



Wolfe Addition No. 2

Replacement Plan

Demars Construction
August 18, 2022

Submitted by:
Bolton & Menk, Inc.
1960 Premier Drive
Mankato, MN 56001
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PLAN SET

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name:	Max DeMars DeMars Construction		
Mailing Address:	3 Civic Center Plaza Mankato, MN 56001		
Phone:	(507) 387-5933		
E-mail Address:	max@demarsgc.com		

Authorized Contact (do not complete if same as above):

Mailing Address:

Phone:

E-mail Address:

Agent Name:	Chad Ponce Natural Resources Specialist Bolton & Menk, Inc.		
Mailing Address:	200 S. Tryon, Suite 1400 Charlotte, NC 28202		
Phone:	(843) 286-3631		
E-mail Address:	chad.ponce@bolton-menk.com		

PART TWO: Site Location Information

County: Blue Earth County

City/Township: Mankato

Parcel ID and/or Address: Parcel ID: R430903300012, N. Victory Drive, Mankato, MN 56001 (See Location Map)

Legal Description (Section, Township, Range): Sec 3, T108N, R26W

Lat/Long (decimal degrees):

Attach a map showing the location of the site in relation to local streets, roads, highways.

Approximate size of site (acres) or if a linear project, length (feet): Approximately 49 acres

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted **prior to** this application then describe that here and provide the Corps of Engineers project number.

A type and boundary application requesting an approved jurisdictional determination was submitted for the site on June 10, 2022. The US Army Corps acknowledged the request (MVP-2015-04603-RMH) on June 29, 2022. The delineation was Approved with Conditions by a WCA Notice of Decision dated July 12, 2022. The LGU decision indicates that Wetland 3 is incidental and Wetlands 1, 2, and 4 are not incidental.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

Demars Construction is proposing to develop the property with a Blue Earth County Parcel ID of R430903300012, located along the north side of North Victory Drive, in Mankato, MN. (Exhibit A). The proposed construction includes residential housing, commercial properties, roads, stormwater ponds, and utilities. The residential housing proposed are twin home style homes which are intended to add a buffer from the existing single-family homes to the north and the proposed commercial area to the south. This project supports the needs of the community for additional market-based work-force housing to meet the growing Mankato community and additional business opportunities to support the community. The site layout is shown on Exhibit B.

Permanent impacts are proposed for the construction of the above activities. Total WCA permanent impacts are 0.70-acres (Wetland 1, Wetland 2, and Wetland 4) and total WCA/CWA non-jurisdictional permanent impacts are 0.04 acres (Wetland 3) (Exhibit C).

This site meets the criteria for:

MN rule 8420.0520 subp 7A (Sequencing Flexibility)

A(1) the wetland to be impacted has been degraded to the point where replacement of it would result in a certain gain in function and public value

Wetlands at the site are isolated and of low quality. The site, including wetlands contained on the site, have been used for agricultural since at least 1938.

Using a bank from same watershed will add greater value to the watershed than the degraded wetlands which would be impacted. Proposed permanent wetland impacts (0.70 acres) will be mitigated for through a state approved wetland bank with approved credits available at a ratio of 2:1 for a total of 1.40 credits. Wetland 3 is an incidental, non-jurisdictional wetland and therefore does not require mitigation. The following siting was used to determine the bank:

- On-site mitigation was not a viable option due to spatial constraints. The project area is a future development with all areas within the site being accounted for through lots, roads, utility easements, and stormwater management, therefore it would not be a feasible location for a wetland restoration.*
- Bank #1651 is in the same major watershed (28) and is in the same Bank Service Area (BSA 9) as the wetland impacts. The needed wetland credits will be drawn from this bank at the required 2:1 ratio.*

PART FOUR: Aquatic Resource Impact¹ Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Type of Impact (fill, excavate, drain, or remove vegetation)	Duration of Impact Permanent (P) or Temporary (T) ¹	Size of Impact ²	Overall Size of Aquatic Resource ³	Existing Plant Community Type(s) in Impact Area ⁴	County, Major Watershed #, and Bank Service Area # of Impact Area ⁵
Wetland 1	Wetland	Fill	P	0.28 ac	0.28 ac	Fresh (wet) Meadow	Blue Earth, 28, 9
Wetland 2	Wetland	Fill	P	0.31 ac	0.31 ac	Fresh (wet) Meadow	Blue Earth, 28, 9
Wetland 3	Wetland	Fill	P	0.04 ac	0.04 ac	Fresh (wet) Meadow	Blue Earth, 28, 9
Wetland 4	Wetland	Fill	P	0.11 ac	0.11 ac	Seasonally Flooded Basin	Blue Earth, 28, 9

¹If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".

²Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).

³This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".

⁴Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

⁵Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

N/A

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature:



Date:

I hereby authorize Bolton & Menk to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

¹ The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Attachment C

Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

Demars Construction is proposing to develop the property with a Blue Earth County Parcel ID of R430903300012, located along the north side of North Victory Drive, in Mankato, MN. (Exhibit A). The proposed construction includes residential housing, commercial properties, roads, stormwater ponds, and utilities. The residential housing proposed are twin home style homes which are intended to add a buffer from the existing single-family homes to the north and the proposed commercial area to the south. This project supports the needs of the community for additional market-based work-force housing to meet the growing Mankato community and additional business opportunities to support the community. According to the Mankato Area Housing Study Update 2020 (available at Mankato.gov) vacancy rates for market-rate housing is approximately 1.3%. This project will support the needs of the community for additional market-rate housing units. The plans include the construction of 116 twin-home style units (58 buildings) with 2-3 bedrooms each.

The site layout is shown on Exhibit B.

Permanent impacts are proposed for the construction of the above activities. Total WCA permanent impacts are 0.70-acres (Wetland 1, Wetland 2, and Wetland 4) and total WCA/CWA non-jurisdictional permanent impacts are 0.04 acres (Wetland 3) (Exhibit C).

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

1. *No build alternative. If the site is left undeveloped, the degraded/isolated wetlands would not be impacted by construction. However, the community needs for additional market-based work-force housing and additional business opportunities would not be met.*
2. *Avoidance of wetlands was considered. Site design was limited by an existing gas line right-of-way owned which is aligned east and west through the center of the property. The road right-of-way may only be crossed once at a 90 degree angle. Design was also limited by the established site entrances on the south and northeast sides of the property. Sewer alignment also affected the requirements for grading.*

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

Minimization was met at the site during site design. Site plans were developed such that the minimum amount of impacts could be achieved. Due to the needed features and site design limitations, wetlands were unavoidable.

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

Other properties were considered for this development, however, this location was selected because it allows both commercial and residential development. There is very limited medium density property available in the area.

Attachment D

Replacement/Compensatory Mitigation

Complete this part **if** your application involves wetland replacement/compensatory mitigation not associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

Replacement/Compensatory Mitigation via Wetland Banking. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

Wetland Bank Account #	County	Major Watershed #	Bank Service Area #	Credit Type (if applicable)	Number of Credits
1651	Blue Earth	28	9	Withdraw	1.40

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. *However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.*

Project-Specific Replacement/Permittee Responsible Mitigation. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed project.

WCA Action Eligible for Credit ¹	Corps Mitigation Compensation Technique ²	Acres	Credit % Requested	Credits Anticipated ³	County	Major Watershed #	Bank Service Area #

¹Refer to the name and subpart number in MN Rule 8420.0526.

²Refer to the technique listed in *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota*.

³If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile.....) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

NA

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

NA

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

NA

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict project outcomes, identify specific project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

NA

For projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

NA

For projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

NA

Provide a five-year monitoring plan to address project outcomes and credit allocation:

NA

Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

NA

Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

NA

By signature below, the applicant attests to the following (only required if application involves project-specific/permittee responsible replacement):

- All proposed replacement wetlands were not:
 - Previously restored or created under a prior approved replacement plan or permit
 - Drained or filled under an exemption during the previous 10 years
 - Restored with financial assistance from public conservation programs
 - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration and the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof of such recording to the LGU and the Corps.

Applicant or Representative:

Title:

Signature: _____

Date:

Transaction Form to Withdraw Credits

Minnesota Wetland Bank Program

If the layout of this form looks incorrect, click on [View, Edit Document](#), then save it to your computer.

1. Credit User		<i>This space for BWSR use only.</i>
Name: Max DeMars Company President	Organization: DeMars Construction	
Address: 3 Civic Center Plaza Mankato, MN 56001	Email: max@demarsgc.com	
Phone: (507) 387-5933	LGU File #:	
Consultant: Chad Ponce, Bolton & Menk, Inc., chad.ponce@bolton-menk.com		
2. Wetland Impact Information		
To be completed for the project impacting wetlands and with which this withdrawal is intended to replace.		
Project Name: Wolfe Addition #2	Impact Size (acres): 0.70 ac	
Impact County: Blue Earth	Impact Wetland type: Type 1 and 2	
Impact Major Watershed/BSA: 28 / 9	Replacement Ratio: 2:1	
Sec/Twp/Range: Sec 3, T108N, R26W		
*Projects with multiple locations should use the most central location in relation to the project as a whole.		
Are Federally authorized credits required for this impact? Yes No		
Corps Regulatory File Number: MVP-2015-04603-RMH		
Comments:		

3. Credits to be Withdrawn To be completed by the seller of the credits (account holder)				
Account Information				
Account:		County:	Bank Service Area:	
Credit Subgroup	Wetland Type/Plant Community Type	Federally Approved?	Cost per Credit	Credit Amounts
A	2-Fresh Wet Meadow	Yes	60,000	1.40
Per Credit Withdrawal Fee by BSA		Enter the Withdrawal Fee for the BSA of the account:	Total Credits:	1.40
BSA 1 \$520	BSA 6 \$1,083	2628	Withdrawal Fee:	\$3,679.20
BSA 2 \$371	BSA 7 \$1,992		<i>(Withdrawal Fee x total credits)</i>	
BSA 3 \$725	BSA 8 \$2,577	Easement Stewardship Fee:	<i>(Easement Stewardship fee x total credits)</i>	
BSA 4 \$1,412	BSA 9 \$2,628	\$302	Stewardship Fee:	\$422.80
BSA 5 \$685	BSA 10 \$3,099		Total Fees:	\$4,102

Please make checks payable to the Minnesota Board of Water and Soil Resources. BWSR does not accept cash.

BWSR fee policy: http://www.bwsr.state.mn.us/wetlands/wetlandbanking/fee_and_sales_data/Wetland_Banking_Fee_Policy_Effective_June1_2017.pdf

Disclaimer: All transactions in the Wetland Bank system are public information

If the layout of this form looks incorrect, click on [View, Edit Document](#), then save it to your computer.

Project Name: Wolfe Addition No. 2

Confirmation email will be emailed to the user, seller, and regulatory representative when the transaction is complete. If anyone else should be notified please indicated their emails below:

4. Regulatory Authorization

By signing below, the identified agency and authorized representative hereby certifies that they have: **a)** verified that the subject wetland credits are deposited in the account of the owner/seller, **b)** approved a wetland replacement plan or similar agreement under their jurisdiction, and **c)** approve the proposed use of the wetland bank credit described above.

WCA LGU/Agency:

LGU Representative:

Email Address:

Signature

Date

For NRCS, DNR, etc. as applicable

Agency Name and Location:

Representative:

Email Address:

Signature

Date

5. Credit User Signature

By signing below the proposed credit user attests that he/she owns or has purchased the credits identified in this form and has received approval from the regulatory authority(ies).

Signature

Date

6. Account Holder Signature

By signing below I, the seller and holder of the aforementioned account in the State of Minnesota Wetland Mitigation Bank, certify that:

- 1) The credits described in this transaction form have been sold to the credit user or will be used for my own project;
- 2) I have received payment in full from the buyer (if applicable);
- 3) The credits described in this transaction form have not been sold or used in any way to mitigate wetland losses other than for the project and location identified in the wetland impact information block on the previous page;
- 4) The credits described in this application should be withdrawn from my account; and
- 5) I will not have a negative balance of credits after the subject credits are debited from my account.

Name/Representative:

Email Address:

Signature _____

Date _____

**Send complete forms and fee payments to:
Wetland Bank Administration
Minnesota Board of Water and Soil
Resources
520 Lafayette Road North
Saint Paul, MN 55155**

Disclaimer: All transactions in the Wetland Bank system are public information

**PURCHASE AGREEMENT
FOR
WETLAND BANKING CREDITS**

THIS AGREEMENT is made this 16th of August, 2022 between
Barbara and Alan Stevensen (Seller) and DeMars Construction (Buyer).

1. Seller agrees to sell to Buyer, and Buyer agrees to buy from Seller, the wetland banking credits (Credits) listed below:

Credits to be Sold																													
Credit Subgroup	Wetland Type/Plant Community Type	Cost per Credit	Credit Amounts	Purchase Amount																									
A	Fresh Wet Meadow	60,000	1.40	84,000																									
TOTAL:				\$84,000																									
Per Credit Withdrawal Fee by BSA Enter the Withdrawal Fee for the BSA of the account: <table><tr><td>BSA 1 \$520</td><td>BSA 6 \$1,083</td><td colspan="3">(Withdrawal Fee x total credits)</td></tr><tr><td>BSA 2 \$371</td><td>BSA 7 \$1,992</td><td>2,628</td><td>Withdrawal Fee:</td><td>\$3,679.20</td></tr><tr><td>BSA 3 \$725</td><td>BSA 8 \$2,577</td><td colspan="3">Easement Stewardship Fee: (Easement Stewardship fee x total credits)</td></tr><tr><td>BSA 4 \$1,412</td><td>BSA 9 \$2,628</td><td>\$302 per credit</td><td>Stewardship Fee:</td><td>\$422.80</td></tr><tr><td>BSA 5 \$685</td><td>BSA 10 \$3,099</td><td></td><td>Total Fees:</td><td>\$4,102</td></tr></table>					BSA 1 \$520	BSA 6 \$1,083	(Withdrawal Fee x total credits)			BSA 2 \$371	BSA 7 \$1,992	2,628	Withdrawal Fee:	\$3,679.20	BSA 3 \$725	BSA 8 \$2,577	Easement Stewardship Fee: (Easement Stewardship fee x total credits)			BSA 4 \$1,412	BSA 9 \$2,628	\$302 per credit	Stewardship Fee:	\$422.80	BSA 5 \$685	BSA 10 \$3,099		Total Fees:	\$4,102
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BWSR fee policy: http://www.bwsr.state.mn.us/wetlands/wetlandbanking/fee_and_sales_data/Wetland_Banking_Fee_Policy_Effective_June1_2017.pdf																													

2. Seller represents and warrants as follows:

- a) The Credits are deposited in an account in the Minnesota Wetland Bank administered by the
Minnesota Board of Water and Soil Resources (BWSR) pursuant to Minn. Rules Chapter 8420.0700-.0755.
- b) Seller owns the Credits and has the right to sell the Credits to Buyer.

3. Buyer will purchase from the Seller a total of 1.40 wetland credits at a rate of \$60,000 per credit. The Buyer will pay the Seller a total of \$84,000 for the Credits. The Buyer will execute a check made out for this amount, payable to Alan Stevensen, at the time that the permit application is approved by the LGU.

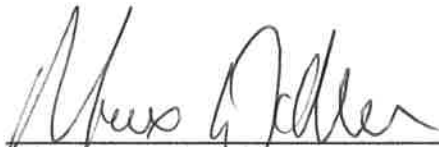
4. Buyer agrees to pay a withdrawal fee of **\$3,679.20** and Easement Stewardship Fee of **\$422.80** to the State of Minnesota based on methods described in Box 3 of the Transaction Form to Withdrawal Credits. The Buyer will execute a check made out for this amount, payable to the **Board of Water and Soil Resources**, at the time that the permit application is approved by the LGU.
5. Upon payment of the balance of the purchase price, Seller will sign a fully executed Application for Withdrawal of the Credits in the form specified by BWSR, provide a copy of the Application for Withdrawal to the Buyer and forward the same to the BWSR along with the check for the Withdrawal Fee.
6. Buyer will apply to the **City of Mankato** (LGU) for approval of a replacement plan utilizing the Credits as the means of replacing impacted wetlands. If the LGU does not approve the Buyer's application for a replacement plan utilizing the Credits, then either Buyer or Seller may cancel this Agreement by giving written notice to the other. In this case neither Buyer nor Seller shall have any further obligations under this Agreement.



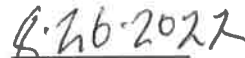
(Signature of Seller)



(Date)



(Signature of Buyer)



(Date)



Landowner Statement and Contractor Responsibility For Work in Wetlands or Public Waters



MN Statutes Sections 103G.2212 and 103G.241 stipulate that an agent or employee of another may not:

- 1) drain, excavate, or fill a wetland, wholly or partially; or
- 2) construct, reconstruct, remove, or make any change in any reservoir, dam, or the course, current, or cross-section of any public water;

unless the agent or employee has obtained a signed statement from the property owner stating that any permit or wetland replacement plan required for the work has been obtained, or that a permit or replacement plan is not required; **AND** this statement is mailed to the appropriate office with jurisdiction over the wetland or public water prior to initiating the work (see next page for information on where to send this notification).

This form is a notification only and is not an application or authorization for any activities described in it.

1. PROJECT INFORMATION

Project will affect (check all that apply):

☐ Lake, Watercourse, or Public Waters Wetland ☒ Non-Public Waters Wetland ☐ Wetland of Unknown Jurisdiction

Address or description of project location (attach map if necessary):

Legal address

Parcel IDs: R430903300012

County	Gov't Lot(s)	Quarter Section(s)	Section(s)	Township(s)	Range(s)	Lot, Block, Subd.
Blue Earth			3	108	26	

Description of proposed work (include sketch and/or attach additional pages if needed):

*Demars Construction is proposing to develop the property with a Blue Earth County Parcel ID of R430903300012, located along the north side of North Victory Drive, in Mankato, MN. (**Exhibit A**). The proposed construction includes residential housing, commercial properties, roads, stormwater ponds, and utilities.*

2. LANDOWNER STATEMENT

I certify that, as the owner of the property listed on this form (check one):

- ☐ I have obtained all permits or approvals required to perform the work described above.
☐ No permits or approvals are required for this work.

Property Owner (Print Name) DeMars Constructino Max DeMars	Address 3 Civic Center Plaza Mankato, MN 56001	
Signature	Date	Phone Number and E-mail Address (Optional) (507) 387-5933 max@demarsgc.com

3. CONTRACTOR VERIFICATION

By signing below, I verify that I have received a signed copy of this form and will be performing the indicated work as described above.

Company and Individual Performing Proposed Work (Print)	Address	
Signature	Date	Phone Number and E-mail Address (Optional)

Note: The contractor is responsible for ensuring this form is mailed to the appropriate office when complete.

This statement is invalid if any of the above information is not supplied or is inaccurate. Work in violation of this notification requirement is a separate and independent offense from other violations of Minnesota Statutes chapter § 103G and is a misdemeanor punishable by fines up to \$1,000 and/or 90 days in jail. The State Department of Natural Resources (DNR) Commissioner also has the authority to require restoration of any work done without the necessary permits or approvals or work that is beyond what was authorized.

4. INFORMATION AND RESOURCES

A Wetland Conservation Act (WCA) replacement plan is required for any wetland draining, excavation, or filling activity that is not exempt under Minnesota Rules Chapter 8420.0420. A DNR Waters permit is required for any work in public waters.

National wetland inventory maps are available for review at the County Soil and Water Conservation District (SWCD) office and online at <http://www.fws.gov/wetlands/Data/Mapper.html>. Many wetlands are not identified on the maps but are still restricted from draining, excavating, or filling. If you are unsure the proposed work will affect a wetland, contact your local government unit (LGU) or SWCD for assistance.

Public Waters of the State of Minnesota include the channel to the top of the channel bank for watercourses and the basin from the ordinary high water level waterward for public waters (i.e. lakes) and public waters wetlands. Public waters inventory maps are available for review at the County Auditor's office, DNR Division of Waters regional offices, and online at http://www.dnr.state.mn.us/waters/watermgmt_section/pwi/download.html.

General information about public waters, wetlands, and related regulations are available on the DNR website at <http://mndnr.gov> and the MN Board of Water and Soil Resources (BWSR) website at <http://www.bwsr.state.mn.us>.

5. WHERE TO SEND THIS NOTIFICATION

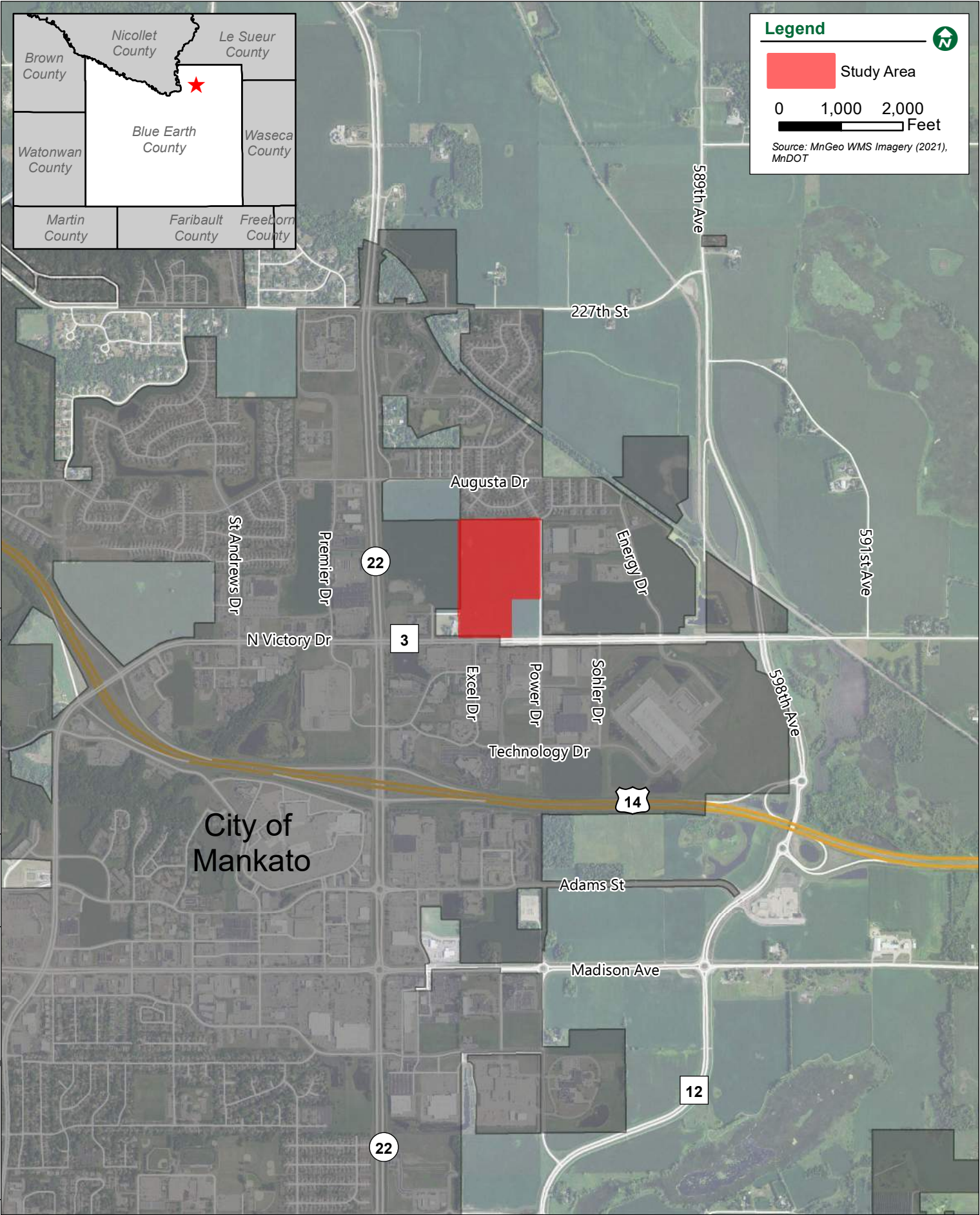
- For work in public waters (lake, watercourse, or public waters wetland), send this completed form to the DNR Regional Enforcement Office serving the project's area. See below for DNR regional office information. A map of DNR regions can be found on the DNR website at: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf
- For work in any wetland that is not a public waters wetland, send this completed form to the WCA LGU with jurisdiction over the project area. The LGU is usually the County or SWCD, except in urban areas the City is often the LGU. Contact any of these local governments or BWSR for assistance. BWSR also maintains a list of LGUs on its website at: <http://www.bwsr.state.mn.us/directories/WCA.pdf>.
- If it is not known if the wetland is a public waters wetland, send the completed form to both the DNR Regional Enforcement Office and the WCA LGU.

Department of Natural Resources Regional Offices

<u>Northwest Region:</u> 2115 Birchmont Beach Rd. NE Bemidji, MN 56601 Phone: 218-308-2700	<u>Northeast Region:</u> 1201 E. Hwy. 2 Grand Rapids, MN 55744 Phone: 218-327-4455	<u>Central Region:</u> 1200 Warner Road St. Paul, MN 55106 Phone: 651-259-5800	<u>Southern Region:</u> 261 Hwy. 15 South New Ulm, MN 56073 Phone: 507-359-6000
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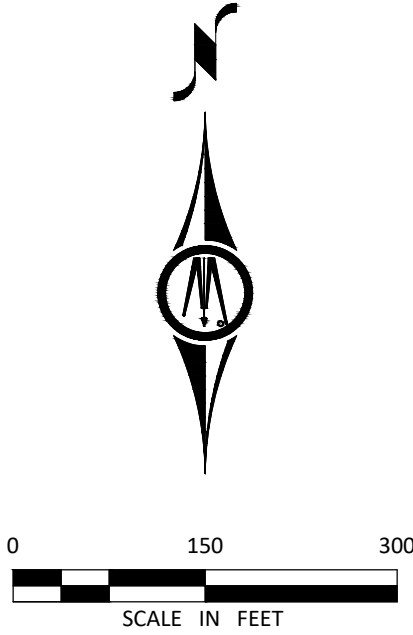
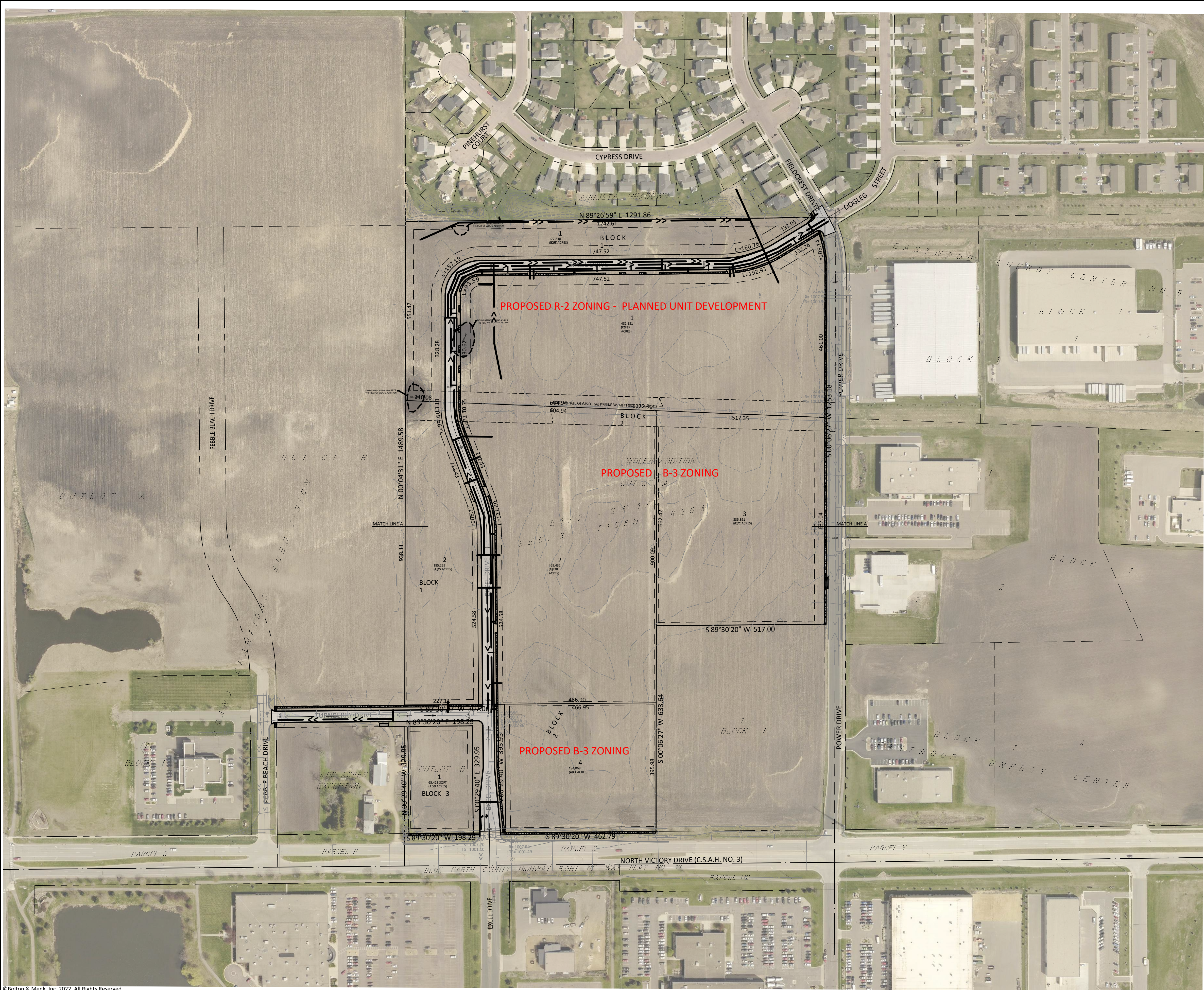
Keep a copy of this form for your records!

Appendix









UTILITY & SITE DATA
All Zoning, Setback, and Flood Zone information was obtained from the City of Mankato Code. For detailed zoning information and specific interpretation of code requirements, contact the City of Mankato.

ZONING:
Subject property - T - Transition District
Proposed Re-zone to R-2, One- and Two-family Dwelling District and B-3, Highway Commercial District.

SETBACKS (R-2, One- and Two-family Dwelling District):	
Front	
Main Building	30 feet
Side	
Main Building	6 feet
Rear	
Main Building	25 feet
Lot Area (minimum) = 6,000 sq.ft. (single) & 8,000 (two family) .	
Lot Width (minimum) = 60 feet	
Ground Coverage by all structures (maximum) = 35%	
Building Height (maximum) = 35 feet	

SETBACKS (B-3, Highway Commercial District):	
Front	
Main and Accessory Building	15 feet
Parking Areas	15 feet
Side	
Main and Accessory Buildings	6 feet
Parking Areas	3 feet
Rear	
Main and Accessory Building	6 feet
Parking Areas	3 feet

Lot Area (minimum) = 10,000 sq.ft.
Lot Width (minimum) = 150 feet
Maximum Ground Coverage = 75% by all structures
Maximum Building Height = No requirement

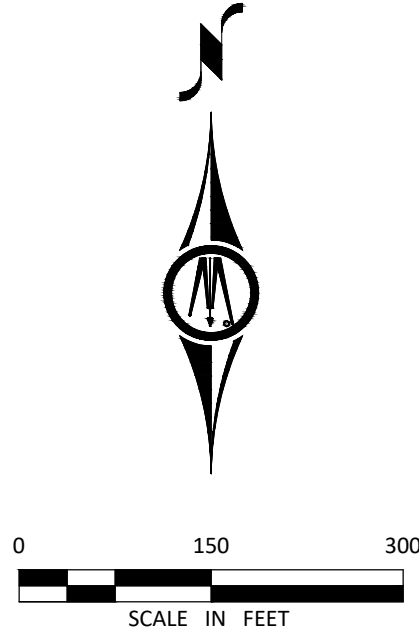
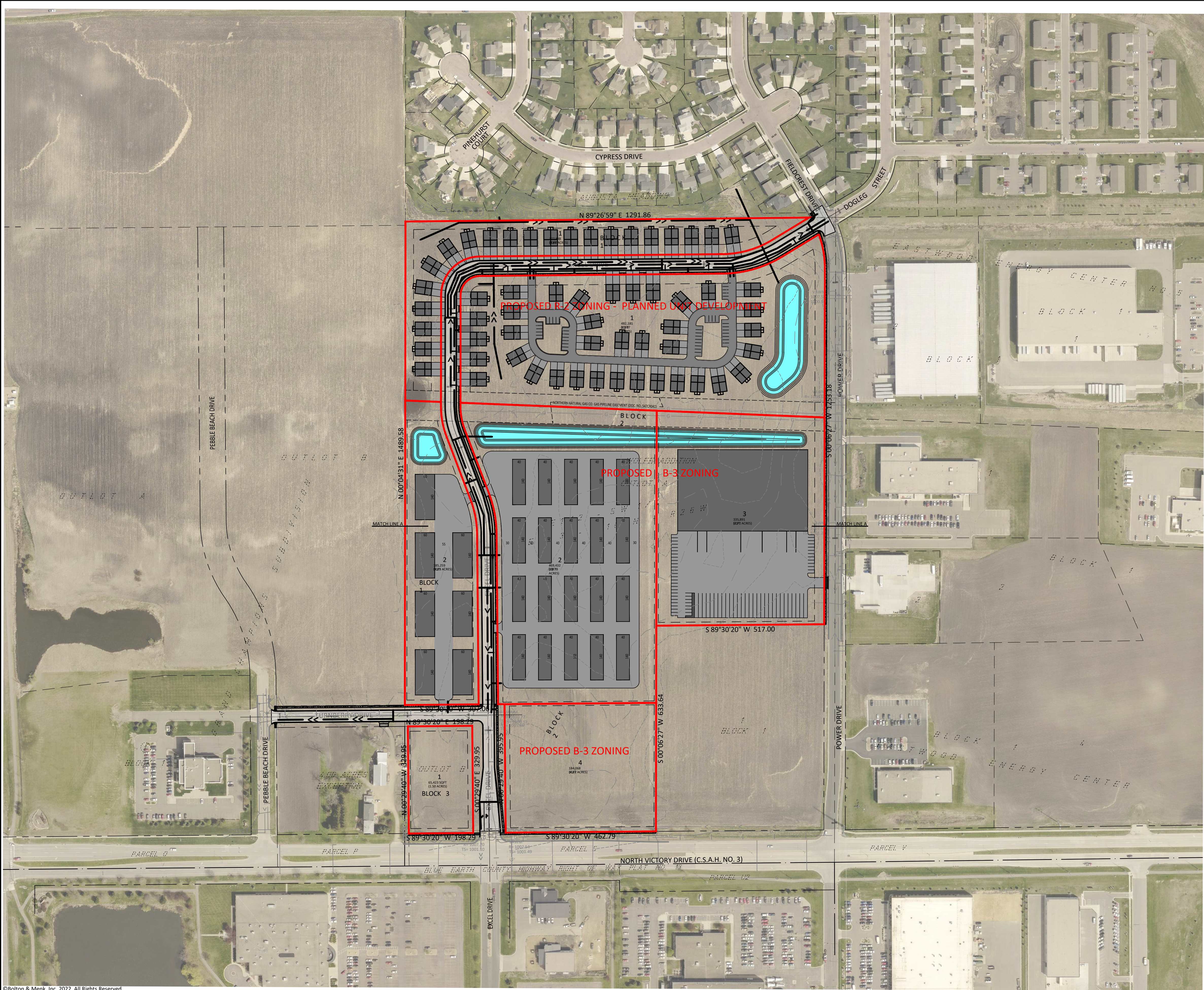
SURVEYOR'S CERTIFICATION
I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.


Michael M. Eichers
License Number 46564

05/03/2022
Date

WOLFE ADDITION NO. 2

PRELIMINARY PLAT MANKATO, MINNESOTA		PART OF THE E. 1/2 - SW 1/4, SEC. 3 - T108N-R26W
 BOLTON & MENK 1960 PREMIER DRIVE MANKATO, MINNESOTA 56001 (507) 625-4171		FOR: DEMARS CONSTRUCTION



UTILITY & SITE DATA
All Zoning, Setback, and Flood Zone information was obtained from the City of Mankato Code. For detailed zoning information and specific interpretation of code requirements, contact the City of Mankato.

ZONING:
Subject property - T - Transition District
Proposed Re-zone to R-2, One- and Two-family Dwelling District and B-3, Highway Commercial District.

SETBACKS (R-2, One- and Two-family Dwelling District):
Front
Main Building 30 feet
Side
Main Building 6 feet
Rear
Main Building 25 feet
Lot Area (minimum) = 6,000 sq.ft. (single) & 8,000 (two family) .
Lot Width (minimum) = 60 feet
Ground Coverage by all structures (maximum) = 35%
Building Height (maximum) = 35 feet

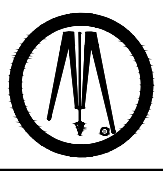
SETBACKS (B-3, Highway Commercial District):
Front
Main and Accessory Building 15 feet
Parking Areas 15 feet
Side
Main and Accessory Buildings 6 feet
Parking Areas 3 feet
Rear
Main and Accessory Building 6 feet
Parking Areas 3 feet
Lot Area (minimum) = 10,000 sq.ft.
Lot Width (minimum) = 150 feet
Maximum Ground Coverage = 75% by all structures
Maximum Building Height = No requirement

SURVEYOR'S CERTIFICATION
I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.


Michael M. Eichers
License Number 46564

12/07/2021
Date

WOLFE ADDITION NO. 2

CONCEPT PLAN MANKATO, MINNESOTA		PART OF THE E. 1/2 - SW 1/4, SEC. 3 - T108N-R26W
 BOLTON & MENK	1960 PREMIER DRIVE MANKATO, MINNESOTA 56001 (507) 625-4171	FOR: DEMARS CONSTRUCTION

DEMARS CONSTRUCTION

CONSTRUCTION PLANS FOR

TURNBERRY DRIVE & EXCEL DRIVE EXTENSION

MANKATO, MN

PAVEMENT AND SIDEWALK CONSTRUCTION, SITE GRADING, STORMWATER MANAGEMENT
WATERMAIN, SANITARY SEWER AND STORM SEWER INSTALLATION

JULY 2022

RESOURCE LIST

CITY OF MANKATO, MN

City Hall
10 Civic Center Plaza
Mankato, MN 56001
507-387-8695

City Manager:
Susan Arntz

Mayor: Najwa Massad

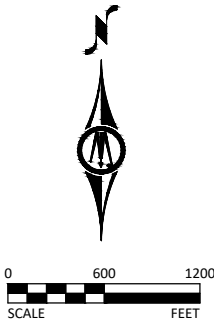
City Council Members:
Mike Laven
Karen Foreman
Dennis Dieken
Mark Frost
Jenn Melby-Kelley
Jessica Hatanpa

Asst. City Engineer:
Michael McCarty, P.E.
10 Civic Center Plaza
Mankato, MN 56001
507-387-8600

Public Works Director:
Jeffrey Johnson, P.E.

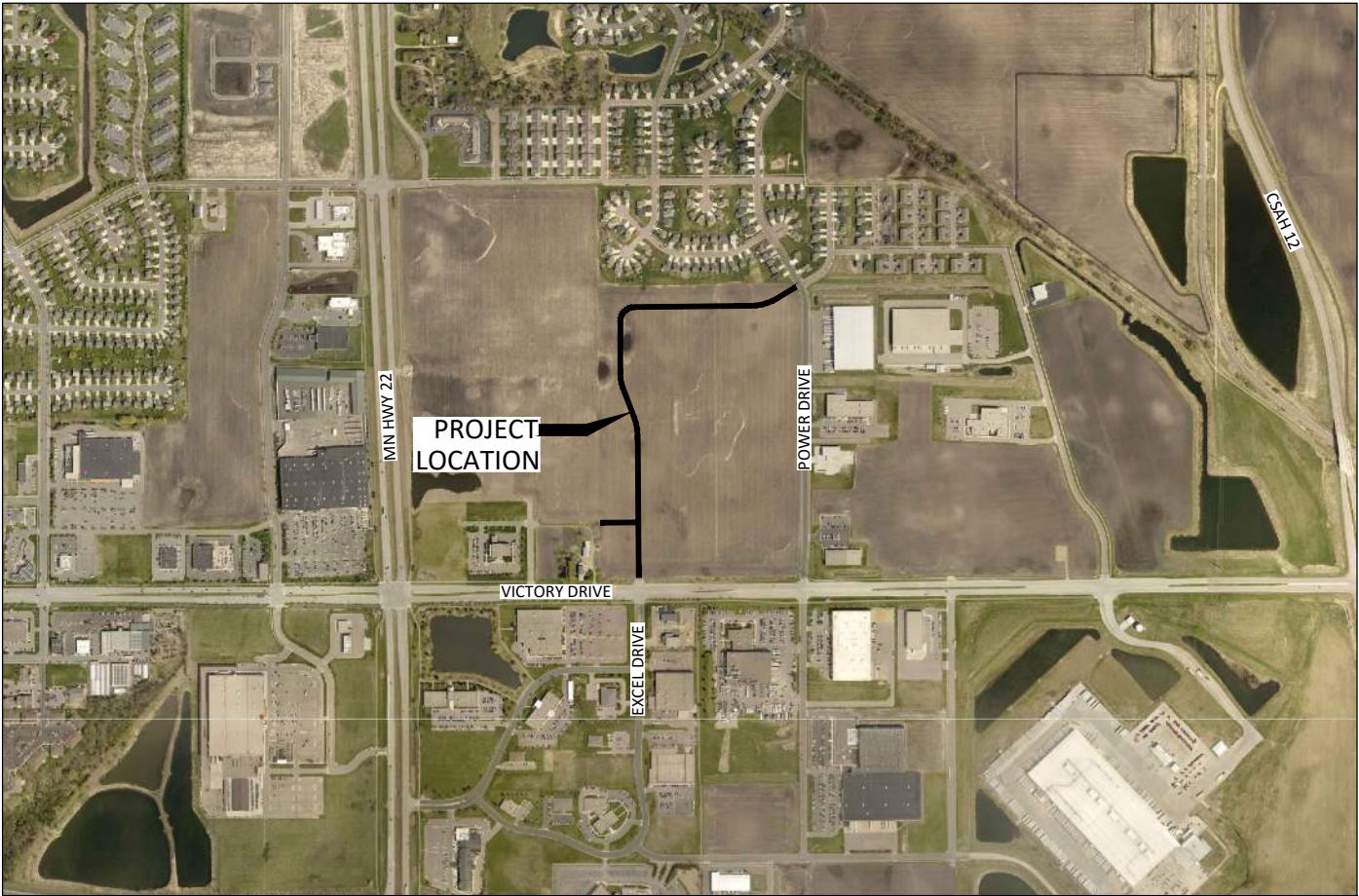
Infrastructure Superintendent:
Anthony Talamantez

MAP OF THE
CITY OF MANKATO
BLUE EARTH COUNTY, MN



NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF C/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."



SHEET
NUMBER

SHEET TITLE

GENERAL

G0.01 - G0.02	TITLE SHEET & LEGEND
G1.01	STATEMENT OF ESTIMATED QUANTITIES
G1.02 - G1.03	CONSTRUCTION TABLES
G2.01 - G2.03	PROJECT OVERVIEW

CIVIL

C0.01 - C0.03	EXISTING CONDITIONS & REMOVAL PLAN
C1.01 - C1.02	CONSTRUCTION DETAILS

STORMWATER POLLUTION PREVENTION PLAN	
C2.01	PROJECT INFORMATION AND LOCATION MAP
C2.02	NARRATIVE
C2.03	SITE AND SOILS MAP
C2.04 - C2.05	BEST MANAGEMENT PRACTICE DETAILS
C2.06 - C2.12	EROSION & SEDIMENT CONTROL PLAN

TOWNHOME GRADING PLAN	
C3.01	TOWNHOME GRADING PLAN

SANITARY SEWER & WATERMAIN PLAN & PROFILE	
C4.01 - C4.05	EXCEL DRIVE
C4.06	TOWNHOME SERVICE LAYOUT

STORM SEWER PLAN & PROFILE	
C5.01 - C5.04	EXCEL DRIVE
C5.05 - C5.08	YARD DRAINAGE & NORTH BASIN OUTLET

STORMWATER MANAGEMENT PLAN	
C5.09	FILTRATION BASIN
C5.10	WET SEDIMENTATION BASIN
C5.11	SYSTEM CONNECTION AND OUTFALL PROFILES

STREET & SURFACE CONSTRUCTION	
C6.01 - C6.06	TURNBERRY DRIVE & EXCEL DRIVE - STREET PLAN & PROFILE
C6.07 - C6.08	INTERSECTION DETAILS
C6.09 - C6.12	SUBDIVISION SIDEWALK EXTENSIONS

C7.01 - C7.03	TRAFFIC CONTROL PLAN IN PROGRESS, NOT PROVIDED
E1.01 - E1.03	LIGHTING PLAN AND DETAILS
L1.01 - L1.04	TREE PLANTING PLAN AND DETAILS

THIS PLAN SET CONTAINS 65 SHEETS.

APPROVED: _____
CITY ENGINEER
LICENSE NUMBER: _____ DATE: _____

⚡ BM=1006.33
TOP NUT HYDRANT
NORTHEAST QUADRANT OF
POWER DRIVE / DOGLEG ROAD

⚡ BM=1008.43
TOP NUT HYDRANT
NORTHEAST QUADRANT OF
FIRESTONE/TURNBERRY DRIVE

⚡ BM=1011.75
TOP NUT HYDRANT
SOUTHEAST QUADRANT OF
EXCEL/VICTORY DRIVE

PROJECT DATUM: BLUE EARTH COUNTY
HORIZONTAL: 2011 COUNTY COORDINATES
VERTICAL: NAVD 1988

RECORD DRAWING INFORMATION	
OBSERVER:	
CONTRACTOR:	
DATE:	

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

REVIEW

ALEC W. PIETZ, P.E.
LIC. NO. 59617 DATE XX/XX/XXXX



1960 PREMIER DRIVE
MANKATO, MINNESOTA 56001
Phone: (507) 625-4171
Email: Mankato@bolton-menk.com
www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
AWP			
DRAWN			
AWP			
CHECKED			
MS			
CLIENT PROJ. NO.			
0M1.127338			

DEMARS CONSTRUCTION

TURNBERRY DRIVE & EXCEL DRIVE EXTENSION

TITLE SHEET

SHEET

G0.01

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EXISTING TOPOGRAPHIC SYMBOLS

	ACCESS GRATE		REGULATION STATION GAS
	AIR CONDITION UNIT		SATELLITE DISH
	ANTENNA		SIGN NON TRAFFIC
	AUTO SPRINKLER CONNECTION		SIGN TRAFFIC
	BARRICADE PERMANENT		SIGNAL CONTROL CABINET
	BASKETBALL POST		SOIL BORING
	BENCH		SIREN
	BIRD FEEDER		TELEPHONE BOOTH
	BOLLARD		TILE INLET
	BUSH		TILE OUTLET
	CATCH BASIN RECTANGULAR CASTING		TILE RISER
	CATCH BASIN CIRCULAR CASTING		TRANSFORMER-ELECTRIC
	CURB STOP		TREE-CONIFEROUS
	CLEAN OUT		TREE-DEAD
	CULVERT END		TREE-DECIDUOUS
	DRINKING FOUNTAIN		TREE STUMP
	DOWN SPOUT		TRAFFIC ARM BARRIER
	FILL PIPE		TRAFFIC SIGNAL
	FIRE HYDRANT		TRASH CAN
	FLAG POLE		UTILITY MARKER
	FLARED END / APRON		VALVE
	FUEL PUMP		VALVE POST INDICATOR
	GRILL		VALVE VAULT
	GUY WIRE ANCHOR		VAULT
	HANDHOLE		VENT PIPE
	HANDICAP SPACE		WATER SPIGOT
	IRRIGATION SPRINKLER HEAD		WELL
	IRRIGATION VALVE BOX		WETLAND DELINEATED MARKER
	LIFT STATION CONTROL PANEL		WETLAND
	LIFT STATION		WET WELL
	LIGHT ON POLE		YARD HYDRANT
	LIGHT-GROUND		
	MAILBOX		

PROPOSED TOPOGRAPHIC SYMBOLS

	CLEANOUT
	MANHOLE
	LIFT STATION
	STORM SEWER CIRCULAR CASTING
	STORM SEWER RECTANGULAR CASTING
	STORM SEWER FLARED END / APRON
	STORM SEWER OUTLET STRUCTURE
	STORM SEWER OVERFLOW STRUCTURE
	CURB BOX
	FIRE HYDRANT
	WATER VALVE
	WATER REDUCER
	WATER BEND
	WATER TEE
	WATER CROSS
	WATER SLEEVE
	WATER CAP / PLUG
	RIP RAP
	DRAINAGE FLOW
	TRAFFIC SIGNS

SURVEY SYMBOLS

	BENCHMARK LOCATION
	CONTROL POINT
	MONUMENT FOUND
	CAST IRON MONUMENT
	STONE MONUMENT

EXISTING TOPOGRAPHIC LINES

	RETAINING WALL
	FENCE
	FENCE-DECORATIVE
	GUARD RAIL
	TREE LINE
	BUSH LINE

SURVEY LINES

	CONTROLLED ACCESS
	BOUNDARY
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	SETBACK LINE
	SECTION LINE
	QUARTER LINE
	SIXTEENTH LINE
	TEMPORARY EASEMENT

EXISTING UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE

PROPOSED UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE
	PIPE CASING

GRADING INFORMATION

	EXISTING CONTOUR MINOR
	EXISTING CONTOUR MAJOR
	PROPOSED CONTOUR MINOR
	PROPOSED CONTOUR MAJOR
	PROPOSED GRADING LIMITS / SLOPE LIMITS
	PROPOSED SPOT ELEVATION
	RISE:RUN (SLOPE)

HATCH PATTERNS

	BITUMINOUS		GRAVEL
	CONCRETE		

EXISTING PRIVATE UTILITY LINES

NOTE:
EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA"

	UNDERGROUND FIBER OPTIC
	UNDERGROUND ELECTRIC
	UNDERGROUND GAS
	UNDERGROUND COMMUNICATION
	OVERHEAD ELECTRIC
	OVERHEAD COMMUNICATION
	OVERHEAD UTILITY

UTILITIES IDENTIFIED WITH A QUALITY LEVEL :

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE: G-A G-A UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-02.

UTILITY QUALITY LEVELS:

QUALITY LEVEL D: PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

QUALITY LEVEL C: INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. INCLUDES QUALITY LEVEL D ACTIVITIES.

QUALITY LEVEL B: INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND COLLECTING THE INFORMATION THROUGH A SURVEY METHOD. INCLUDES QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL A: PROVIDES THE HIGHEST LEVEL OF ACCURACY. IT INVOLVES LOCATING OR POTHOLING UTILITIES AS WELL AS ACTIVITIES IN QUALITY LEVELS B, C, AND D. THE LOCATED FACILITY INFORMATION IS SURVEYED AND MAPPED AND THE DATA PROVIDES PRECISE PLAN AND PROFILE INFORMATION.

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT
ADJ	ADJUST	GU	GUTTER	RT	RIGHT
ALT	ALTERNATE	GV	GATE VALVE	SAN	SANITARY SEWER
B-B	BACK TO BACK	HDPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
BIT	BITUMINOUS	HH	HANDHOLE	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL	CLASS	MAX	MAXIMUM	TYP	TYPICAL
CLVT	CULVERT	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CON	CONCRETE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CSP	CORRUGATED STEEL PIPE	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL		
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL		
DWY	DRIVEWAY	PC	POINT OF CURVE	AC	ACRES
E	EXTERNAL CURVE DISTANCE	PCC	POINT OF COMPOUND CURVE	CF	CUBIC FEET
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CV	COMPACTED VOLUME
ELEV	ELEVATION	PED	PEDESTRIAN, PEDESTAL	CY	CUBIC YARD
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	EA	EACH
ER	END RADIUS	PERM	PERMANENT	EV	EXCAVATED VOLUME
ESMT	EASEMENT	PI	POINT OF INTERSECTION	LB	POUND
EX	EXISTING	PL	PROPERTY LINE	LF	LINEAR FEET
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LS	LUMP SUM
F-F	FACE TO FACE	PT	POINT OF TANGENT	LV	LOOSE VOLUME
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	SF	SQUARE FEET
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	SV	STOCKPILE VOLUME
FM	FORCEMAIN	R	RADIUS	SY	SQUARE YARD
FO	FIBER OPTIC	R/W	RIGHT-OF-WAY		
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE		
GRAN	GRANULAR	RET	RETAINING		

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

REVIEWED

ALEC W. PIETZ, P.E.
LIC. NO. 59617 DATE XX/XX/XXXX



1960 PREMIER DRIVE
MANKATO, MINNESOTA 56001
Phone: (507) 625-4171
Email: Mankato@bolton-menk.com
www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
AWP			
DRAWN			
AWP			
CHECKED			
MS			
CLIENT PROJ. NO.			
0M1.127338			

DEMARS CONSTRUCTION

TURNBERRY DRIVE & EXCEL DRIVE EXTENSION

LEGEND

SHEET

G0.02

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STATEMENT OF ESTIMATED QUANTITIES				
ITEM NO.	MNDOT ITEM NO.	ITEM	ESTIMATED QUANTITY	UNIT
1	2021.501	MOBILIZATION	1	LS
2	2104.502	REMOVE HYDRANT	1	EA
3	2104.502	REMOVE DRAINAGE STRUCTURE	1	EA
4	2104.503	REMOVE WATER MAIN	25	LF
5	2104.503	REMOVE SEWER PIPE (STORM)	10	LF
6	2104.503	REMOVE SEWER PIPE (SANITARY)	15	LF
7	2104.503	SAWING CONCRETE PAVEMENT	31	LF
8	2104.503	SAWING BITUMINOUS PAVEMENT	160	LF
9	2104.503	REMOVE CURB AND GUTTER	170	LF
10	2104.504	REMOVE CONCRETE WALK	10	SY
11	2104.504	REMOVE BITUMINOUS PAVEMENT	360	SY
12	2105.504	GEOTEXTILE FABRIC TYPE 5	14800	SY
13	2105.507	COMMON EXCAVATION (P) (EV)	39400	CY
14	2211.509	AGGREGATE BASE, CLASS 3 (CV) (P)	6160	CY
15	2211.509	AGGREGATE BASE, CLASS 5 (CV) (P)	3160	CY
16	2231.604	BITUMINOUS PATCH SPECIAL (TRAIL PATCH)	70	SY
17	2360.504	TYPE SP 12.5 WEAR CRS MIX (3,C) 1.5" THICK	12200	SY
18	2360.504	TYPE SP 19.0 NON WEAR CRS MIX (3,B) 2.5" THICK	12200	SY
19	2411.502	CONCRETE TRANSFORMER PAD	1	EA
20	2501.502	18" RC PIPE APRON	2	EA
21	2501.502	24" RC PIPE APRON	3	EA
22	2501.502	36" RC PIPE APRON	1	EA
23	2502.503	4" PERF PVC PIPE DRAIN, SDR 35	5680	LF
24	2502.503	8" PERF PVC PIPE DRAIN, SDR 35	340	LF
25	2502.503	12" PERF PVC PIPE DRAIN, SDR 35	1230	LF
26	2502.602	4" PVC PIPE DRAIN CLEAN-OUT	13	EA
27	2502.602	8" PVC PIPE DRAIN CLEAN-OUT	6	EA
28	2503.503	8" PVC PIPE SEWER, SDR 35	1659	LF
29	2503.503	10" PVC PIPE SEWER, SDR 35	373	LF
30	2503.503	12" PIPE SEWER (STORM)	376	LF
31	2503.503	15" PIPE SEWER (STORM)	870	LF
32	2503.503	12" RC PIPE SEWER DESIGN 3006 CLASS IV	172	LF
33	2503.503	15" RC PIPE SEWER DESIGN 3006 CLASS IV	118	LF
34	2503.503	18" RC PIPE SEWER DESIGN 3006 CLASS IV	320	LF
35	2503.503	24" RC PIPE SEWER DESIGN 3006 CLASS IV	1489	LF
36	2503.503	30" RC PIPE SEWER DESIGN 3006 CLASS IV	401	LF
37	2503.503	36" RC PIPE SEWER DESIGN 3006 CLASS IV	113	LF
38	2503.602	CONNECT TO EXISTING SANITARY SEWER	2	EA
39	2503.602	CONNECT TO EXISTING STORM SEWER	2	EA
40	2503.602	8" X 4" PVC WYE, HEAVY WALL	58	EA
41	2503.603	4" PVC SANITARY SERVICE PIPE, SDR 26	2358	LF
42	2504.602	CONNECT TO EXISTING WATER MAIN	2	EA
43	2504.602	6" GATE VALVE AND BOX	7	EA
44	2504.602	8" GATE VALVE AND BOX	6	EA
45	2504.602	12" GATE VALVE AND BOX	6	EA
46	2504.602	HYDRANT	7	EA
47	2504.602	INSTALL HYDRANT	7	EA
48	2504.602	12"X8" WET TAP	1	EA
49	2504.602	1" CORPORATION STOP	58	EA
50	2504.602	1" CURB STOP & BOX	58	EA

STATEMENT OF ESTIMATED QUANTITIES				
ITEM NO.	MNDOT ITEM NO.	ITEM	ESTIMATED QUANTITY	UNIT
51	2504.603	1" TYPE PE PIPE	2642	LF
52	2504.603	6" PVC WATERMAIN	83	LF
53	2504.603	8" PVC WATERMAIN	190	LF
54	2504.603	12" PVC WATERMAIN	2522	LF
55	2504.608	WATERMAIN FITTINGS	2000	LBS
56	2506.503	CONSTRUCT DRAINAGE STRUCTURE SPECIAL (DES R-1)	24	LF
57	2506.503	CONSTRUCT DRAINAGE STRUCTURE SPECIAL (DES I-1)	32	LF
58	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 4007	156	LF
59	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	55	LF
60	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 60-4020	48	LF
61	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4022	5	LF
62	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 60-4022	12	LF
63	2506.503	CONSTRUCT DRAINAGE STRUCTURE DESIGN 72-4022	11	LF
64	2506.602	CONSTRUCT DRAINAGE STRUCTURE MANKATO STD. 3	8	EA
65	2506.602	CONSTRUCT DRAINAGE STRUCTURE SPECIAL (DES P-1)	1	EA
66	2506.602	CONSTRUCT DRAINAGE STRUCTURE SPECIAL (DES P-4)	1	EA
67	2506.602	STORM SEWER CASTING ASSEMBLY	37	EA
68	2506.502	SANITARY SEWER CASTING ASSEMBLY	11	EA
69	2511.507	RANDOM RIPRAP CLASS II	25	CY
70	2511.507	RANDOM RIPRAP CLASS III	75	CY
71	2521.518	4" CONCRETE WALK	22200	SF
72	2521.518	6" CONCRETE WALK	400	SF
73	2531.503	CONCRETE CURB & GUTTER DESIGN B618	6310	LF
74	2531.618	TRUNCATED DOMES	60	SF
75	2545.502	LIGHTING UNIT TYPE E	10	EA
76	2545.502	LUMINAIRE (LED)	10	EA
77	2545.502	LIGHT FOUNDATION DESIGN STEEL E	10	EA
78	2545.502	HANDHOLE	5	EA
79	2545.503	2" NON-METALLIC CONDUIT	2600	LF
80	2545.503	UNDERGROUND WIRE 1/C 4 AWG	2600	LF
81	2563.601	TRAFFIC CONTROL	1	LS
82	2565.602	TRANSFORMER AND SERVICE EQUIPMENT	1	EA
83	2571.524	DECIDUOUS TREE 2" CAL B&B - BICOLOR OAK	37	TREE
84	2571.524	DECIDUOUS TREE 2" CAL B&B - ELM	37	TREE
85	2571.524	DECIDUOUS TREE 2" CAL B&B - HACKBERRY	38	TREE
86	2571.524	DECIDUOUS TREE 2" CAL B&B - HONEY LOCUST	38	TREE
87	2573.502	STORM DRAIN INLET PROTECTION	36	EA
88	2573.501	STABILIZED CONSTRUCTION EXIT	2	EA
89	2573.503	SILT FENCE, TYPE MS	2200	LF
90	2574.508	FERTILIZER TYPE 3	2350	LB
91	2575.504	EROSION CONTROL BLANKETS, CATEGORY 20	26100	SY
92	2575.504	EROSION CONTROL BLANKETS, CATEGORY 3N	13700	SY
93	2575.508	SEED MIXTURE 25-141	120	LB
94	2575.508	SEED MIXTURE 25-151	960	LB
95	2575.508	SEED MIXTURE 33-261	200	LB
96	2575.605	SEEDING	8	ACRE
97	2582.501	PAVEMENT MESSAGE PREFORM THERMOPLASTIC	40	SF
98	2582.503	4" SOLID LINE WHITE-PAINT	180	LF

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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
STATEMENT OF ESTIMATED QUANTITIES

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STORM SEWER TABLE									
SERIES / ALIGNMENT	STRUCTURE NUMBER	STRUCTURE DESIGN	STATION	CASTING	RIM ELEV	LOW INVERT ELEV	DOWNSTREAM STRUCTURE	HEIGHT	NOTES
EXCEL DRIVE - A-SERIES	A-1	60-4020	11+06.7	C-1	1007.73	1002.40	EXISTING	5.33 LF	VERIFY LOCATION AND ELEVATION
	A-2	72-4022	11+90.0	C-2	1008.22	1003.42	A-1	4.80 LF	
	A-3	48-4022	11+90.0	C-2	1008.42	1003.80	A-2	4.62 LF	
EXCEL DRIVE - B-SERIES	B-1	24" RC APRON	504+13.2	N/A	N/A	1004.00	BASIN	N/A	
	B-2	60-4022	504+23.0	C-2	1009.60	1004.13	B-1	5.47 LF	
	B-3	60-4020	504+23.0	C-1	1009.91	1004.29	B-2	5.62 LF	
	B-3A	MKTO 2402C	504+23.0	C-2	1009.65	1005.65	B-3	4.00 LF	
	B-4	48-4020	501+72.7	C-1	1010.26	1005.04	B-3	5.22 LF	
	B-5	60-4020	500+50.0	C-1	1009.20	1005.41	B-4	3.79 LF	
	B-5A	R-1	500+50.0	C-2	1008.94	1005.44	B-5	3.50 LF	
	B-5B	MKTO 2402C	500+40.0	C-2	1009.06	1005.47	B-5A	3.59 LF	
	B-5C	R-1	500+50.0	C-2	1008.94	1005.49	B-5	3.45 LF	
	B-5D	MKTO 2402C	500+40.0	C-2	1009.06	1005.52	B-5C	3.54 LF	
	MISC-1	48-4020	504+33.0	C-1	1010.00	1004.11	MISC-2	5.89 LF	FOR FUTURE POND CONNECTION ON ADJACENT COMMERCIAL SITE
	MISC-2	18" RC APRON	504+23.5	N/A	N/A	1004.00	BASIN	N/A	
C-SERIES OUTFALL	C-1	36" RC APRON	573+66.6	N/A	N/A	1000.00	POND	N/A	
EXCEL DRIVE - C-SERIES	C-2	60-4022	572+86.7	C-2	1006.39	1000.24	C-1	6.15 LF	
	C-3	72-4022	521+49.3	C-2	1006.20	1000.34	C-2	5.86 LF	
	C-4	60-4020	520+42.1	C-1	1008.80	1000.66	C-3	8.14 LF	
	C-5	60-4020	518+31.0	C-1	1008.55	1001.29	C-4	7.26 LF	
	C-5A	MKTO 2402C	518+31.0	C-3	1008.29	1004.29	C-5	4.00 LF	
	C-5B	MKTO 2402C	518+31.0	C-3	1008.29	1004.29	C-5	4.00 LF	
	C-6	60-4020	514+51.4	C-1	1009.84	1002.43	C-5	7.41 LF	18" STUB SOUTH FOR ADJACENT PROJECT
	C-7	60-4020	513+12.4	C-1	1009.10	1002.85	C-6	6.25 LF	
	C-8	48-4020	512+68.2	C-1	1008.87	1002.98	C-7	5.89 LF	
	C-9	48-4020	511+94.3	C-1	1008.49	1003.20	C-8	5.29 LF	
	C-10	48-4020	511+20.3	C-1	1008.15	1003.42	C-9	4.73 LF	
	C-11	60-4020	510+50.0	C-1	1007.78	1003.63	C-10	4.15 LF	
	C-11A	R-1	510+50.0	C-2	1007.61	1003.67	C-11	3.94 LF	
	C-11B	MKTO 2402C	510+42.0	C-2	1007.55	1003.71	C-11A	3.84 LF	
	C-11C	R-1	510+50.0	C-2	1007.51	1003.76	C-11	3.75 LF	
	C-11D	MKTO 2402C	510+19.0	C-2	1007.67	1003.92	C-11C	3.75 LF	
EXCEL DRIVE - D-SERIES	D-1	R-1	39+84.8	C-2	1003.43	998.83	EXISTING	4.60 LF	
	D-2	R-1	39+55.0	C-2	1003.41	999.14	D-1	4.27 LF	
	D-3	MKTO 2402C	39+55.0	C-2	1003.41	999.41	D-2	4.00 LF	

STORM SEWER TABLE									
SERIES / ALIGNMENT	STRUCTURE NUMBER	STRUCTURE DESIGN	STATION	CASTING	RIM ELEV	LOW INVERT ELEV	DOWNSTREAM STRUCTURE	HEIGHT	NOTES
REAR YARD DRAINAGE - E-SERIES	E-1	48-4020	560+75.2	C-4	1009.57	1001.30	C-3	8.27 LF	SEE DETAIL, SHEET C1.02
	E-1A	I-1	570+50.0	N/A	1007.70	1004.70	E-1	3.00 LF	
	E-2	I-1	559+25.9	N/A	1008.79	1001.67	E-1	7.12 LF	
	E-3	I-1	556+77.9	N/A	1008.33	1002.29	E-2	6.04 LF	
	E-4	48-4020	553+05.9	C-4	1007.18	1003.22	E-3	3.96 LF	DAYLIGHT AND GRADE AREA TO DRAIN TOWARDS, INSTALL RODENT GUARD
	E-4A	12" CULVERT	553+03.0	N/A	N/A	1006.60	E-4	N/A	
	E-5	I-1	551+79.3	N/A	1008.26	1003.79	E-4	4.47 LF	SEE DETAIL, SHEET C1.02
	E-6	I-1	1007.78	N/A	1007.78	1004.37	E-5	3.41 LF	
BACK YARD DRAINAGE - F-SERIES	F-1	48-4020	583+93.9	C-4	1008.80	1005.28	C-7	3.52 LF	SEE DETAIL, SHEET C1.02
	F-1A	I-1	583+93.9	N/A	1008.37	1005.39	F-1	2.98 LF	
	F-2	I-1	583+75.0	N/A	1008.24	1005.40	F-1	2.84 LF	
	F-3	I-1	582+08.6	N/A	1008.15	1005.82	F-2	2.33 LF	
BASIN OUTFALL TO POND	P-1	SPECIAL P-1	591+00.0	N/A	1005.50	1000.50	P-2	5.00 LF	SEE DETAIL, SHEET C1.02
	P-2	18" RC APRON	592+53.8	N/A	N/A	1000.00	POND	N/A	
POND OUTFALL	P-3	24" RC APRON	595+50.0	N/A	N/A	997.00	P-4	N/A	
	P-4	SPECIAL P-4	596+13.1	N/A	1004.00	997.50	P-5	6.50 LF	SEE DETAIL, SHEET C1.02
	P-5	48-4020	596+45.8	C-1	1004.18	998.94	P-6	5.24 LF	
	P-6	48-4020	597+33.6	C-1	1004.53	998.06	P-7	6.47 LF	
	P-7	24" RC APRON	597+61.7	N/A	N/A	998.00	OUTFALL	N/A	OUTFALL TO EXISTING BASIN

SANITARY SEWER TABLE						
STRUCTURE	STATION	RIM ELEV	LOW INVERT ELEV	DOWNSTREAM STRUCTURE	HEIGHT	NOTES
A	404+50.0	1010.68	983.76	EX SAN - 3	26.92 LF	
B	426+61.1	1004.28	991.89	EXISTING	12.39 LF	
C	424+89.7	1006.01	992.68	B	13.33 LF	
D	424+01.6	1007.78	993.13	C	14.65 LF	
E	423+44.3	1008.86	993.46	D	15.40 LF	
F	419+56.5	1009.63	995.11	E	14.52 LF	
G	417+19.9	1009.92	996.16	F	13.76 LF	
H	415+65.4	1009.10	996.88	G	12.22 LF	
I	414+97.0	1008.73	997.25	H	11.48 LF	
J	414+28.6	1008.36	997.62	I	10.74 LF	
K	411+50.0	1009.07	998.83	J	10.24 LF	

CASTING ASSEMBLY TABLE			
CASTING ID	CASTING DESIGNATION	CASTING TYPE	NUMBER REQ'D
C-1	NEENAH R-1733	PLATEN LID LETTERED "STORM SEWER" WITH TWO CONCEALED PICKHOLES	15
C-2	NEENAH R-3067-V	CURB INLET FRAME & CURB BOX WITH TYPE V-VANE GRATE	17
C-3	NEENAH R-3067-VB	CURB INLET FRAME & CURB BOX WITH TYPE BIDIRECTIONAL V-VANE GRATE	2
C-4	NEENAH R-2573-C	INLET FRAME, TYPE C GRATE	3
C-5	NEENAH R-1642	FRAME W / SELF-SEALING SOLID LID LETTERED "SANITARY SEWER" WITH TWO CONCEALED PICKHOLES	11

TOWNHOME DRIVEWAY TABULATION			
TOWNHOME BUILDING	DRIVEWAY START STATION	DRIVEWAY END STATION	SIDE
1	24+89.3	25+31.3	RT
2	25+51.3	25+93.3	RT
3	26+13.3	26+55.3	RT
4	26+75.3	27+17.3	RT
5	27+37.3	27+82.2	RT
6	25+20.3	25+62.3	LT
7	25+82.3	26+24.3	LT
8	26+44.3	26+86.3	LT
9	27+06.3	27+48.3	LT
10	27+62.4	27+98.4	LT
11	28+00.4	28+35.4	LT
12	28+37.3	28+72.3	LT
13	28+74.2	29+09.3	LT
14	29+21	29+63	LT
15	29+83	30+25	LT
16	30+45	30+87	LT
17	31+07	31+49	LT
18	31+69	32+11	LT
19	32+31	32+73	LT
20	32+93	33+35	LT
21	33+55	33+97	LT
22	34+17	34+59	LT
23	34+79	35+21	LT
24	35+41	35+83	LT
25	36+03	36+45	LT
26	36+79.2	37+23.8	LT
27	32+96.8	33+38.8	RT
28	33+58.8	34+00.8	RT
29	34+20.8	34+62.8	RT

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DEMARS CONSTRUCTION
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CONSTRUCTION TABLES

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SERVICE TABULATION TO BE
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FACILITIES

FUTURE
COMMERCIAL
WAREHOUSE

POWER DRIVE

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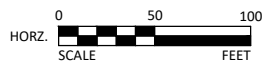
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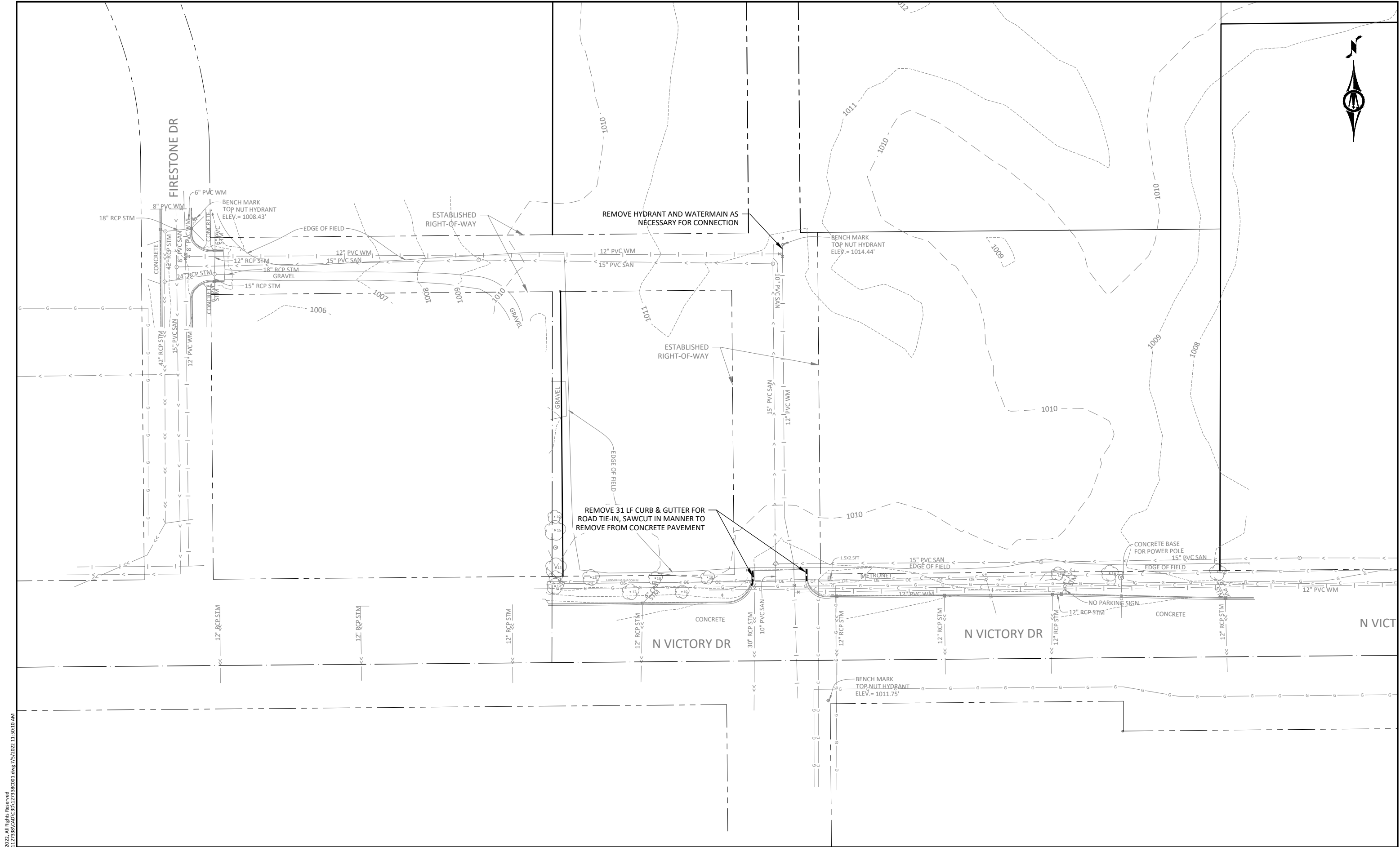
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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION

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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
EXISTING CONDITIONS & REMOVAL PLAN

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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
EXISTING CONDITIONS & REMOVAL PLAN

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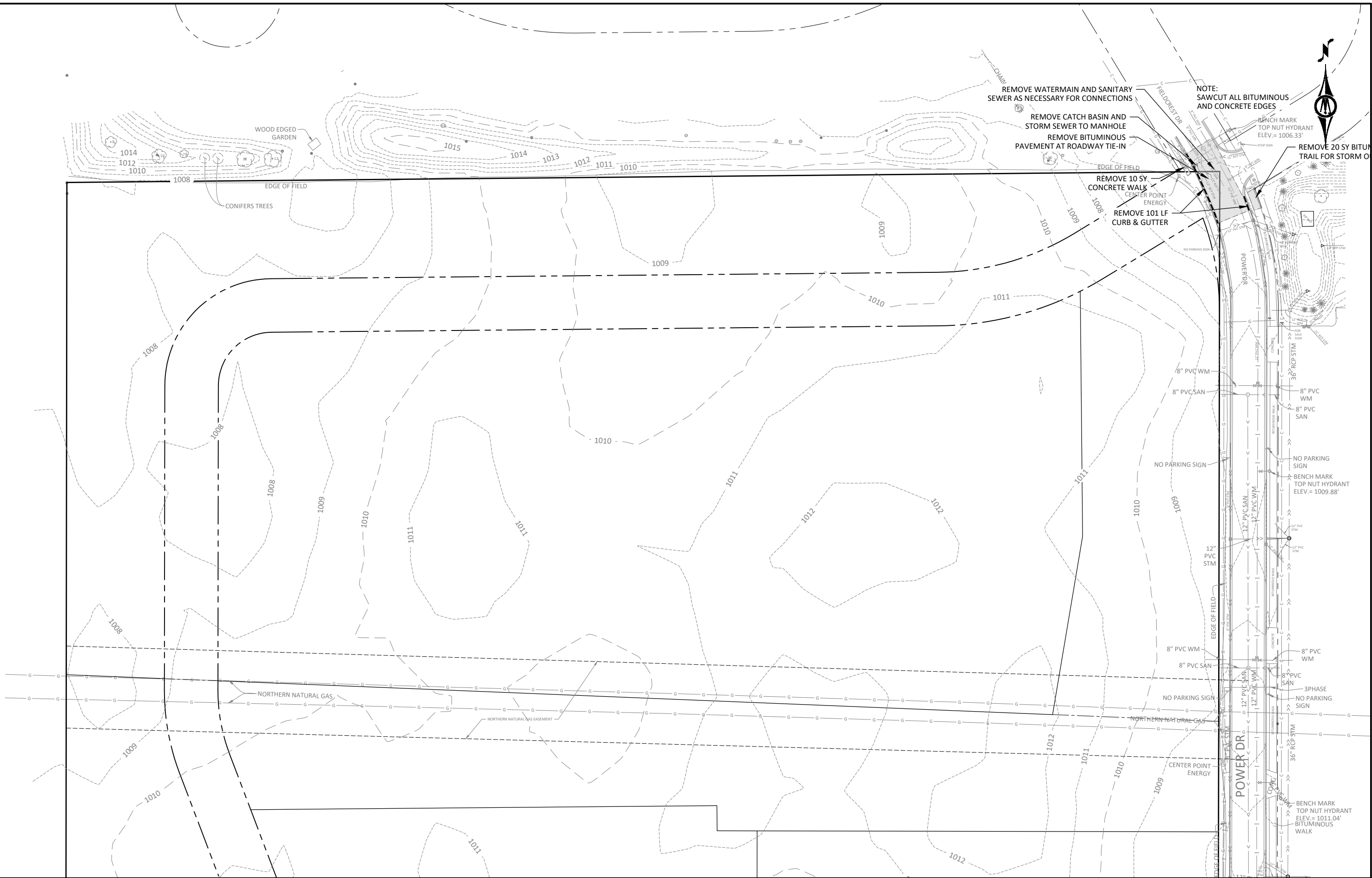
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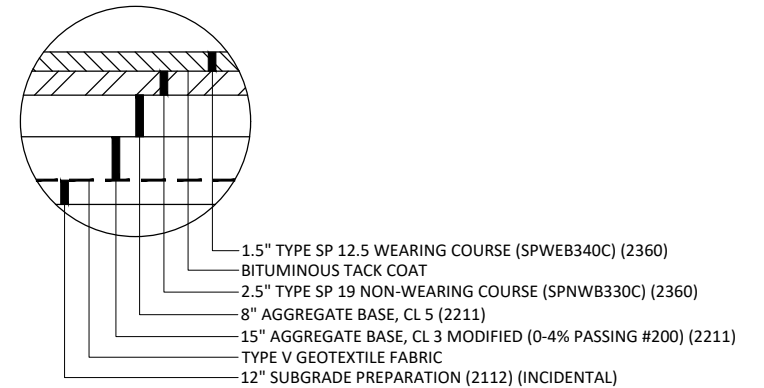
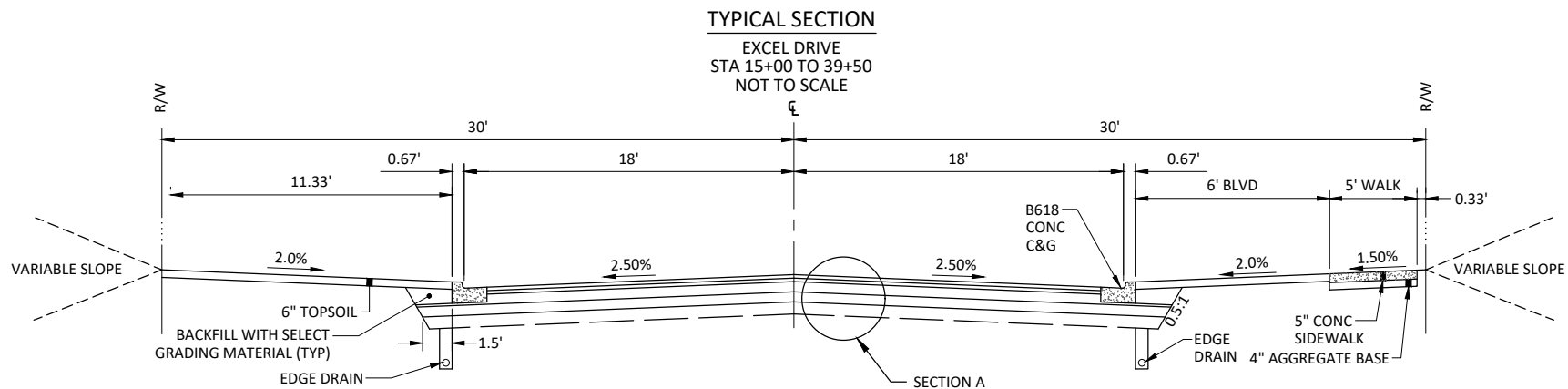
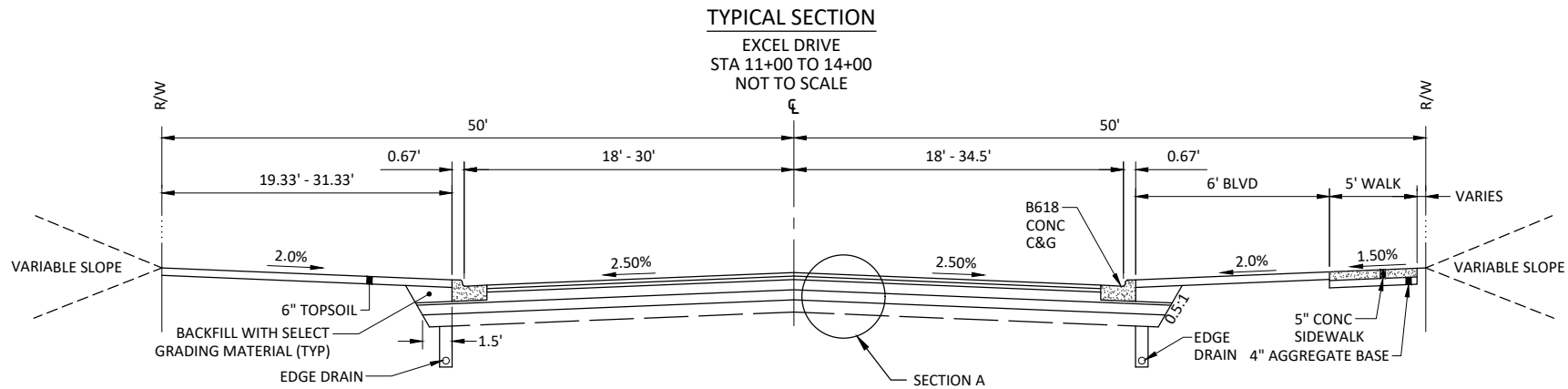
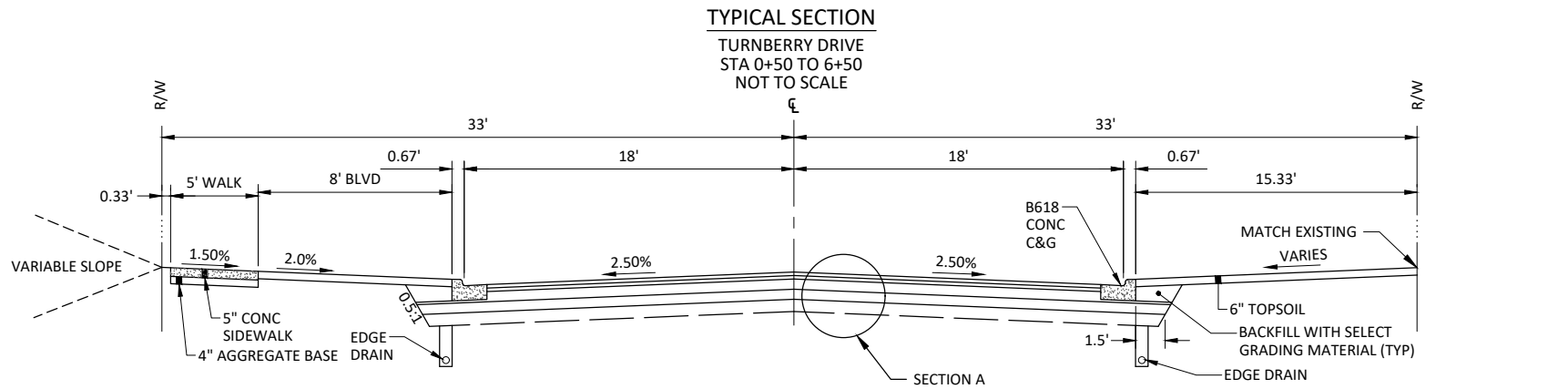
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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
EXISTING CONDITIONS & REMOVAL PLAN

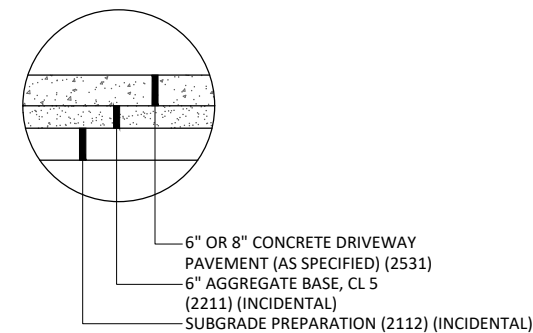
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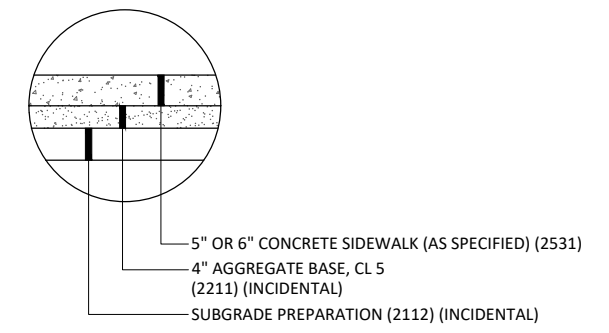
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MINNESOTA PROFESSIONAL ENGINEER
AUGUST 2022 11:50:23 AM



SECTION A
NOT TO SCALE

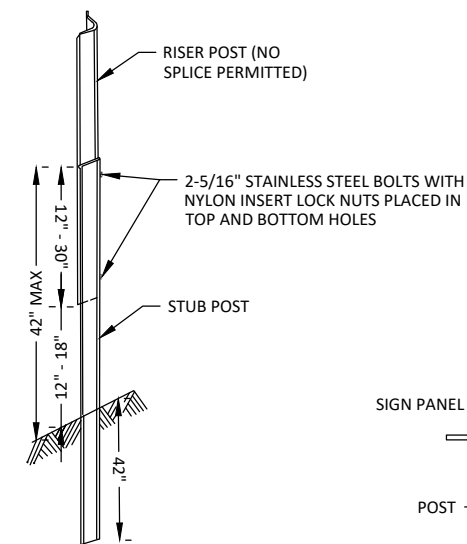


6" & 8" CONCRETE DRIVEWAY PAVEMENT
NOT TO SCALE

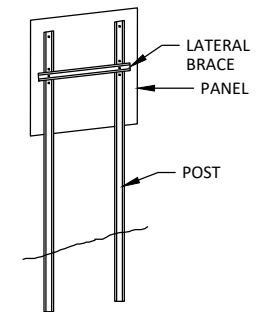


5" & 6" CONCRETE SIDEWALK
NOT TO SCALE

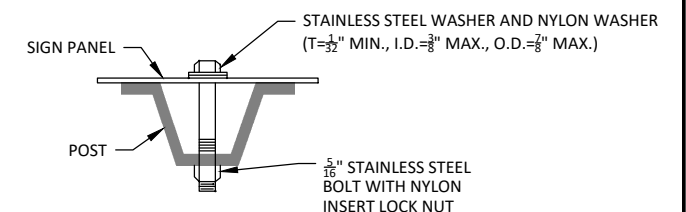
TYPE C & D POST



U-POST BREAKAWAY SPLICE



TYPICAL TYPE C INSTALLATION



**U-POST MOUNTING
- TYPE C SIGNS**

TRACER WIRE NOTE:
REFER TO THE MINNESOTA RURAL WATER ASSOCIATION (MRWA) TRACER WIRE SPECIFICATION GUIDE & DETAILS TO PROPERLY INSTALL TRACER WIRE WITH WATERMAIN AND SANITARY SEWER. THE GUIDE CAN BE FOUND AT: mrwa.com/tools.html - Tracer Wire Specification Guide & Details

PEDESTRIAN RAMP DETAILS:
SEE LATEST MNDOT STANDARD PLANS 5-297.250 FOR PROPER PEDESTRIAN RAMP DETAILS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

REVIEW

ALEC W. PIETZ, P.E.
LIC. NO. 59617 DATE XX/XX/XXXX



1960 PREMIER DRIVE
MANKATO, MINNESOTA 56001
Phone: (507) 625-4171
Email: Mankato@bolton-menk.com
www.bolton-menk.com

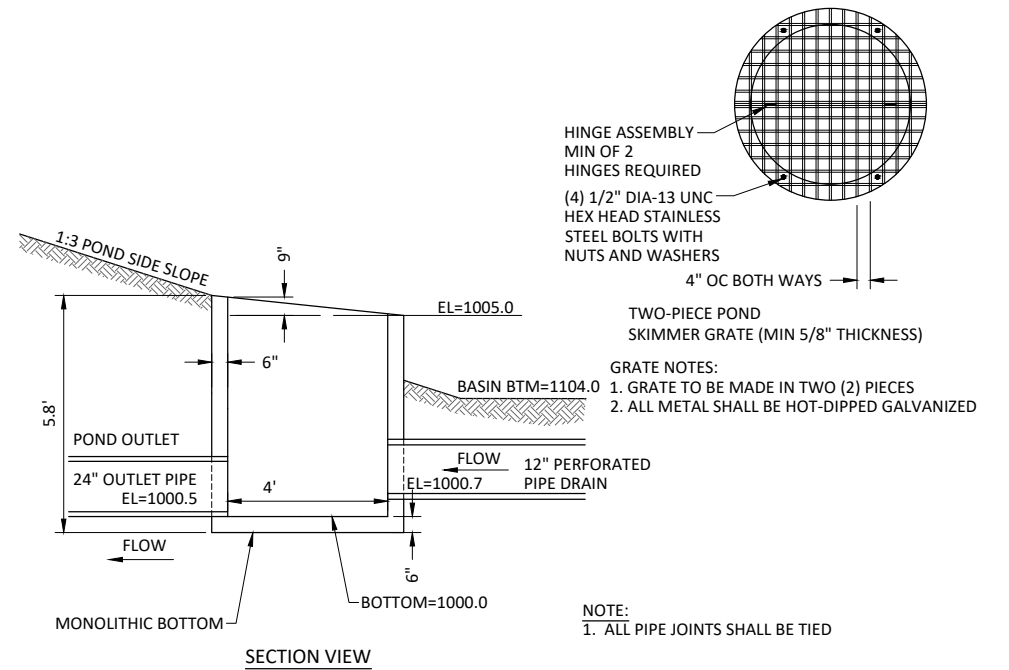
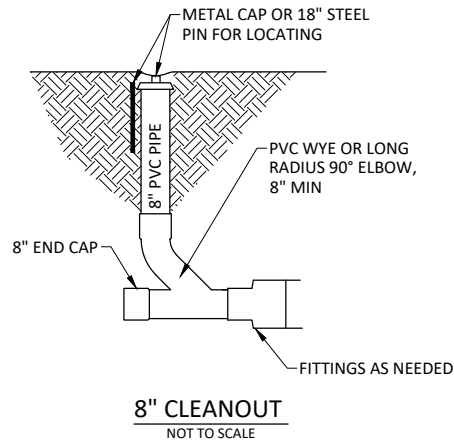
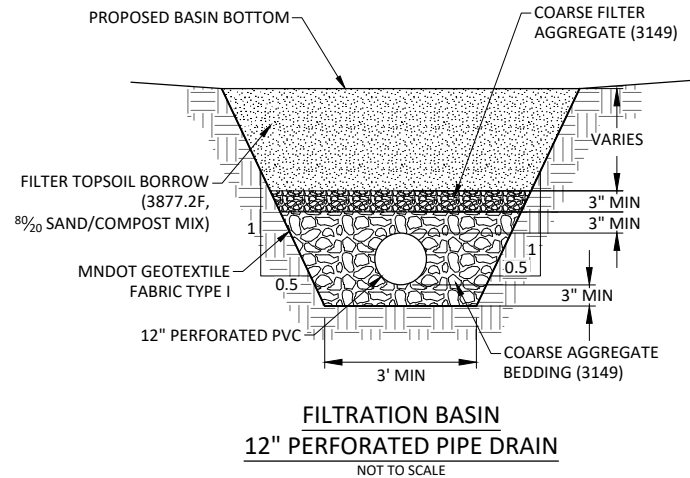
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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
CONSTRUCTION DETAILS

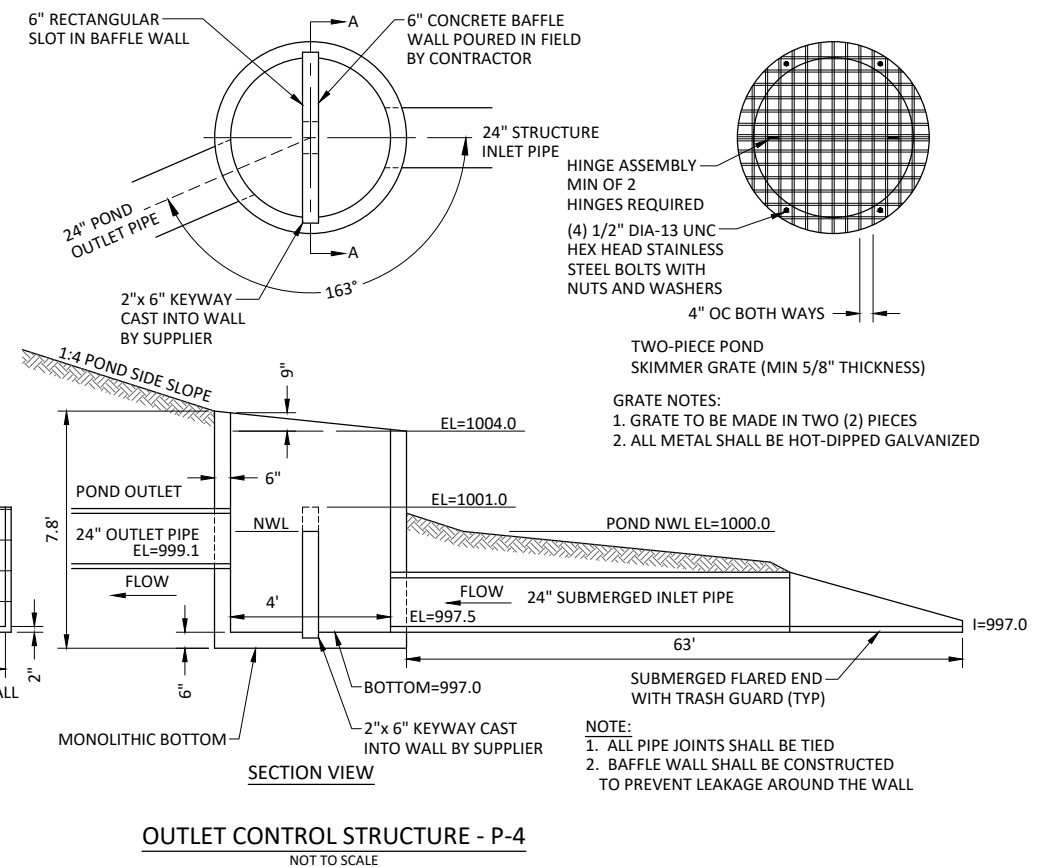
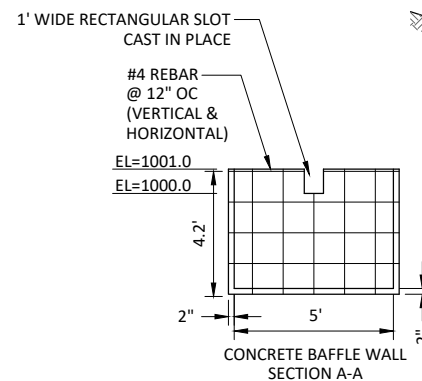
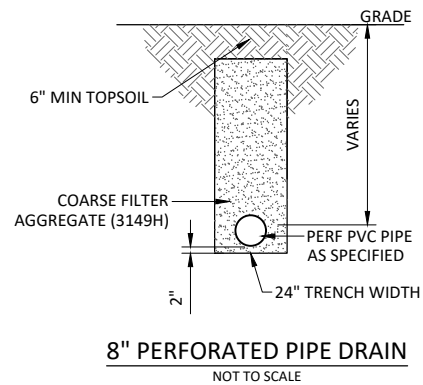
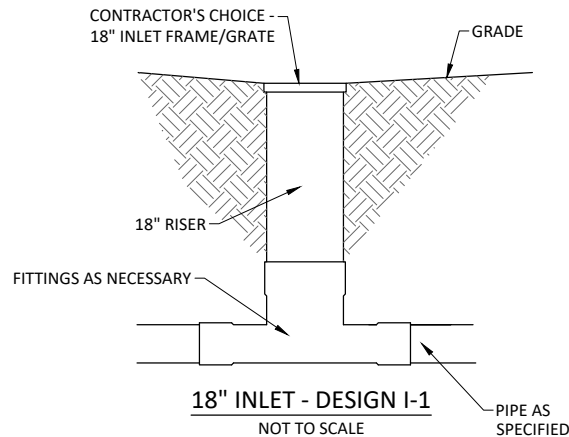
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MANKATO STANDARD PLATES	
AVAILABLE ON CITY WEBSITE	
mankatomn.gov/your-government/departments/public-works/engineering	
PLATE NO.	DESCRIPTION
2002A	TEMPORARY MANHOLE INSERTS
2003A	STABILIZED CONSTRUCTION EXIT
2100A	GRANULAR BEDDING AND ENCASEMENT
2200A	SANITARY SEWER MANHOLE
2203A	INTERNAL CHIMNEY SEAL
2240A	STANDARD SANITARY SERVICE
2241A	DEEP SANITARY SERVICE
2320A	WATERMAIN CONSTRUCTION AROUND OBSTACLES
2321A	GATE VALVE ADAPTOR
2322A	HYDRANT DETAIL
2340B	WATER SERVICE
2402C	MANKATO STANDARD CATCH BASIN 3
2420B	DRAIN TILE TRENCH DETAIL
2421A	DRAIN TILE CLEANOUT END/THRU BOULEVARD
2440A	4" DRAIN STUB
2540B	STANDARD DRIVEWAY APPROACH FOR ALL CURB TYPES
2640A	EQUIPMENT PAD
2641A	LOW LEVEL LIGHT BASE
2650A	LIGHT BASE DESIGN STEEL (E)
2651A	LIGHT BASE DESIGN STEEL (P)
2660A	100 AMP LIGHTING SERVICE
2661A	200 AMP LIGHTING SERVICE

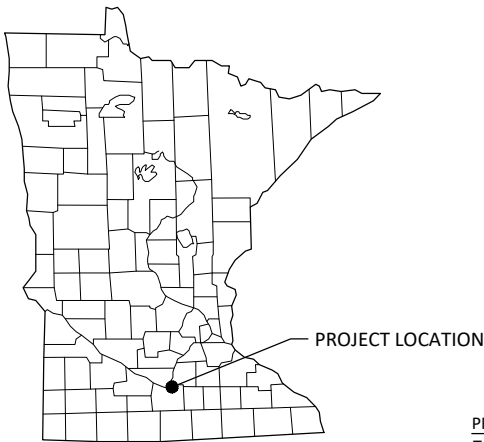


MNDOT STANDARD PLATES	
PLATE NO.	DESCRIPTION
3000L	REINFORCED CONCRETE PIPE (5 SHEETS)
3006G	GASKET JOINT FOR R.C. PIPE (2 SHEETS)
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3133D	RIPRAP AT RCP OUTLETS
4007C	PRECAST MECHANICAL JOINT SEWER MANHOLE
4011E	PRECAST CONCRETE BASE
4020J	MANHOLE OR CATCH BASIN (FOR USE WITH OR WITHOUT TRAFFIC LOADS) (2 SHEETS)
4022A	MANHOLE OR CATCH BASIN COVER (3 ft. X 2 ft. OPENING)
4026A	CONCRETE ENCASED CONCRETE ADJUSTING RINGS
4101D	RING CASTING FOR MANHOLE OR CATCH BASIN
4110F	COVER CASTING FOR MANHOLE (FOR USE IN ALL TRAFFIC AREAS) - CASTING NO. 715 AND 716
4180J	MANHOLE OR CATCH BASIN STEP
7038A	DETECTABLE WARNING SURFACE TRUNCATED DOMES
7100H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
7111J	INSTALLATION OF CATCH BASIN CASTINGS (CONCRETE CURB AND GUTTER)



STORMWATER
POLLUTION PREVENTION
PLAN (SWPPP)

TURNBERRY & EXCEL
DRIVE EXTENSION -
DEMARS CONSTRUCTION
CITY OF MANKATO
BLUE EARTH COUNTY, MINNESOTA



LEGEND

1-MILE BOUNDARY

PROJECT BOUNDARY

OR

PROTECTED WATERS

NATIONAL WETLANDS INVENTORY

RECEIVING WATERS

PROJECT AREAS:

Total Project Size (disturbed area) =	13.9	ACRES
Existing area of impervious surface =	0.1	ACRES
Post construction area of impervious surface =	6.1	ACRES
Total new impervious surface area created =	6.0	ACRES

Planned Construction Start Date:

TBD

Estimated Construction Completion Date:

TBD

PERMANENT STORMWATER MANAGEMENT SYSTEM:
Type of storm water management used if more than 1 acre of new impervious surface is created:

X	Wet Sedimentation Basin
X	Infiltration/Filtration
	Regional Pond
	Permanent Stormwater Management Not Required

PROJECT LOCATION:

COUNTY	TOWNSHIP	RANGE	SECTION	LATITUDE	LONGITUDE
BLUE EARTH	T108N	R26W	14	44.1644° N	93.9213° W

BMP SUMMARY	QUANTITY	UNIT
STABILIZED CONSTRUCTION EXIT	2	EACH
STORM DRAIN INLET PROTECTION	36	EACH
SILT FENCE, TYPE MACHINE SLICED	2200	LIN FT
SEED MIX 25-141 & FERTILIZE	1.0	ACRE
SEED MIX 25-151 & FERTILIZE	4.0	ACRE
SEED MIX 33-261 & FERTILIZE	2.8	ACRE
EROSION CONTROL BLANKET CATEGORY 20	26100	SQ YD
EROSION CONTROL BLANKET CATEGORY 3N	13700	SQ YD
RANDOM RIPRAP CLASS II	25	CU YD
RANDOM RIPRAP CLASS III	75	CU YD
NOTE: QUANTITIES LISTED ACCOUNT FOR ONE INSTALLATION. ADDITIONAL INSTALLATIONS MAY BE NECESSARY AS A RESULT OF SCHEDULING AND MAINTENANCE.		

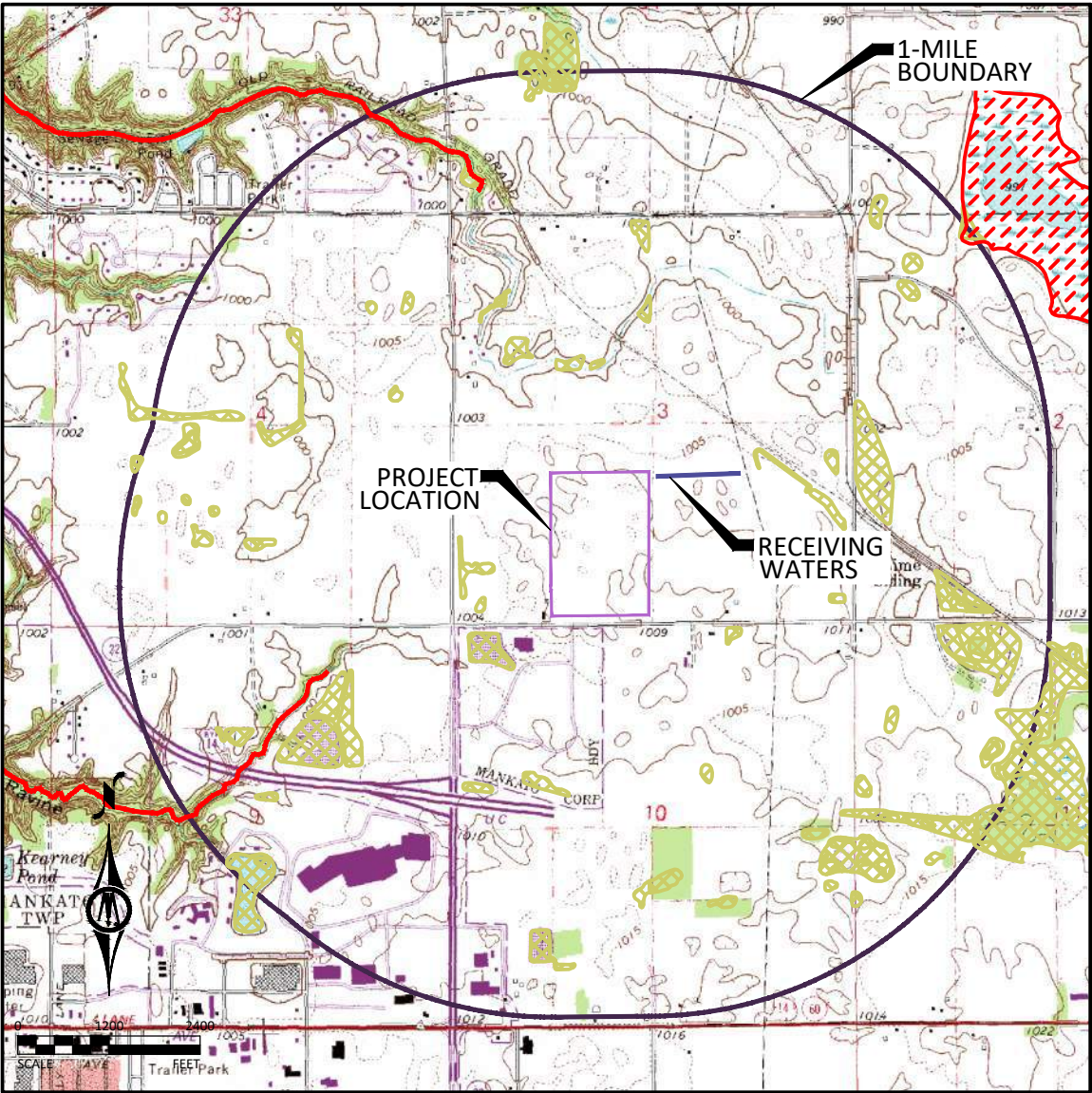
DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:
Construction activities include: Construction of public roadways and infrastructure in Mankato, Minnesota to provide service to proposed and future users such as dwellings and commercial/industrial developments. Site improvements include pavements, storm sewer, watermain, sanitary sewer, water and sanitary services, stormwater management, and site grading.

Existing drainage patterns discharge stormwater by overland flow from primarily agricultural land to adjacent property and existing streets. The existing streets contain storm sewer that discharge to different stormwater management bodies.

After development, overland flow is proposed to be captured by storm sewer and primarily routed to new stormwater management features throughout the subdivision. Ultimate discharge of stormwater is proposed at the existing management feature on the east side of the Power/Excel Drive intersection.

Two small extensions of storm sewer are proposed from existing stubs provided by the City to previously platted right-of-way for Excel Drive and Turnberry Drive.

The disturbed area and new impervious area reported are for the new roadway. However, the stormwater management was designed to accommodate the new impervious area for a portion of the overall subdivision. An all encompassing hydraulic model and report was developed with this plan and submitted to the City of Mankato to fully describe the stormwater management plan for the subdivision.



RECEIVING WATERS:
Receiving waters, including surface water, wetlands, Public Waters, and stormwater ponds, within 1-mile of the project boundary are identified on the USGS 7.5 min quad map above. Receiving waters that are impaired, the impairment, and WLA are listed as follows. All specific BMPs relative to construction activities listed in the permit for special, prohibited, restricted, or impaired have been incorporated into this plan. All specific BMPs listed in approved TMDLs and those BMPs listed for construction related waste load allocations have also been incorporated.

NAME OF WATER BODY	TYPE (ditch, pond, wetland, lake, etc.)	Special, Prohibited, Restricted Water ¹	Flows to Impaired Water Within 1-Mile ²	USEPA Approved Construction Related TMDL ³
Unnamed Pond	Pond	No	No	N/A

¹ Special, prohibited, and restricted waters are listed in Section 23 of the MN Construction Stormwater General Permit (MNR100001).
² Identified as impaired under section 303 (d) of the federal Clean Water Act for phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.
³ Construction Related TMDLs include those related to: phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.

IMPLEMENTATION SCHEDULE AND PHASING: The Contractor is required to provide an updated schedule and site management plan meeting the minimum requirements of Section 1717 of the Minnesota Standard Specifications for Construction.

- 1) Submit SWPPP Updates to Engineer. Submittal shall include any requested changes to the SWPPP, including but not limited to: Trained Personnel, Locations for Stockpiles, Concrete Washout, Sanitation Facilities, Types and Locations of Erosion & Sediment Control. Failure to submit updates shall be considered acceptance of the SWPPP as designed with no changes.
- 2) Install perimeter sediment control, inlet protection, and construction exit.
- 3) Remove existing surfaces as required.
- 4) Complete site and utility improvements.
- 5) Install additional inlet protection as needed.
- 6) Reestablish turf.
- 7) Repeat steps 2-6 as necessary throughout the project.
- 8) Add additional temporary BMPs as necessary during construction based on inspection reports.
- 9) Ensure final stabilization measures are complete.
- 10) Provide digital copy of all Field SWPPP Documentation including Inspection Reports and SWPPP Revisions to the Owner.
- 11) Submit Notice of Termination (NOT) to MPCA. NOTE: The NOT must be submitted to MPCA before Final Stabilization is considered complete.



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Information contained in this SWPPP narrative sheet summarizes requirements of the GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PROGRAM - Permit No: MN RI00001 (Permit) as they apply to this project. All provisions of the Permit including those not specifically cited herein shall apply to this project. The Contractor is responsible to be familiar with and comply with all conditions of the permit. The full text of the Permit is available at: <https://www.pca.state.mn.us/sites/default/files/wq-strm2-80a.pdf>

SWPPP AMENDMENTS AND SUBMITTALS

Contractor must prepare and submit to the Engineer a SWPPP amendment as necessary to include additional Best Management Practices (BMPs) to correct problems identified or address the following situations.

1. Contact information and training documentation for Construction SWPPP Manager and BMP Installer,

2. There is a change in construction method of phasing, operation, maintenance, weather or seasonal conditions not anticipated during the design of the SWPPP including but not limited to:

a. Types and/or Locations of BMPs

b. Material Storage and Spill Response

c. Fueling Plans

d. Locations for Stockpiles, Concrete Washout, and Sanitation Facilities and

e. Project Phasing

3. It is determined that the SWPPP is not achieving objectives of minimizing pollutants in stormwater discharges associated with construction activity, or

4. The SWPPP is not consistent with the terms and conditions of the permit.

The Contractor may implement SWPPP amendments immediately and is not required to wait for Engineer review of the submittal. The responsibility for completeness of SWPPP amendments and compliance with the Permit lies with the Contractor. Review, comment, or lack of comment by the Engineer on a SWPPP amendment shall not absolve the responsibilities of the Contractor in any way.

If a change order is issued for a design change the SWPPP amendment will be prepared by the Engineer and included in the change order.

In addition to SWPPP amendments, the Contractor shall submit to the Engineer Weekly Erosion and Sediment Control Schedule meeting the requirements of MnDOT 1717.

The Contractor shall keep copies of all SWPPP amendments, Weekly Erosion and Sediment Control Schedules, inspection logs, and maintenance logs with the field copy of the SWPPP. A PDF copy of these documents will be provided along with a copy of the final Field Copy of the SWPPP to the Engineer along with the signed Notice of Termination when final stabilization is complete.

EROSION PREVENTION PRACTICES

Stormwater conveyance channels shall be routed around unstabilized areas. Erosion controls and velocity dissipation devices shall be used at outlets within and along the length of any constructed conveyance channel.

The normal wetted perimeter of all ditches or swales, including storm water management pond slopes, that drain waters from the site must be stabilized within 200' of any property edge or discharge point, including storm sewer inlets, within 24 hours of connection.

Temporary or permanent ditches or swales used as sediment containment during construction do not need to be stabilized during temporary period of use and shall be stabilized within 24 hours after no longer used as sediment containment.

Mulch, hydromulch, tackifier, or similar practice shall not be used in any portion of the wetted perimeter of a temporary or permanent drainage ditch or swale section with a continuous slope of greater than 2 percent.

Energy dissipation shall be installed at all temporary or permanent pipe outlets within 24 hours of connection to a surface water or permanent stormwater treatment system.

The Contractor shall phase construction and use construction methods to the extent practical to minimize exposed soils. The project phasing shall be documented in the Weekly Erosion and Sediment Control Schedule.

SEDIMENT CONTROL PRACTICES

Down gradient BMPs including perimeter BMPs must be in place before up gradient land- disturbing activities begin and shall remain in place until final stabilization.

All BMPs that have been adjusted or removed to accommodate short-term activities shall be re-installed or replaced the earlier of the end of the work day or before the next precipitation event even if the activity is not complete.

Inlet BMPs may be removed for specific safety concerns. The BMPs shall be replaced as soon as the safety concern is resolved. The removal shall be documented in the SWPPP as a SWPPP amendment.

Temporary stockpiles must have sediment control BMPs. The Contractor shall prepare and submit to the Engineer a SWPPP amendment showing the location of temporary stockpiles and the BMPs for each stockpile. The SWPPP amendment must meet the minimum requirements of Section 9 of the Permit.

Soil compaction shall be minimized and topsoil shall be preserved, unless infeasible or if construction activities dictate soil compaction or topsoil stripping.

The use of polymers, flocculants, or other sedimentation treatment chemicals are not proposed as part of this SWPPP as designed by the Engineer. If methods or phasing of construction require the use of any of these chemicals, the Contractor shall prepare and submit to the Engineer a SWPPP amendment that meets the minimum requirements of Section 9 of the Permit.

TEMPORARY SEDIMENTATION BASINS

A temporary sedimentation basin has not been included in this SWPPP as designed by the Engineer. If a basin is later determined to be desirable or necessary the Contractor shall prepare and submit to the Engineer a SWPPP amendment. Temporary sedimentation basins shall meet or exceed the minimum requirements of Section 14 of the Permit and shall include a basin draining plan meeting or exceeding the minimum requirements of Section 10 of the Permit. Where the site discharges to Special and/or Impaired Waters the SWPPP amendment shall also meet or exceed the minimum requirements of Section 23 of the permit.

DEWATERING

A dewatering plan has not been included in this SWPPP as designed by the Engineer. If dewatering is required for this project, the Contractor shall prepare and submit to the Engineer a SWPPP amendment. All dewatering shall meet or exceed the minimum requirements of Section 10 of the Permit.

POLLUTION PREVENTION

Products and materials that have the potential to leach pollutants that are stored on the site must be stored in a manner designed to minimize contact with stormwater. Materials that are not a source of potential contamination to stormwater or that are designed for exposure to stormwater are not required to be covered.

Hazardous materials including but not limited to pesticides, fertilizer, petroleum products, curing compounds and toxic waste must be properly stored and protected from stormwater exposure as recommended by the manufacturer in an access restricted area.

Solid waste must be stored, collected and disposed of in compliance with Minnesota Administrative Rules Chapter 7035.

Portable toilets must be positioned so that they are secure and will not be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn. R. CH 7041.

Exterior vehicle or equipment washing on the project site shall be limited to a defined area of the site. No engine degreasing is allowed on site. A sign must be installed adjacent to each washout facility that requires site personnel to utilize the proper facilities for disposal of concrete and other washout wastes.

The Contractor shall prepare and submit a SWPPP amendment detailing the location and BMPs proposed for storage of materials, solid waste, portable toilets, and exterior vehicle or equipment washing on the site. The SWPPP amendment shall include a spill prevention and response plan that is appropriate for the materials proposed to be on the site. The SWPPP amendment shall meet or exceed the minimum requirements of Section 12 of the Permit.

INSPECTION & MAINTENANCE

A trained person shall routinely inspect the entire construction site at the time interval indicated on this sheet of the SWPPP during active construction and within 24-hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection that occurs within 24-hours after a rainfall event, the next inspection must be conducted at the time interval indicated in the Receiving Waters Table found on the SITE PLAN AND INFORMATION SHEET of the SWPPP.

All inspections and maintenance conducted during construction must be recorded on the day it is completed and must be retained with the SWPPP. Inspection report forms are available in the Project Specifications. Inspection report forms other than those provided shall be approved by the engineer.

The Contractor may request a change in inspection schedule for the following conditions:

- a. Inspections of areas with permanent cover to be reduced to once per month,
- b. Inspections of areas that have permanent cover and have had no construction activity for 12 months to be suspended until construction resumes,
- c. Inspections of areas where construction is suspended due to frozen ground conditions, inspections to be suspended until the earlier of within 24 hours of runoff occurring, or upon resuming construction.

No change in inspection schedule shall occur until authorized by the Engineer.

Inspections must include:

1. All erosion prevention and sediment control BMPs and Pollution Prevention Management Measures to ensure integrity and effectiveness.
2. Surface waters, including drainage ditches and conveyance systems for evidence of erosion and sediment deposition.
3. Construction site vehicle exit locations, streets and curb and gutter systems within and adjacent to the project for sedimentation from erosion or tracked sediment from vehicles.
4. Infiltration areas to ensure that no sediment from ongoing construction activity is reaching the infiltration area and that equipment is not being driven across the infiltration area.

All non-functioning BMPs and those BMPs where sediment reaches one-half (1/2) of the depth of the BMP, or in the case of sediment basins one-half (1/2) of the storage volume, must be repaired, replaced, or supplemented by the end of the next business day after discovery, or as soon as field conditions allow.

Permittees must repair, replace or supplement all nonfunctional BMPs with functional BMPs by the end of the next business day after discovery, or as soon as field conditions allow.

Any sediment that escapes the site must be removed and the area stabilized within 7 calendar days of discovery unless precluded by legal, regulatory, or physical access in which case the work shall be completed within 7 calendar days of authorization. Paved surfaces such as streets shall have any escaped or tracked sediment removed by the end of the day that it is discovered. Sediment release, other than paved surfaces that can be cleaned up with street sweeping shall be reported immediately upon discovery to the Engineer.

PUBLIC WATER RESTRICTIONS:

For public waters that have been promulgated "work in water restrictions" during fish spawning time frames, all exposed soil areas that are within 200 feet of the water's edge, and drain to these waters must complete stabilization within 24-hours during the time period. MN DNR permits are not valid for work in waters that are designated as infested waters unless accompanied by an Infested Waters Permit or written notification has been obtained from MN DNR stating that such permit is not required. There is no exception for pre-existing permits. If a MN DNR Permit has been issued for the project and the water is later designated as infested, the Contractor shall halt all work covered by the MN DNR Permit until an Infested Waters Permit is obtained or that written notification is obtained stating that such permit is not required.

FINAL STABILIZATION

Final Stabilization is not complete until all the following requirements have been met:

1. Substantial Completion has been reached and no ground disturbing activities are anticipated.
2. Permanent cover has been installed with an established minimum uniform perennial vegetation density of 70 percent of its expected final growth. Vegetation is not required in areas where no vegetation is proposed by this project such as impervious surfaces or the base of a sand filter.

3. Accumulated sediment has been removed from all permanent stormwater treatment systems as necessary to ensure the system is operating as designed.
4. All sediment has been removed from conveyance systems
5. All temporary synthetic erosion prevention and sediment control BMPs have been removed. BMPs designated on the SWPPP to remain to decompose on-site may remain.
6. For residential construction only, permit coverage terminates on individual lots if the structures are finished and temporary erosion prevention and downgradient perimeter control is complete, the residence sells to the homeowner, and the permittee distributes the MPCA's "Homeowner Fact Sheet" to the homeowner.
7. For agricultural land only (e.g., pipelines across cropland), the disturbed land must be returned to its preconstruction agricultural use prior to submitting the NOT.

SITE STABILIZATION COMPLETION:

Stabilization of exposed soils shall begin immediately and shall be completed after the construction activity has temporarily or permanently ceased no later than:	14 calendar days
--	------------------

SITE INSPECTION INTERVAL:

A trained person shall routinely inspect the entire construction site during active construction at an interval of no less than:	7 calendar days
--	-----------------

SPECIAL ENVIRONMENTAL CONSIDERATIONS AND PERMITS:

1)	Was an environmental review required for this project or any part of a common plan of development or sale that includes all or any portion of this project?	NO
2)	Does any portion of the site have the potential to affect threatened or endangered species or their critical habitat?	NO
3)	Does any portion of this site discharge to a Calcareous fen.	NO
4)	Will any portion of the site potentially affect properties listed on the National Register of Historic Places or a known or discovered archeological site?	NO
5)	Have any Karst features have been identified in the project vicinity?	NO
6)	Is compliance with temporary or permanent stormwater management design requirements infeasible for this project?	NO
7)	Has the MN DNR promulgated "work in water restrictions" for any Public Water this site discharges to during fish spawning?	NO

SWPPP DESIGNER TRAINING DOCUMENTATION:

UNIVERSITY OF MINNESOTA

Alec W. Pietz

Construction Site Management (May 31 2024)
Design of Construction SWPPP (May 31 2024)

ISSUED FOR	DATE	DEMARS CONSTRUCTION	SHEET
		TURNBERRY DRIVE & EXCEL DRIVE EXTENSION	C2.02
		STORMWATER POLLUTION PREVENTION PLAN	
		NARRATIVE	

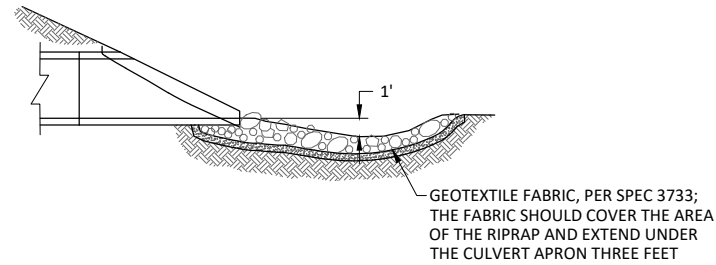
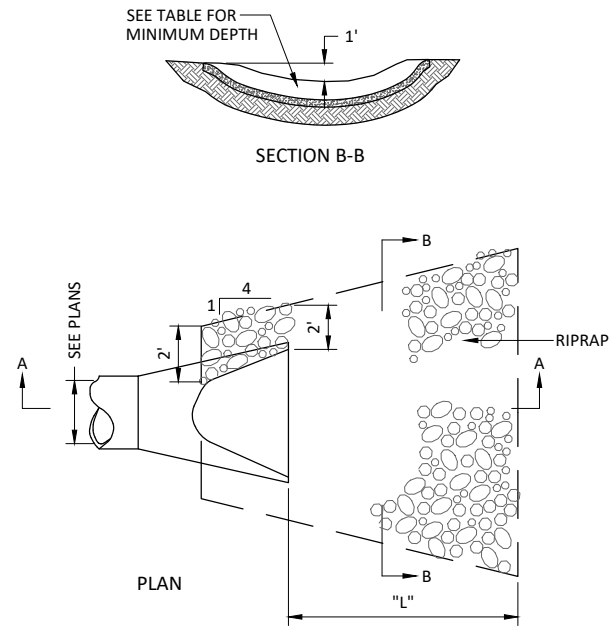
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A QUALIFIED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	
ALEC W. PIETZ, P.E.	
LIC. NO. 59617	DATE XX/XX/XXXX



BOLTON & MENK

1960 PREMIER DRIVE
MANKATO, MINNESOTA 56001
Phone: (507) 625-4171
Email: Mankato@bolton-menk.com
www.bolton-menk.com

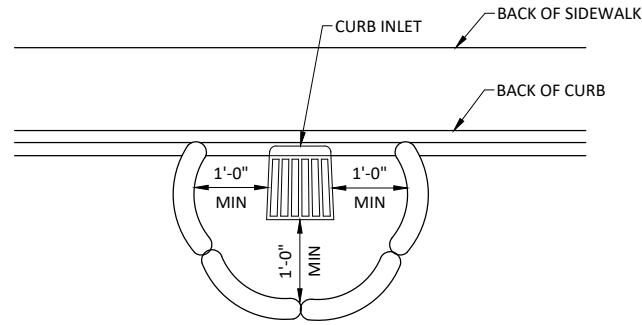
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RIPRAP AT RCP CULVERT END

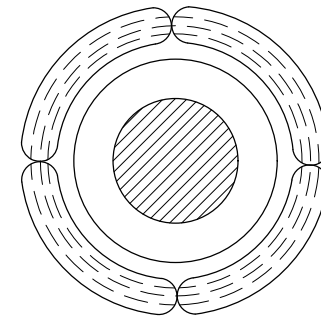
NOT TO SCALE

DIA OF ROUND PIPE (IN)	L (FT)	CLASS II	CLASS III	CLASS IV
		d50=6"	d50=9"	d50=12"
12	8	5	8	10
15	8	5	8	10
18	10	6	10	15
21	10	8	15	15
24	12	10	15	20
27	12	10	15	20
30	14	15	20	25
36	16	18	25	30
42	18	20	30	40
48	20	20	40	50



NOTE:
THIS INLET PROTECTION IS USED DURING
ROUGH GRADING ONLY, USE BEFORE ROAD
IS OPEN TO TRAFFIC OR IS PAVED

PAYMENT SHALL INCLUDE ALL MATERIALS,
FILLING OF LOG, PLACEMENT,
MAINTENANCE & REMOVAL;
80% OF BID PRICE SHALL BE PAID UPON
PROPER PLACEMENT WITH THE FINAL 20%
PAID UPON REMOVAL

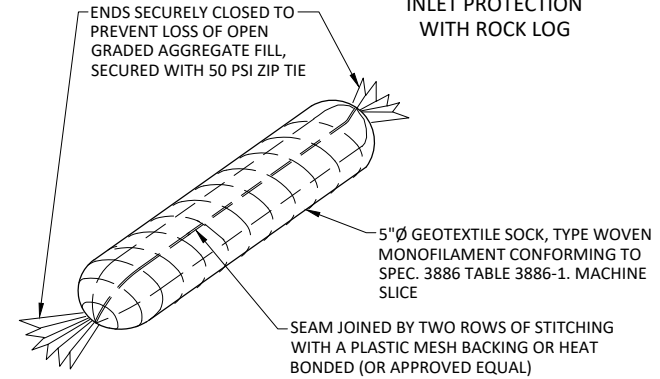


INLET PROTECTION
WITH ROCK LOG

FILL ROCK LOG WITH 45 LBS. OF OPEN
GRADED AGGREGATE CONSISTING OF
SOUND, DURABLE PARTICLES OF CRUSHED
QUARRY ROCK OR GRAVEL CONFORMING
TO THE FOLLOWING GRADATION.

GRADATION	
SIEVE SIZE	PERCENT PASSING
1 1/2"	100
1"	95-100
3/4"	65-95
3/8"	30-65
NO 4	10-35
NO 10	3-20
NO 40	0-8
NO 200	0-3

NOTE:
CRUSHED CONCRETE OR BITUMINOUS
SHALL NOT BE USED FOR OPEN
GRADED AGGREGATE.



INLET PROTECTION
ROCK BAG

NOT TO SCALE

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DEMARS CONSTRUCTION

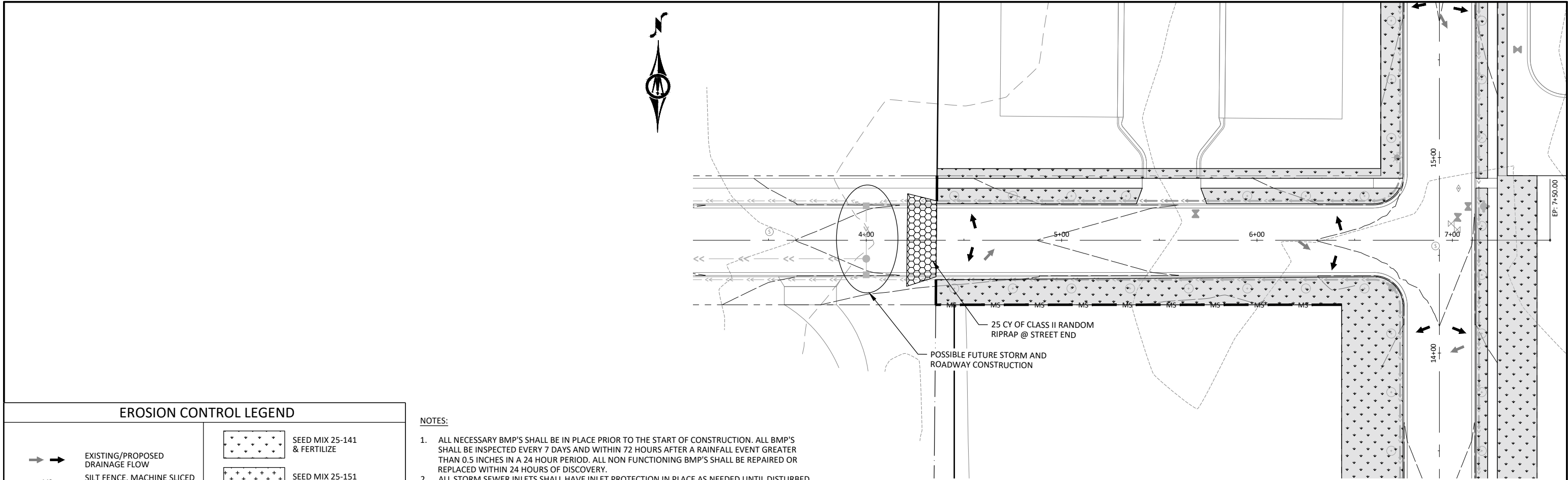
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION

STORMWATER POLLUTION PREVENTION PLAN

BEST MANAGEMENT PRACTICE DETAILS

SHEET

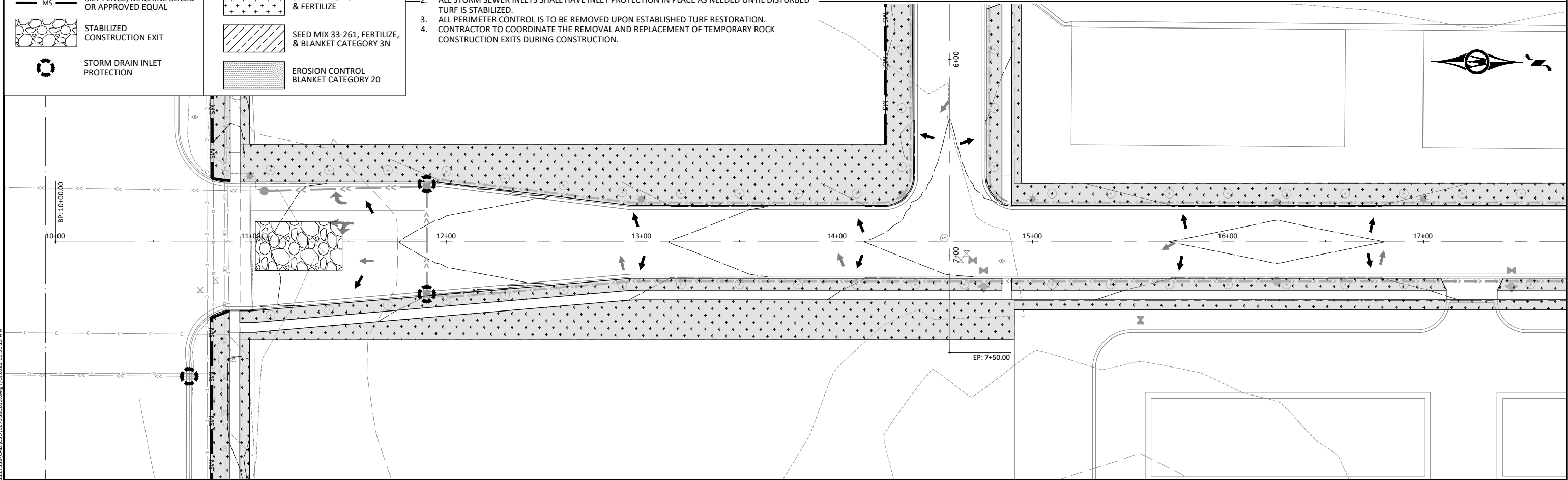
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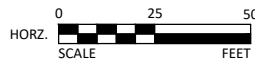
EROSION CONTROL LEGEND

	EXISTING/PROPOSED DRAINAGE FLOW		SEED MIX 25-141 & FERTILIZE
	SILT FENCE, MACHINE SLICED OR APPROVED EQUAL		SEED MIX 25-151 & FERTILIZE
	STABILIZED CONSTRUCTION EXIT		SEED MIX 33-261, FERTILIZE, & BLANKET CATEGORY 3N
	STORM DRAIN INLET PROTECTION		EROSION CONTROL BLANKET CATEGORY 20

- NOTES:
1. ALL NECESSARY BMP'S SHALL BE IN PLACE PRIOR TO THE START OF CONSTRUCTION. ALL BMP'S SHALL BE INSPECTED EVERY 7 DAYS AND WITHIN 72 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD. ALL NON FUNCTIONING BMP'S SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF DISCOVERY.
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 4. CONTRACTOR TO COORDINATE THE REMOVAL AND REPLACEMENT OF TEMPORARY ROCK CONSTRUCTION EXITS DURING CONSTRUCTION.



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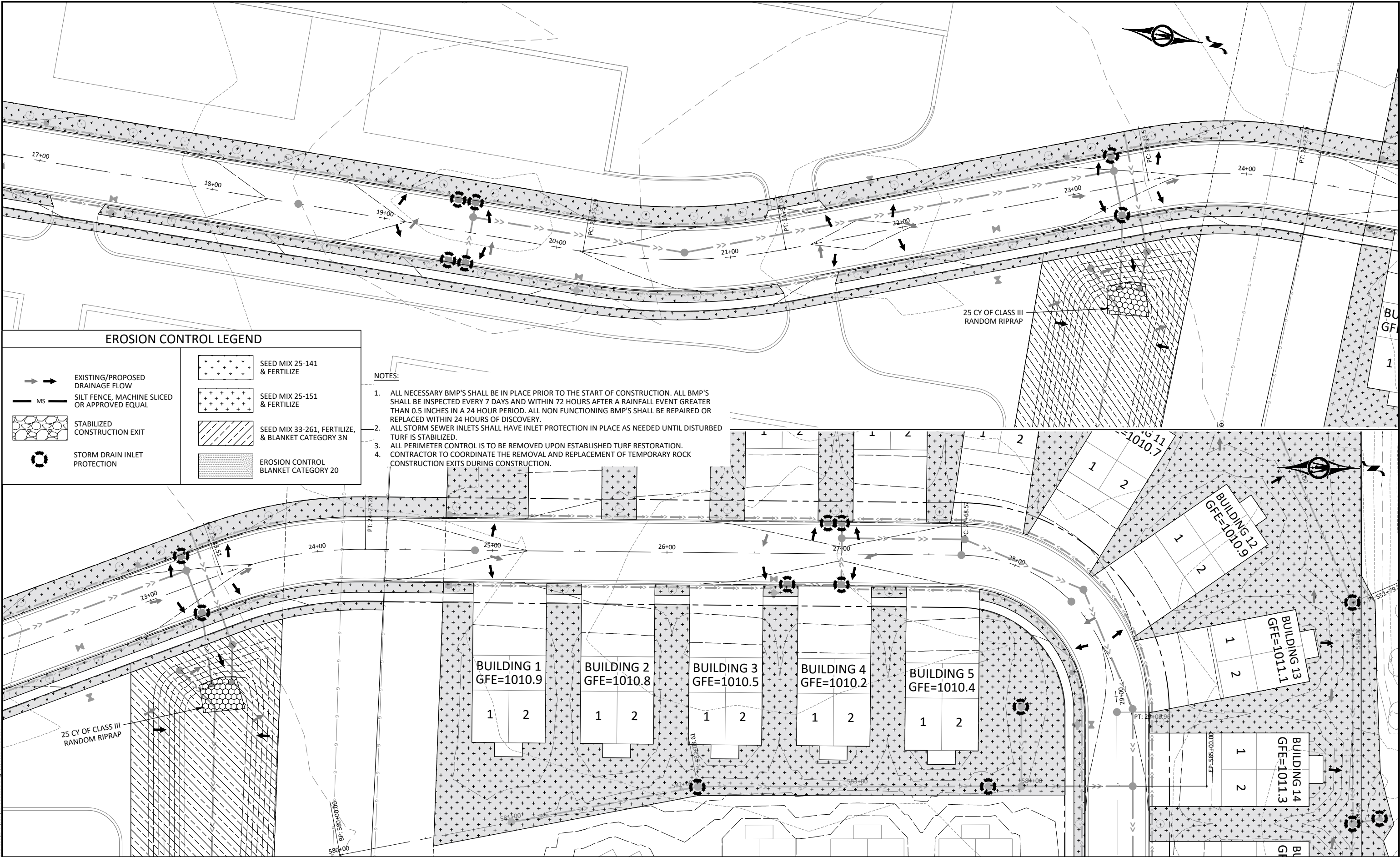


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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
STORMWATER POLLUTION PREVENTION PLAN
EROSION & SEDIMENT CONTROL PLAN - TURNBERRY & EXCEL DRIVE

SHEET
C2.06



EROSION CONTROL LEGEND

	EXISTING/PROPOSED DRAINAGE FLOW		SEED MIX 25-141 & FERTILIZE
	SILT FENCE, MACHINE SLICED OR APPROVED EQUAL		SEED MIX 25-151 & FERTILIZE
	STABILIZED CONSTRUCTION EXIT		SEED MIX 33-261, FERTILIZE, & BLANKET CATEGORY 3N
	STORM DRAIN INLET PROTECTION		EROSION CONTROL BLANKET CATEGORY 20

NOTES:

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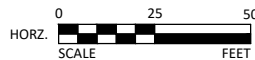
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STORMWATER POLLUTION PREVENTION PLAN
EROSION & SEDIMENT CONTROL PLAN - EXCEL DRIVE

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EXISTING/PROPOSED DRAINAGE FLOW

SILT FENCE, MACHINE SLICED OR APPROVED EQUAL

STABILIZED CONSTRUCTION EXIT

STORM DRAIN INLET PROTECTION

SEED MIX 25-141 & FERTILIZE

SEED MIX 25-151 & FERTILIZE

SEED MIX 33-261, FERTILIZE, & BLANKET CATEGORY 3N

EROSION CONTROL BLANKET CATEGORY 20

DEMARS CONSTRUCTION

TURNBERRY DRIVE & EXCEL DRIVE EXTENSION

STORMWATER POLLUTION PREVENTION PLAN

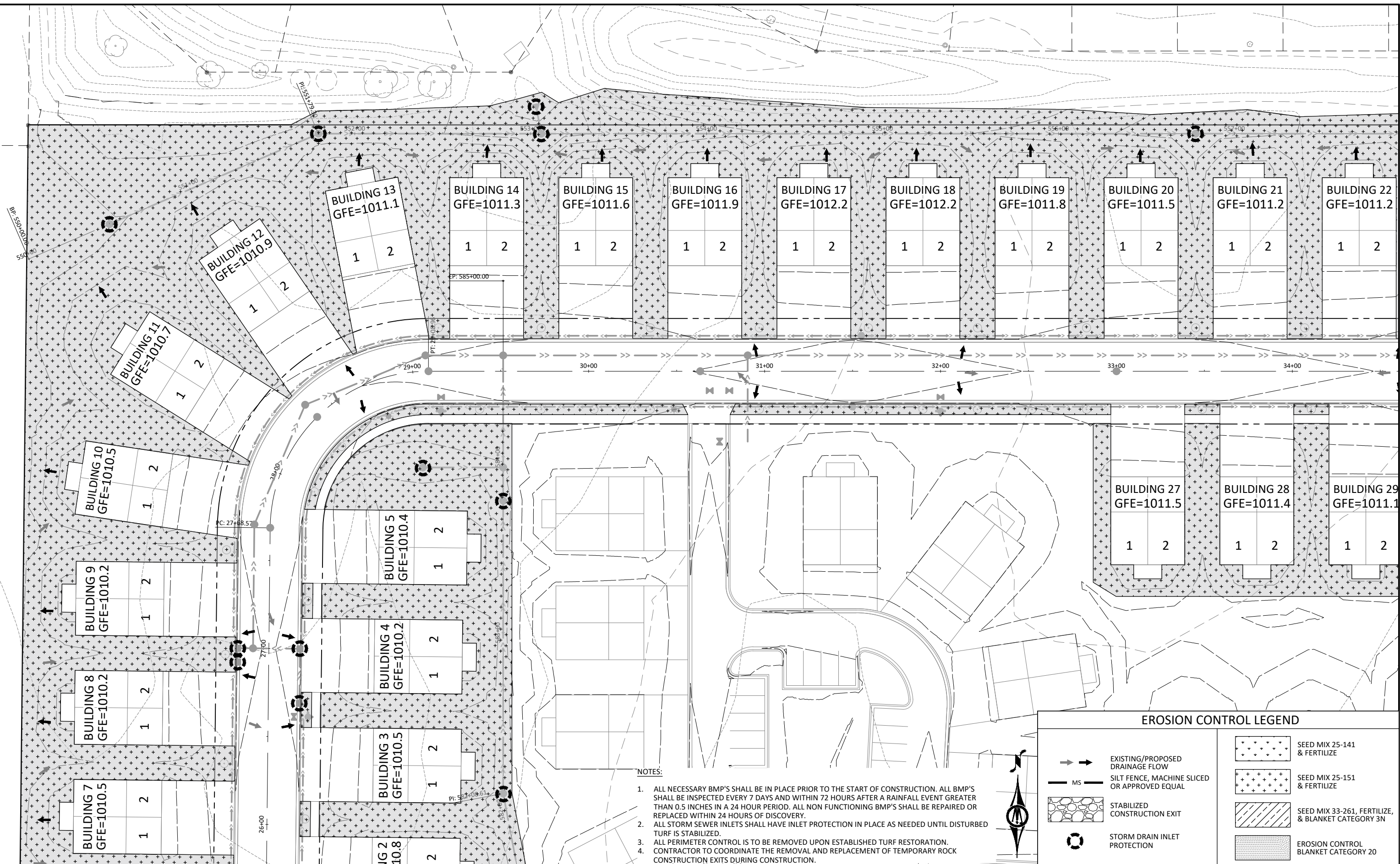
EROSION & SEDIMENT CONTROL PLAN - EXCEL DRIVE & TOWNHOMES

SHEET

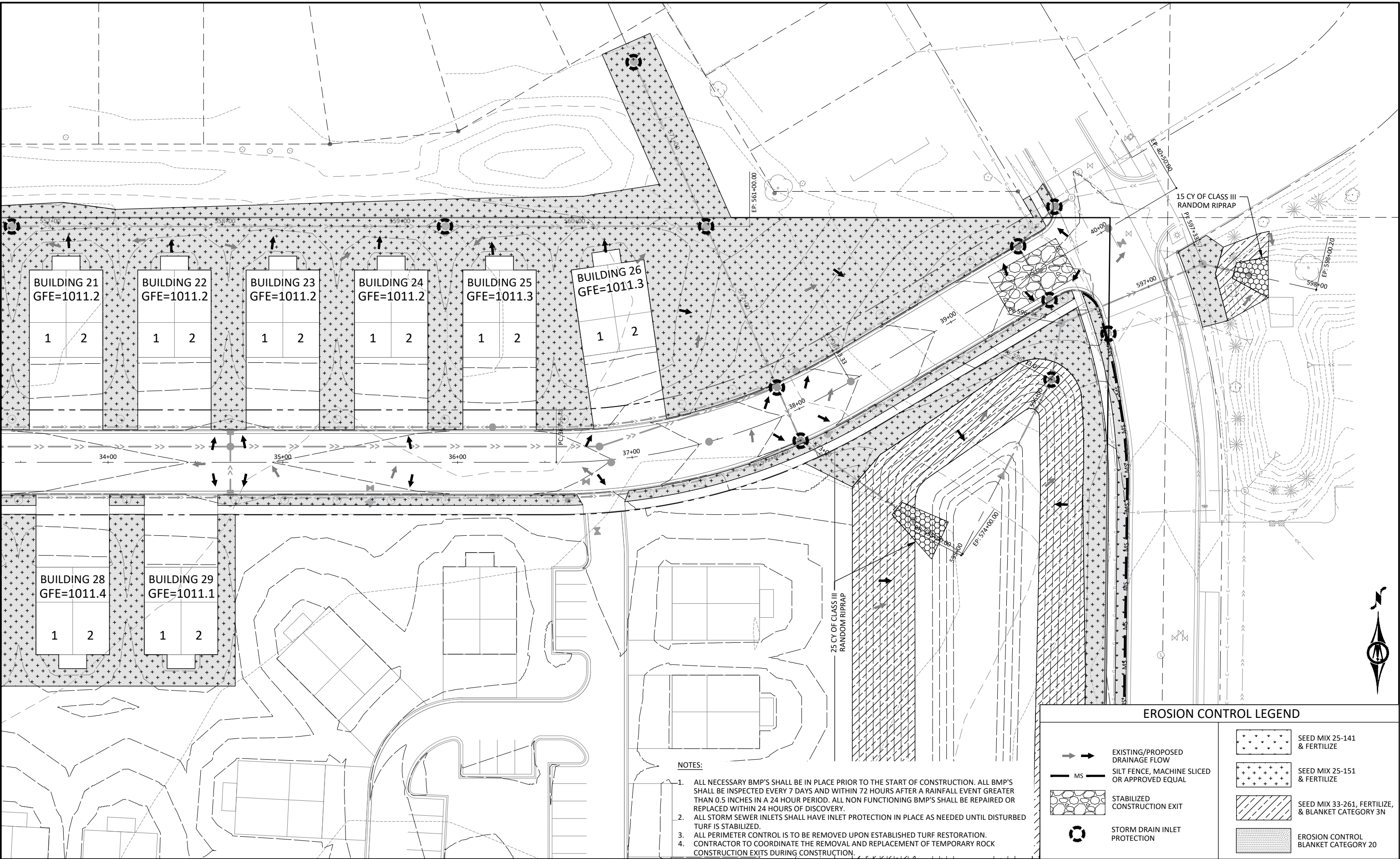
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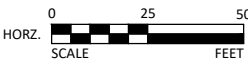


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EROSION CONTROL LEGEND

	EXISTING/PROPOSED DRAINAGE FLOW		SEED MIX 25-141 & FERTILIZE
	SILT FENCE, MACHINE SLICED OR APPROVED EQUAL		SEED MIX 25-151 & FERTILIZE
	STABILIZED CONSTRUCTION EXIT		SEED MIX 33-261, FERTILIZE, & BLANKET CATEGORY 3N
	STORM DRAIN INLET PROTECTION		EROSION CONTROL BLANKET CATEGORY 20



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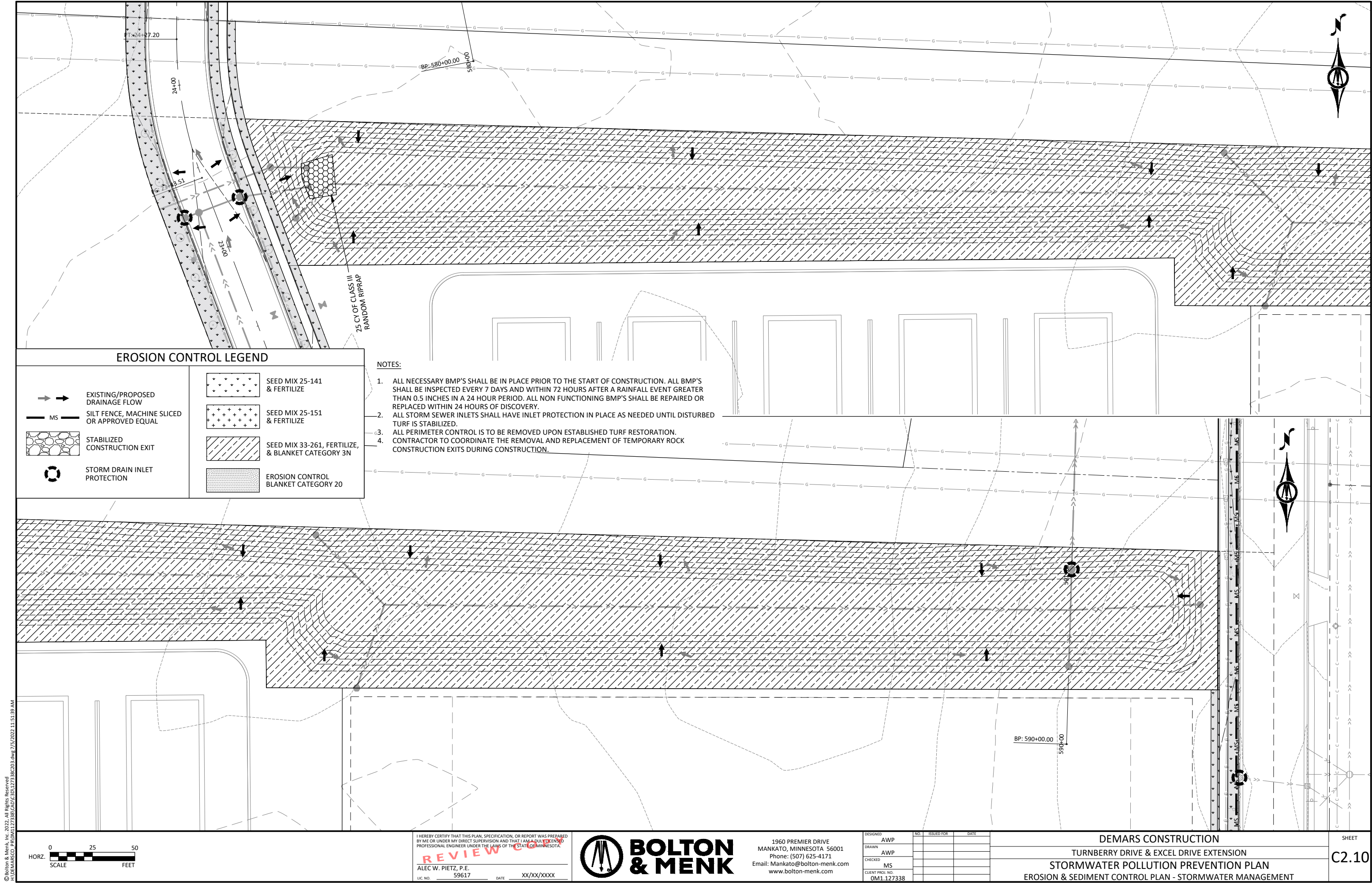


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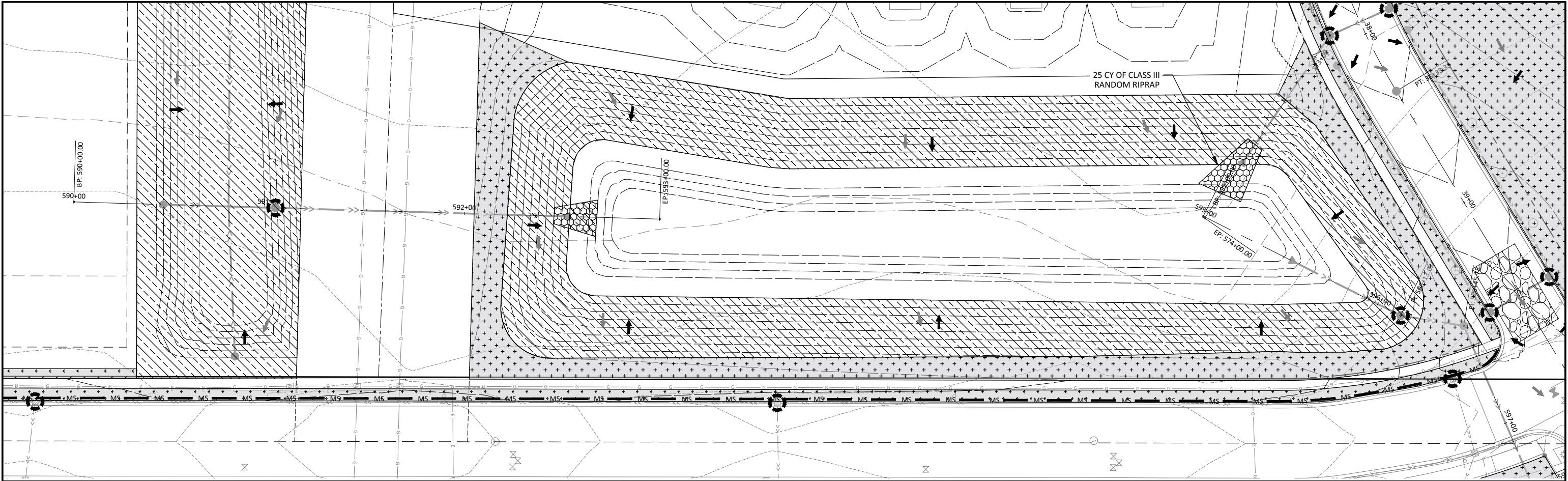
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TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
STORMWATER POLLUTION PREVENTION PLAN
EROSION & SEDIMENT CONTROL PLAN - EXCEL DRIVE & TOWNHOMES

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EROSION CONTROL LEGEND

EXISTING/PROPOSED DRAINAGE FLOW

SILT FENCE, MACHINE SLICED OR APPROVED EQUAL

STABILIZED CONSTRUCTION EXIT

STORM DRAIN INLET PROTECTION

SEED MIX 25-141 & FERTILIZE

SEED MIX 25-151 & FERTILIZE

SEED MIX 33-261, FERTILIZE, & BLANKET CATEGORY 3N

EROSION CONTROL BLANKET CATEGORY 20

- NOTES:
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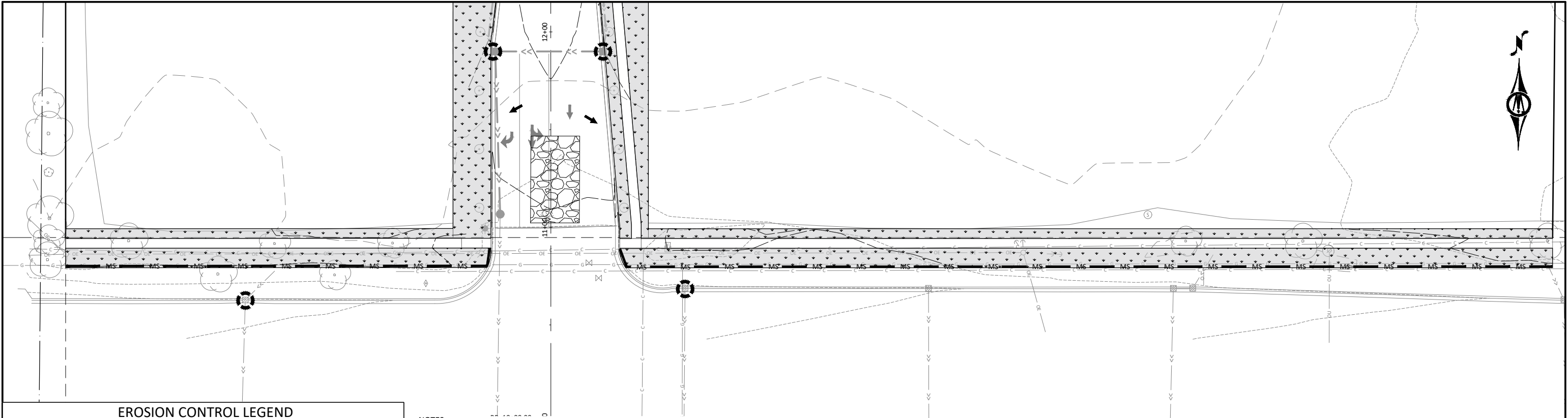
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STORMWATER POLLUTION PREVENTION PLAN
EROSION & SEDIMENT CONTROL PLAN - STORMWATER MANAGEMENT

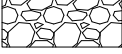
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EROSION CONTROL LEGEND

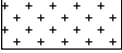

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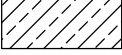

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STABILIZED CONSTRUCTION EXIT


STORM DRAIN INLET PROTECTION

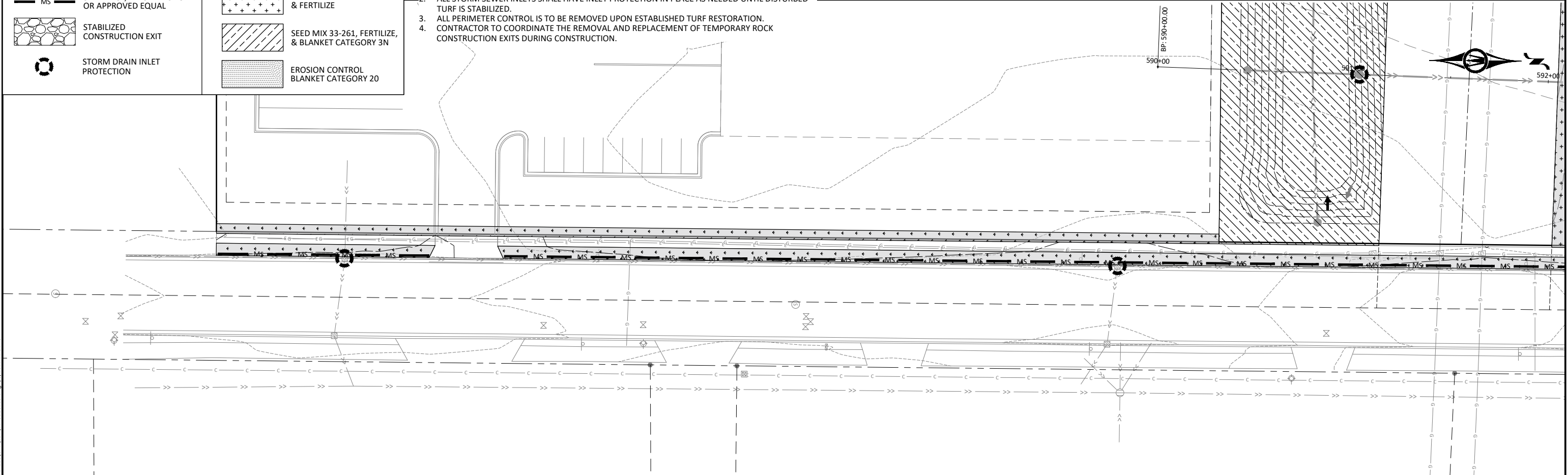

SEED MIX 25-141 & FERTILIZE


SEED MIX 25-151 & FERTILIZE


SEED MIX 33-261, FERTILIZE, & BLANKET CATEGORY 3N


EROSION CONTROL BLANKET CATEGORY 20

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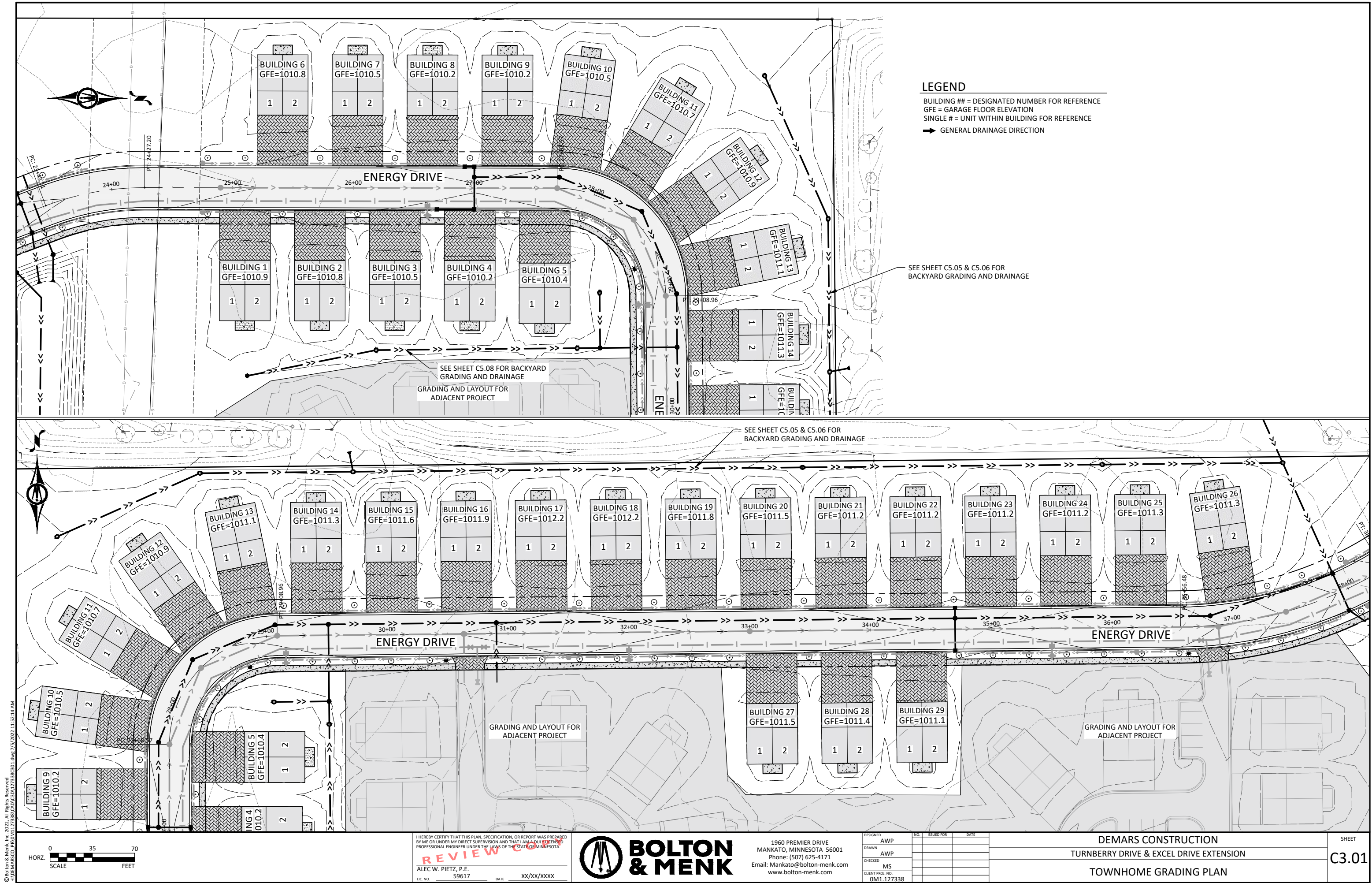


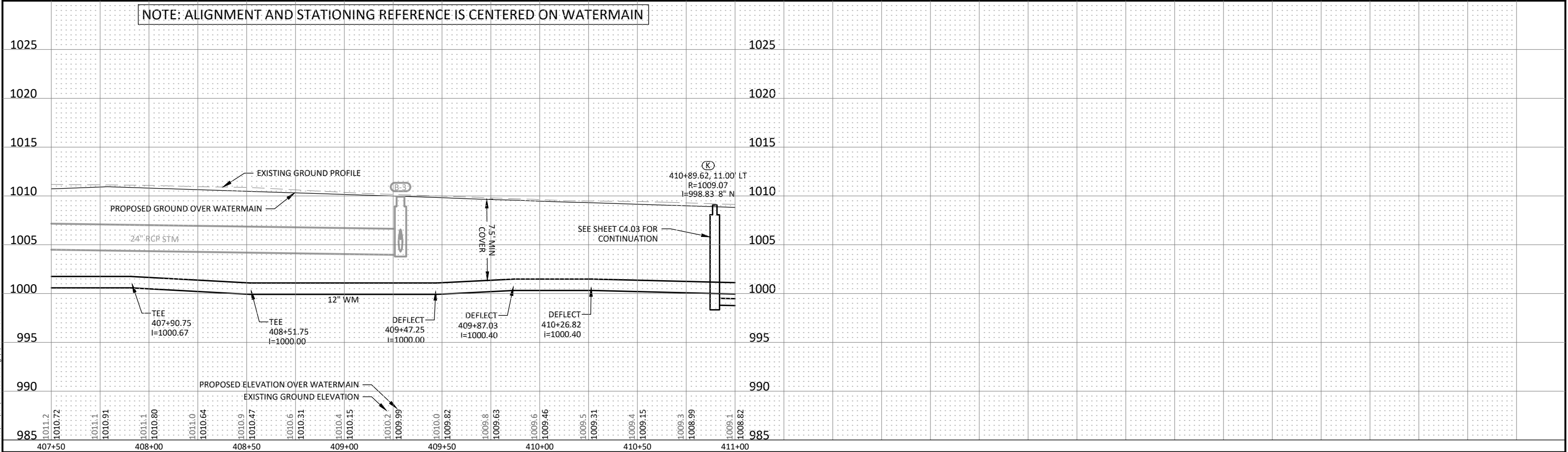
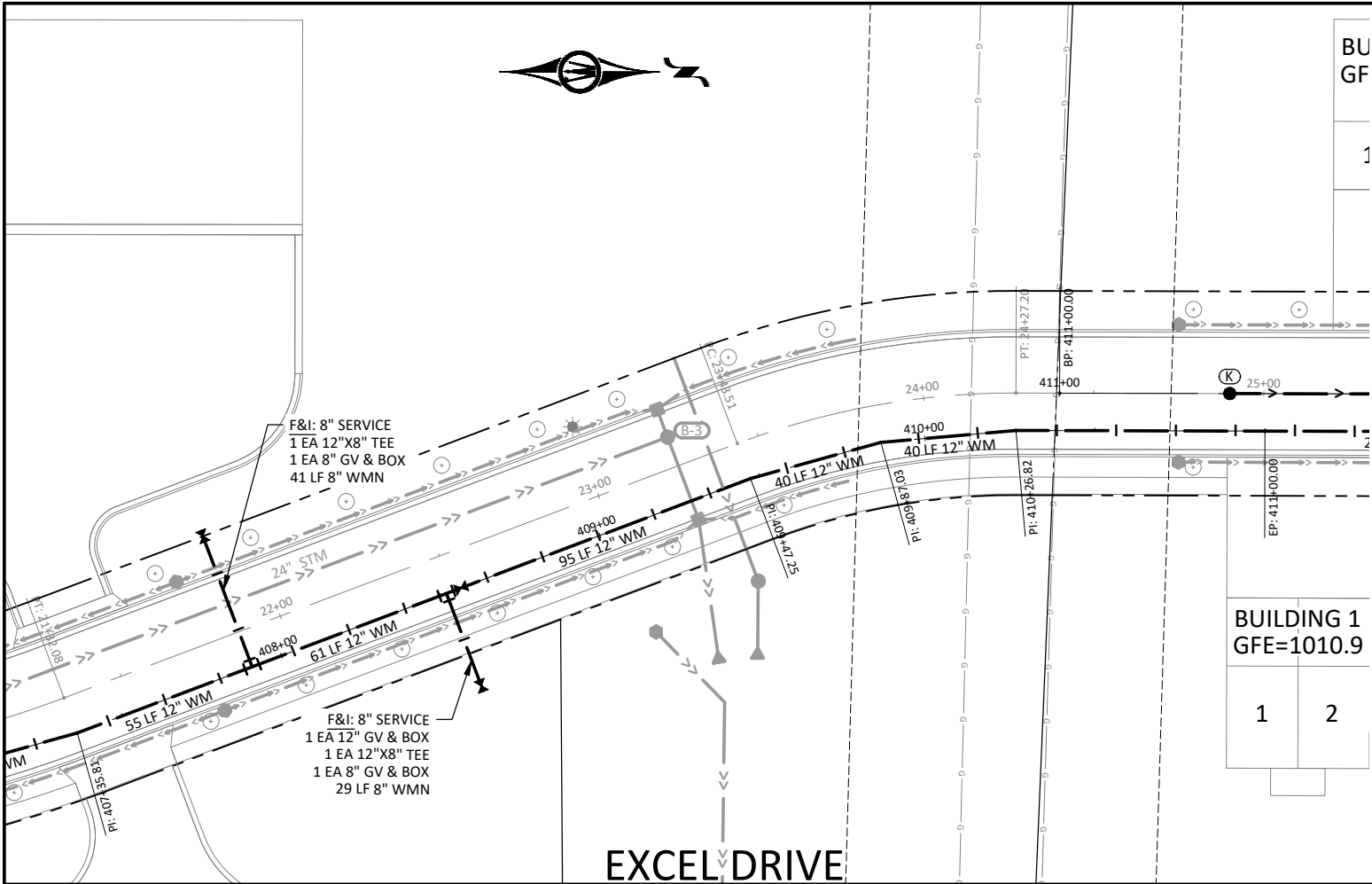
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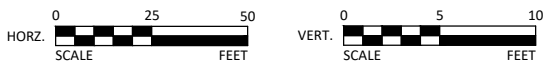
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TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
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EROSION & SEDIMENT CONTROL PLAN - VICTORY & POWER DRIVE SIDEWALK

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C2.12





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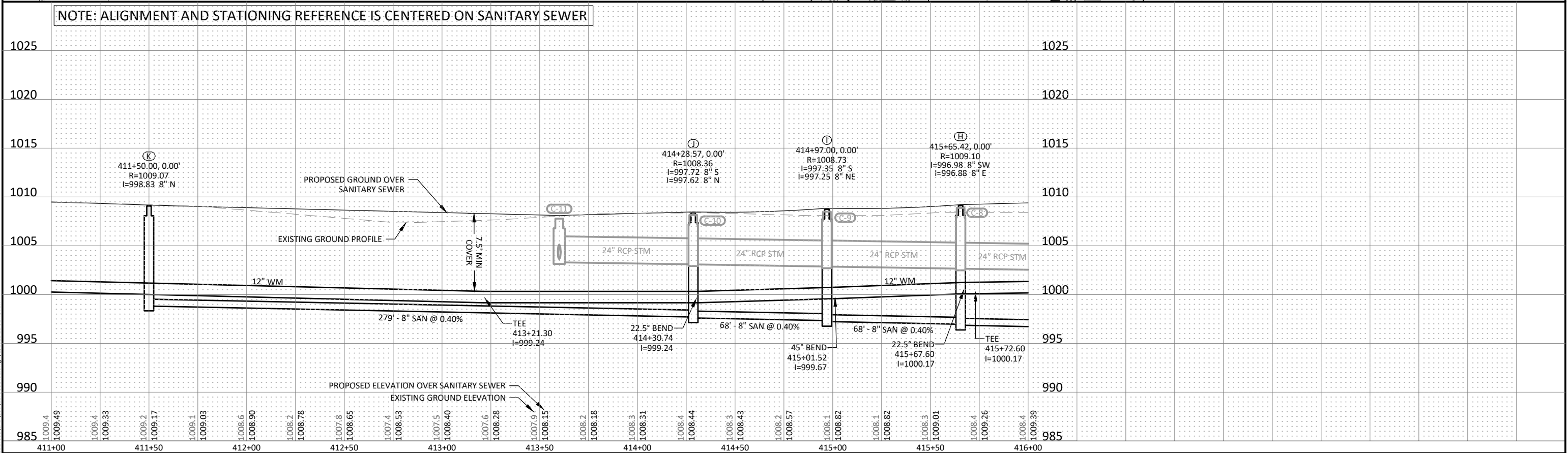
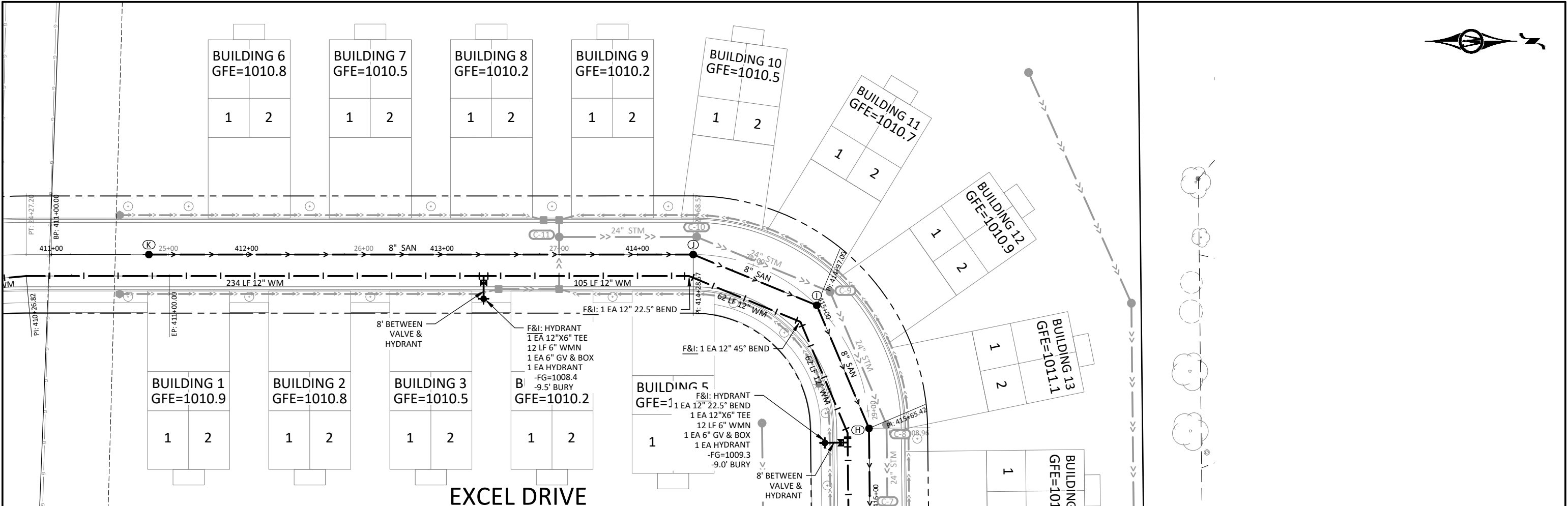


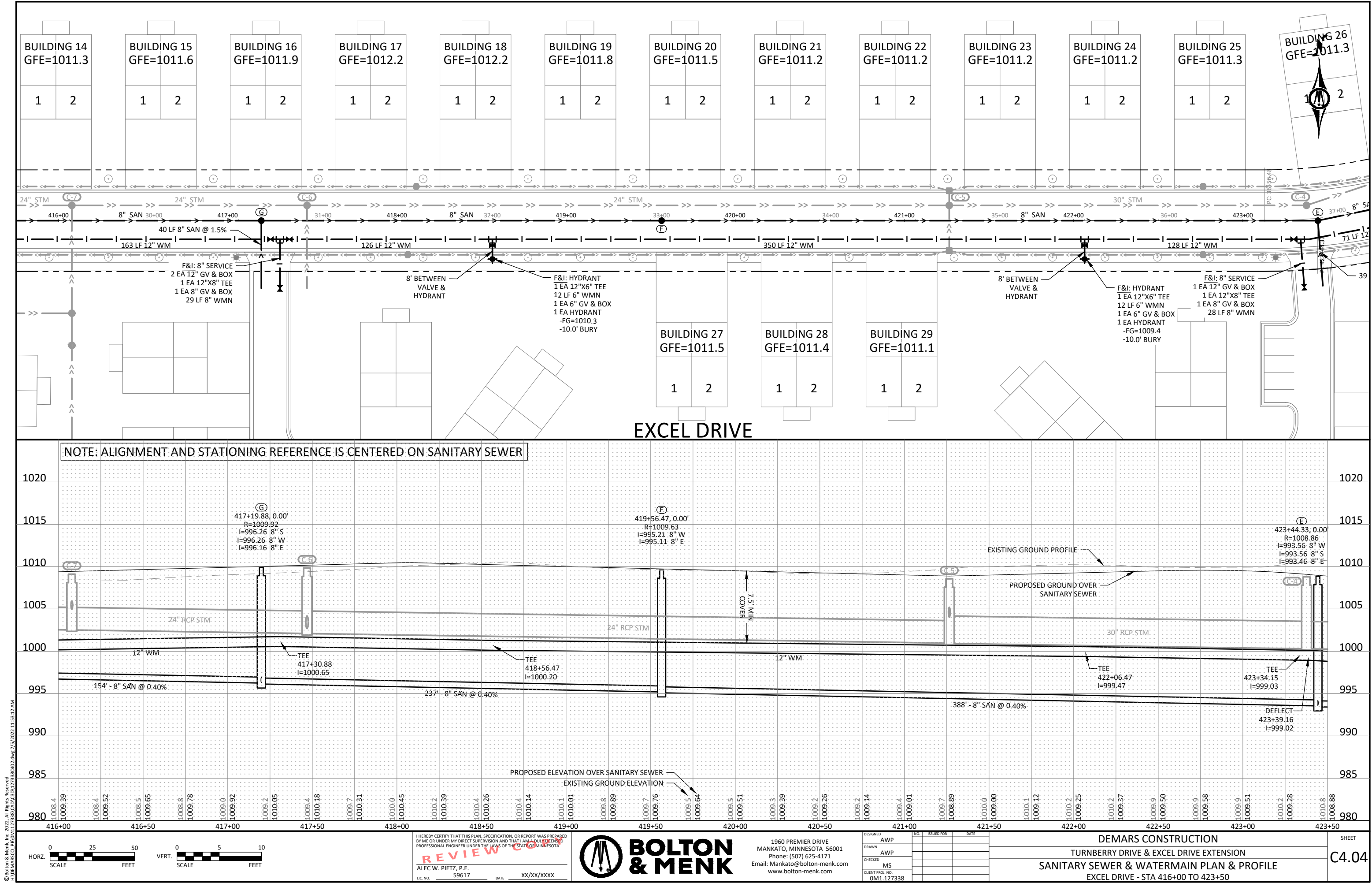
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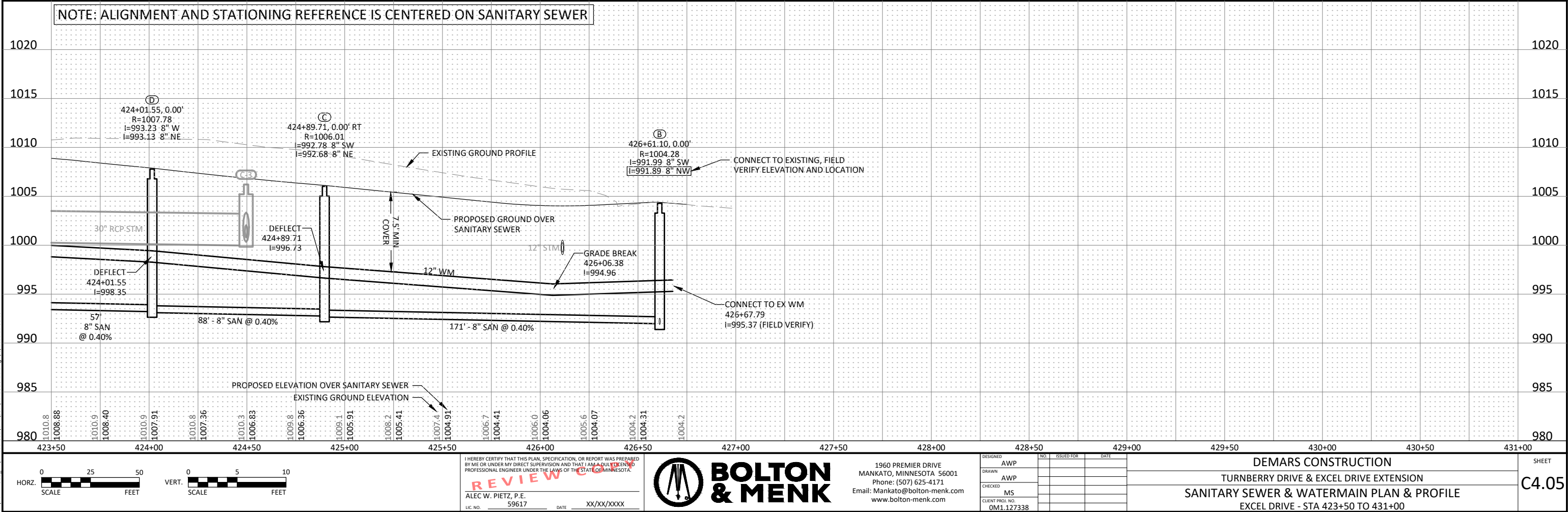
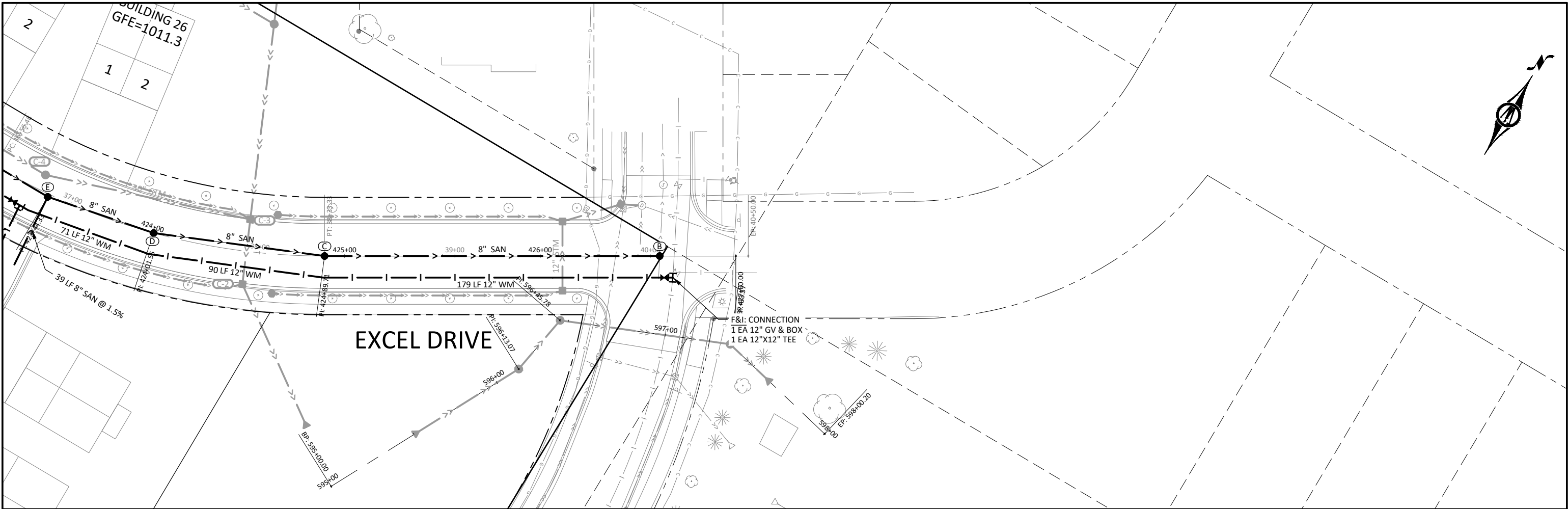
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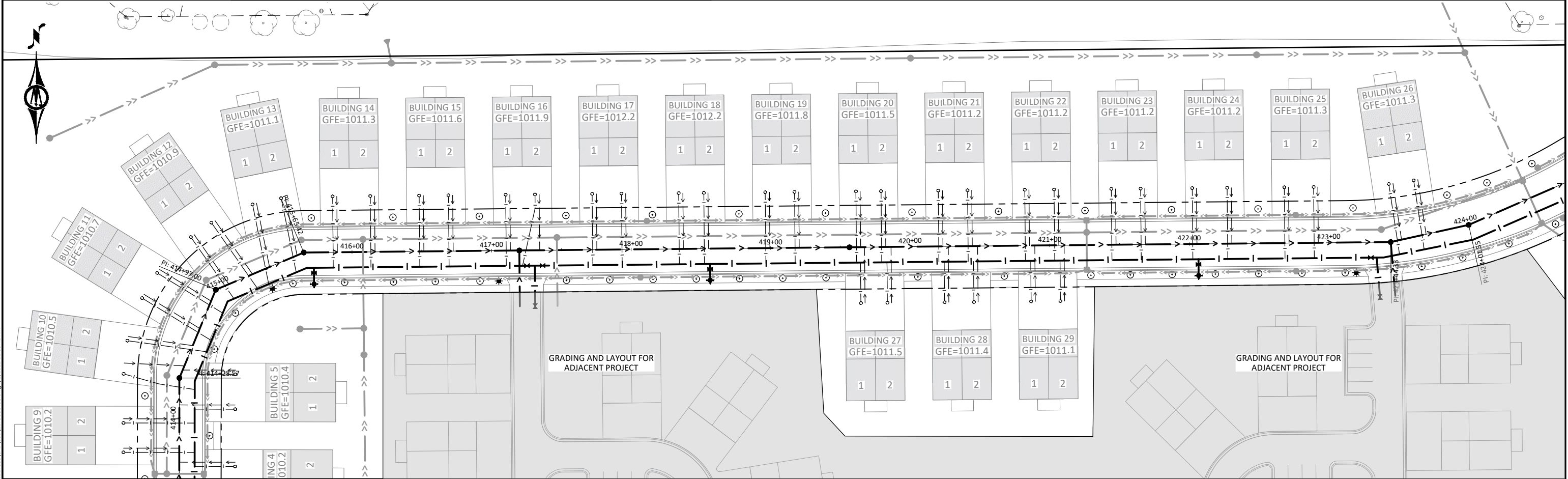
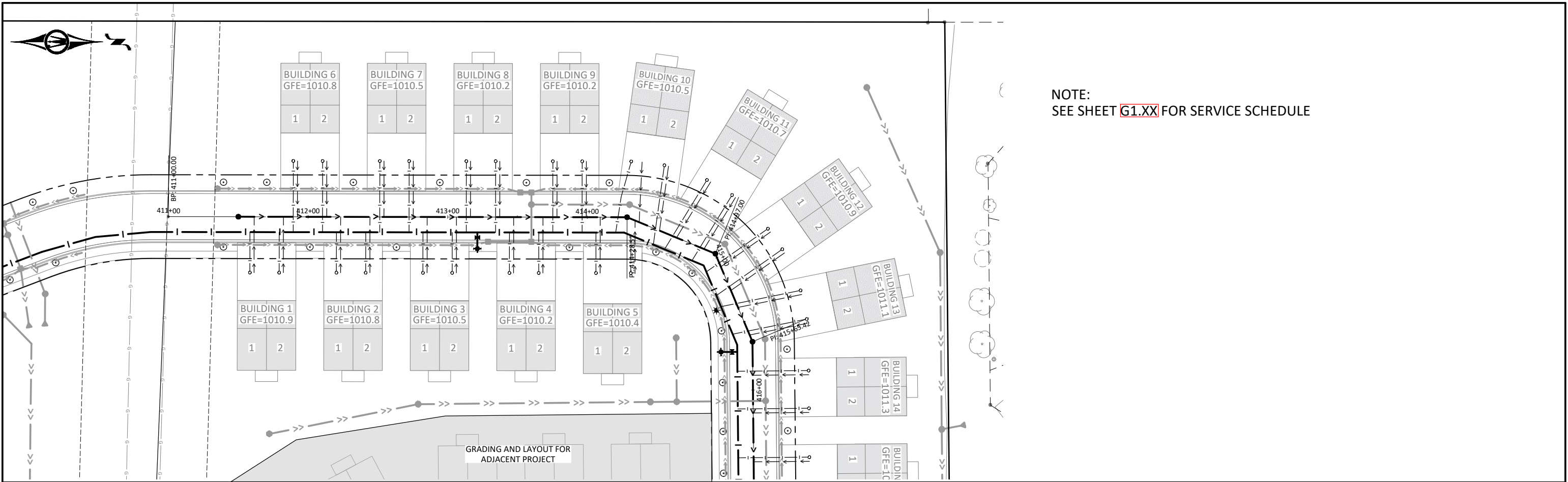
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SANITARY SEWER & WATERMAIN PLAN & PROFILE
EXCEL DRIVE - STA 407+50 TO 411+00

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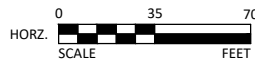








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LIC. NO. 59617 DATE XX/XX/XXXX

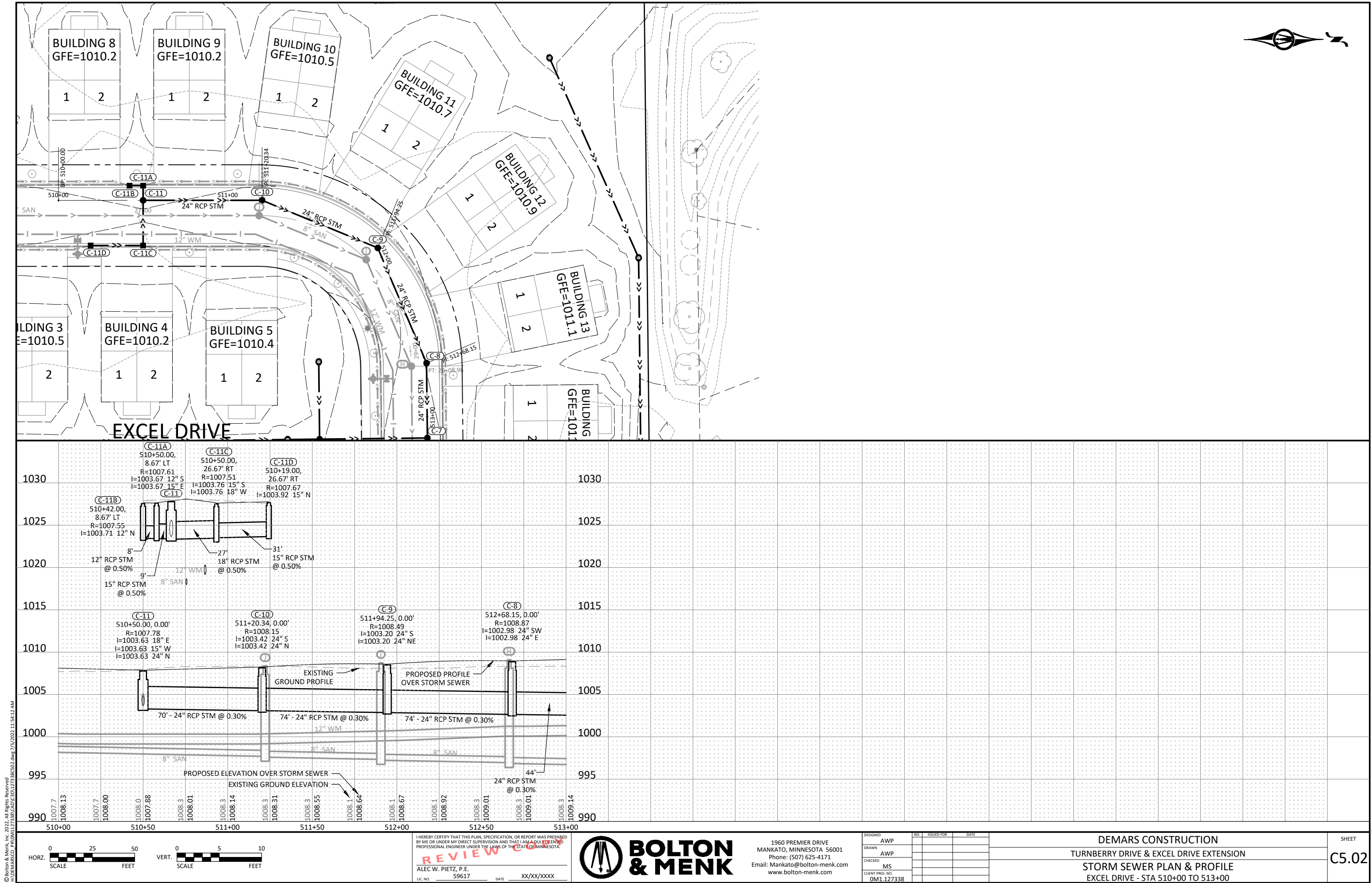


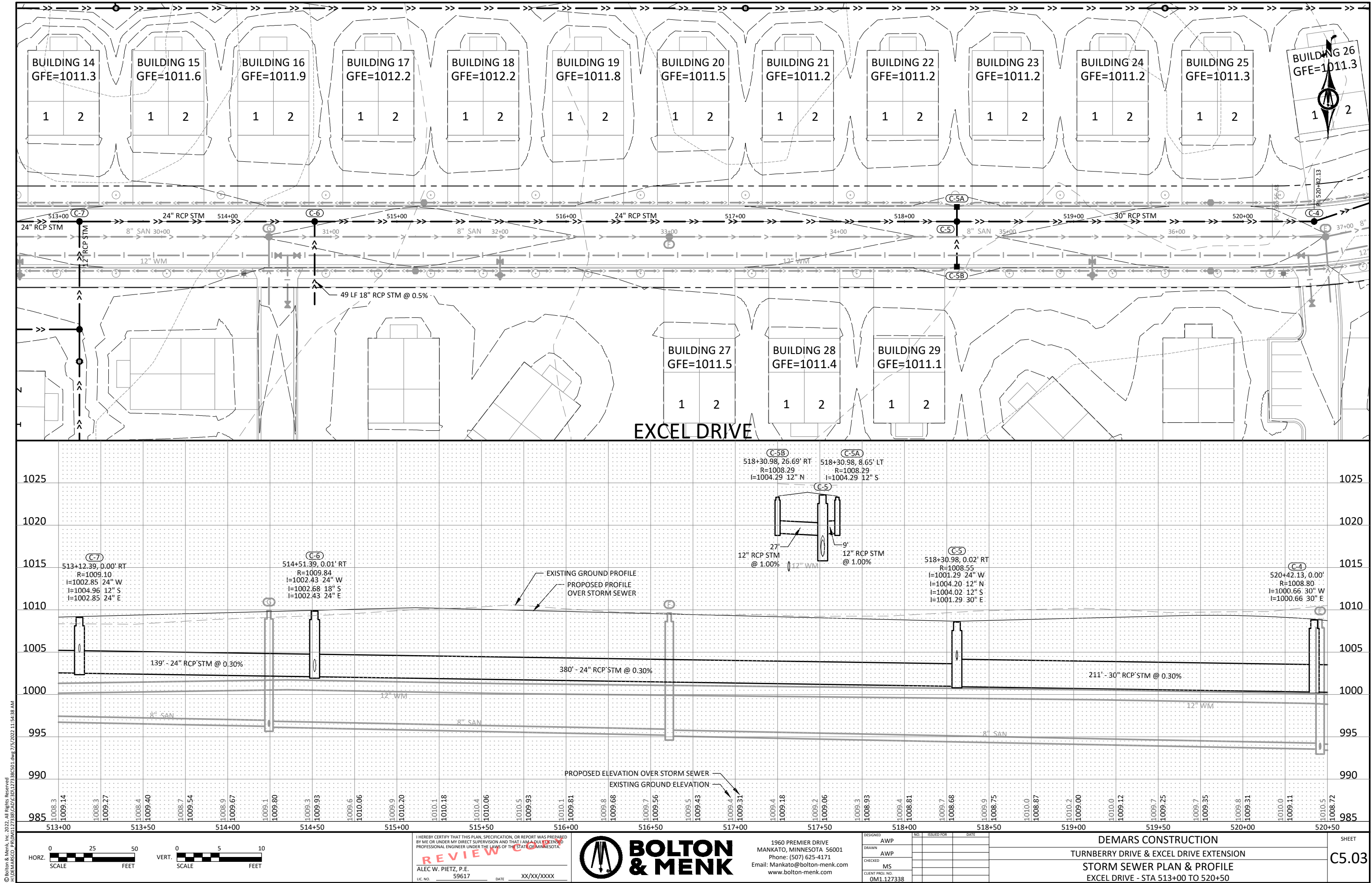
1960 PREMIER DRIVE
MANKATO, MINNESOTA 56001
Phone: (507) 625-4171
Email: Mankato@bolton-menk.com
www.bolton-menk.com

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CHECKED	MS			
CLIENT PROJ. NO.	0M1.127338			

DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
TOWNHOME SANITARY & WATER SERVICE LAYOUT

SHEET
C4.06





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REVIEW

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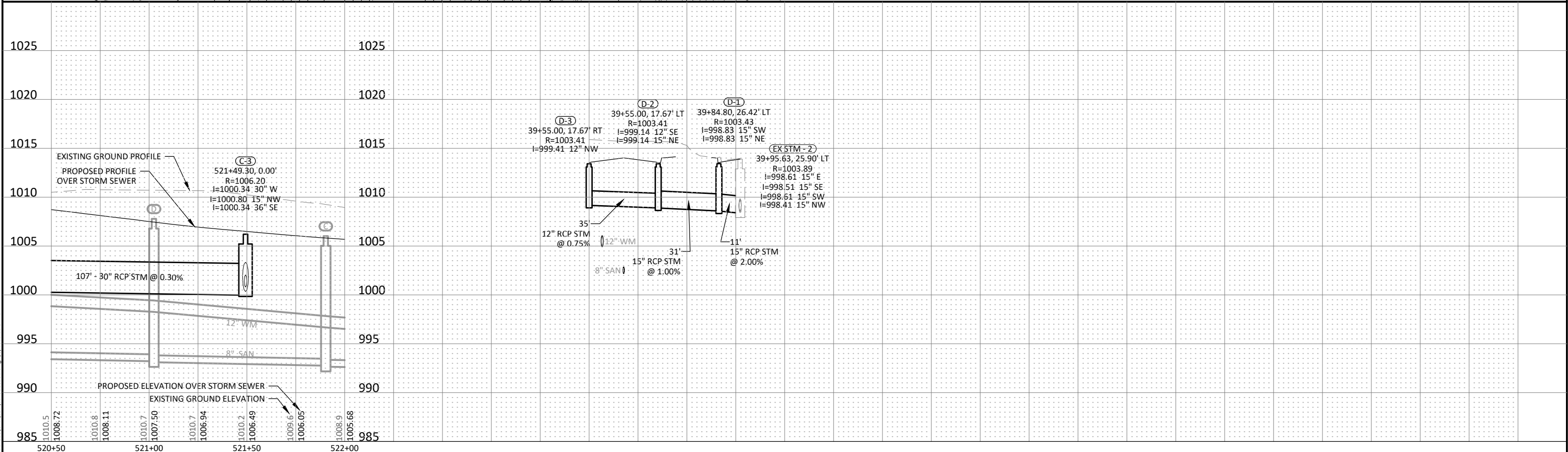
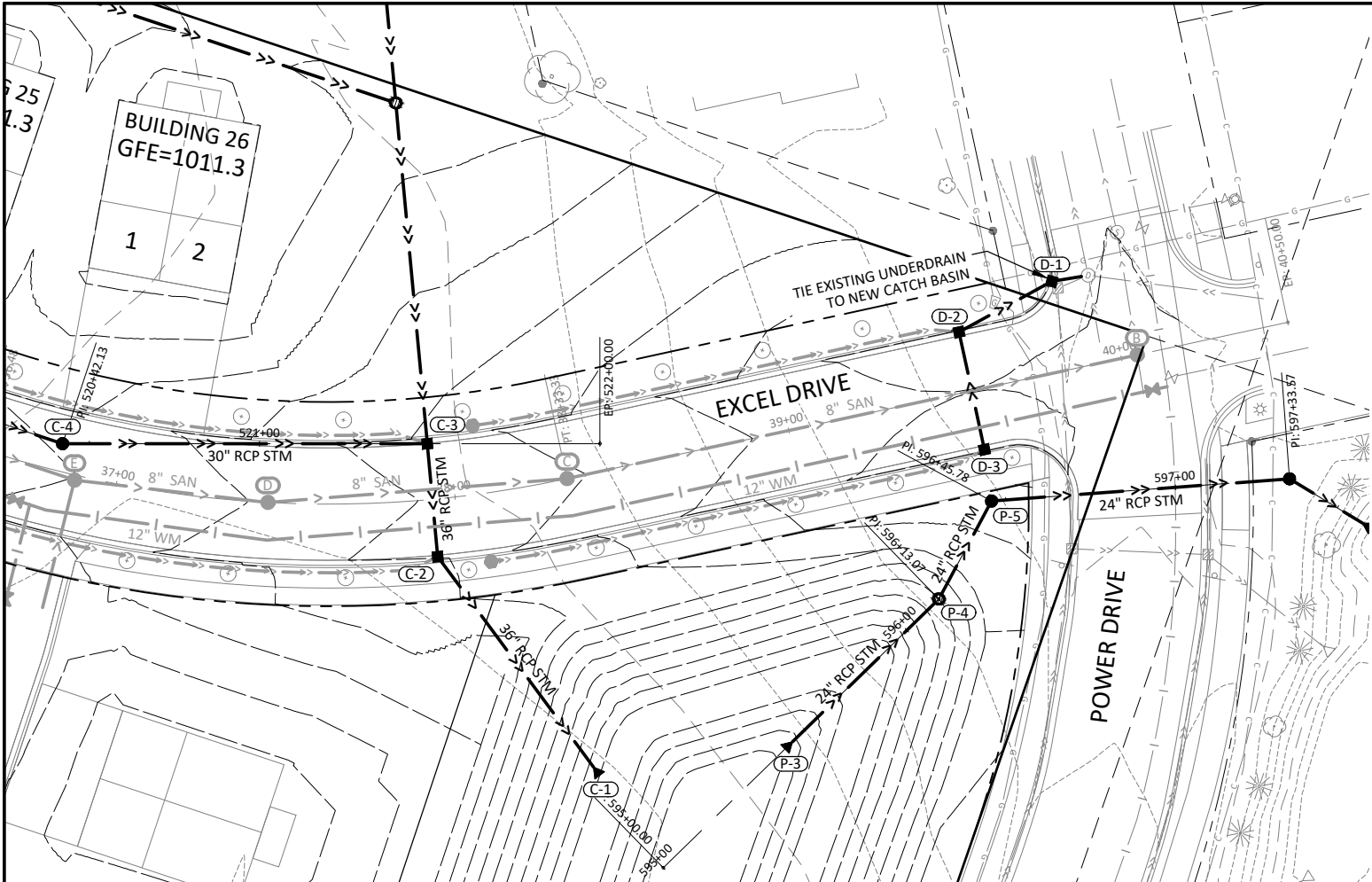


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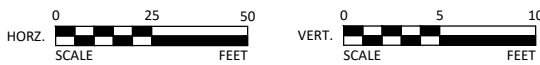
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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
STORM SEWER PLAN & PROFILE
EXCEL DRIVE - STA 513+00 TO 520+50

SHEET
C5.03



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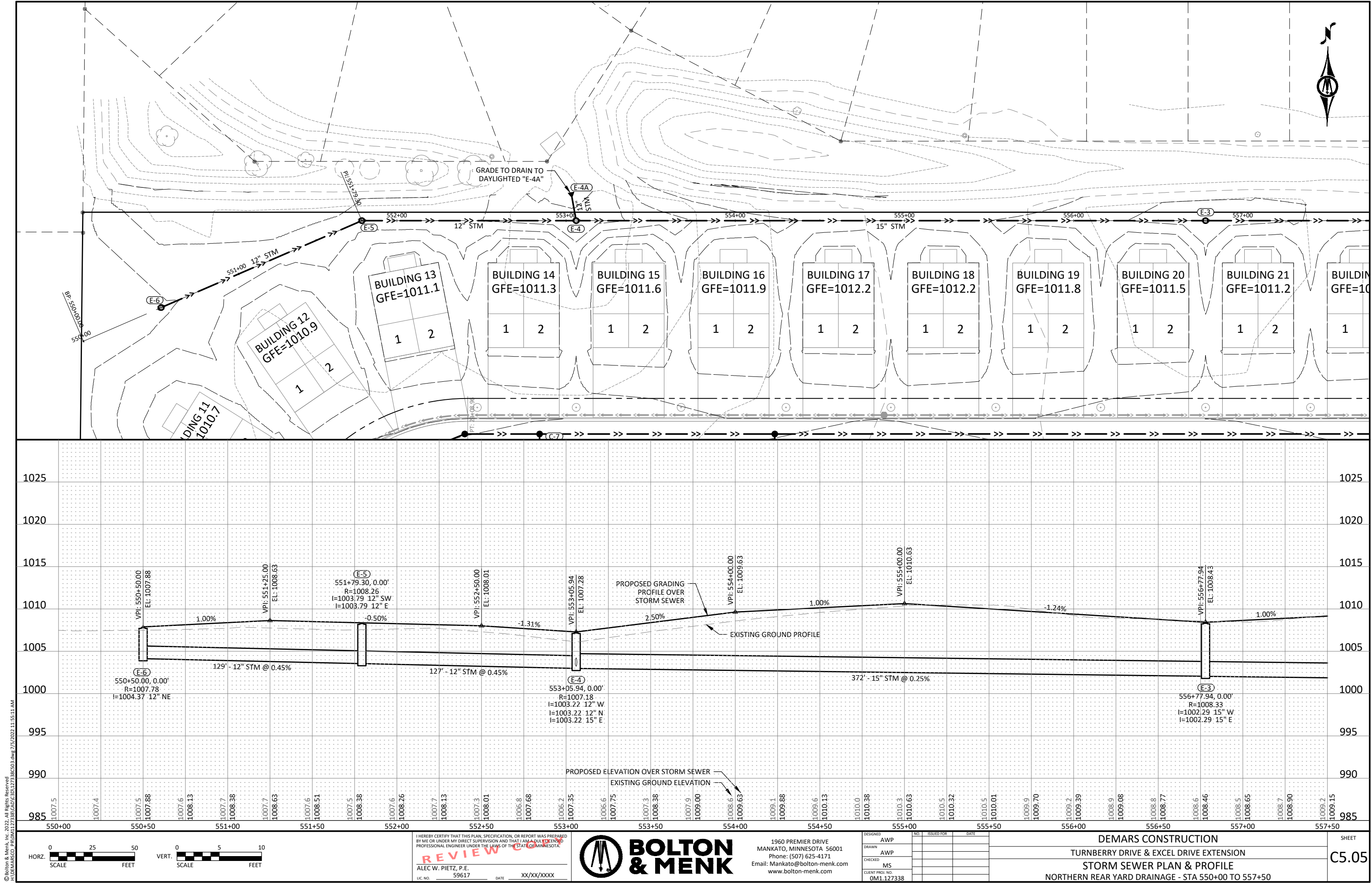


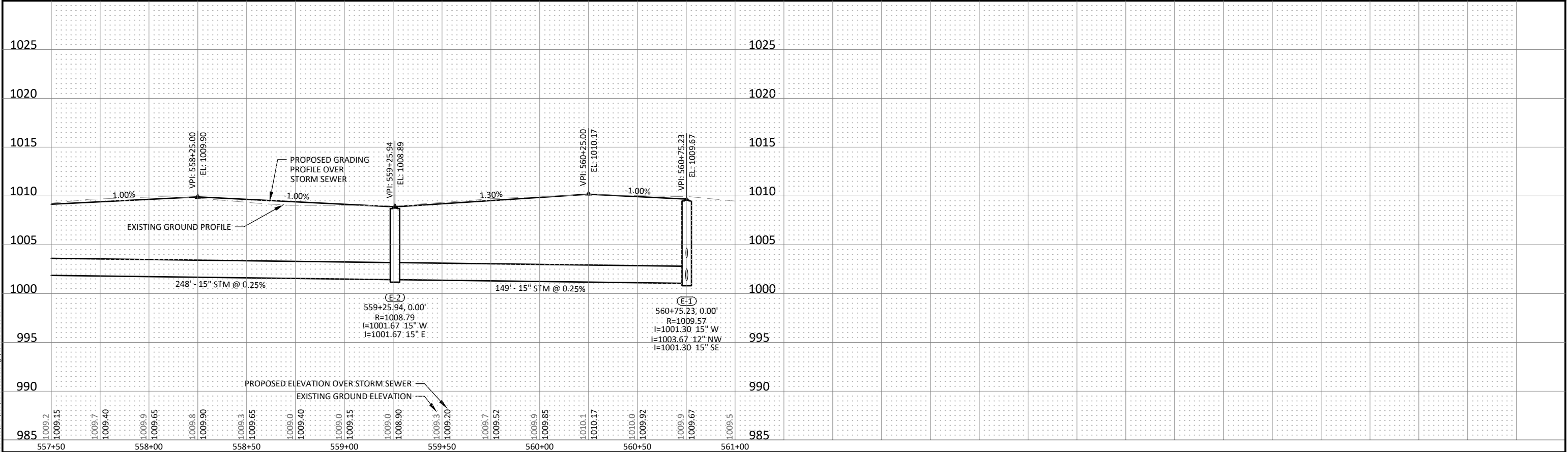
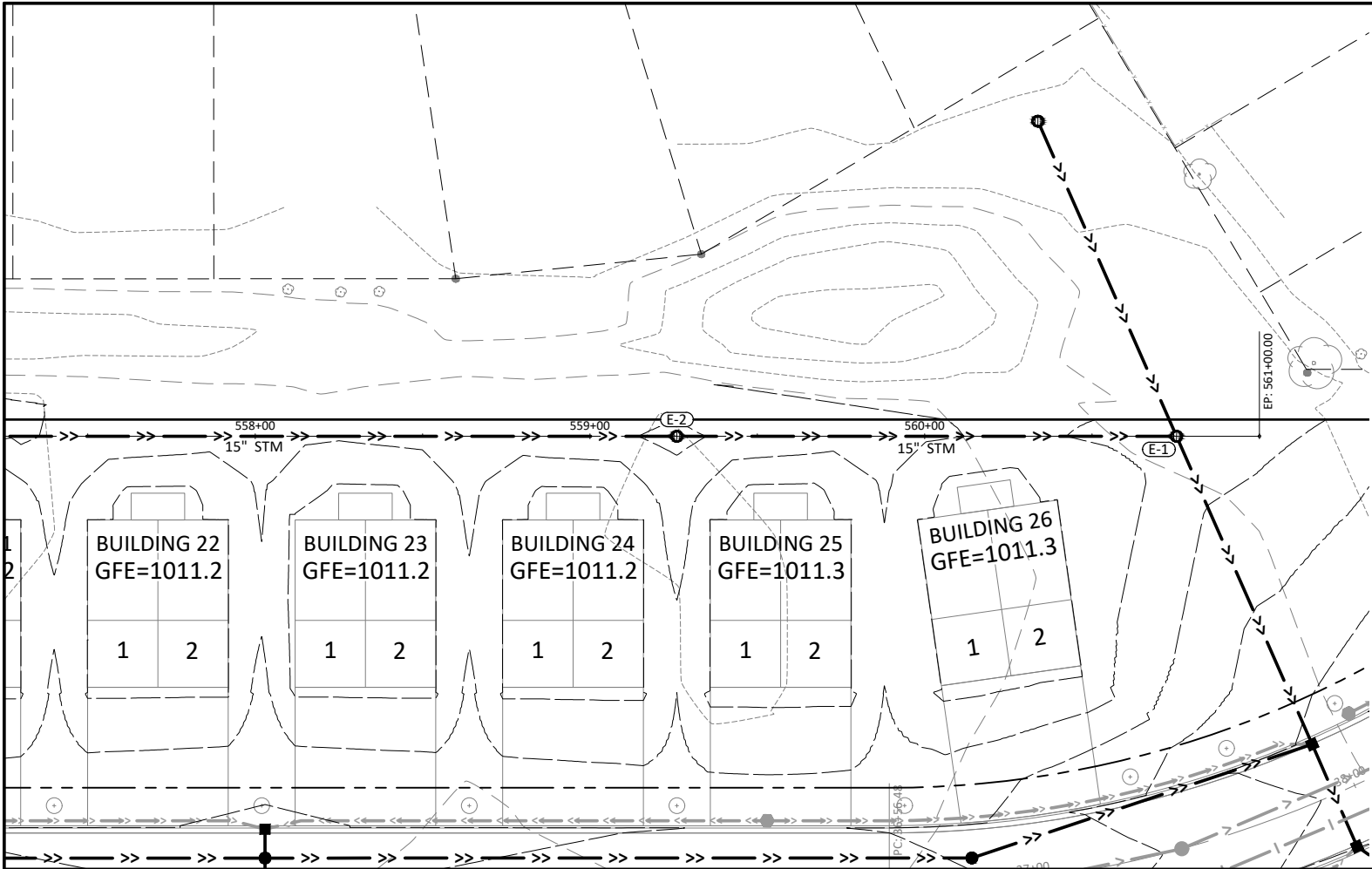
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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
STORM SEWER PLAN & PROFILE
EXCEL DRIVE - STA 520+50 TO 522+00 AND POWER DRIVE INTERSECTION

SHEET
C5.04





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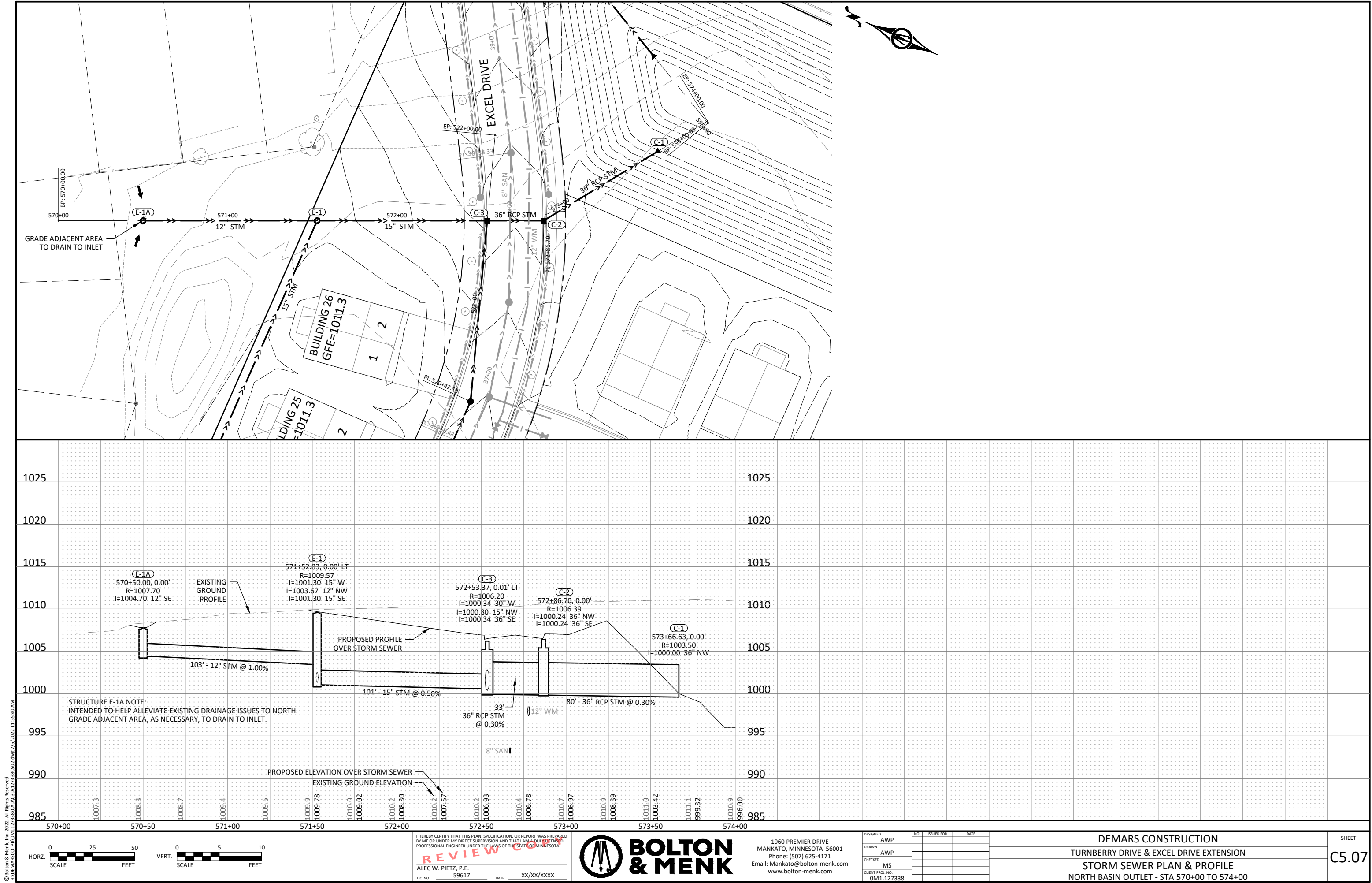


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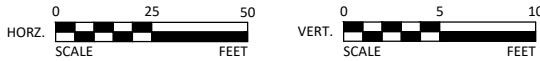
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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
STORM SEWER PLAN & PROFILE
NORTHERN REAR YARD DRAINAGE - STA 557+50 TO 561+00

SHEET
C5.06



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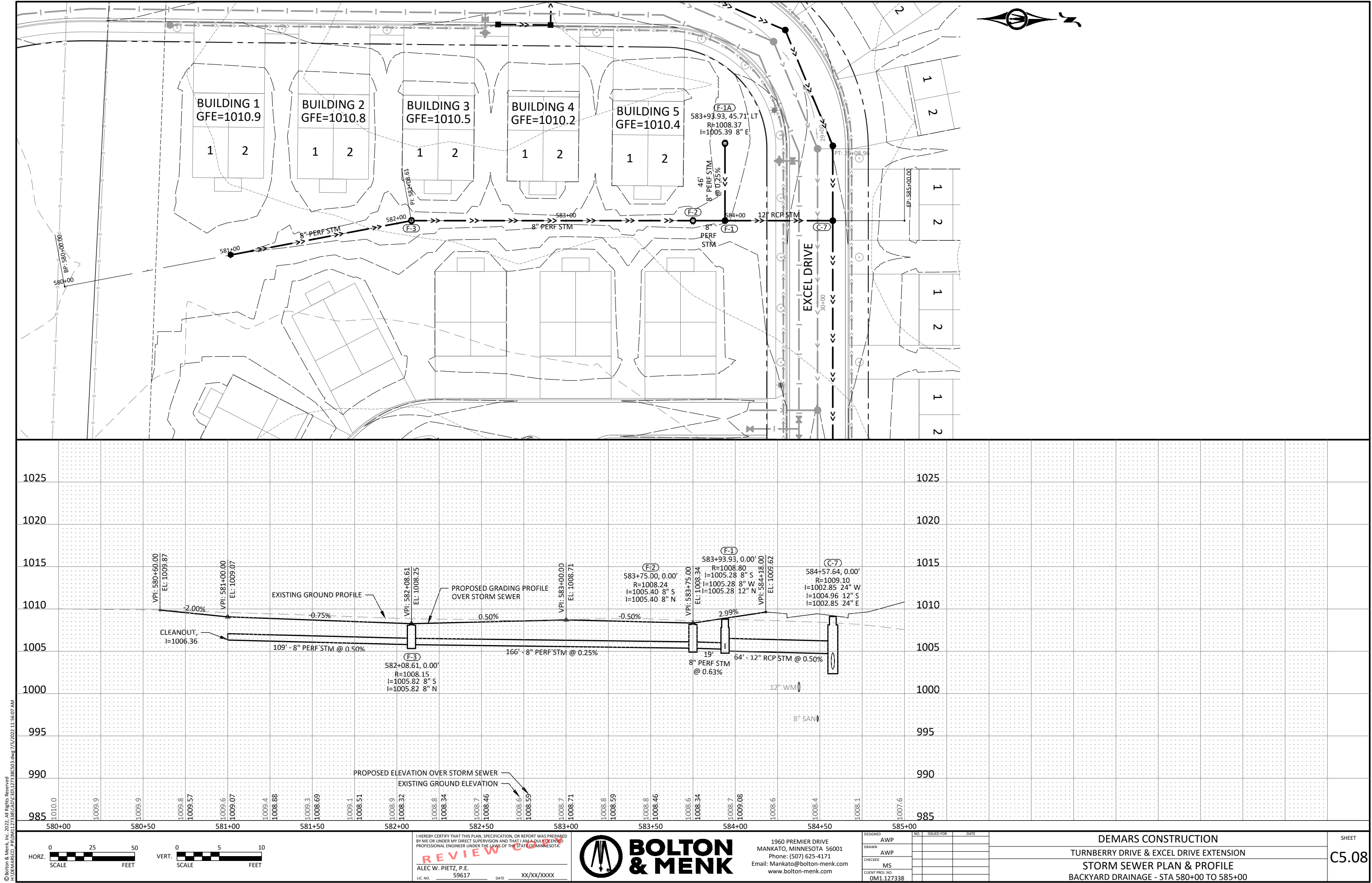


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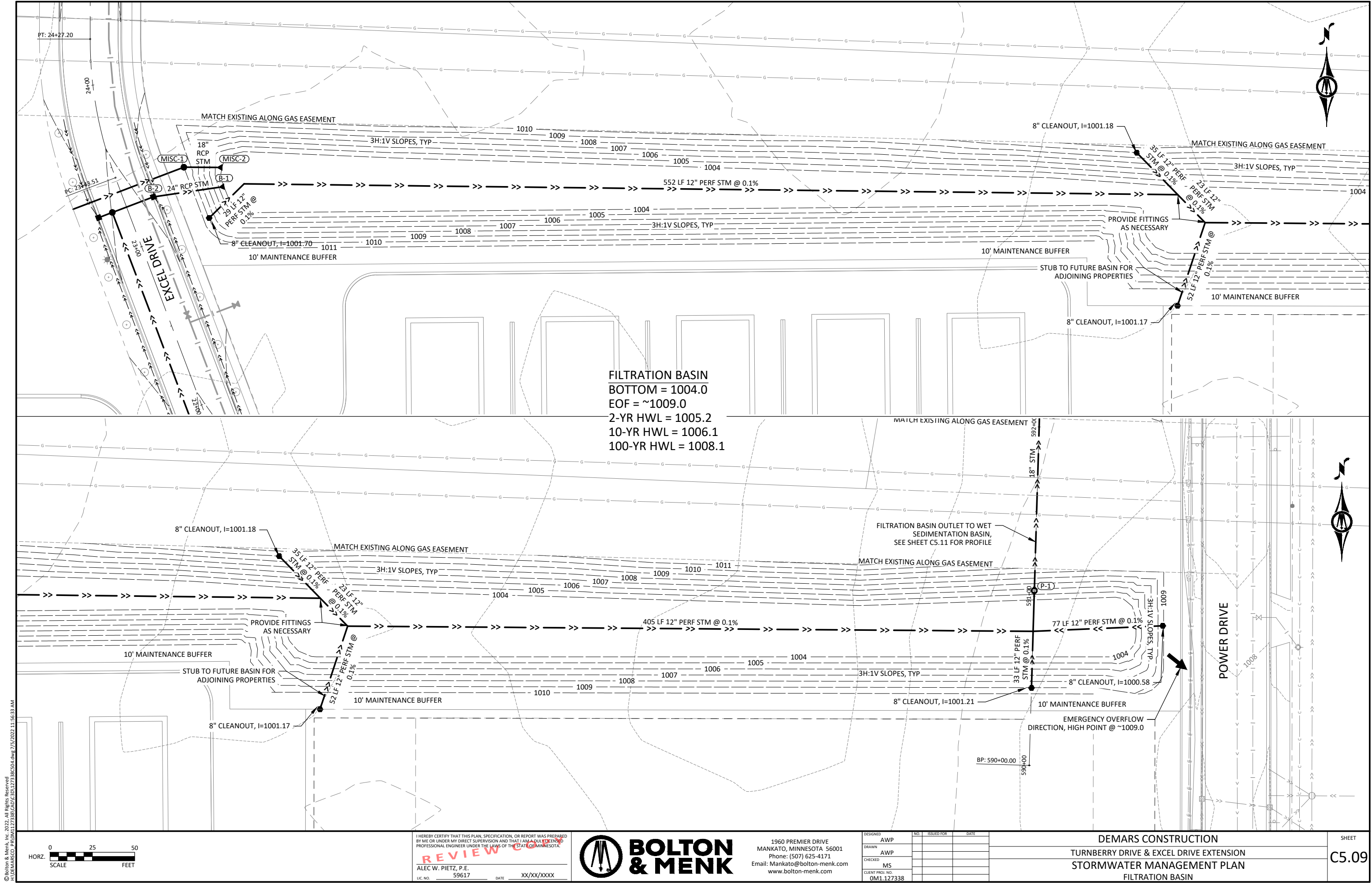
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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
STORM SEWER PLAN & PROFILE
NORTH BASIN OUTLET - STA 570+00 TO 574+00

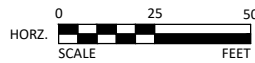
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C5.07



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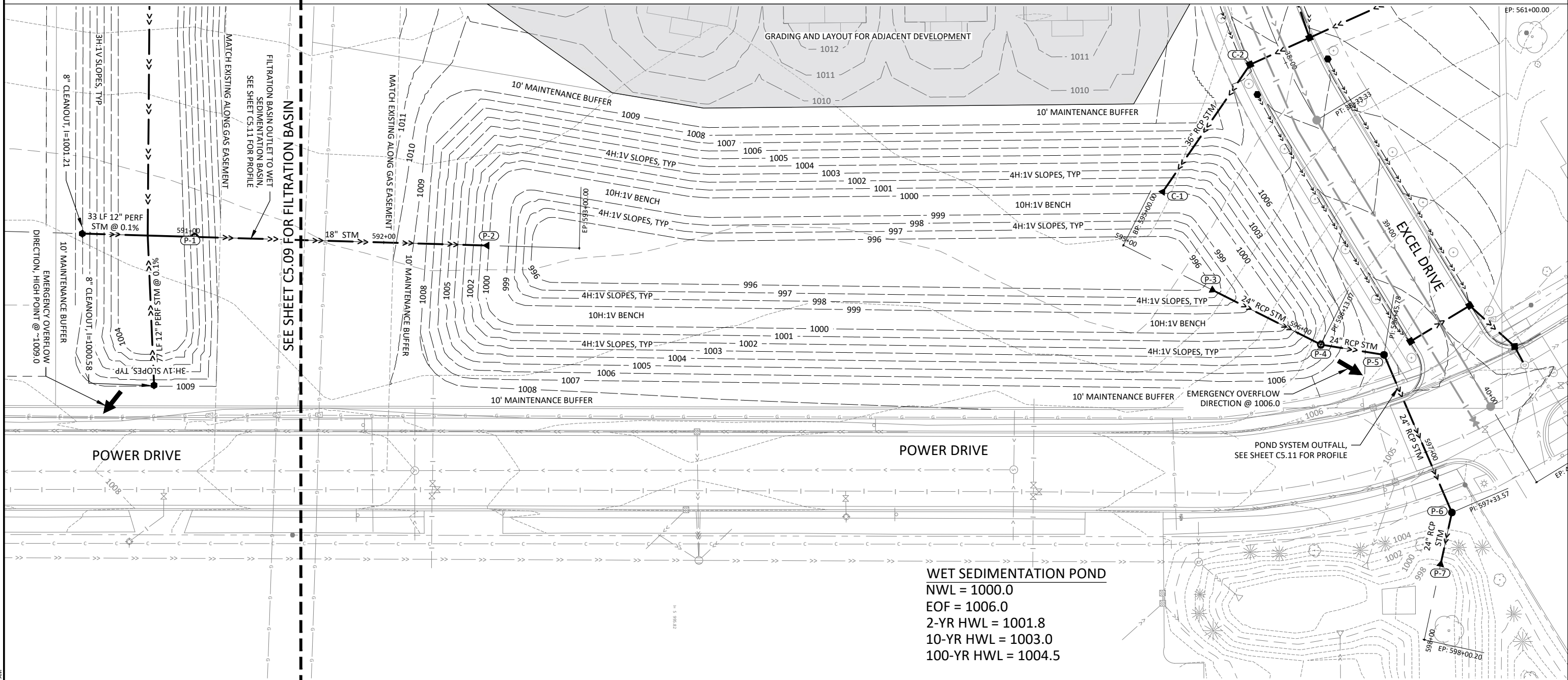


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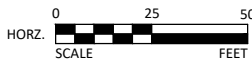
DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
STORMWATER MANAGEMENT PLAN
FILTRATION BASIN

SHEET
C5.09



WET SEDIMENTATION POND
NWL = 1000.0
EOF = 1006.0
2-YR HWL = 1001.8
10-YR HWL = 1003.0
100-YR HWL = 1004.5

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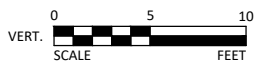
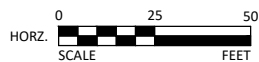
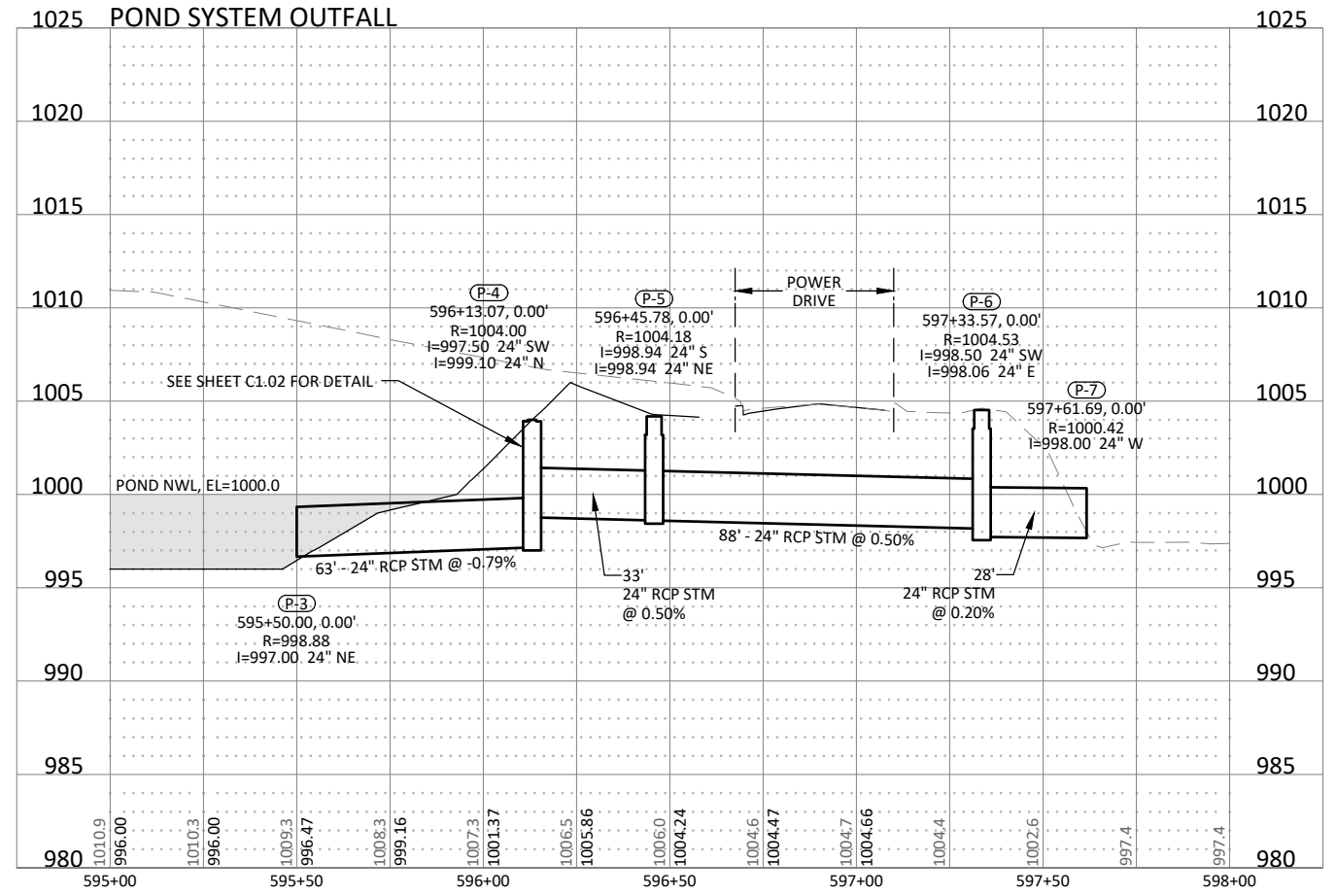
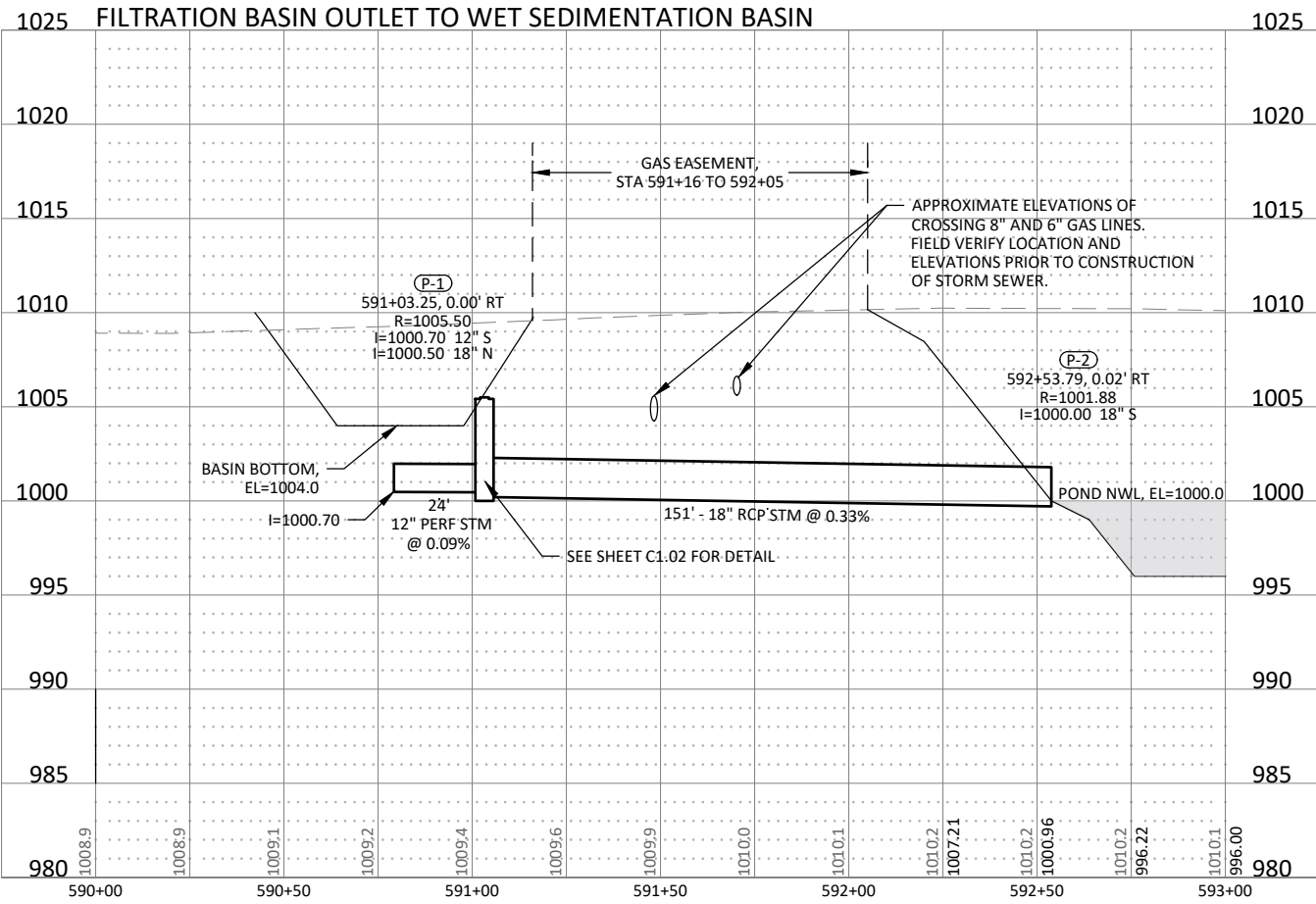


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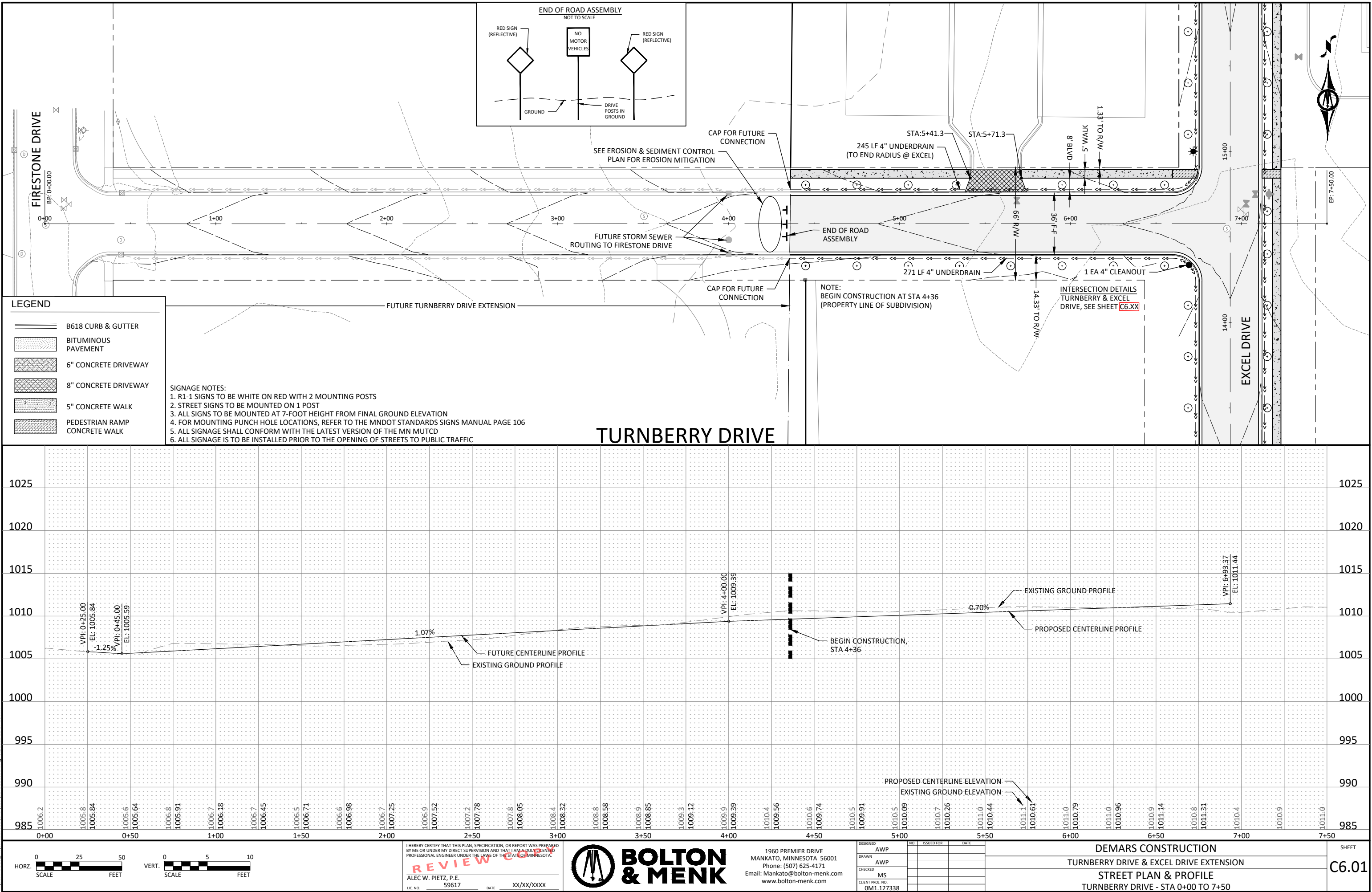
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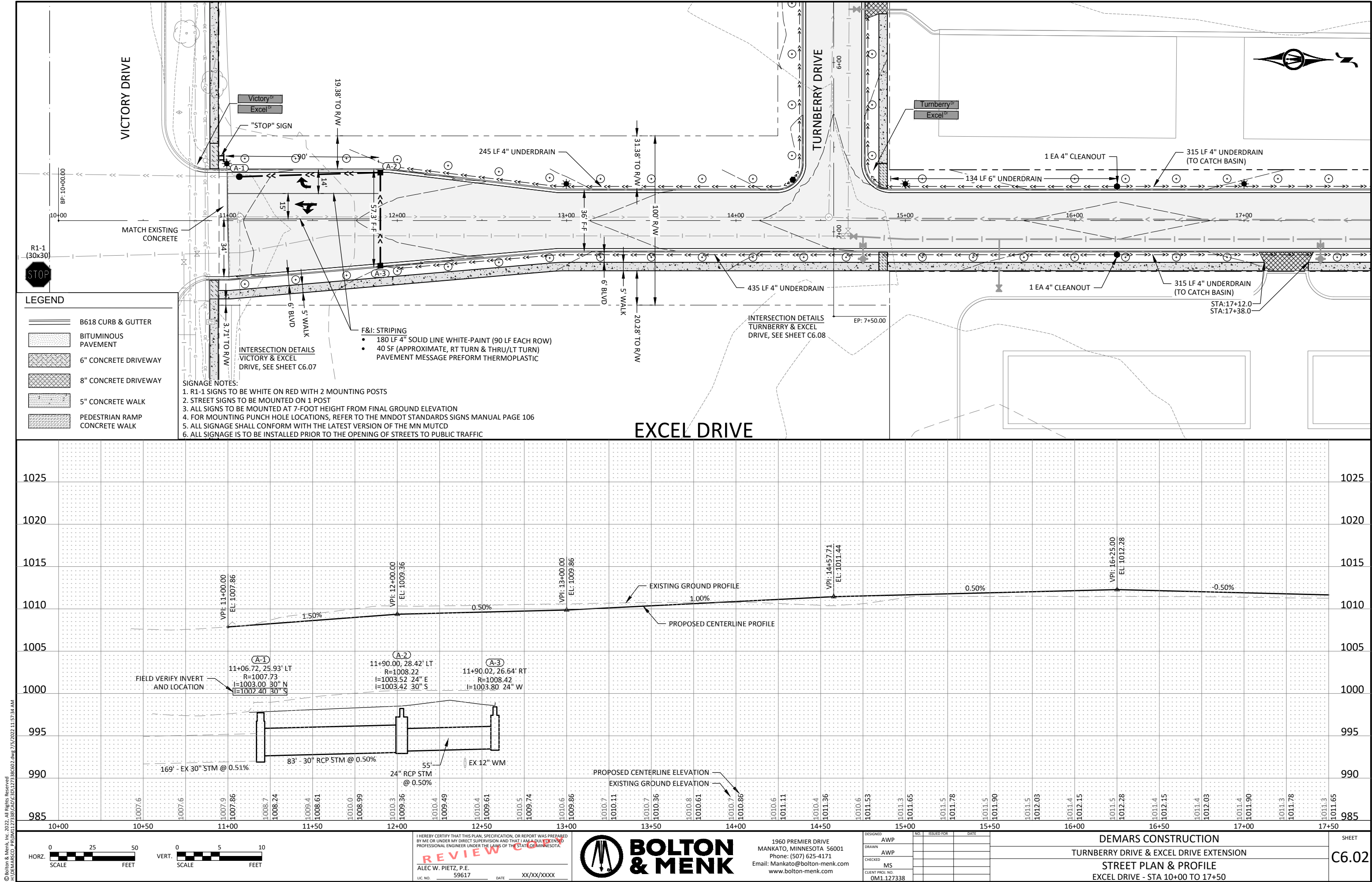
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TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
STORMWATER MANAGEMENT PLAN
WET SEDIMENTATION POND

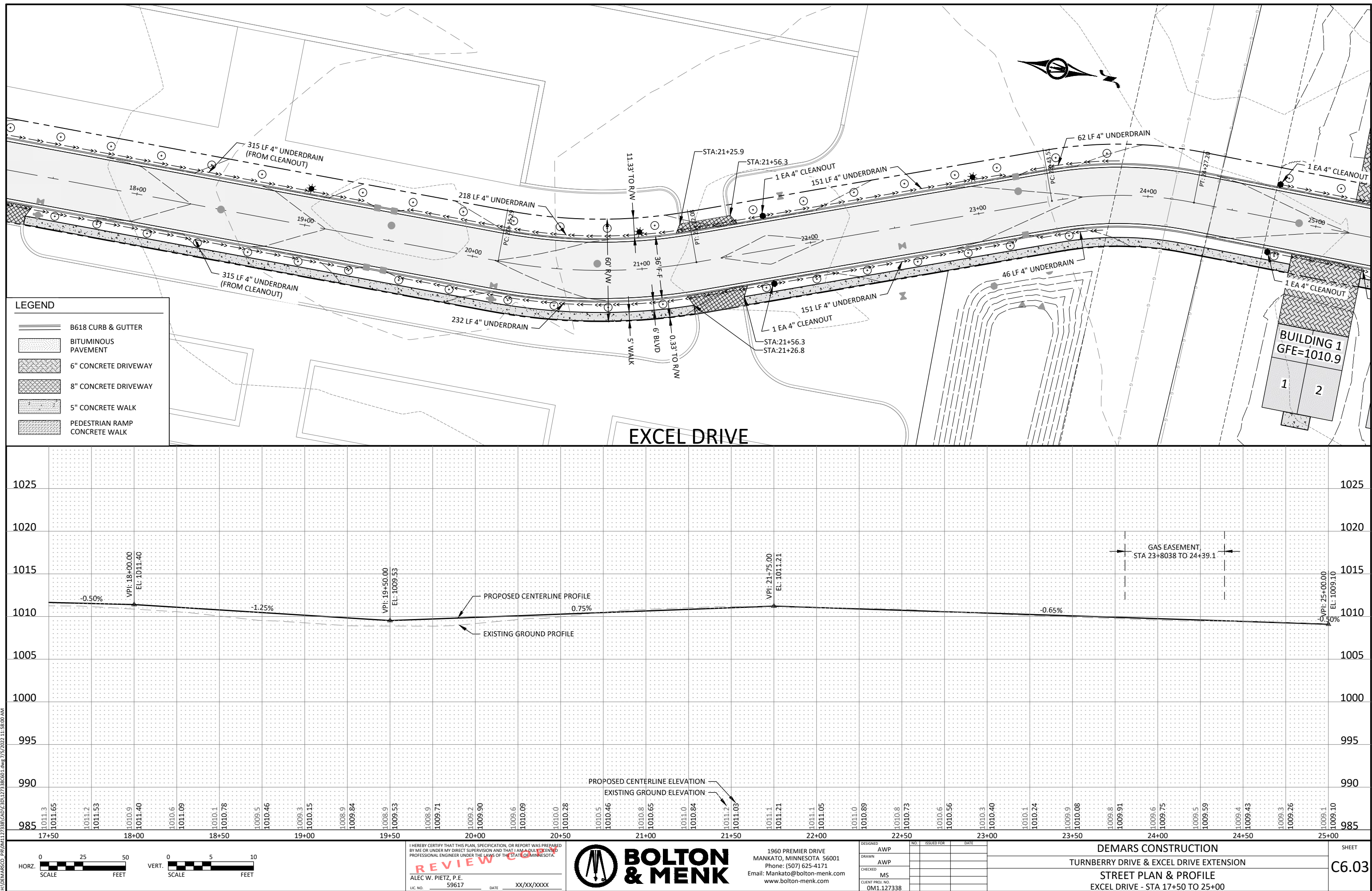
SHEET
C5.10

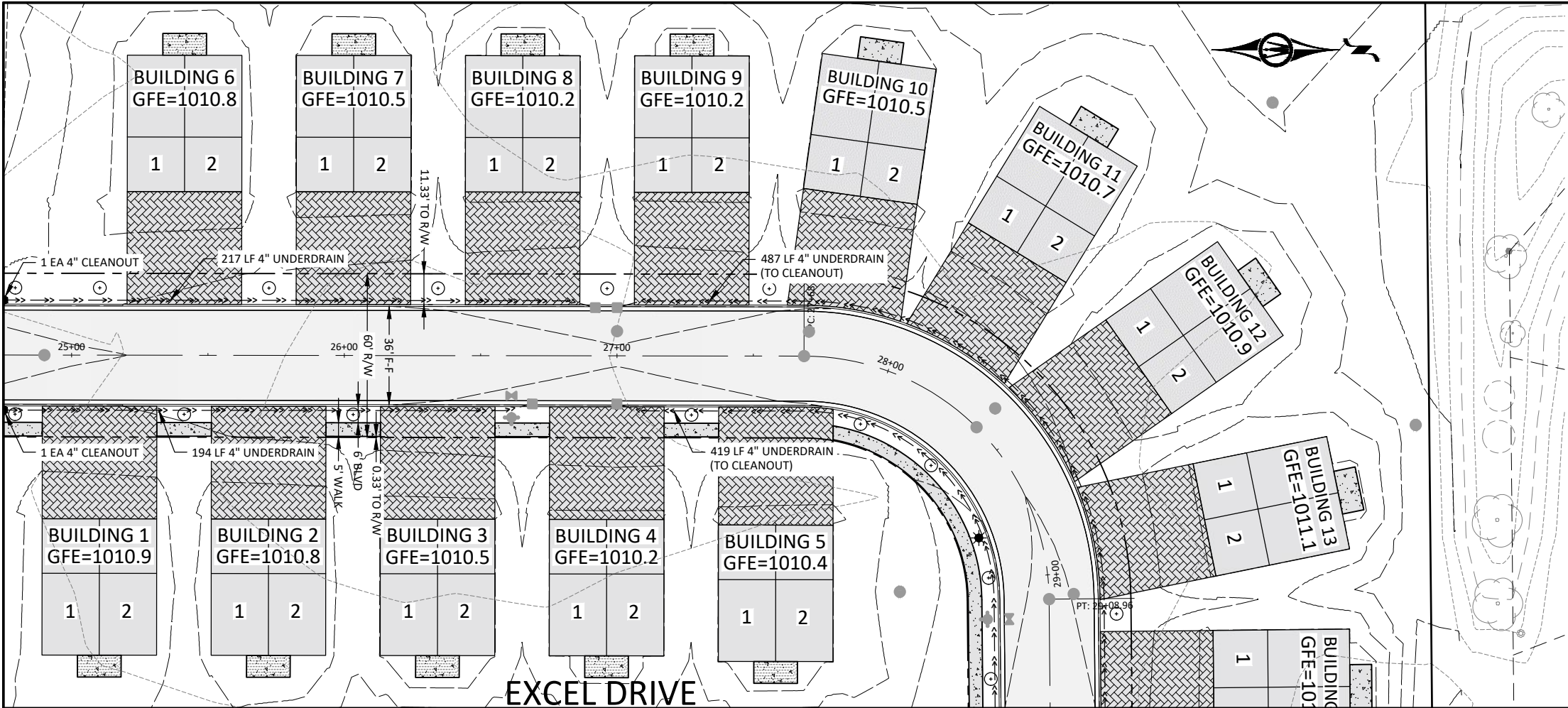


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NOTE:
SEE TOWNHOME DRIVEWAY
TABULATION ON SHEET G1.02

LEGEND

B618 CURB & GUTTER

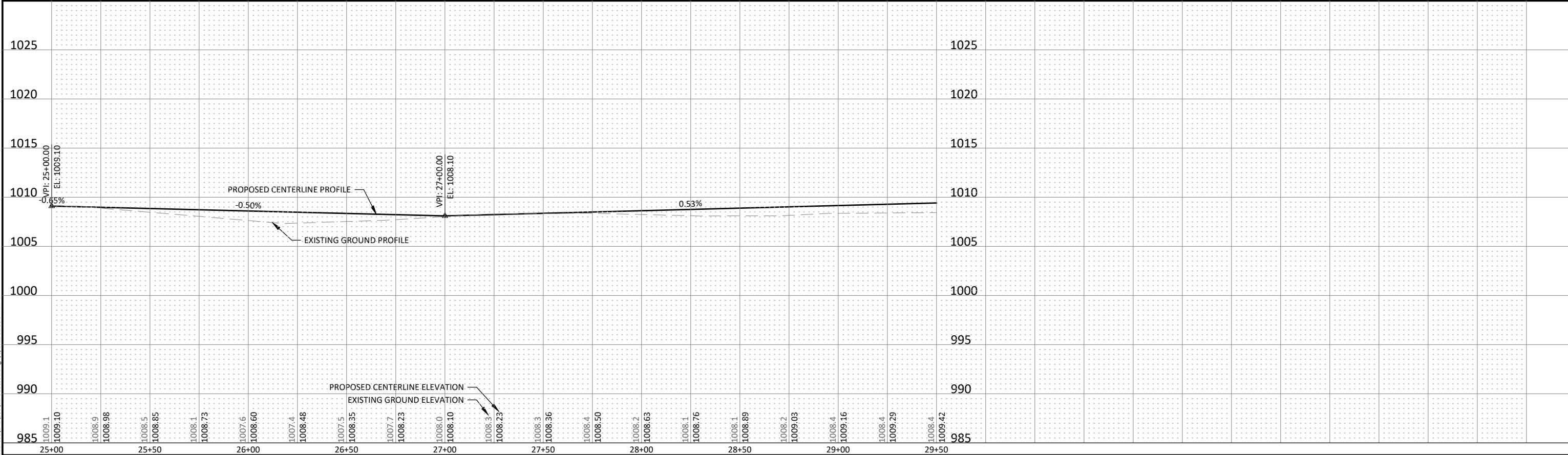
BITUMINOUS PAVEMENT

6" CONCRETE DRIVEWAY

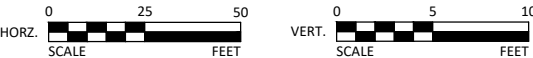
8" CONCRETE DRIVEWAY

5" CONCRETE WALK

PEDESTRIAN RAMP CONCRETE WALK



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DATE XX/XX/XXXX



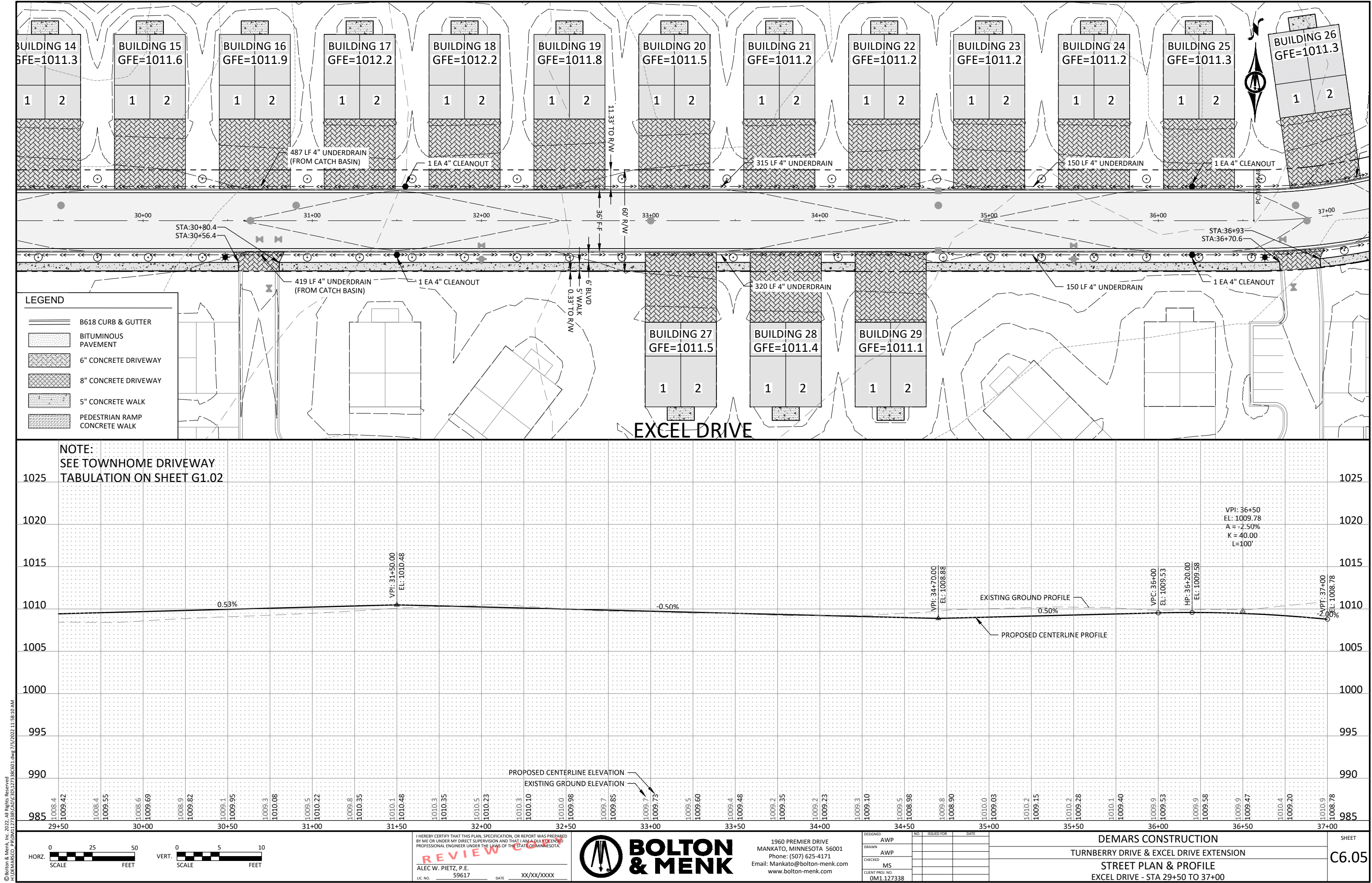
BOLTON & MENK

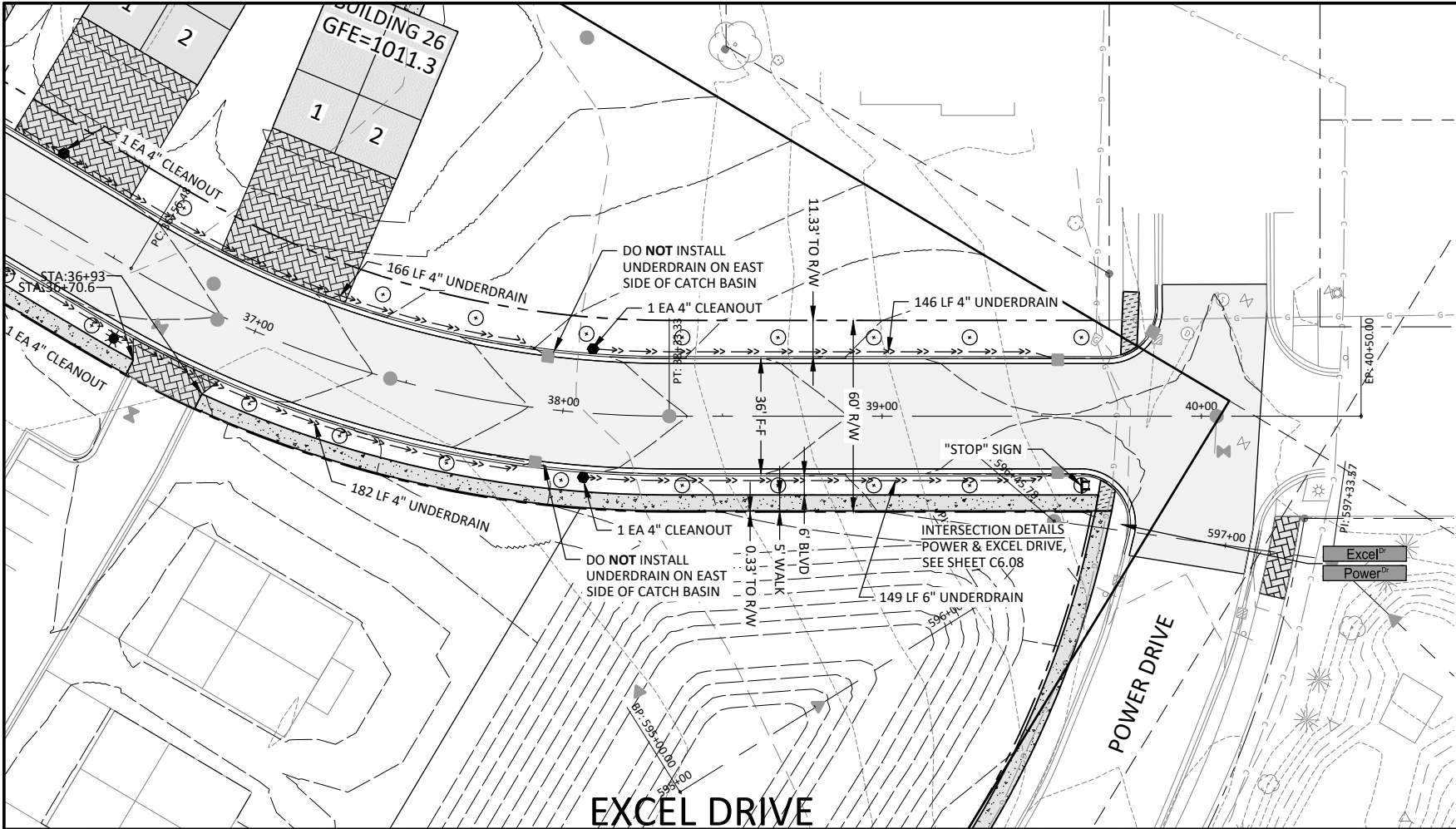
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Phone: (507) 625-4171
Email: Mankato@bolton-menk.com
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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
STREET PLAN & PROFILE
EXCEL DRIVE - STA 25+00 TO 29+50

SHEET
C6.04





NOTE:
SEE TOWNHOME DRIVEWAY
TABULATION ON SHEET G1.02

- SIGNAGE NOTES:
- 1. R1-1 SIGNS TO BE WHITE ON RED WITH 2 MOUNTING POSTS
 - 2. STREET SIGNS TO BE MOUNTED ON 1 POST
 - 3. ALL SIGNS TO BE MOUNTED AT 7-FOOT HEIGHT FROM FINAL GROUND ELEVATION
 - 4. FOR MOUNTING PUNCH HOLE LOCATIONS, REFER TO THE MNDOT STANDARDS SIGNS MANUAL PAGE 106
 - 5. ALL SIGNAGE SHALL CONFORM WITH THE LATEST VERSION OF THE MN MUTCD
 - 6. ALL SIGNAGE IS TO BE INSTALLED PRIOR TO THE OPENING OF STREETS TO PUBLIC TRAFFIC

LEGEND

B618 CURB & GUTTER

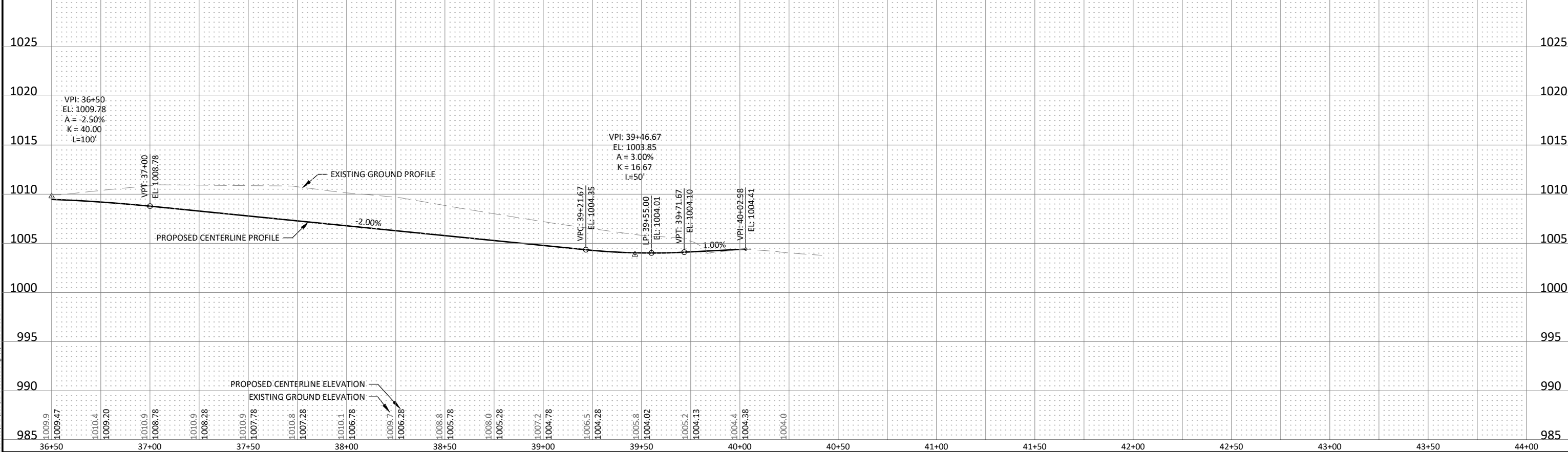
BITUMINOUS PAVEMENT

6" CONCRETE DRIVEWAY

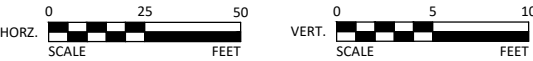
8" CONCRETE DRIVEWAY

5" CONCRETE WALK

PEDESTRIAN RAMP CONCRETE WALK



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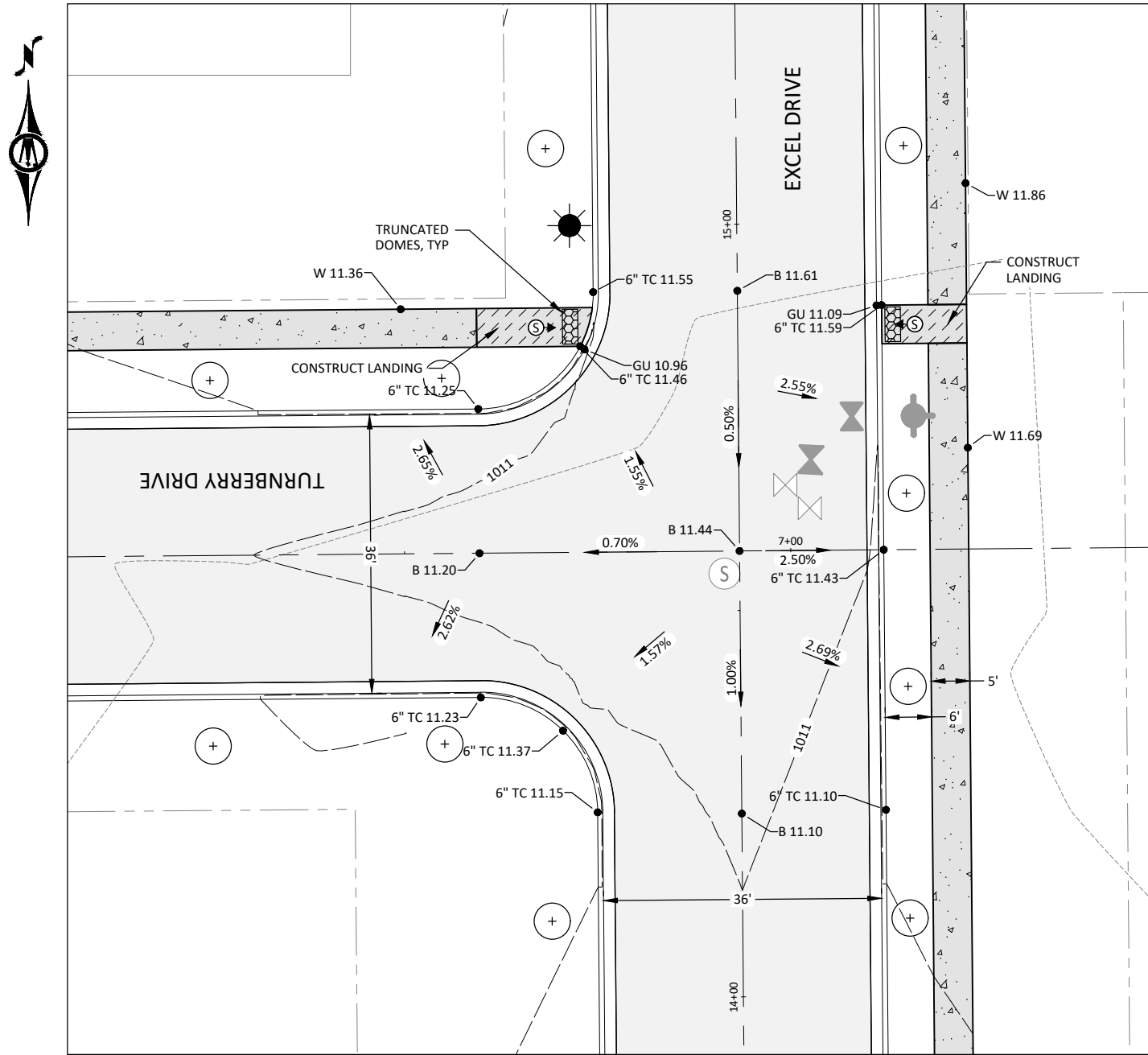
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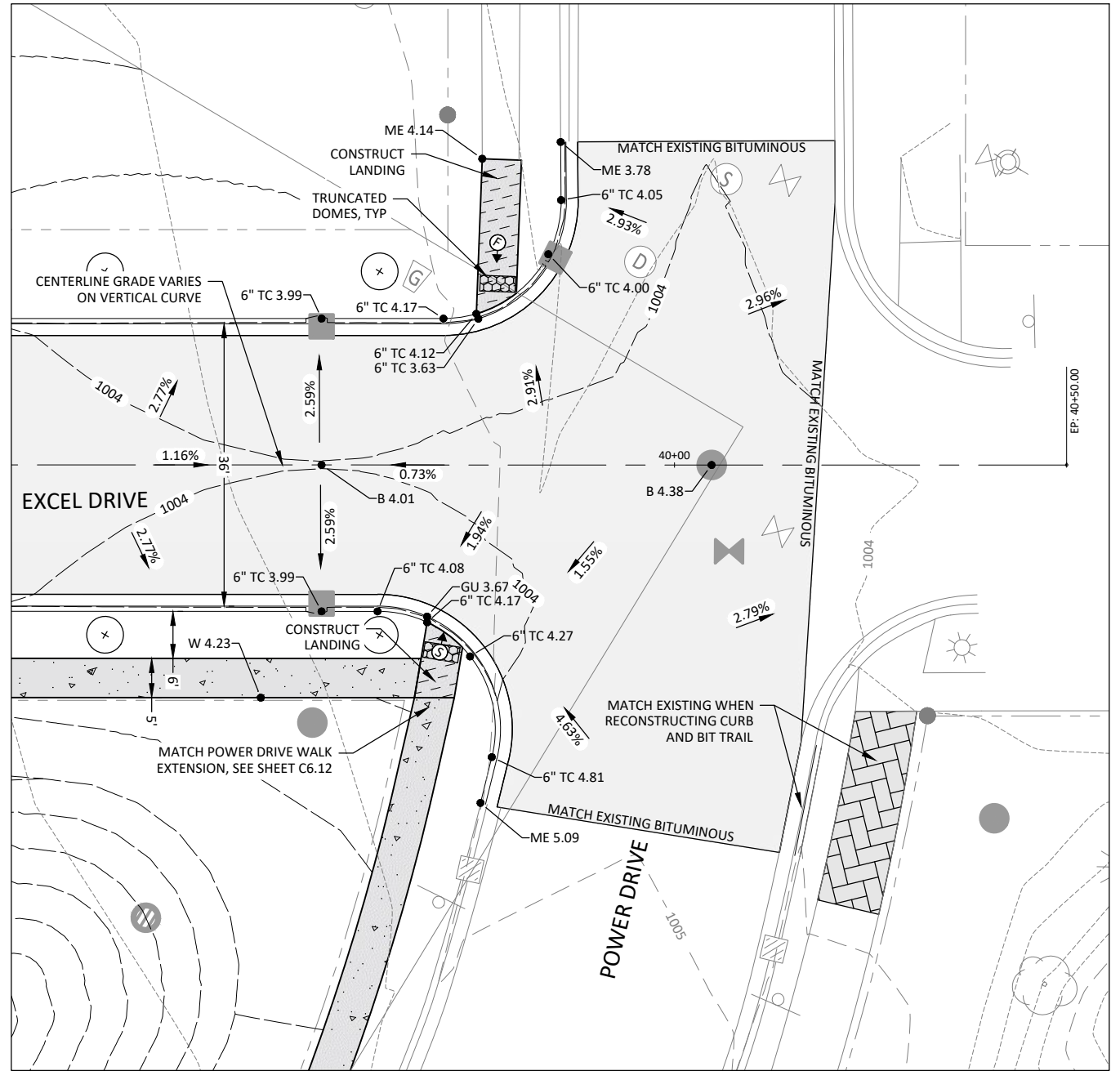
DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
STREET PLAN & PROFILE
EXCEL DRIVE - STA 36+50 TO 44+00

SHEET
C6.06

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TECHNOLOGY CIRCLE/DRIVE (WEST)



PEDESTRIAN RAMP NOTES:

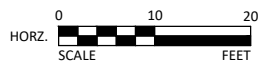
1. LANDING AREAS SHALL BE CONSTRUCTED SEPARATELY FROM RAMPS WITH MINIMUM DIMENSIONS OF 4' X 4' AND MAXIMUM SLOPE OF 2.0% IN ALL DIRECTIONS.
2. LANDINGS AND SIDEWALK BREAKLINE LOCATIONS ARE EXAMPLE AND ARE SUBJECT TO CHANGE IN THE FIELD.
3. SPOT ELEVATIONS INDICATED BY "6" TC" CAN BE SUBTRACTED BY 0.50' FOR THE 0" CURB HEIGHT.

▲ INDICATES PEDESTRIAN RAMP SLOPE EXPECTED TO BE BETWEEN 5.0% MINIMUM AND 8.3%
⑤ MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

▲ INDICATES PEDESTRIAN RAMP SLOPE EXPECTED TO BE GREATER THAN 2.0% AND LESS THAN 5.0% IN
⑥ THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

LEGEND

B= BITUMINOUS
ME= MATCH EXISTING
6" TC= 6" HEIGHT CURB
GU= GUTTER



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REVIEW
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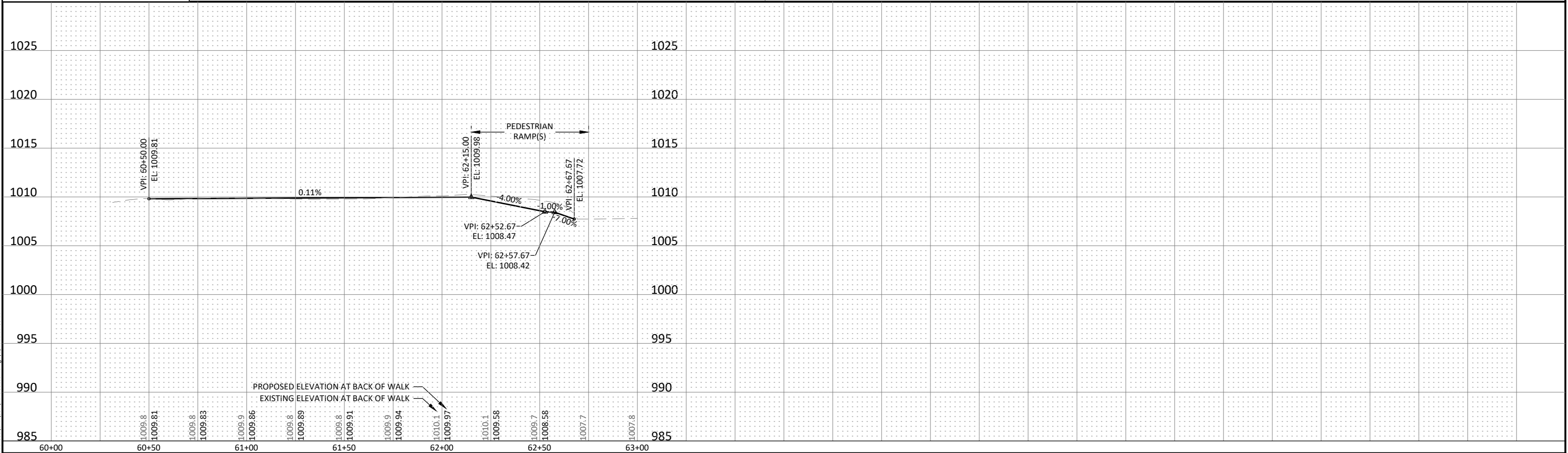
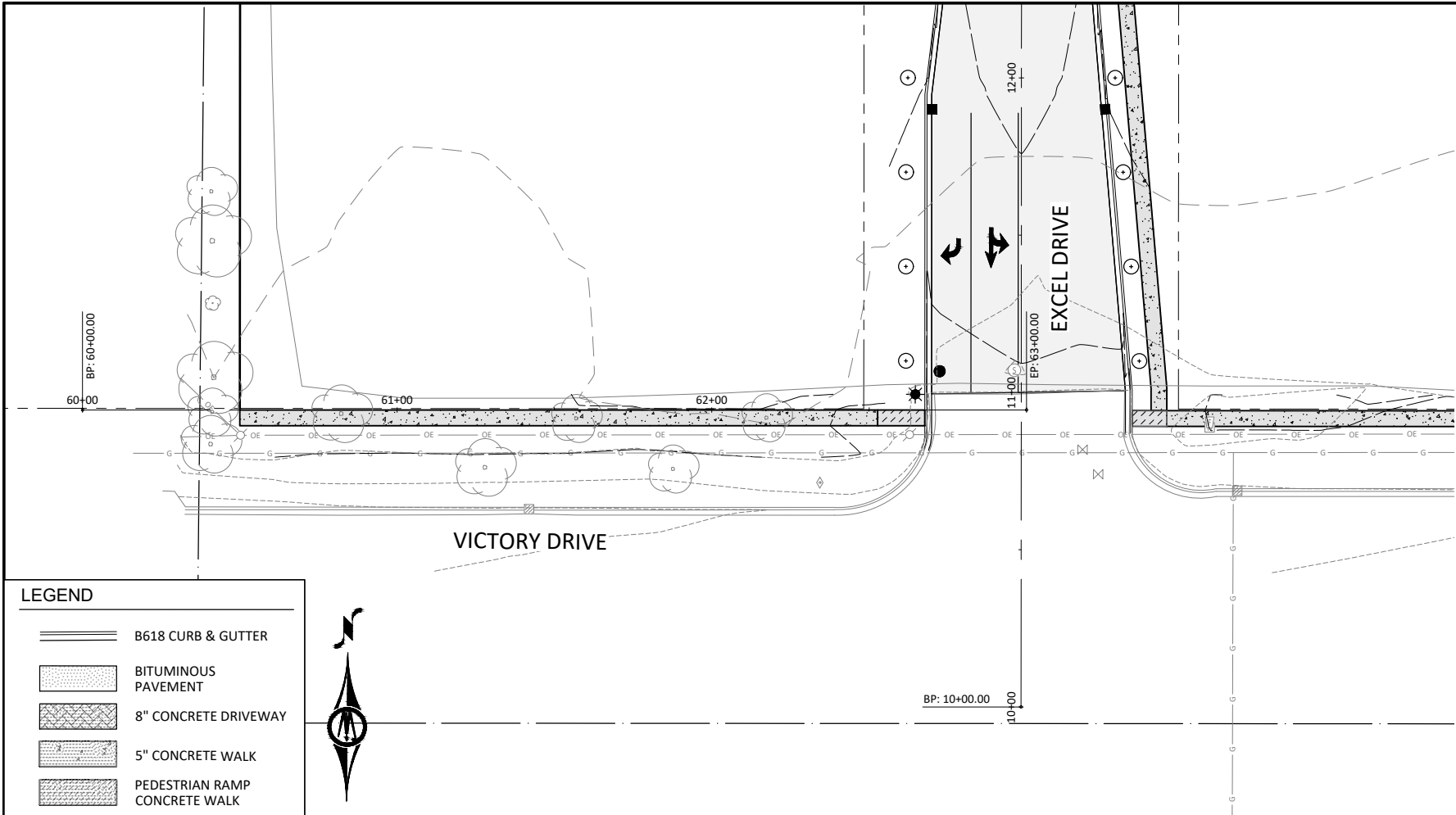
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0M1.127338			

DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
INTERSECTION DETAILS
TURNBERRY - EXCEL DRIVE & POWER - EXCEL DRIVE

SHEET

C6.08



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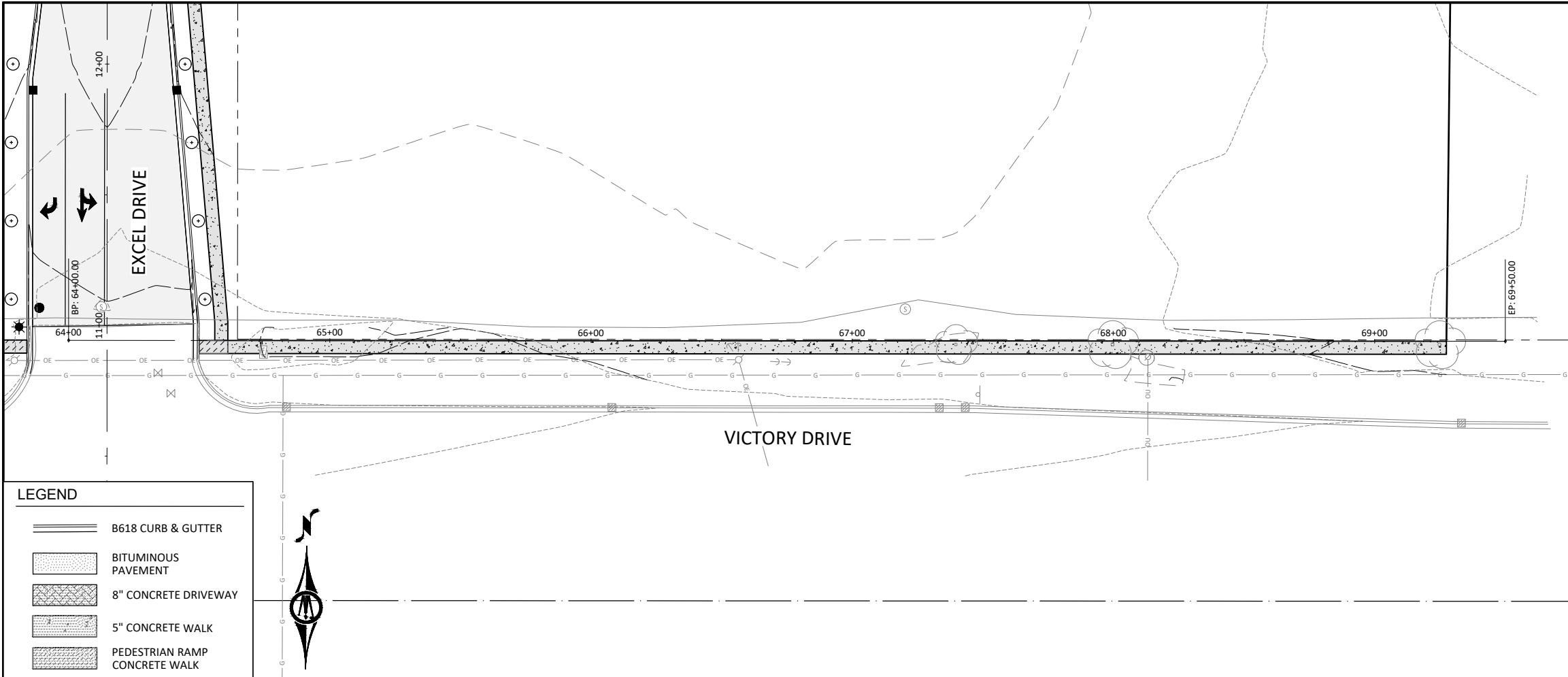


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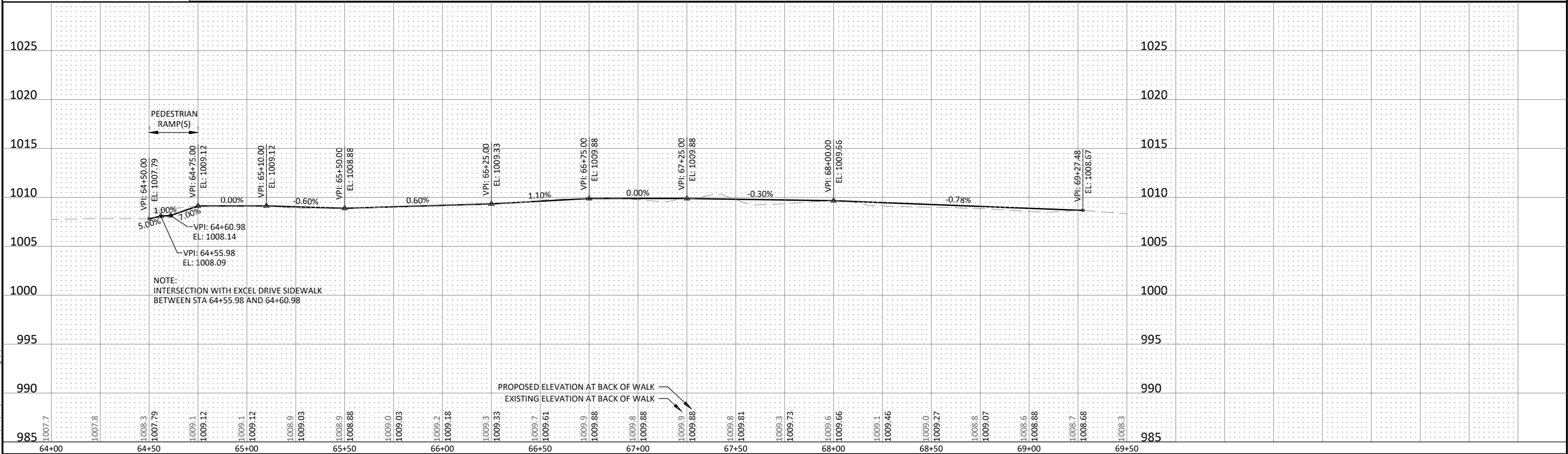
DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
SUBDIVISION SIDEWALK EXTENSIONS
VICTORY DRIVE (WEST OF EXCEL) - STA 60+00 TO 63+00

SHEET
C6.09

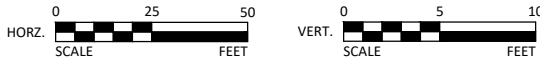


LEGEND

- B618 CURB & GUTTER
- BITUMINOUS PAVEMENT
- 8" CONCRETE DRIVEWAY
- 5" CONCRETE WALK
- PEDESTRIAN RAMP CONCRETE WALK



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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
SUBDIVISION SIDEWALK EXTENSIONS
VICTORY DRIVE (EAST OF EXCEL) - STA 64+00 TO 69+50

SHEET
C6.10



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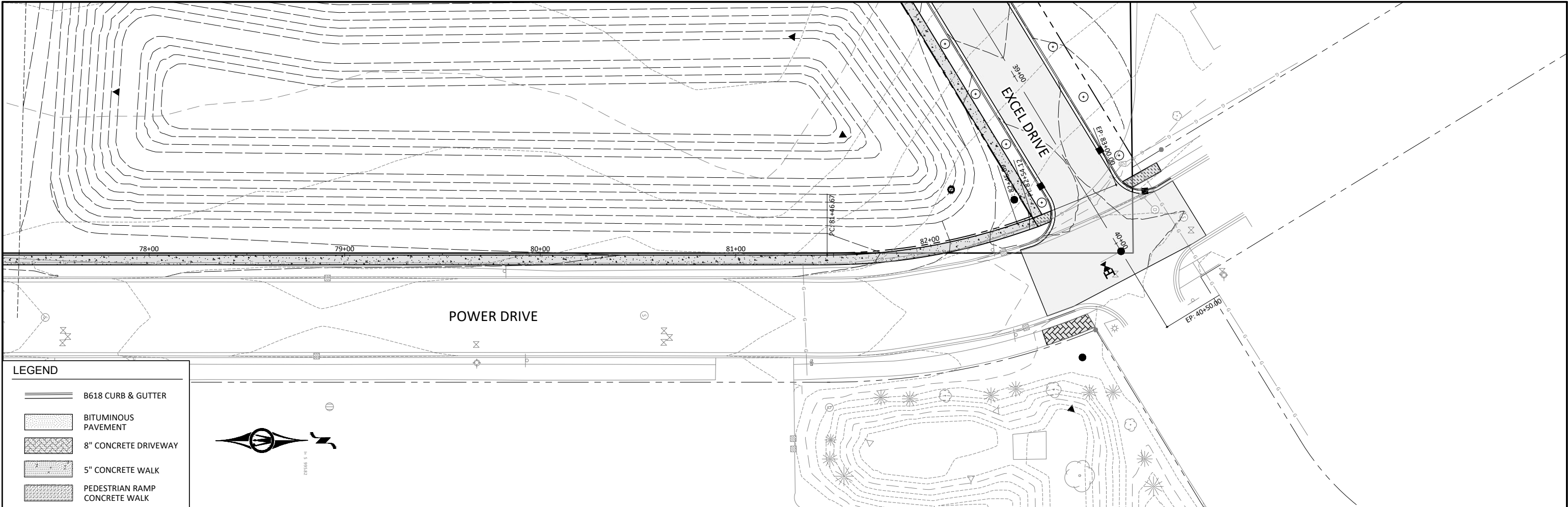


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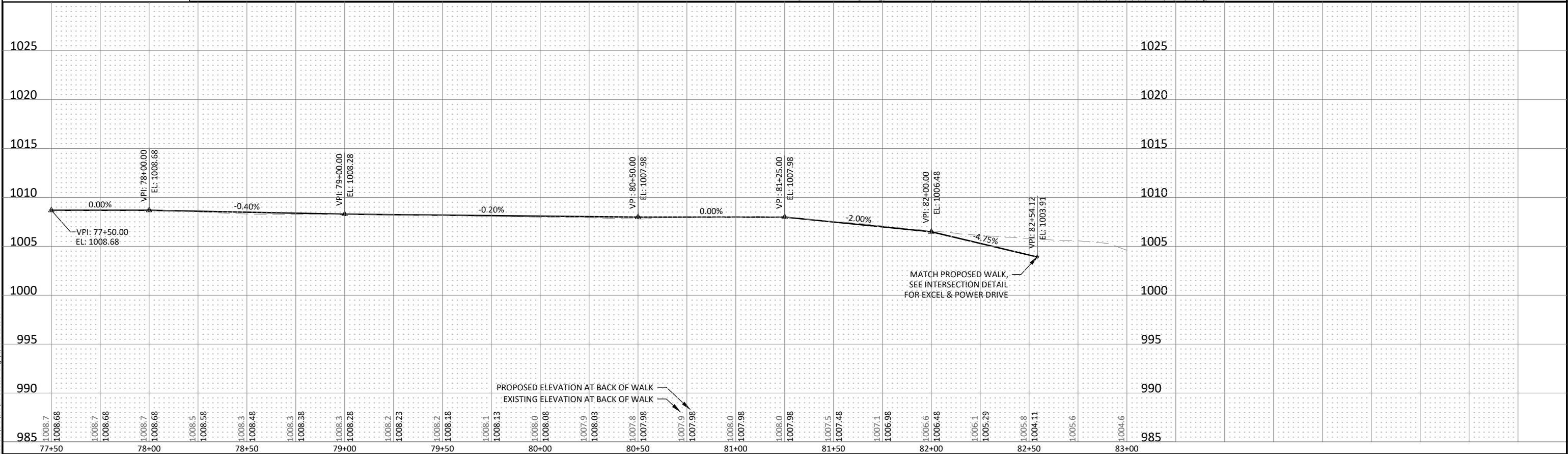
DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
SUBDIVISION SIDEWALK EXTENSIONS
POWER DRIVE - STA 70+00 TO 77+50

SHEET
C6.11



LEGEND

- B618 CURB & GUTTER
- BITUMINOUS PAVEMENT
- 8" CONCRETE DRIVEWAY
- 5" CONCRETE WALK
- PEDESTRIAN RAMP
- CONCRETE WALK



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HORIZ. SCALE 0 25 50 FEET

VERT. SCALE 0 5 10 FEET

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REVIEW

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DEMARS CONSTRUCTION
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SUBDIVISION SIDEWALK EXTENSIONS
POWER DRIVE - STA 77+50 TO 83+00

SHEET
C6.12

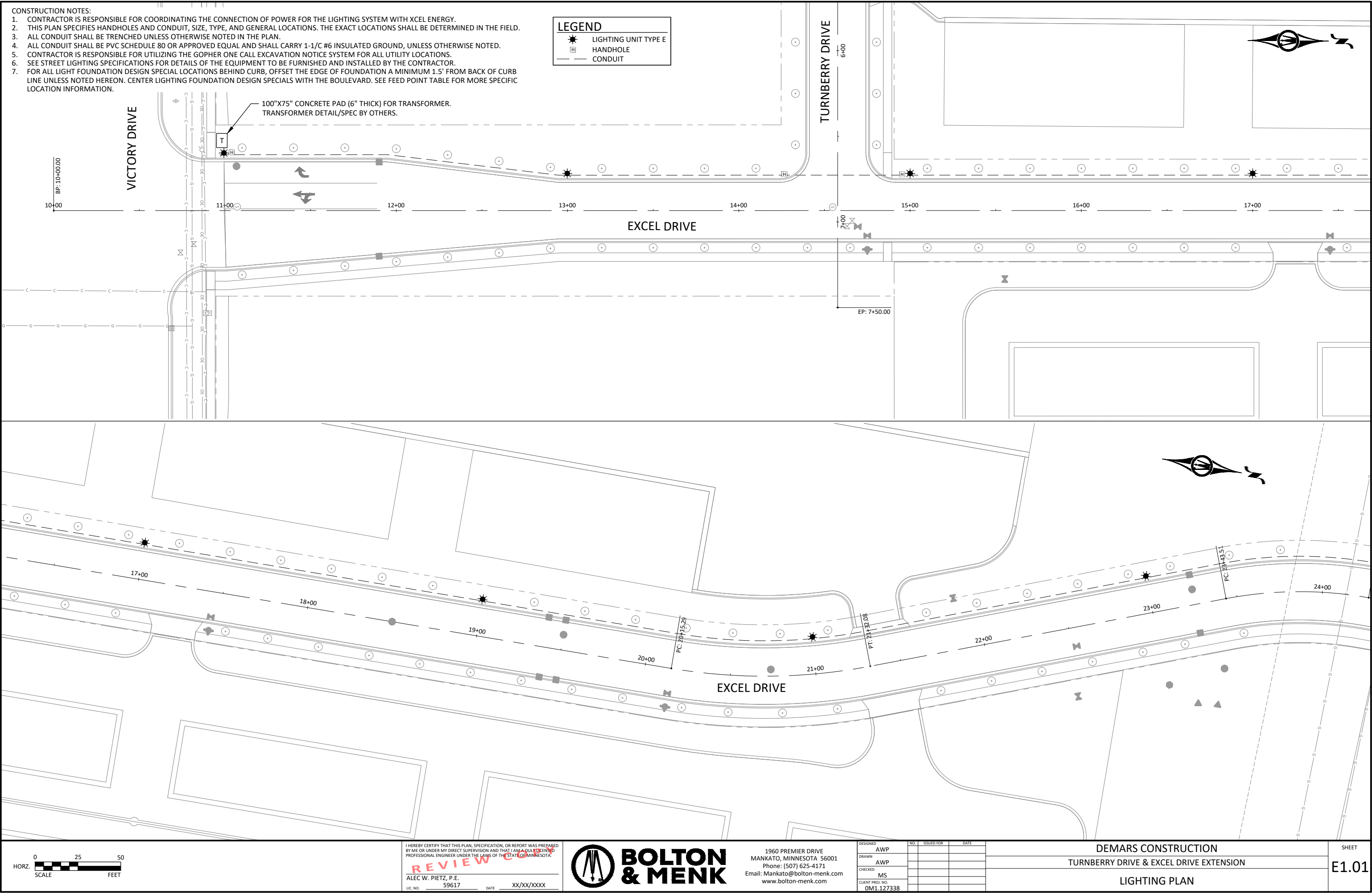
- CONSTRUCTION NOTES:
1. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE CONNECTION OF POWER FOR THE LIGHTING SYSTEM WITH XCEL ENERGY.
 2. THIS PLAN SPECIFIES HANDHOLES AND CONDUIT, SIZE, TYPE, AND GENERAL LOCATIONS. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD.
 3. ALL CONDUIT SHALL BE TRENCHED UNLESS OTHERWISE NOTED IN THE PLAN.
 4. ALL CONDUIT SHALL BE PVC SCHEDULE 80 OR APPROVED EQUAL AND SHALL CARRY 1-1/C #6 INSULATED GROUND, UNLESS OTHERWISE NOTED.
 5. CONTRACTOR IS RESPONSIBLE FOR UTILIZING THE GOPHER ONE CALL EXCAVATION NOTICE SYSTEM FOR ALL UTILITY LOCATIONS.
 6. SEE STREET LIGHTING SPECIFICATIONS FOR DETAILS OF THE EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
 7. FOR ALL LIGHT FOUNDATION DESIGN SPECIAL LOCATIONS BEHIND CURB, OFFSET THE EDGE OF FOUNDATION A MINIMUM 1.5' FROM BACK OF CURB LINE UNLESS NOTED HEREON. CENTER LIGHTING FOUNDATION DESIGN SPECIALS WITH THE BOULEVARD. SEE FEED POINT TABLE FOR MORE SPECIFIC LOCATION INFORMATION.

LEGEND

 LIGHTING UNIT TYPE E

 HANDHOLE

 CONDUIT

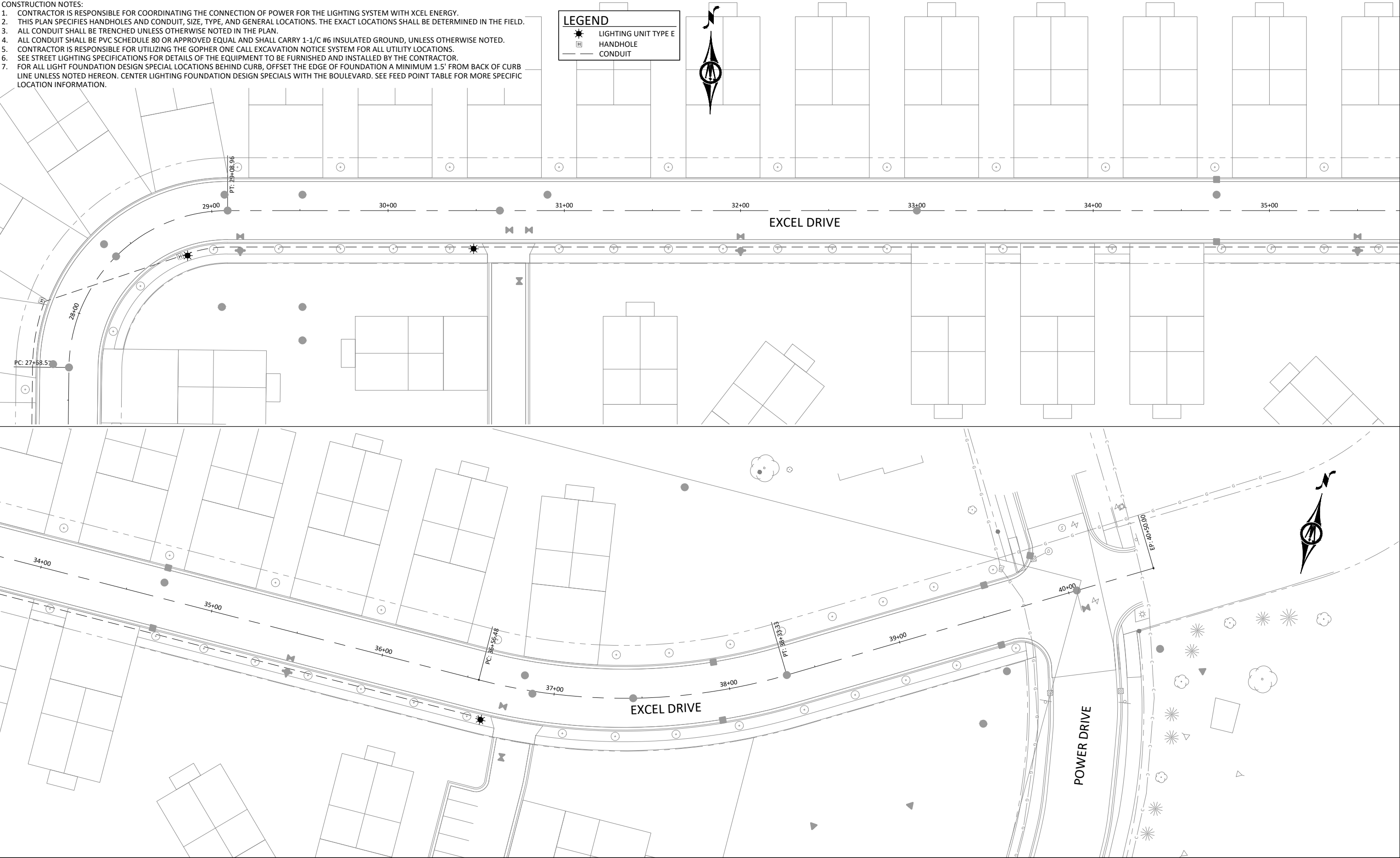


CONSTRUCTION NOTES:

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2. THIS PLAN SPECIFIES HANDHOLES AND CONDUIT, SIZE, TYPE, AND GENERAL LOCATIONS. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD.
3. ALL CONDUIT SHALL BE TRENCHED UNLESS OTHERWISE NOTED IN THE PLAN.
4. ALL CONDUIT SHALL BE PVC SCHEDULE 80 OR APPROVED EQUAL AND SHALL CARRY 1-1/2" #6 INSULATED GROUND, UNLESS OTHERWISE NOTED.
5. CONTRACTOR IS RESPONSIBLE FOR UTILIZING THE GOPHER ONE CALL EXCAVATION NOTICE SYSTEM FOR ALL UTILITY LOCATIONS.
6. SEE STREET LIGHTING SPECIFICATIONS FOR DETAILS OF THE EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
7. FOR ALL LIGHT FOUNDATION DESIGN SPECIAL LOCATIONS BEHIND CURB, OFFSET THE EDGE OF FOUNDATION A MINIMUM 1.5' FROM BACK OF CURB LINE UNLESS NOTED HEREON. CENTER LIGHTING FOUNDATION DESIGN SPECIALS WITH THE BOULEVARD. SEE FEED POINT TABLE FOR MORE SPECIFIC LOCATION INFORMATION.

LEGEND

-  LIGHTING UNIT TYPE E
-  HANDHOLE
-  CONDUIT



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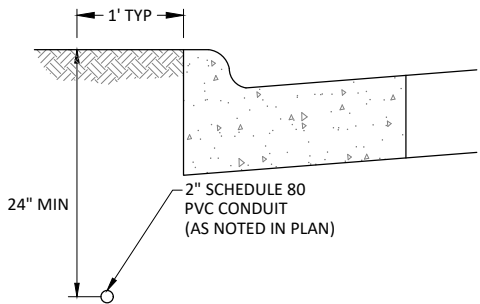


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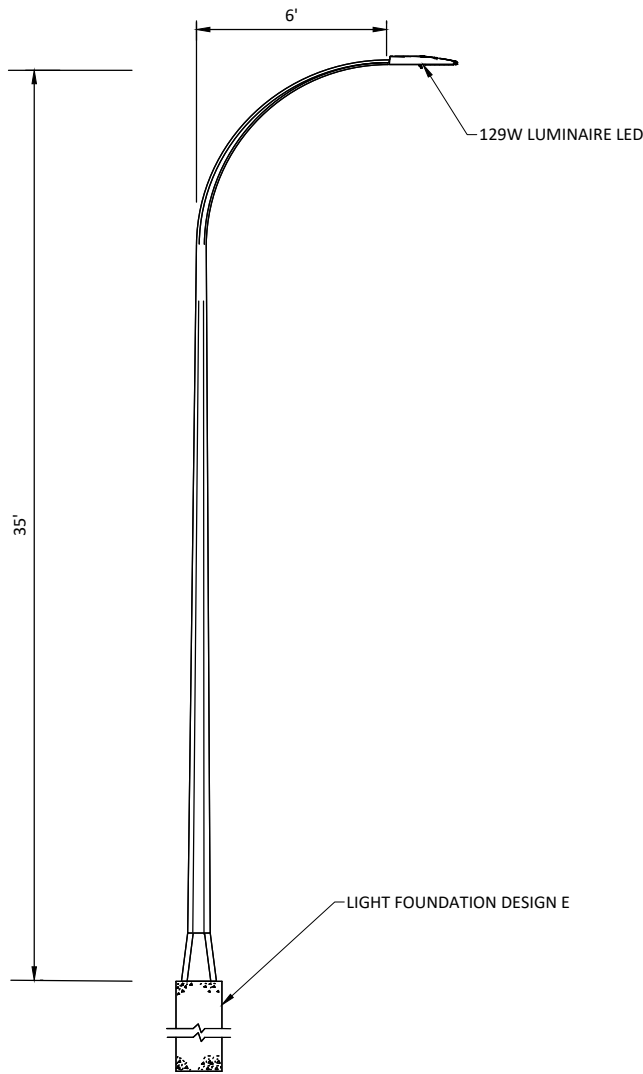
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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
LIGHTING PLAN

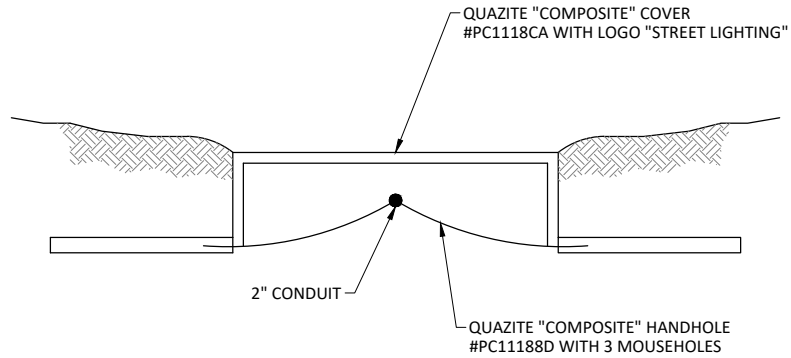
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CONDUIT INSTALLATION
NOT TO SCALE



LIGHTING UNIT TYPE E
NOT TO SCALE



HANDHOLE
NOT TO SCALE

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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
LIGHTING DETAILS

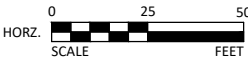
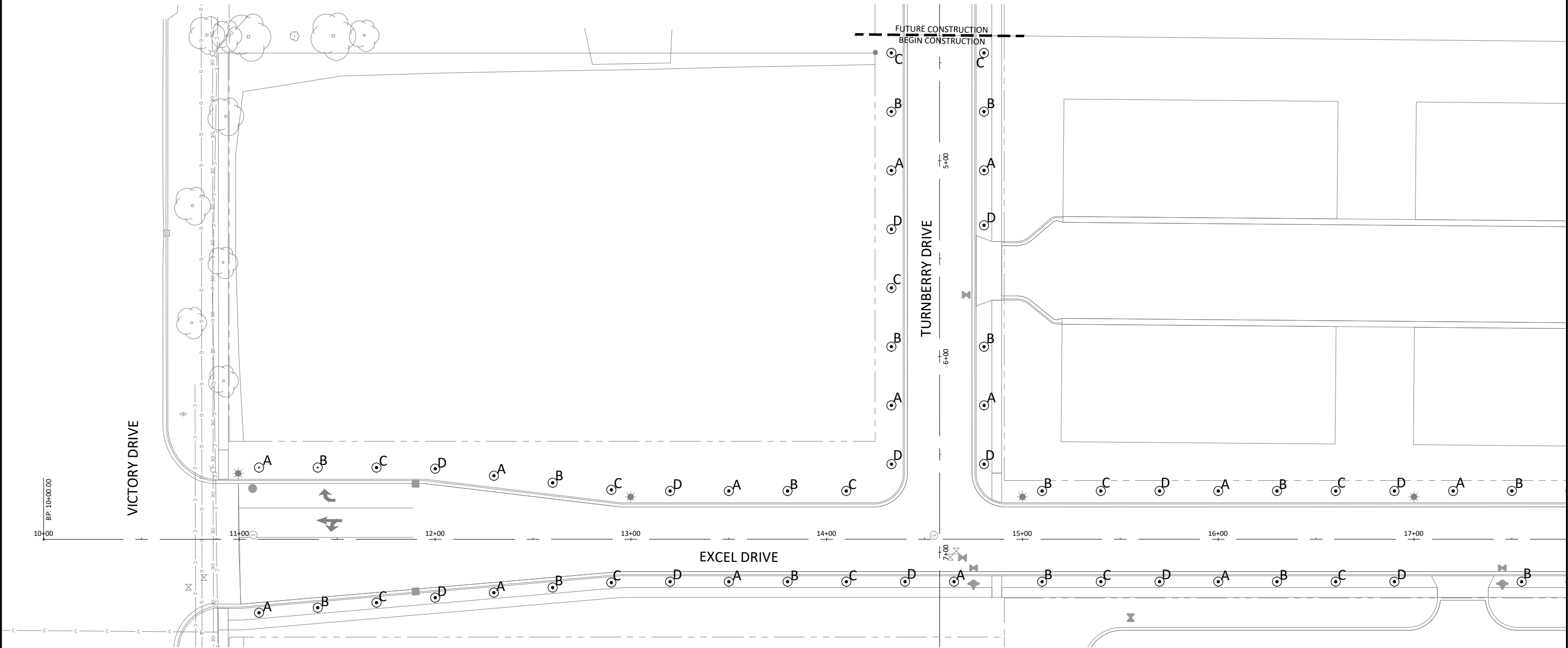
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LEGEND

- A BICOLOR OAK
- B DISCOVERY ELM
- C HACKBERRY
- D HONEY LOCUST



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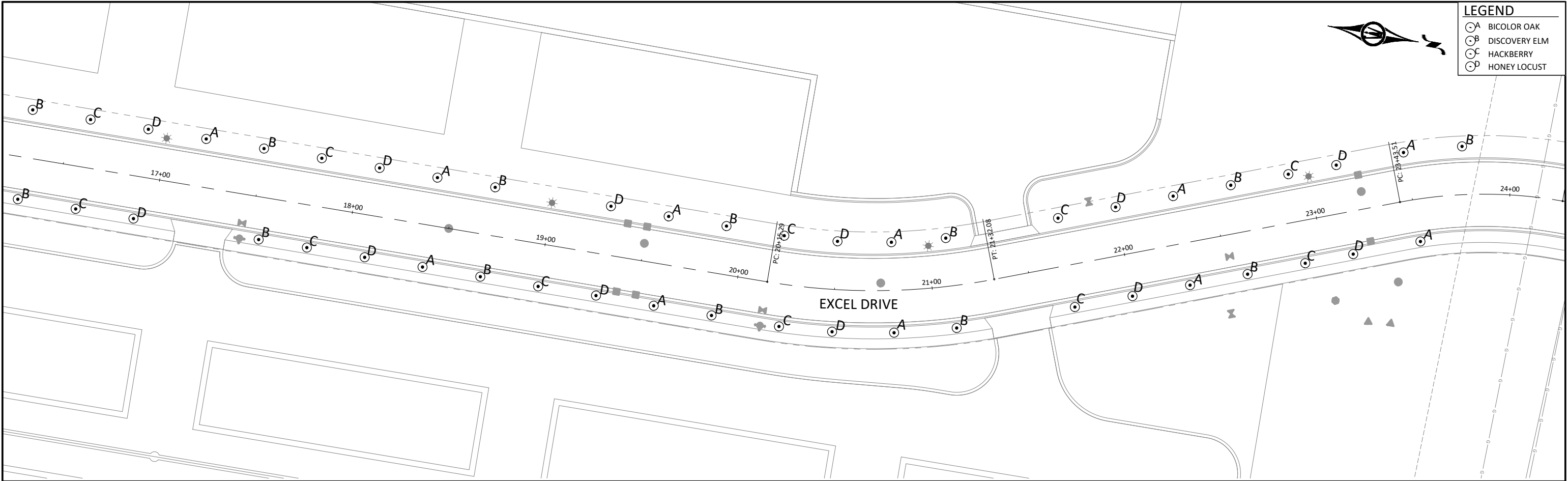
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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
TREE PLANTING PLAN

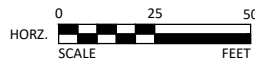
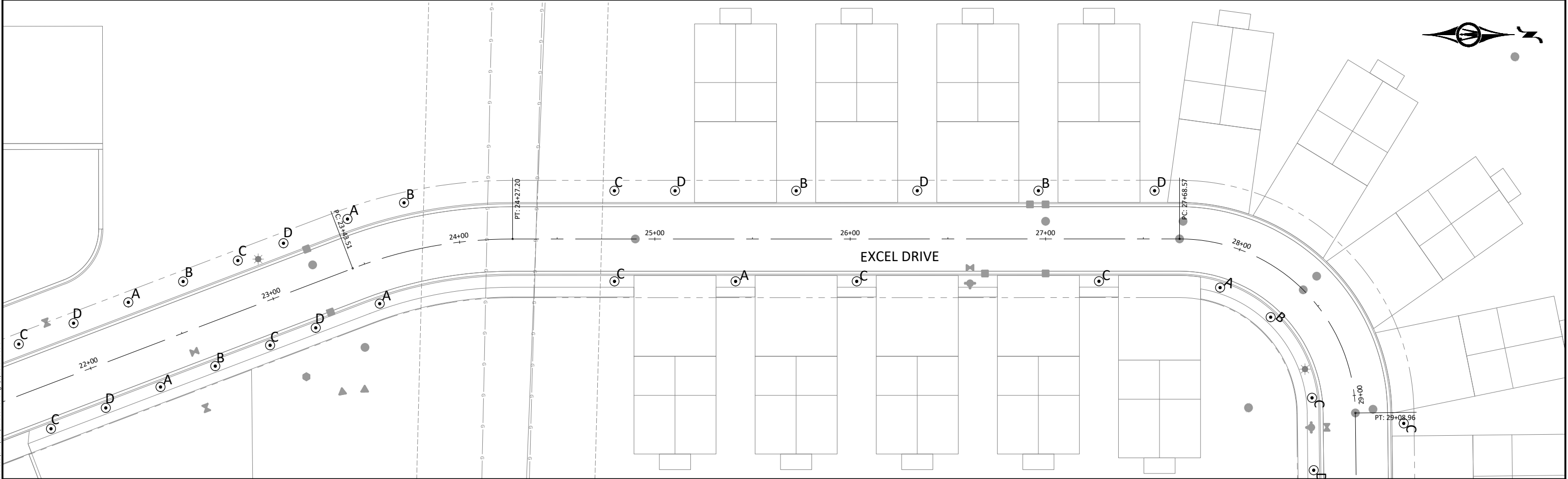
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LEGEND	
	BICOLOR OAK
	DISCOVERY ELM
	HACKBERRY
	HONEY LOCUST



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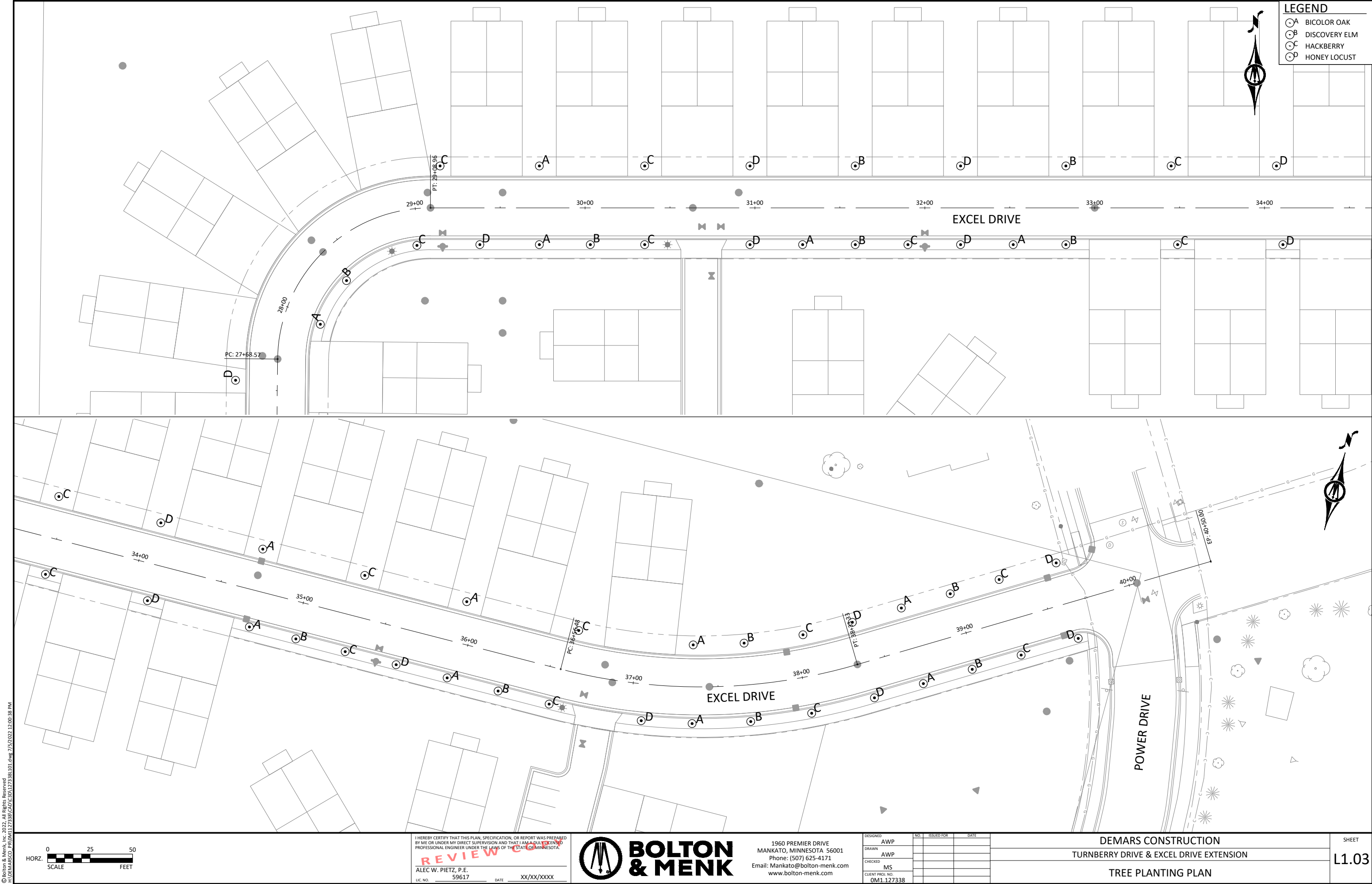
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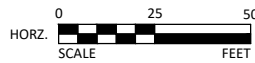
DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
TREE PLANTING PLAN

SHEET
L1.02



LEGEND	
	A BICOLOR OAK
	B DISCOVERY ELM
	C HACKBERRY
	D HONEY LOCUST

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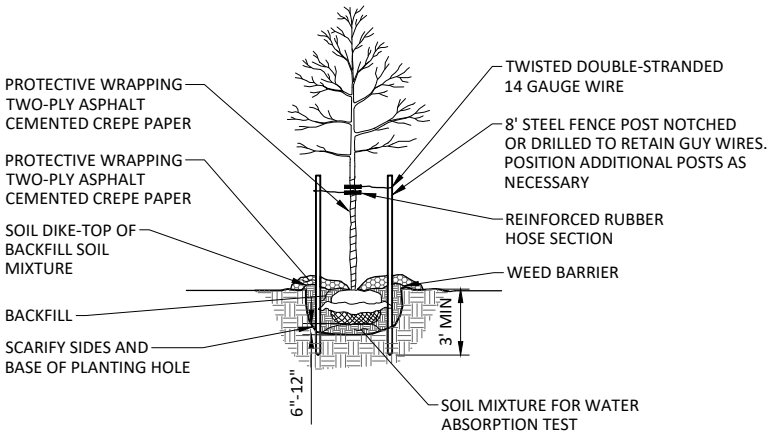
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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
TREE PLANTING PLAN

SHEET
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TREE PLANTING SCHEDULE TO BE INCLUDED WITH FINAL PLANS

- 1. PROVIDE AND INSTALL HEALTHY PLANT MATERIALS THAT MEET ALL SPECIFICATIONS AND ARE OF THE SIZE, TYPE AND SPECIES NAMED ON THE PLANT SCHEDULE AND SHOWN ON THE PLANS.
- 2. DIG PLANT HOLE 1'-0" MINIMUM LARGER ON ALL SIDES THAN ROOT BALL.
- 3. PRIOR TO PLACING TREE, SCARIFY BOTTOM AND SIDES OF THE PLANTING HOLE.
- 4. TEST SOIL ABSORPTION. FILL HOLE PARTIALLY WITH SUPPLEMENTED SOIL MIXTURE, ADD WATER AND ALLOW TO PUDDLE AND SETTLE PRIOR TO SETTING TREE.
- 5. AFTER PUDDLING HAS SETTLED, SET TREE AND BACK FILL WITH SUPPLEMENTED SOIL MIXTURE.
- 6. WATER THOROUGHLY AND ADD BACK FILL AS NEEDED AFTER MOISTURE IS ABSORBED.
- 7. BUILD SOIL DIKE AROUND PERIPHERY OF TREE TO HOLD WATER.
- 8. AFTER SETTLEMENT, MULCH WITH MINIMUM 4" LAYER SHREDDED BARK, WOOD CHIPS OR AS OTHERWISE SPECIFIED. DO NOT MULCH UP AGAINST THE TRUNK.
- 9. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF THE TREE.



DECIDUOUS TREE PLANTING
NOT TO SCALE

- BAG & BALL PLANTING NOTE:
- 1. REMOVE WRAPPING AND ALL TIES OR STRAPS. IF ROOT BALL IS WRAPPED IN BURLAP THE LOWER ½ PORTION OF THE FABRIC MAY BE LEFT AT THE BOTTOM OF THE HOLE. SYNTHETIC WRAP MUST BE REMOVED AND PROPERLY DISPOSED.
 - 2. LOOSEN ROOTS TO ENSURE THEY ARE NOT GIRDLING THE ROOT BALL.
 - 3. SALVAGE AND REUSE ALL SOIL THAT CAME WITH THE ROOT BALL.
 - 4. IF ROOT BALL IS EXTREMELY DRY WATER IT PRIOR TO PLACING IT IN THE HOLE.
 - 5. IF TREE IS CONTAINER GROWN, SALVAGE ALL SOIL AND MIX WITH SUPPLEMENTED SOIL FOR BACK FILL.

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DEMARS CONSTRUCTION
TURNBERRY DRIVE & EXCEL DRIVE EXTENSION
TREE PLANTING DETAILS

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