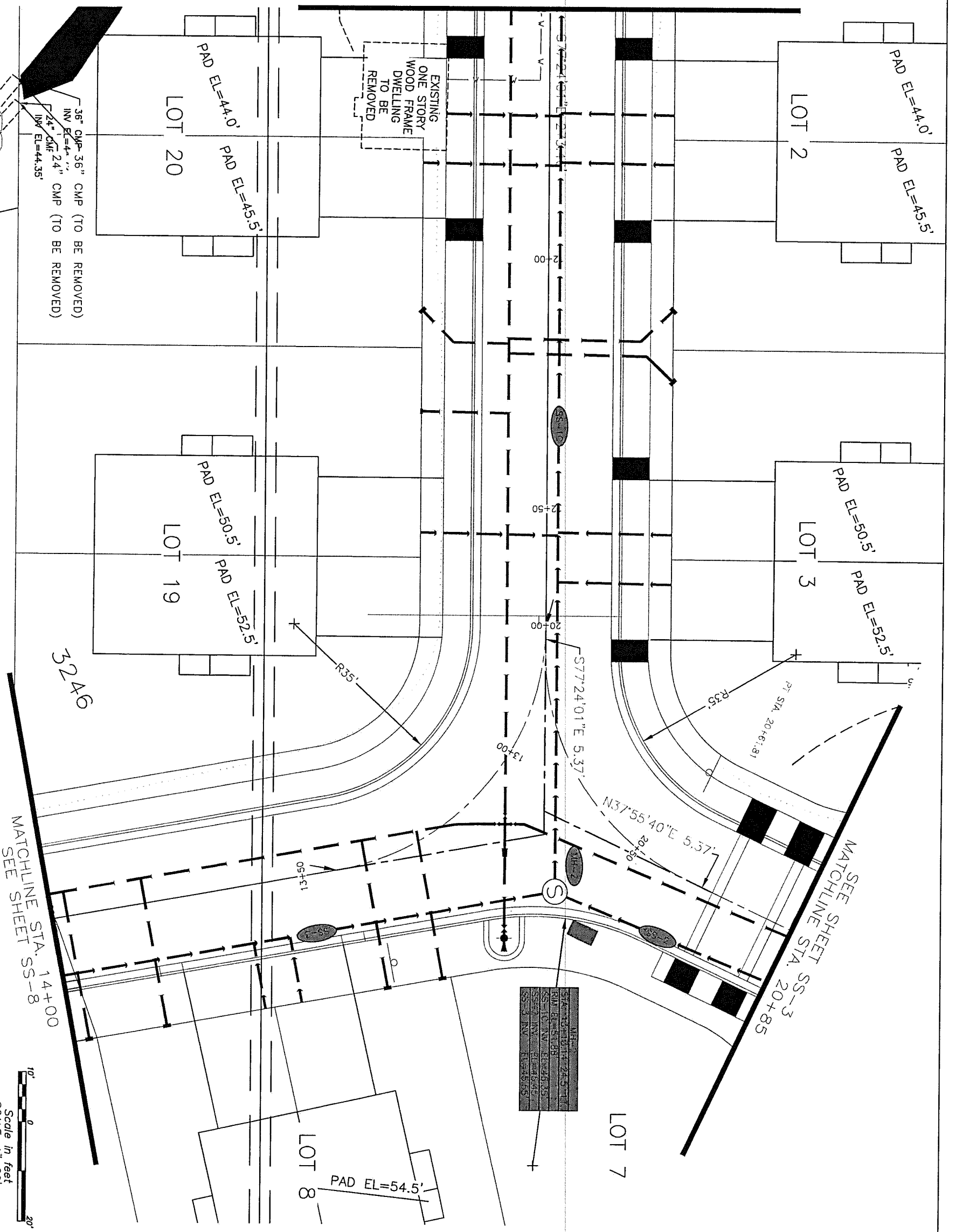
LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING ELECTRIC
- EXISTING DRIVEWAY
- EXISTING STORM DRAIN
- EXISTING CREEK
- EXISTING SEWER LINE
- EXISTING WATER LINE
- PROPOSED VALLEY GUTTER
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE
- PROPOSED 8" PVC SEWER LINE
- PROPOSED 4" SEWER LATERAL
- ⊙ EXISTING SEWER MANHOLE
- ⊙ PROPOSED SEWER MANHOLE



SEWER QUANTITIES	
SIZE/TYPE	QUANTITY
8" SDR 35 PVC	315 LF
4" SDR 35 PVC SIDE SEWER	440 LF
TYPE 1 MANHOLE	1 EA

SEE SHEET SS-1
MATCHLINE STA. 12+00



REV	DATE	BY	DESCRIPTION

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 DRAWN: ###
 CHECKED: ###
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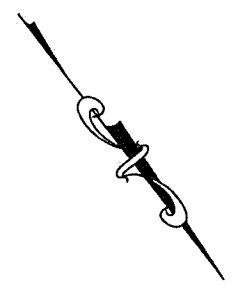
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RAVENWOOD SUBDIVISION

SHEET S52
 SHEET NO. 52 OF 64

LEGEND

- SURVEYED
- UNSURVEYED
- - - CENTERLINE
- - - EASEMENT
- - - EXISTING WATER LINE
- - - EXISTING SEWER LINE
- - - EXISTING ELECTRIC
- - - EXISTING DRIVEWAY
- - - EXISTING STORM DRAIN
- - - EXISTING CREEK
- - - EXISTING SEWER LINE
- - - EXISTING WATER LINE
- - - PROPOSED VALLEY GUTTER
- - - PROPOSED CURB & GUTTER WITH CURB INLET
- - - PROPOSED BACK SIDEWALK
- - - PROPOSED CUT SLOPE
- - - PROPOSED 8" PVC SEWER LINE
- - - PROPOSED 4" SEWER LATERAL
- ⊗ EXISTING SEWER MANHOLE
- ⊗ PROPOSED SEWER MANHOLE

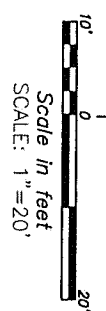
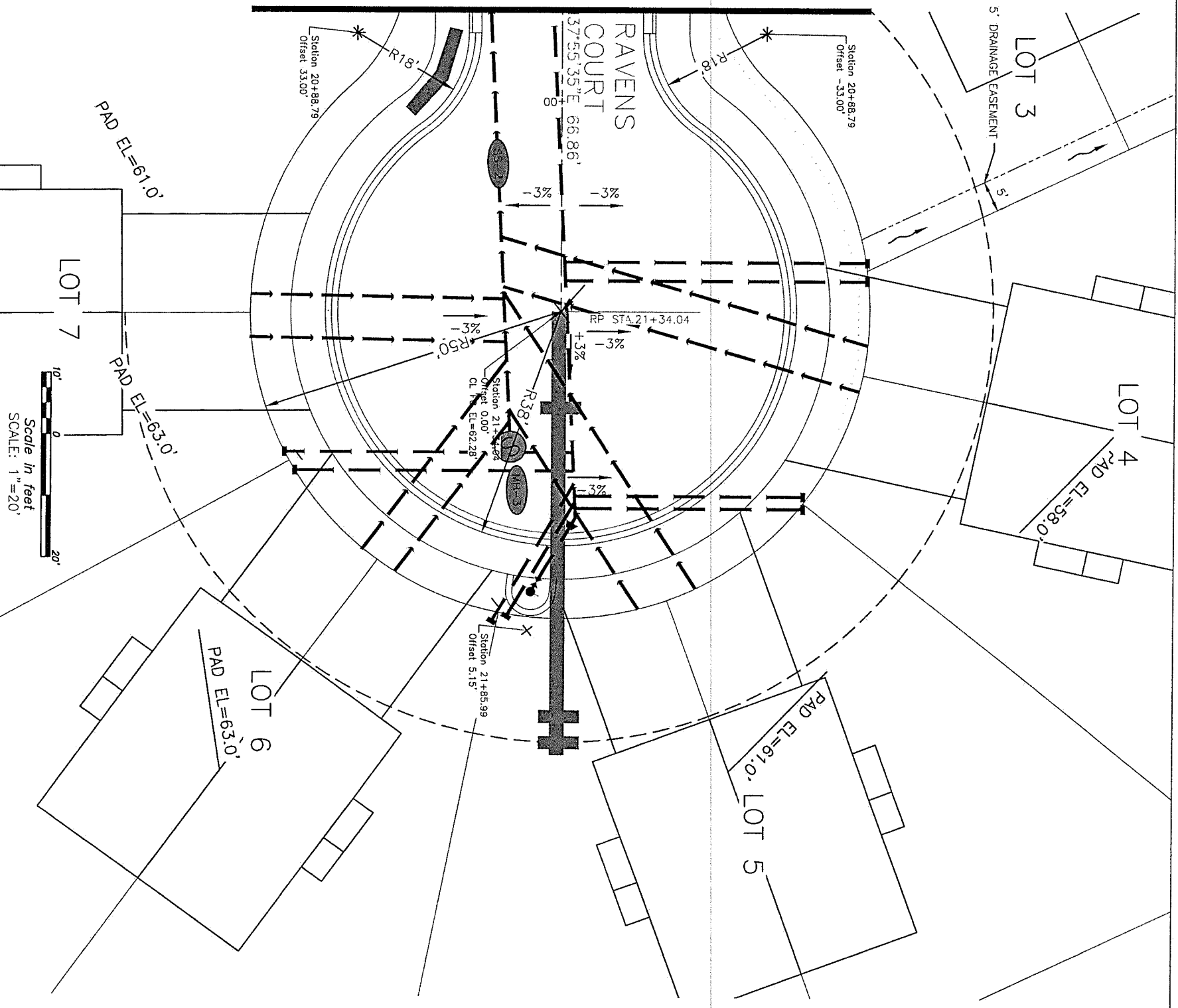


SEWER QUANTITIES	
SIZE/TYPE	QUANTITY
8" SDR 35 PVC	70 LF
4" SDR 35 PVC SIDE SEWER	420 LF
TYPE I MANHOLE	1 EA

REV	DATE	BY	DESCRIPTION

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SEE SHEET SS-2
MATCHLINE STA. 20+85



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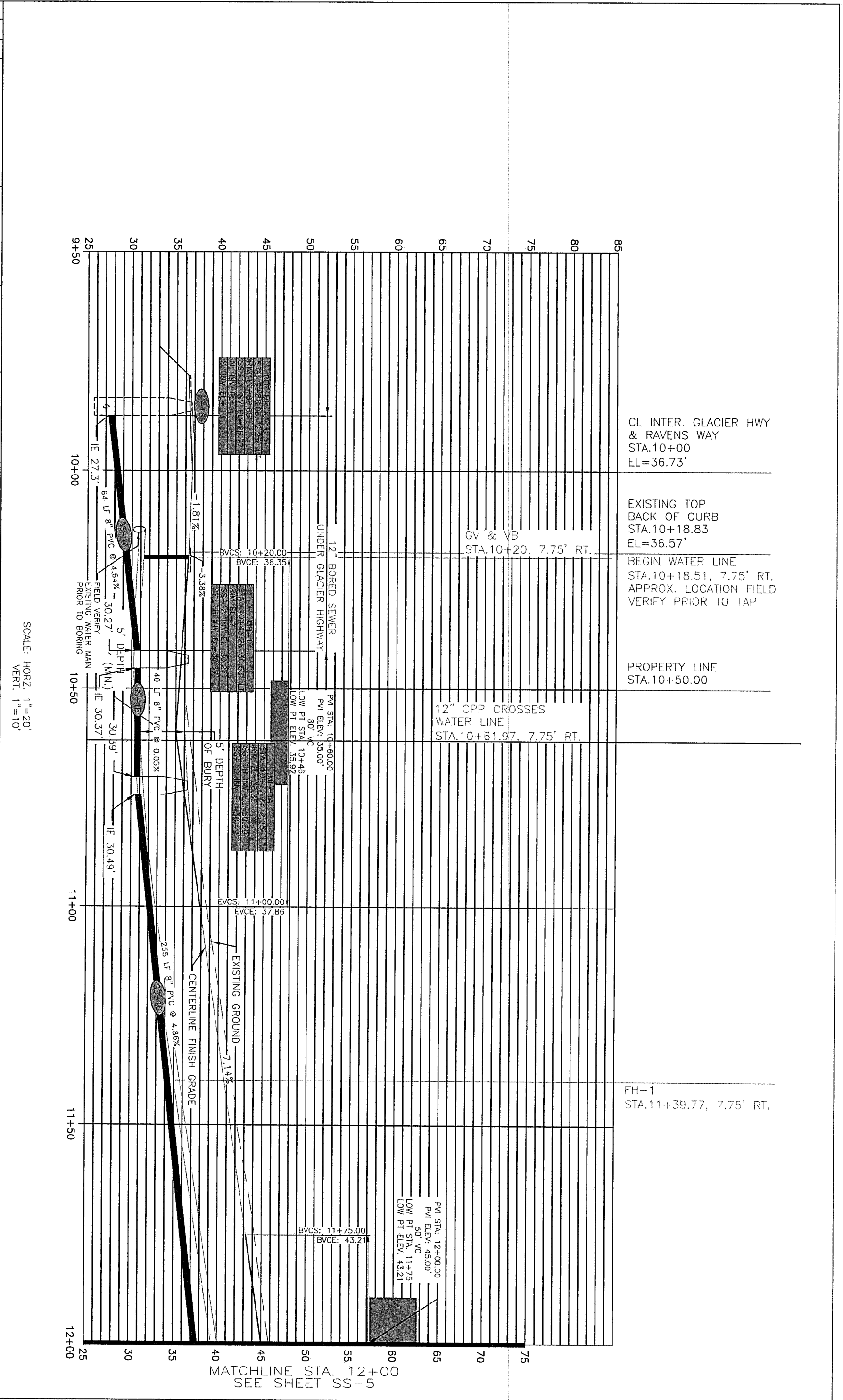
REV	DATE	BY	DESCRIPTION

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DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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RAVENWOOD SUBDIVISION

SHEET	SS4
SHEET NO.	54 OF 64



REV	DATE	BY	DESCRIPTION

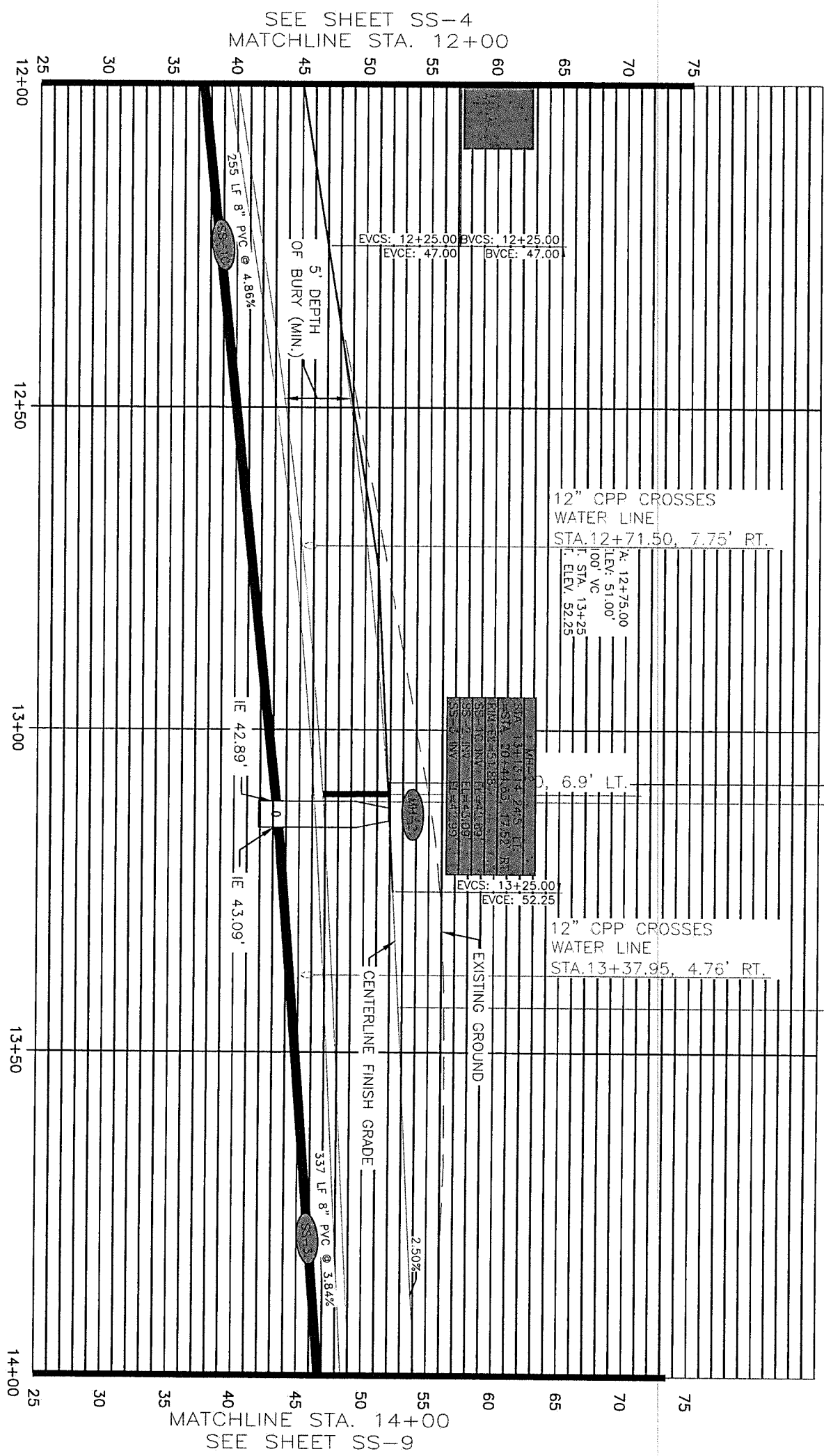
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 DESIGNED: ###
 DRAWN: ###
 CHECKED: ###
 DATE September 30, 2024

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RAVENWOOD SUBDIVISION

SHEET
 SSS
 SHEET NO.
 55 OF 64

SCALE: HORIZ. 1"=20'
 VERT. 1"=10'



SEE SHEET SS-4
 MATCHLINE STA. 12+00

MATCHLINE STA. 14+00
 SEE SHEET SS-9

CL INTER. PC RAVENS
 WAY & RAVENS COURT
 STA.12+73.46=20+00
 EL=51.60'
 FG EL=50.23'

PI RAVENS WAY
 STA.13+08.22
 EL=54.78'
 FG EL=51.75'

4-TEE/ FH-2
 STA.13+11.16, 7.96' LT.
 SEE SHEET W-9

PT RAVENS WAY
 STA.13+42.98
 EL=56.24'
 FG EL=52.70'

PHASE I
 STA.14+00

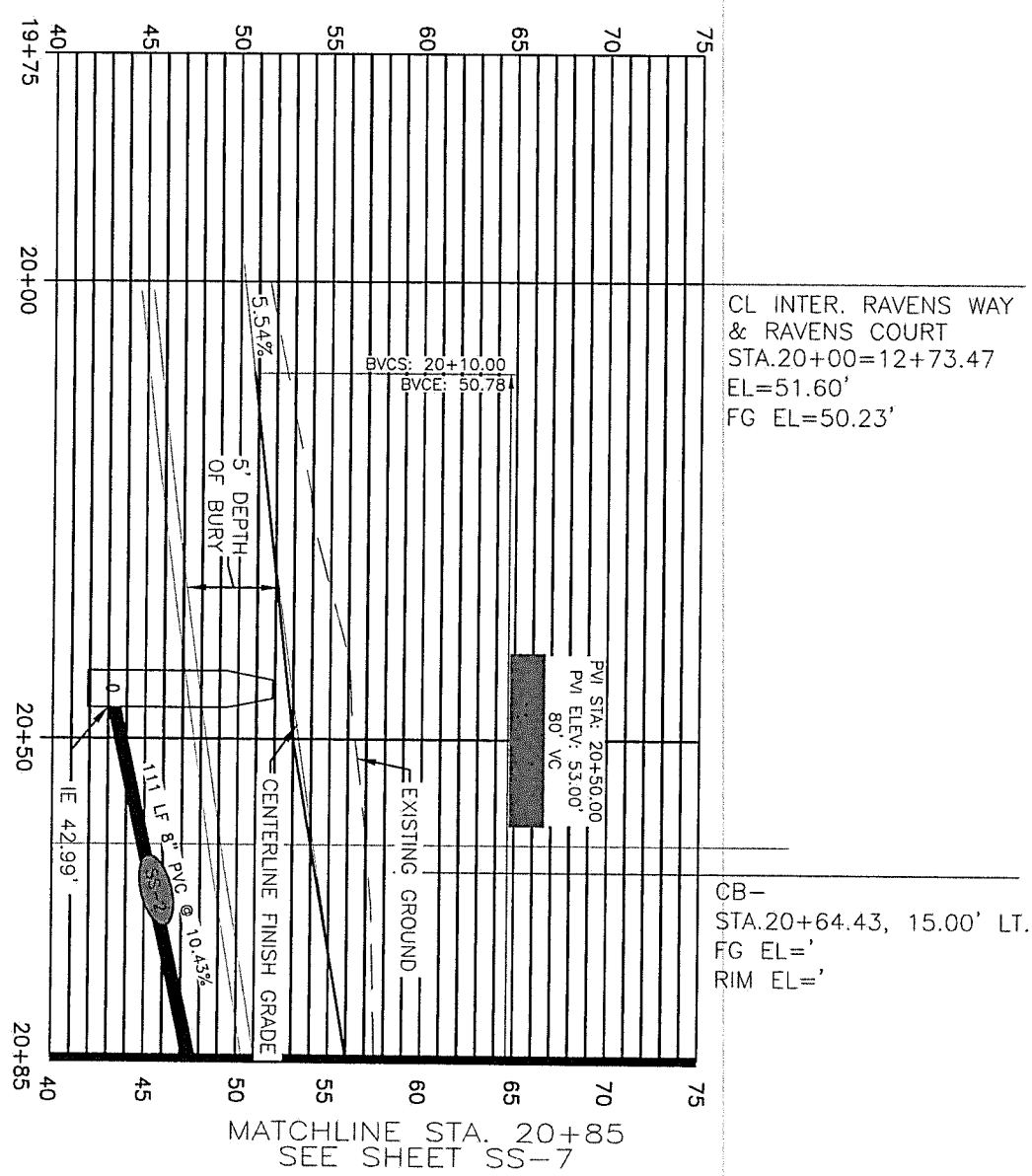
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RAVENWOOD SUBDIVISION

SCALE: HORZ. 1"=20'
 VERT. 1"=10'



SEE SHEET SS-2
MATCHLINE STA. 14+00

LEGEND

- SURVEYED
- UNSURVEYED
- CENTERLINE
- EASEMENT
- EXISTING CREEK

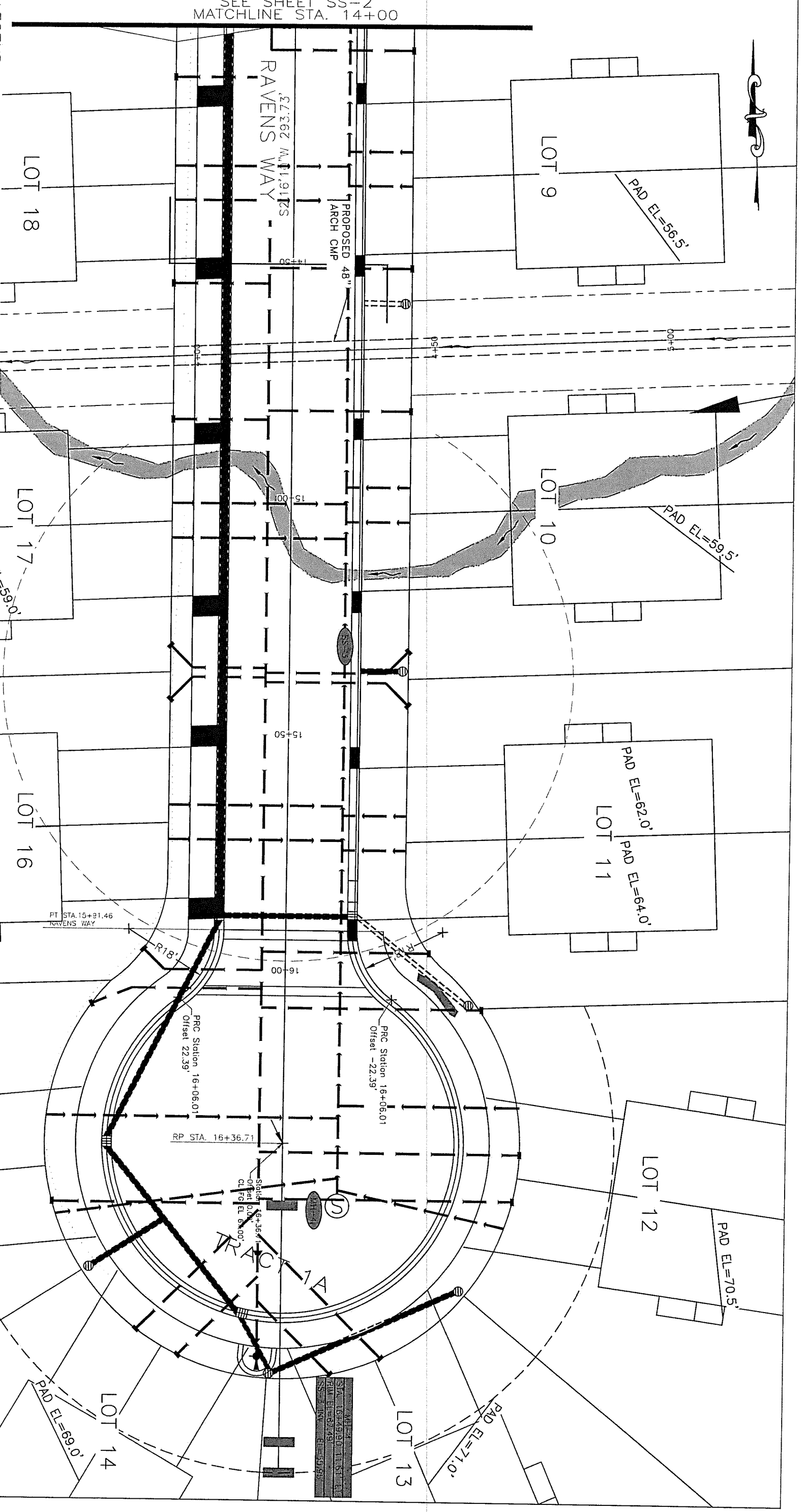
- PROPOSED VALLEY GUTTER
- PROPOSED CUT SLOPE
- PROPOSED FILL SLOPE
- PROPOSED CURB & GUTTER WITH CURB INLET
- PROPOSED BACK SIDEWALK

- PROPOSED 8" PVC SEWER LINE
- PROPOSED 4" SEWER LATERAL
- ⊙ PROPOSED SEWER MANHOLE



SEWER QUANTITIES

SIZE/TYPE	QUANTITY
8" SDR 35 PVC	250 LF
4" SDR 35 PVC SIDE SEWER	1090 LF
TYPE 1 MANHOLE	1 EA



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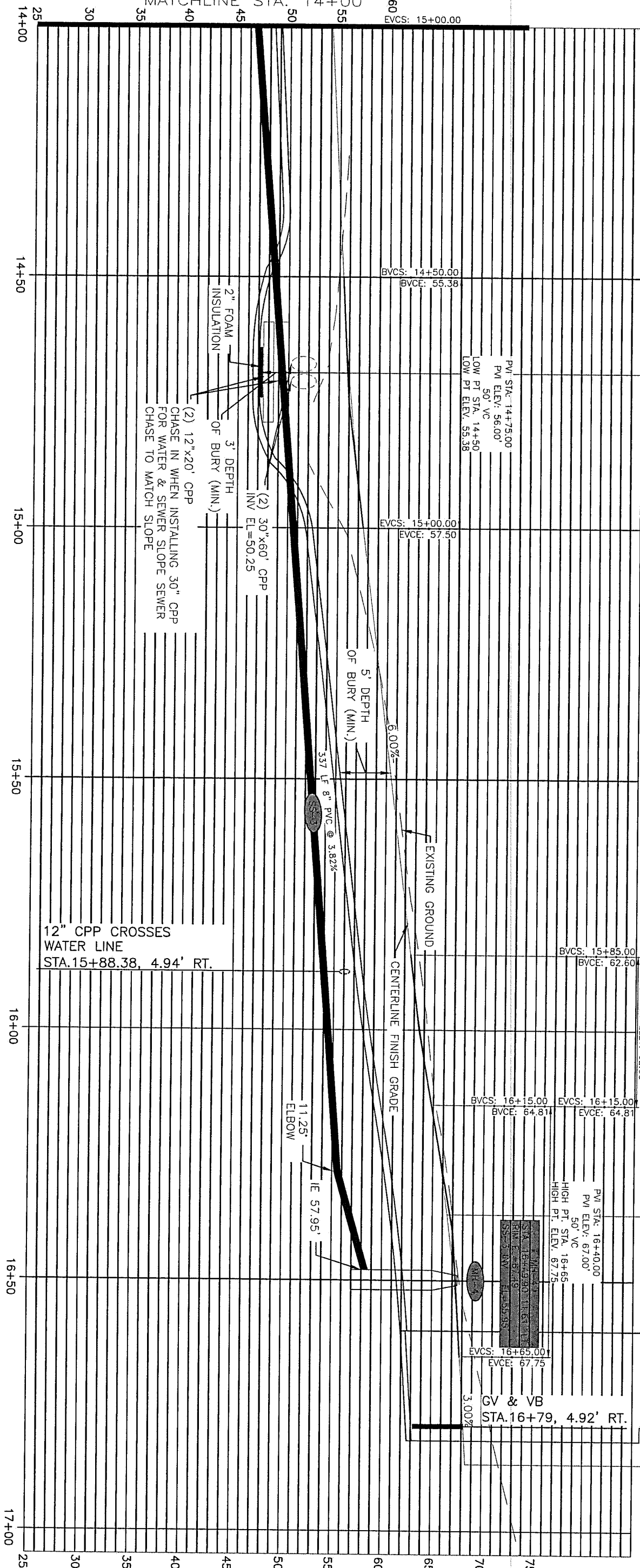
SEE SHEET SS-5
MATCHLINE STA. 14+00

REV	DATE	BY	DESCRIPTION

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SCALE: HORIZ. 1"=20'
VERT. 1"=10'



PHASE II NIC
STA. 14+00

(2) 30" x 60' CPP
STA. 14+69.0
EL. = 53.63'
CL FG EL = 55.98'
CL TOP PIPE EL = 52.75'
INV PIPE EL = 50.25'

PVI STA: 16+00.00
PVI ELEV: 63.50'
30' VC
LOW PT STA: 15+85
LOW PT ELEV: 62.60

RADIUS POINT
RAVENS WAY
STA. 16+36.71
EL = 66.92'
FG EL = 66.44'

8" REDUCER
STA. 16+60, 4.92' RT.

FIRE HYD. F-4
STA. 16+81.92, 4.92' RT.

PROPERTY LINE
STA. 17+86.71

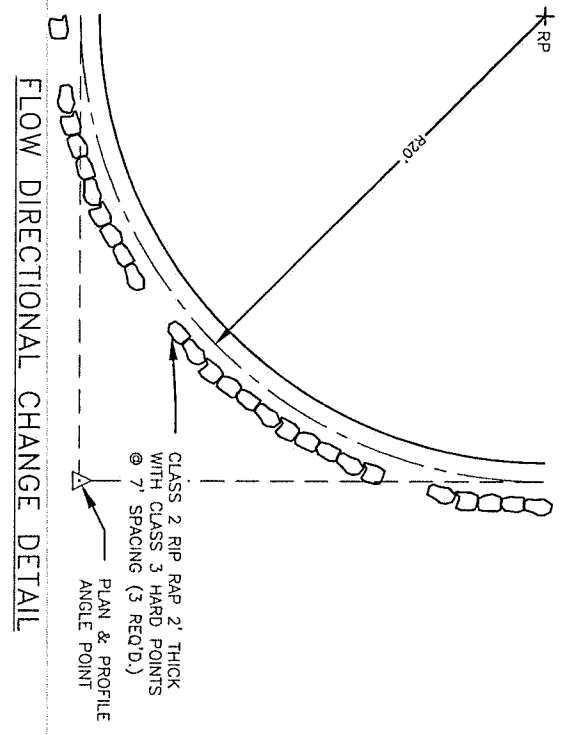
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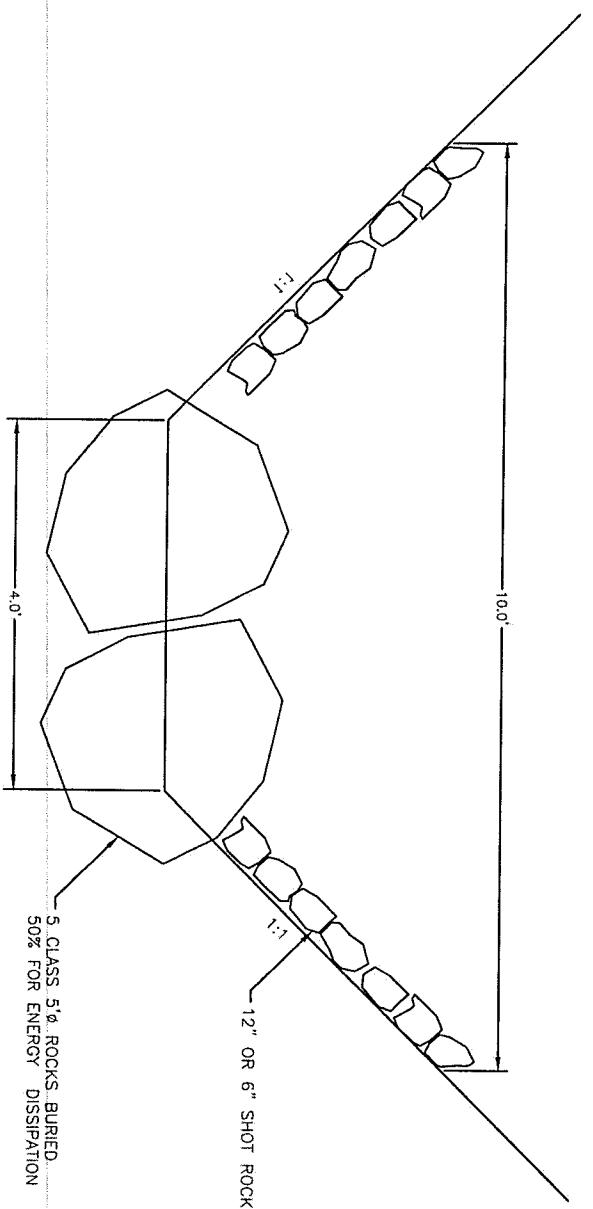
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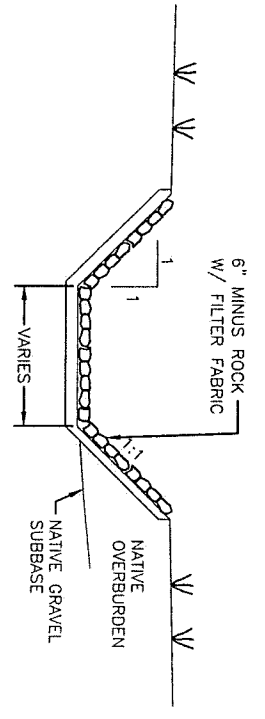
SHEET DT2
 60 OF 64



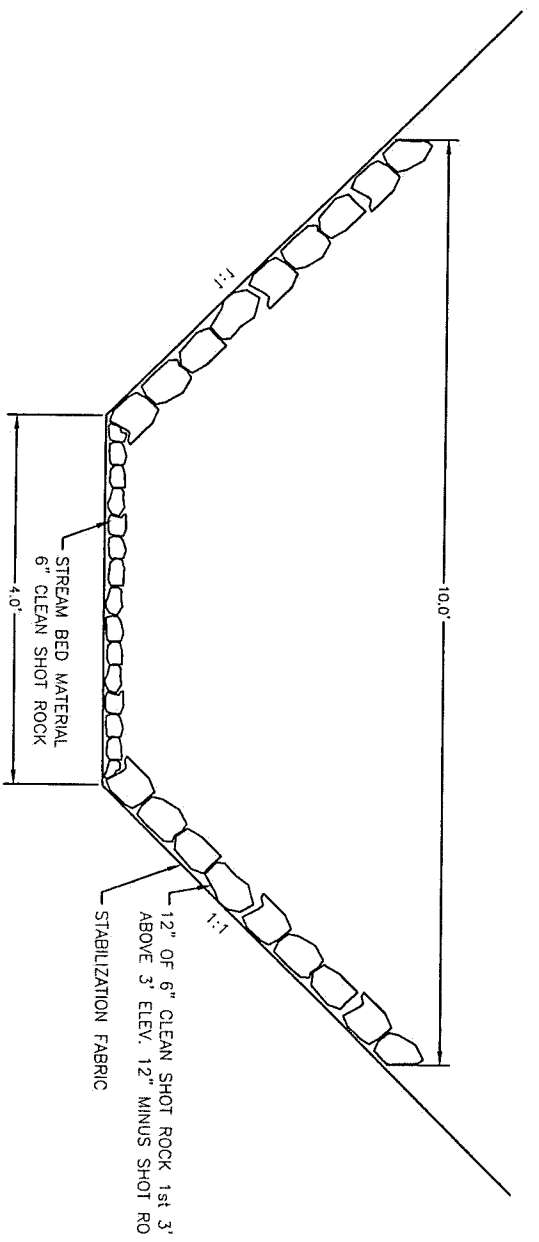
SCALE: 1"=2'



SCALE: 1/2"=1'

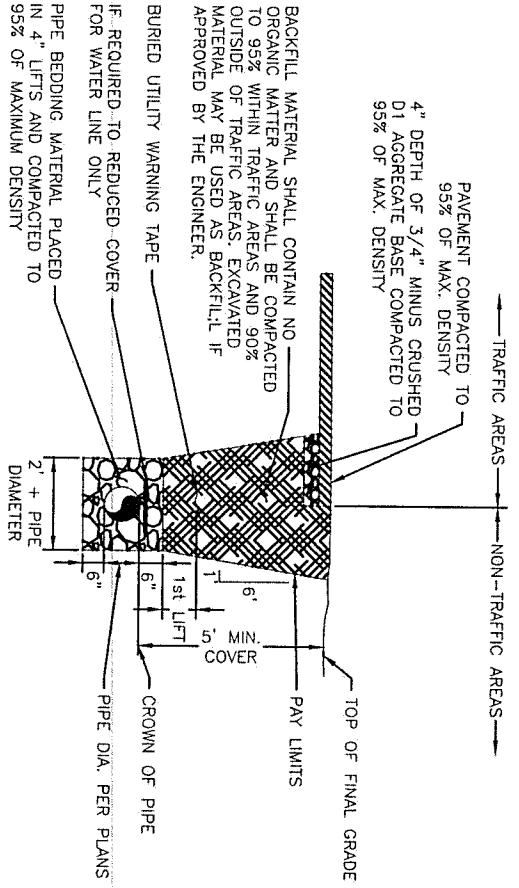


TYPICAL DRAINAGE
 DITCH SECTION TYPE D
 SCALE: 1"=4'



SCALE: 1/2"=1'

TYPICAL STREAM CHANNEL DETAIL TYPE B

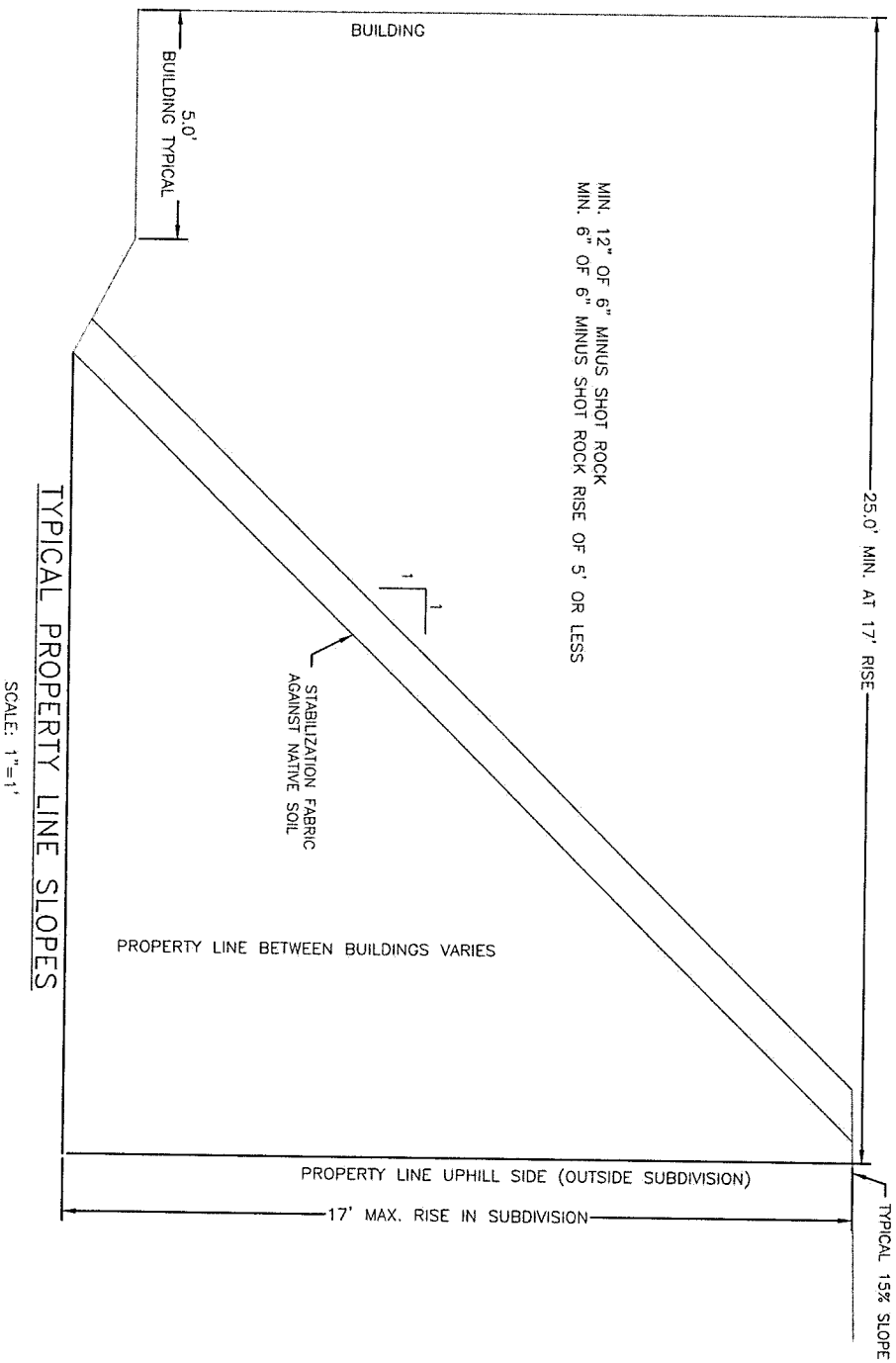
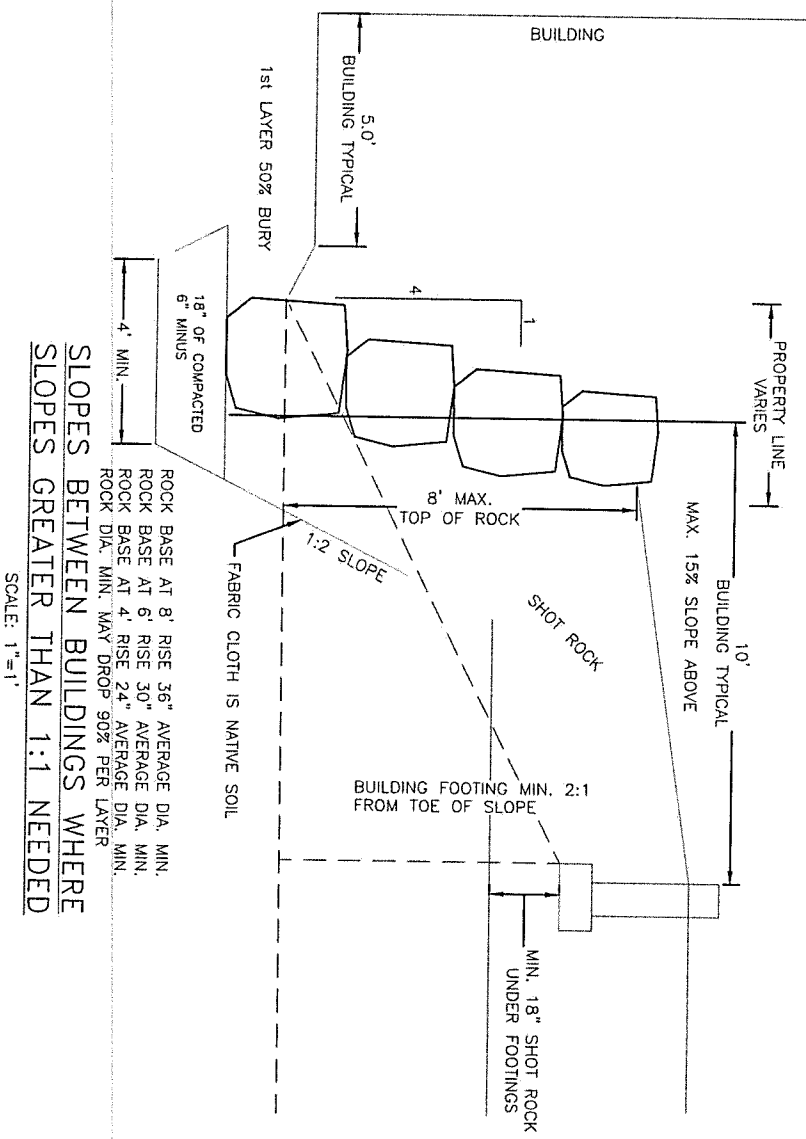


- NOTES (A):
- BACKFILL MATERIAL SHALL BE PLACED IN 12" MAXIMUM LIFTS AS STATED IN SPECIFICATIONS.
 - PIPE BEDDING MATERIAL MUST BE PLACED IN 6" MAX. LIFTS BETWEEN COMPACTION.
 - TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH LOCAL, STATE AND OSHA REGULATIONS AND REQUIREMENTS. INDICATED SLOPE IS FOR PAY QUANTITY DETERMINATION ONLY FOR IMPORTED BACKFILL GRAVEL AND RESURFACING REQUIREMENTS.
 - IF UNSUITABLE PIPE FOUNDATION MATERIAL IS ENCOUNTERED DURING EXCAVATION, ENGINEER MAY DIRECT THE CONTRACTOR TO OVER-EXCAVATE AND BACKFILL WITH SUITABLE MATERIAL.
 - THE DITCH LINE, IF ONE EXISTS, SHALL BE RESHAPED IN SUCH A MANNER TO ALLOW POSITIVE DRAINAGE TO MATCH PRE-CONSTRUCTION CONDITIONS.
 - TRENCH SECTION APPLICABLE FOR BOTH SEWER, WATER PIPE AND STORM, EXCEPT STORM WATER DOES NOT REQUIRE MINIMUM COVER.
- NOTES (B):
- INSULATION BOARD JOINTS SHALL BE LAPPED.
 - MINIMUM DEPTH OF COVER SHALL BE 3'-0" UNLESS SHOWN OTHERWISE ON DRAWINGS OR PRIOR APPROVAL IS GRANTED FROM ENGINEER.
 - ALL INSULATION SHALL BE DOW. HI-60 EXTRUDED POLYSTYRENE (BLUE BOARD) OR APPROVED EQUAL.

"H"	"T"
DEPTH OF COVER	INSULATION THICKNESS
4'-0" OR GREATER	NONE REQUIRED.
3'-8" OR GREATER	2 INCHES
3'-0" OR GREATER	4 INCHES

TYPICAL TRENCH DETAIL

SCALE: 1"=4'



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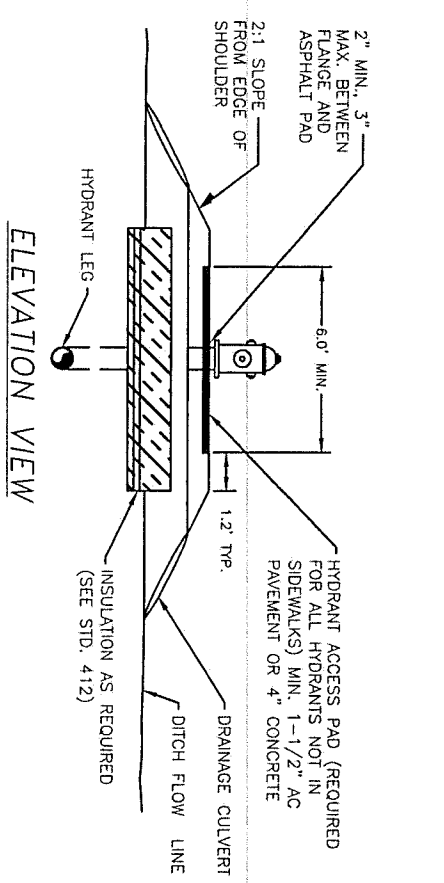
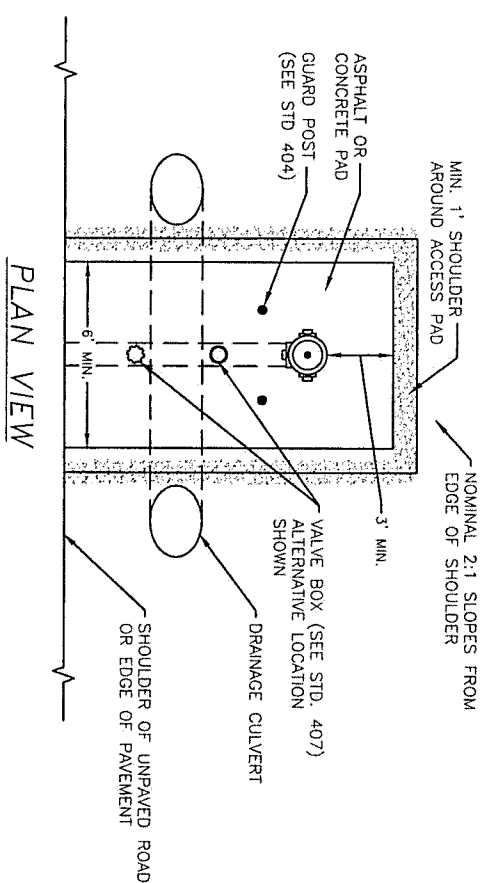
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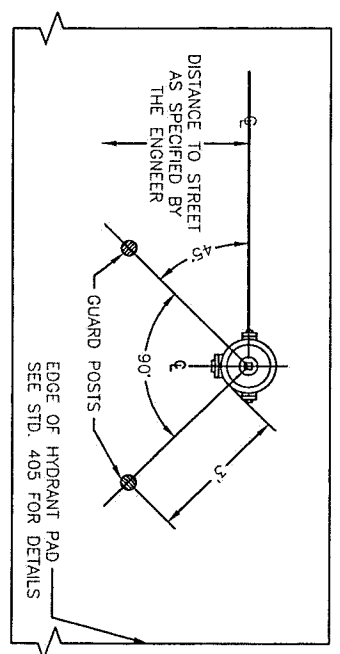
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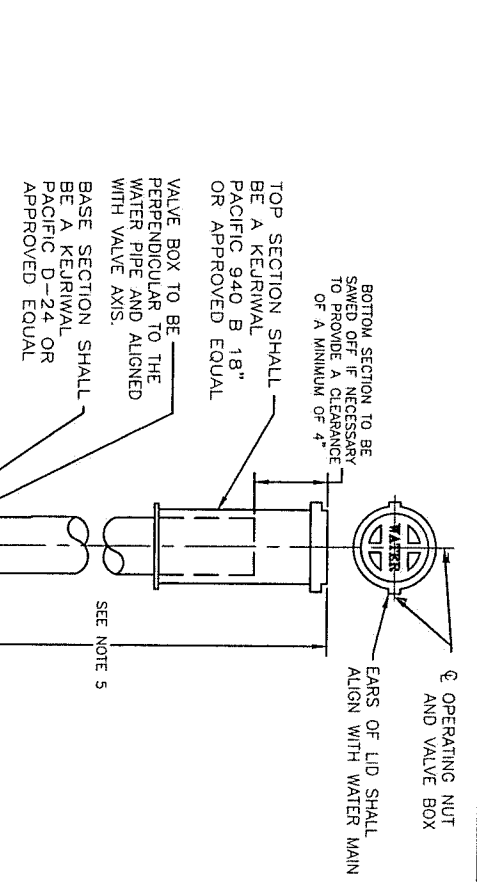
- NOTES:
1. FROM EDGE OF ROAD TO DITCH LINE, SLOPE SURFACE OF HYDRANT PAD TO MATCH EXTENSION OF ROADWAY GROWN.
 2. SEED SIDE SLOPES IN ACCORDANCE WITH SECTION 022710.
 3. NESS BACKFILL AND D-1 IN PAD SHALL CONFORM WITH MATERIALS AND COMPACTION REQUIREMENTS OF STANDARD 102A.
 4. EXTEND LAYER OF D-1 TO EDGE OF PAD SHOULDER.

405-HYDRANT PAD

SCALE: 1"=6'



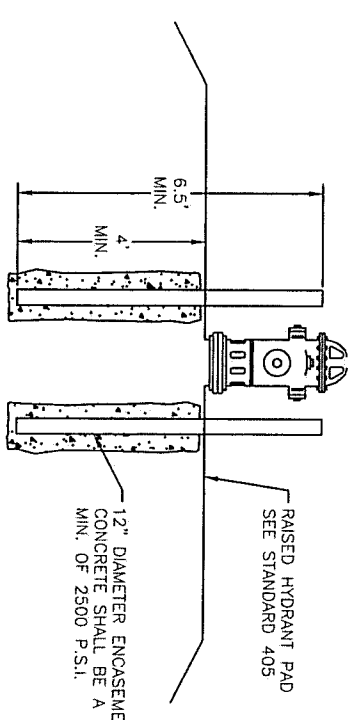
404-HYDRANT GUARD POSTS



- NOTES:
1. A VALVE IS REQUIRED FOR EVERY 500' OF STRAIGHT MAINLINE.
 2. A MINIMUM OF 2 VALVES ARE REQUIRED AT ALL TEES IN MAINLINE. A MINIMUM OF 3 VALVES ARE REQUIRED AT ALL 4-WAY CROSSES IN MAINLINE. NOTE THAT TEES AND CROSSES THAT FEED SERVICES AND FIRE HYDRANTS ARE NOT SUBJECT TO THIS REQUIREMENT.
 3. MAINLINE VALVES REQUIRE THRUST BLOCKS. SEE STANDARD 414C.
 4. IF REQUIRED BY THE ENGINEER, PLACE CONCRETE COLLAR AROUND TOP SECTION PER STANDARD 126.
 5. ON UNPAVED ROADS, RECESS TOP OF VALVE BOX 6" TO 8".
 6. IF WATER PIPE IS MORE THAN 6' DEEP, USE 4" I.D. CAST IRON SOIL PIPE WITH TOP SECTION OF APPROVED CAST IRON VALVE BOX.
 7. THIS DETAIL APPLIES TO ALL MAINLINE VALVES AND ALL WATER VALVES GREATER THAN 4" IN DIAMETER.

407-MAINLINE VALVE

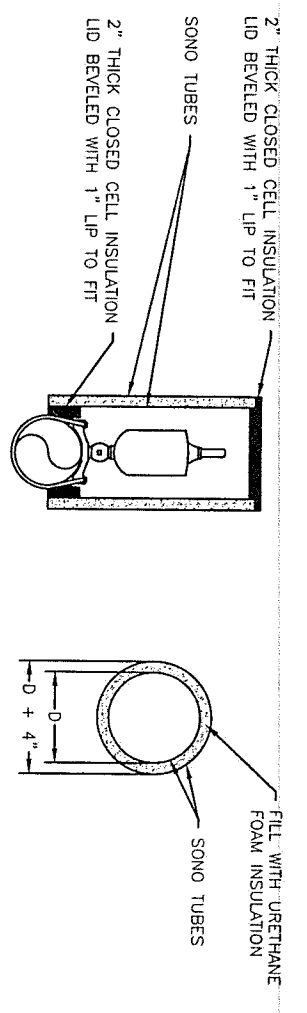
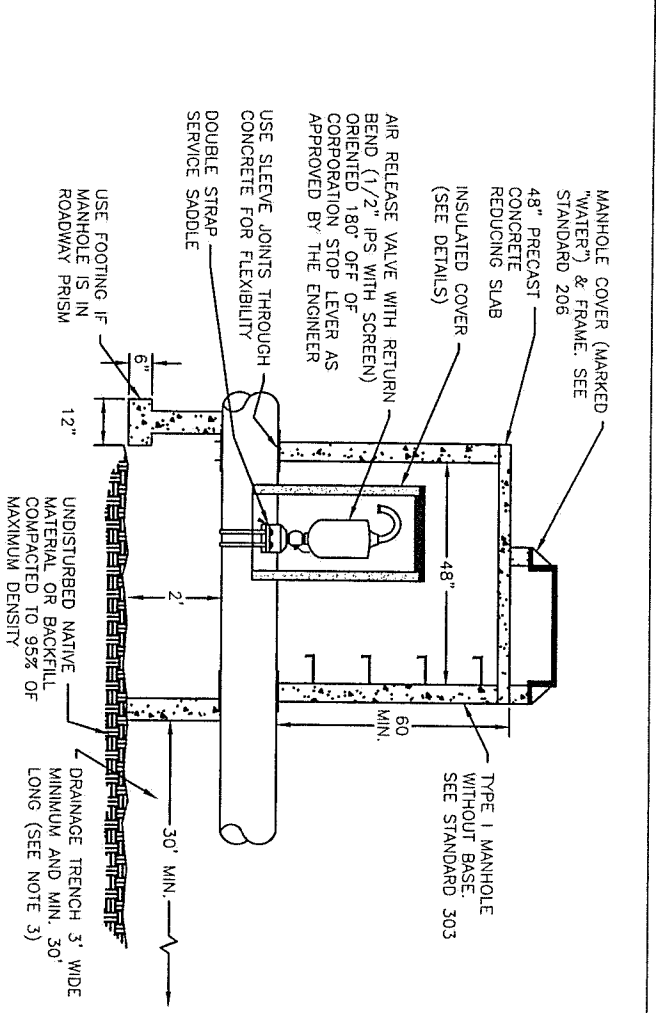
SCALE: 1"=2'



404-HYDRANT GUARD POSTS

SCALE: 1"=4'

- NOTES:
1. GUARD POST ARE REQUIRED ON ALL HYDRANTS EXCEPT THOSE IN SIDEWALKS OR ALONG STATE HIGHWAYS.
 2. GUARD POST SHALL BE 4" DIAMETER. SCHEDULE 40 STEEL PIPE.
 3. POSTS SHALL BE FILLED FLUSH WITH CONCRETE AND PAINTED WITH OSHA YELLOW ENAMEL AFTER INSTALLATION.
 4. POSTS SHALL NOT BLOCK OPERATION OF VALVE.



409-AIR RELEASE VALVE INSULATED COVER DETAILS

- NOTES:
1. PVC DRAIN TO DAYLIGHT MAY BE SUBSTITUTED FOR DRAINAGE TRENCH IF APPROVED BY ENGINEER.
 2. SONO TUBES SHALL BE CONCENTRIC TO INSURE A MINIMUM OF 2" OF INSULATION AT ALL POINTS. TRIM TUBES AND INSULATION TO FIT CURVATURE OF PIPE.
 3. FILL DRAIN TRENCH WITH MATERIAL AS DESCRIBED IN TABLE:

SEIVE SIZE	% PASSING
2"	100
4"	0-10
1"	0-3

409-AIR RELEASE VALVE

SCALE: 1"=4'

REV	DATE	BY	DESCRIPTION

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RAVENWOOD SUBDIVISION

SHEET	DTA	SHEET NO.
62		OF 64

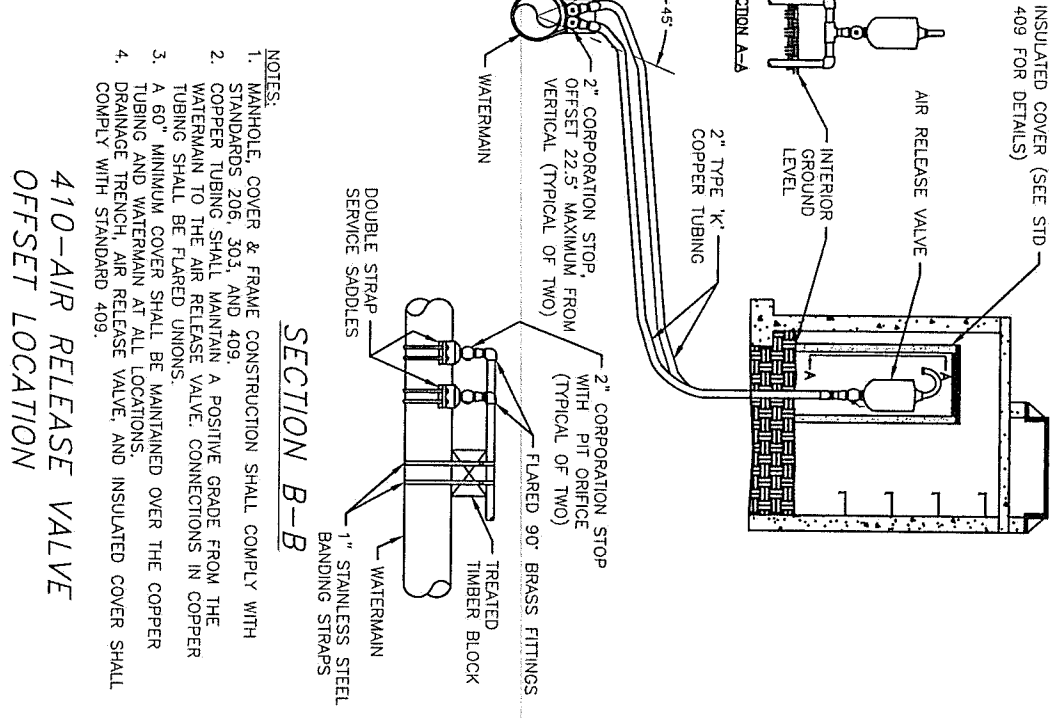
REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	###
DRAWN	###
CHECKED	###
DATE	September 30, 2024

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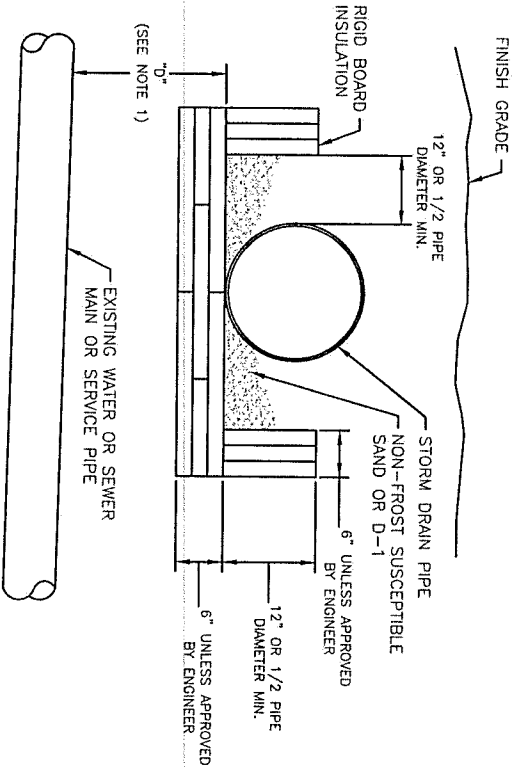
SHEET
 DTS
 SHEET NO.
 63 OF 64



- NOTES:**
- MANHOLE COVER & FRAME CONSTRUCTION SHALL COMPLY WITH STANDARDS 206, 303 AND 409.
 - COPPER TUBING SHALL MAINTAIN A POSITIVE GRADE FROM THE WATERMAIN TO THE AIR RELEASE VALVE. CONNECTIONS IN COPPER TUBING SHALL BE FLARED UNIONS.
 - A 60" MINIMUM COVER SHALL BE MAINTAINED OVER THE COPPER TUBING AND WATERMAIN AT ALL LOCATIONS.
 - DRAINAGE TRENCH, AIR RELEASE VALVE, AND INSULATED COVER SHALL COMPLY WITH STANDARD 409.

**410-AIR RELEASE VALVE
 OFFSET LOCATION**

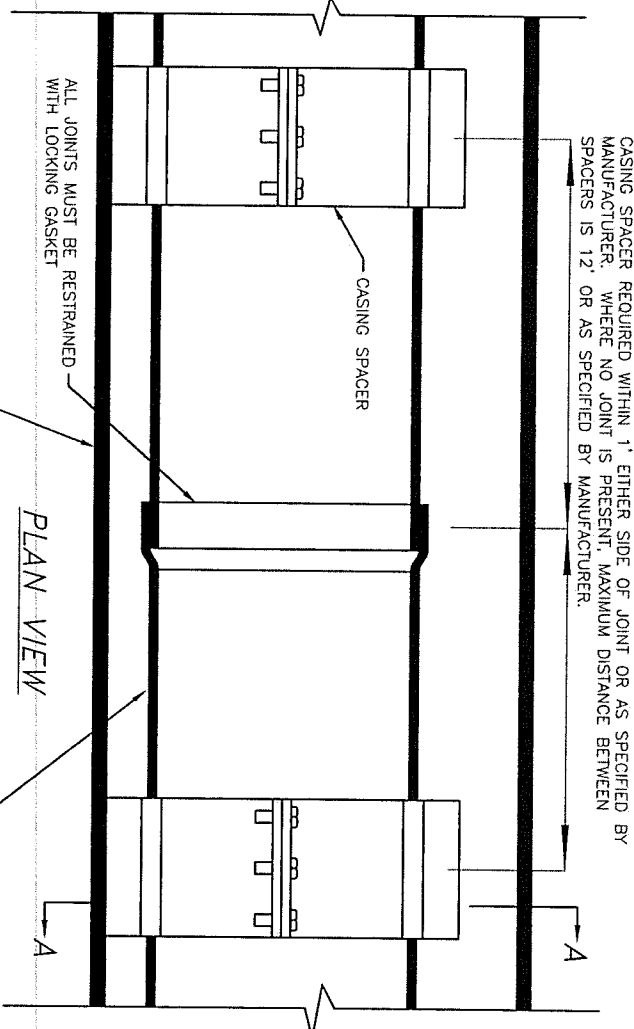
SCALE: 1"=2'



- NOTES:**
- INSTALL INSULATION AS SHOWN WHEN "D" IS LESS THAN 5'-0" FOR WATER PIPE OR 3'6" FOR SEWER PIPE.
 - INSULATION SHALL CONFORM TO SECTION 02607 OF THE STANDARD SPECIFICATIONS.
 - PIPE INSULATION SHALL BE 8'-0" IN LENGTH, CENTERED OVER EXISTING WATER OR SEWER PIPE.
 - PIPE INSULATION WITH R-FACTOR EQUAL TO RIGID BOARD MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.
 - INSULATION BOARDS SHALL OVERLAP 12" AS SHOWN IN DRAWING.

412-RIGID INSULATION

SCALE: 1"=2'



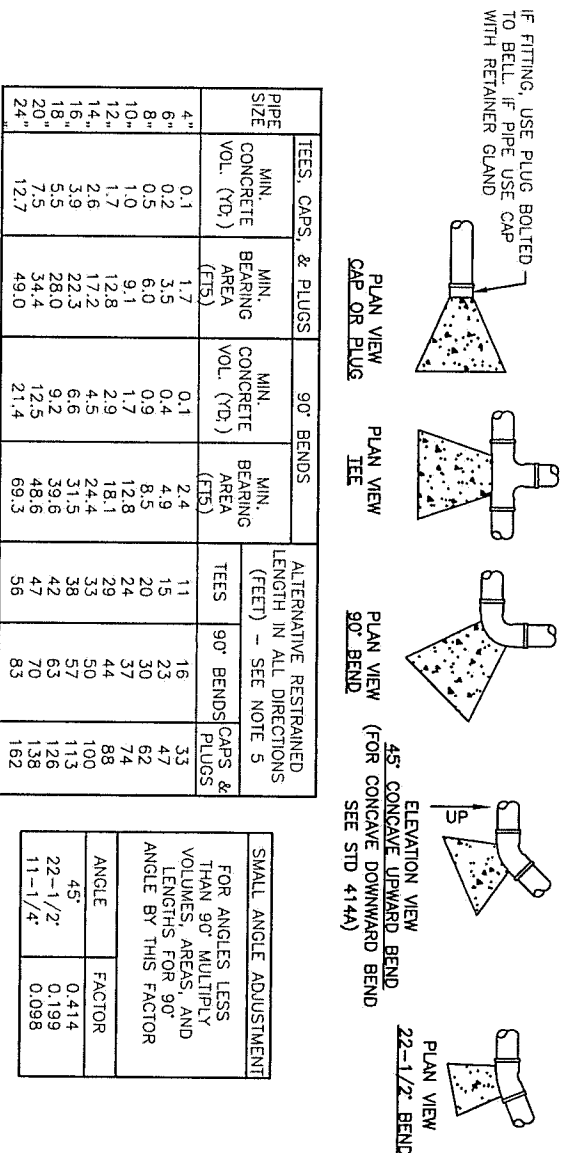
CASING PIPE DIAMETER	MIN. WALL THICKNESS
4"	0.237"
6" - 24"	0.250"
26" - 30"	0.312"

- NOTES:**
- CASING SPACERS SHALL BE "ADVANCE PRODUCT AND SYSTEMS" HIGH-DENSITY POLYETHYLENE OR APPROVED EQUAL.
 - ENDS OF CASING PIPE SHALL BE PERMANENTLY SEALED AGAINST THE ENTRY OF FOREIGN MATERIAL.

SECTION A-A

**413-BORED
 ENCASEMENT**

SCALE: 1"=2'



- NOTES:
- CENTER OF MASS OF THRUST BLOCK MUST LAY OPPOSITE TO AND ALIGNED AGAINST THE DIRECTION OF THRUST.
 - THRUST BLOCKS SHALL BE POURED SO THAT JOINTS OF FITTINGS, INCLUDING ALL NUTS AND FOLLOWERS REMAIN ACCESSIBLE.
 - CONCRETE THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH, UNSTABLE OR UNSUITABLE MATERIALS SHALL BE REMOVED, REPLACED AND/OR COMPACTED AS DETERMINED BY THE ENGINEER.
 - VOLUME AND BEARING SURFACE OF 2500 P.S.I. CONCRETE THRUST BLOCKS ARE BASED ON 150 P.S.I. WATER PRESSURE AND SOIL BEARING CAPACITY OF 2000 P.S.F. ALL OTHER PRESSURE AND/OR SOIL CONDITIONS ARE SUBJECT TO THE ENGINEER'S REVIEW AND APPROVAL.
 - THRUST BLOCKS MAY BE OMITTED IF ALL JOINTS WITHIN MINIMUM DISTANCE GIVEN BY ABOVE TABLE ARE RESTRAINED AND PIPE IS BEDDED IN SAND. THE DISTANCES APPEARING IN THE TABLE ASSUME THAT THE PIPE IS BURIED AT LEAST 5' DEEP AND THAT SOIL CONDITIONS ARE AS LISTED IN NOTE 4. THE INFORMATION IN THE TABLE IS BASED ON DIPSAYS "THRUST RESTRAINT FOR DUCTILE IRON PIPE" WHICH SHOULD BE CONSULTED IF THESE ASSUMPTIONS ARE NOT MET.
 - SUBJECT TO THE CONDITIONS LISTED IN NOTE 4, A COMBINATION OF A SMALLER THRUST BLOCK AND A REDUCED LENGTH OF RESTRAINED PIPE IS ALLOWED PER THE FOLLOWING FORMULA:

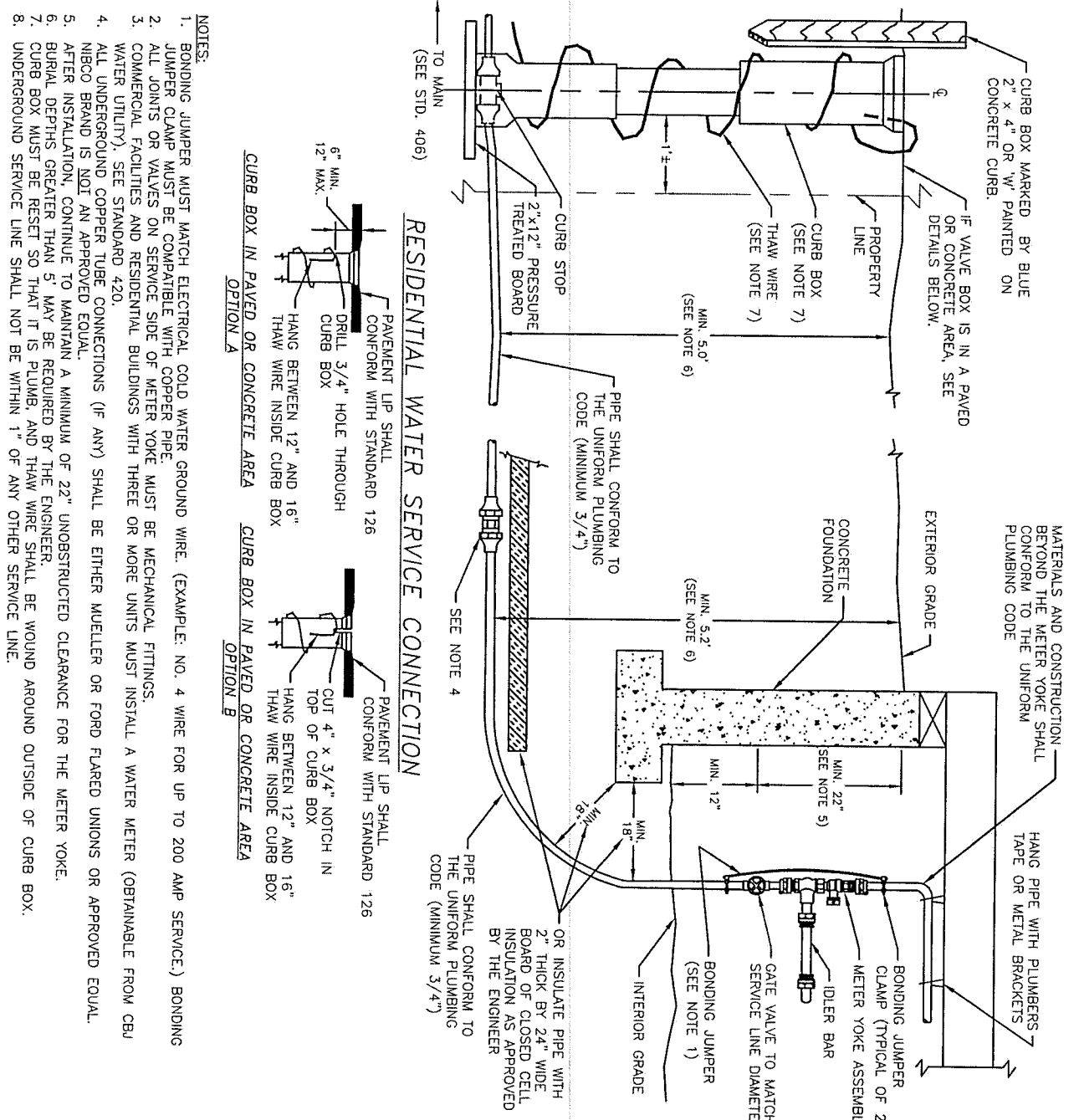
$$\text{ACTUAL BEARING AREA OF BLOCK} \times \text{ACTUAL RESTRAINED LENGTH OF PIPE} \geq 2 \times 1.1 \times \text{BEARING AREA REQUIRED BY TABLE} + \text{RESTRAINED LENGTH REQUIRED BY TABLE} \times 1.1$$
 - THRUST BLOCKS ARE REQUIRED FOR ALL BENDS, TEES, PLUGS, AND CAPS IN PIPE 4" AND LARGER EXCEPT AS LISTED IN NOTE 5.
 - REGARDLESS OF SIZE OF THRUST BLOCKS ALL JOINTS AT CAPS, PLUGS, BENDS, AND TEES MUST BE RESTRAINED.
 - RESTRAINED LENGTHS USED IN PLACE OF THRUST BLOCKS IN STANDARDS 414A, 414B, AND 414C MAY NOT OVERLAP.
 - FIELD-LOOK GASKETS, MEGA-LUG AND UNIFLANGE COUPLINGS ARE THE ONLY APPROVED MEANS OF RESTRAINING PIPE.

414B-HORIZONTAL AND CONCAVE UPWARD THRUST BLOCKS

REV	DATE	BY	DESCRIPTION

SCALE _____ GRAPHIC
 DESIGNED: ###
 DRAWN: ###
 CHECKED: ###
 DATE: September 30, 2024

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419-RESIDENTIAL WATER SERVICE CONNECTION

SCALE: 1"=2'

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