CONTRIBUTING ZONE PLAN MODIFICATION

NFM CEDARVIEW
RN111830360

Prepared For:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Prepared By:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
AUSTIN, TEXAS

CEC Project 331-715

APRIL 2024

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with 30 TAC 213.

Administrative Review

1. Edwards Aquifer applications must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

   To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: http://www.tceq.texas.gov/field/eapp.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.

3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.

4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

   An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.

6. If the geologic assessment was completed before October 1, 2004 and the site contains “possibly sensitive” features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: NFM CedarView						**2. Regulated Entity No.:** 111830360			
3. Customer Name: 121 Acquisition Company						**4. Customer No.:** 606193043			
5. Project Type: **(Please circle/check one)**	New		(Modification)			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	(CZP)	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		(Non-residential)			**8. Site (acres):**		115.74	
9. Application Fee:	$10,000		**10. Permanent BMP(s):**			UpFlo Filters, Batch Detention, Rainwater Harvesting			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Williamson		**14. Watershed:**			S Brushy Creek			

Application Distribution

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the "Texas Groundwater Conservation Districts within the EAPP Boundaries" map found at:

http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	__	__	X
Region (1 req.)	__	__	X
County(ies)	__	__	X
Groundwater Conservation District(s)	__Edwards Aquifer Authority __Barton Springs/ Edwards Aquifer __Hays Trinity __Plum Creek	__Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	__Austin __Buda __Dripping Springs __Kyle __Mountain City __San Marcos __Wimberley __Woodcreek	__Austin __Bee Cave __Pflugerville __Rollingwood __Round Rock __Sunset Valley __West Lake Hills	__Austin X Cedar Park __Florence __Georgetown __Jerrell __Leander __Liberty Hill __Pflugerville __Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	__	__	__	__	__
Region (1 req.)	__	__	__	__	__
County(ies)	__	__	__	__	__
Groundwater Conservation District(s)	__ Edwards Aquifer Authority __Trinity-Glen Rose	__Edwards Aquifer Authority	__Kinney	__EAA __Medina	__EAA __Uvalde
City(ies) Jurisdiction	__Castle Hills __Fair Oaks Ranch __Helotes __Hill Country Village __Hollywood Park __San Antonio (SAWS) __Shavano Park	__Bulverde __Fair Oaks Ranch __Garden Ridge __New Braunfels __Schertz	NA	__San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.

Michael Theone

Print Name of Customer/Authorized Agent

mtheone 4/11/2024

Signature of Customer/Authorized Agent Date

FOR TCEQ INTERNAL USE ONLY				
Date(s)Reviewed:		Date Administratively Complete:		
Received From:		Correct Number of Copies:		
Received By:		Distribution Date:		
EAPP File Number:		Complex:		
Admin. Review(s) (No.):		No. AR Rounds:		
Delinquent Fees (Y/N):		Review Time Spent:		
Lat./Long. Verified:		SOS Customer Verification:		
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):	
Core Data Form Complete (Y/N):			Signed (Y/N):	
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):	

Modification of a Previously Approved Contributing Zone Plan

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Modification of a Previously Approved Contributing Zone Plan** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Michael Theone, PE

Date: 4/11/2024

Signature of Customer/Agent:

MTheone

Project Information

1. Current Regulated Entity Name: NFM CedarView
   Original Regulated Entity Name: NFM CedarView
   Assigned Regulated Entity Number(s) (RN): 111830360
   Edwards Aquifer Protection Program ID Number(s): 11003766
   [X] The applicant has not changed and the Customer Number (CN) is: 606193043
   [ ] The applicant or Regulated Entity has changed. A new Core Data Form has been provided.

2. [X] **Attachment A: Original Approval Letter and Approved Modification Letters**. A copy of the original approval letter and copies of any modification approval letters are attached.

3. A modification of a previously approved plan is requested for (check all that apply):

N/A Any physical or operational modification of any best management practices or structure(s), including but not limited to temporary or permanent ponds, dams, berms, silt fences, and diversionary structures; Mod to provide WQ BMPs, no change in erosion controls

X Any change in the nature or character of the regulated activity from that which was originally approved;

N/A A change that would significantly impact the ability to prevent pollution of the Edwards Aquifer and hydrologically connected surface water; or pollution will be prevented (WQ BMPS)

X Any development of land previously identified in a contributing zone plan as undeveloped.

4. X Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

CZP Modification Summary	***Approved Project***	***Proposed Modification***
Acres	115.74	115.74
Type of Development	Commercial	Commercial
Number of Residential Lots	0	0
Impervious Cover (acres)	0	69.56 (4.95 acres removed per RWH)
Impervious Cover (%)	0	60%
Permanent BMPs	0	6
Other	N/A	RWH

AST Modification Summary	***Approved Project***	***Proposed Modification***
Number of ASTs	0	0
Other	N/A	N/A

UST Modification Summary	***Approved Project***	***Proposed Modification***
Number of USTs	0	0
Other	N/A	N/A

5. X **Attachment B: Narrative of Proposed Modification**. A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved,

including previous modifications, and how this proposed modification will change the approved plan.

6. [X] **Attachment C: Current Site Plan of the Approved Projec**t. A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is attached. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
   - [ ] The approved construction has not commenced. The original approval letter and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
   - [ ] The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
   - [ ] The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.
   - [X] The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.
   - [ ] The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.

7. [X] Acreage has not been added to or removed from the approved plan.
   [ ] Acreage has been added to or removed from the approved plan and is discussed in *Attachment B: Narrative of Proposed Modification*.

8. [X] Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

ATTACHMENT A – ORIGINAL APPROVAL LETTER

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 20, 2024

Mr. Ron Lazenby
121 Acquisition Company, LLC
P.O. Box 3456
Omaha, NE 68103

Re: Approval of a Contributing Zone Plan (CZP)
NFM Cedarview; Located NW of East New Hope Dr. and Avenue of the Stars; Cedar Park, Williamson County, Texas
Edwards Aquifer Protection Program ID: 11003766, Regulated Entity No. RN111830360

Dear Mr. Lazenby:

The Texas Commission on Environmental Quality (TCEQ) has completed its review on the application for the above-referenced project submitted to the Edwards Aquifer Protection Program (EAPP) by Civil and Environmental Consultants, Inc. on behalf of the applicant, 121 Acquisition Company, LLC, on October 19, 2023. Final review of the application was completed after additional material was received on January 26, 2024, and February 15, 2024.

As presented to the TCEQ, the application was prepared in general compliance with the requirements of 30 Texas Administrative Codes (TAC) Chapter §213. The permanent best management practices (BMPs) and measures represented in the application were prepared by a Texas licensed professional engineer (PE). All construction plans and design information were sealed, signed, and dated by a Texas licensed PE. Therefore, the application for the construction of the proposed project and methods to protect the Edwards Aquifer are **approved,** subject to applicable state rules and the conditions in this letter.

This approval expires two years from the date of this letter, unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been officially requested. This approval or extension will expire, and no extension will be granted if more than 50 percent of the project has not been completed within ten years from the date of this letter.

The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this contributing zone plan or modification to a plan. A motion for reconsideration must be filed in accordance with 30 TAC §50.139.

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 115.75 acres. The project will include grading, erosion controls, and the construction of temporary sediment basins. No impervious cover will be added for this phase of development. No wastewater will be generated by this project.

PERMANENT POLLUTION ABATEMENT MEASURES

No permanent BMPs or measures are required for the proposed project.

STANDARD CONDITIONS

1. The plan holder (applicant) must comply with all provisions of 30 TAC Chapter §213 and all technical specifications in the approved plan. The plan holder should also acquire and comply with additional and separate approvals, permits, registrations or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, Dam Safety, Underground Injection Control) as required based on the specifics of the plan.

2. In addition to the rules of the Commission, the plan holder must also comply with state and local ordinances and regulations providing for the protection of water quality as applicable.

Prior to Commencement of Construction:

3. The plan holder of any approved contributing zone plan must notify the EAPP and obtain approval from the executive director prior to initiating any modification to the activities described in the referenced application following the date of the approval.

4. The plan holder must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the EAPP no later than 48 hours prior to commencement of the regulated activity. Notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person.

5. Temporary erosion and sedimentation (E&S) controls as described in the referenced application, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

6. The application must indicate the placement of permanent aboveground storage tanks facilities for static hydrocarbons and hazardous substances with cumulative storage capacity of 500 gallons or more. Subsequent permanent storage tanks on this project site require a modification to be submitted and approved prior to installation.

7. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

8. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge must be filtered through appropriately selected BMPs.

9. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

10. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

The holder of the approved contributing zone plan is responsible for compliance with Chapter §213 subchapter B and any condition of the approved plan through all phases of plan implementation. Failure to comply with any condition within this approval letter is a violation of Chapter §213 subchapter B and is subject to administrative rule or orders and penalties as provided under §213.25 of this title (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. Upon legal transfer of this property, the new owner is required to comply with all terms of the approved contributing zone plan.

This action is taken as delegated by the executive director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mr. James “Bo” Slone, P.G. of the Edwards Aquifer Protection Program at (512) 239-6994 or the regional office at 512-339-2929.

Sincerely,

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/jcs

cc: Mr. Michael Theone, P.E., Civil and Environmental Consultants, Inc.

ATTACHMENT B – NARRATIVE OF PROPOSED MODIFICATION

ATTACHMENT B

Narrative of Proposed Modification

This modification involves provision for treatment of site impervious cover shown within the construction documents along with routing of off-site bypass stormwater flows.

The previously submitted and approved development plans contained earthwork scope only. This modification will consist of the buildings, parking and associated impervious cover improvements at the time of this application and Site Development Permit. The site impervious cover in this modification totals 74.51 acres.

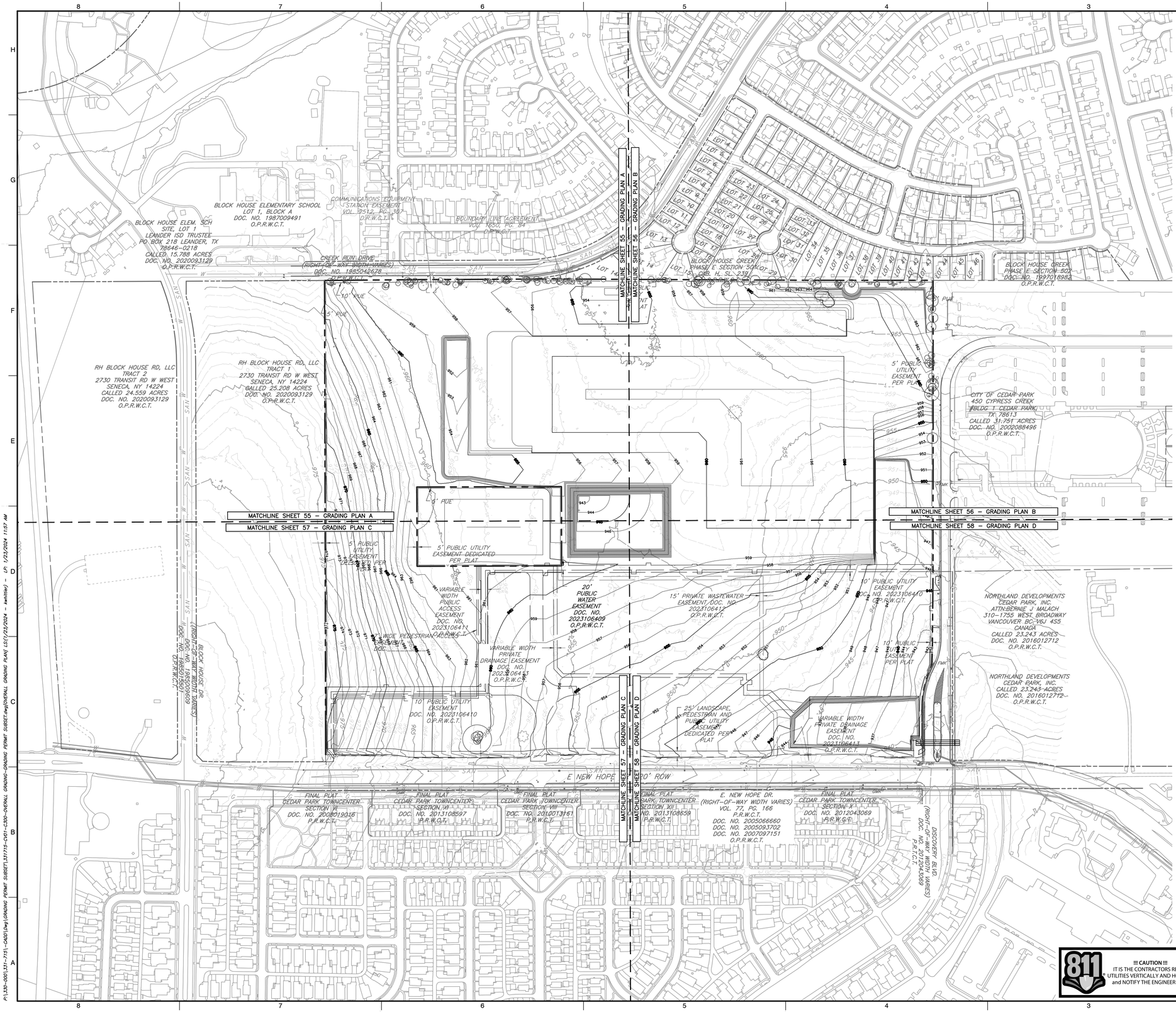
The BMPs included in this modification include UpFlo Filters, Batch Detention Ponds, and Rainwater harvesting/re-irrigation. The Rainwater Harvesting/Re-irrigation basin consists of 4.95 acres. This basin has thus been removed from the IC requirement of the development resulting in an effective impervious cover of 69.56 acres or 60%. The TSS removal requirement (Lm) for this project is 60,545 lbs. This removal requirement is treated using the UpFlo filters and Batch Detention ponds as shown in the construction plans and TSS removal spreadsheets within attachment M.

The UpFlo filter vaults consist of four (4) separate basins designed at an F value of 1.0. This results in an aggregate TSS removal (desired Lm) of 31,191 lbs. The number of modules in each UpFlo vault is based on the removal requirement per the impervious cover shown in this application. However, the UpFlo vaults have been sized to accommodate future development on this tract and the additional modules needed at the time of future development (future CZP applications). Brackets will be installed in the UpFlo vaults for ease of installation upon approval of the impervious cover shown in future CZP applications.

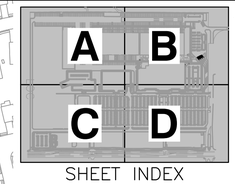
The remaining TSS removal requirement after implementation of the above UpFlo filters is 29,355 lbs. The remaining TSS removal requirement will be treated using Batch Detention Ponds. There are two (2) batch detention ponds within this plan: Batch Detention A and Batch Detention B. Batch Detention Pond A will have a basin of 33.65 acres and accepts offsite bypass flow from upgradient undeveloped private property (13.70 ac basin). Batch Detention A is not required to treat this flow as the adjacent tract will be required to submit a CZP application and connect into public stormwater stubs provided to this tract within the New Hope Roadway Expansion project. Batch Detention Pond A accepts the upgradient/off-site flow on a temporary basis. With these characteristics Batch Detention Pond A has a desired Lm of 19,600 lbs. The remaining required removal is treated by Batch Detention Pond B and equates to 9,755 lbs. Batch Detention Pond B has a basin of 21.90 acres and does not accept any upgradient/offsite flows. Please reference

attachment M (construction plans and TSS removal spreadsheet) for more detailed information of the BMP design and TSS removal requirements.

ATTACHMENT C – CURRENT SITE PLAN OF THE APPROVED PROJECT



SHEET INDEX



NORTH

SCALE IN FEET

0 200 400

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
S	S	PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
	HB	HOSE BIB
S	S	SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
D	D	DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
E	E	ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
M	M	UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL
		CONCRETE

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

811 !!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

CEC
Texas Registered Engineering Firm F-38
Civil & Environmental Consultants, Inc.
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

OVERALL GRADING PLAN

DATE:	1/23/2024
DWG SCALE:	1" = 200'
PROJECT NO:	
DRAWN BY:	CS
CHECKED BY:	SRB
	331-715
APPROVED BY:	MT

DRAWING NO.: 54

SHEET 54 OF 157

2023-23-SD

P:\330-2001\331-715\--CAD\dwg\GRADING PERMIT SUBSET\331715-CV01-C300-OVERALL GRADING-GRADING PERMIT SUBSET.dwg[OVERALL GRADING PLAN] LS(1/23/2024 - xwhite) - LP: 1/23/2024 11:57 AM

Contributing Zone Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Contributing Zone to the Edwards Aquifer and Relating to 30 TAC §213.24(1), Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Contributing Zone Plan Application** is hereby submitted for TCEQ review and Executive Director approval. The application was prepared by:

Print Name of Customer/Agent: Michael Theone

Date: 4/11/2024

Signature of Customer/Agent:

Regulated Entity Name: NFM CedarView

Project Information

1. County: Williamson
2. Stream Basin: S Brushy Creek
3. Groundwater Conservation District (if applicable): N/A
4. Customer (Applicant):

   Contact Person: Ron Lazenby
   Entity: 121 Acquisition Company, LLC
   Mailing Address: PO Box 3456
   City, State: Omaha, NE Zip: 68103
   Telephone: (972) 668-1515 Fax: _____
   Email Address: ron@grandscape.com

5. Agent/Representative (If any):

Contact Person: Michael Theone
Entity: Civil and Environmental Consultants Inc.
Mailing Address: 1221 S MoPac Expressway, Suite 350
City, State: Austin, TX Zip: 78746
Telephone: (512) 439-0400 Fax: (512) 329-0096
Email Address: mtheone@cecinc.com

6. Project Location:

[X] The project site is located inside the city limits of Cedar Park
[ ] The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
[ ] The project site is not located within any city's limits or ETJ.

7. [X] The location of the project site is described below. Sufficient detail and clarity has been provided so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

The northwest corner of New Hope Dr. and Avenue of the Stars

8. [X] **Attachment A - Road Map**. A road map showing directions to and the location of the project site is attached. The map clearly shows the boundary of the project site.

9. [X] **Attachment B - USGS Quadrangle Map**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') is attached. The map(s) clearly show:

[X] Project site boundaries.
[X] USGS Quadrangle Name(s).

10. [X] **Attachment C - Project Narrative**. A detailed narrative description of the proposed project is attached. The project description is consistent throughout the application and contains, at a minimum, the following details:

[X] Area of the site
[X] Offsite areas
[X] Impervious cover
[X] Permanent BMP(s)
[X] Proposed site use
[X] Site history
[X] Previous development
[X] Area(s) to be demolished

11. Existing project site conditions are noted below:

[ ] Existing commercial site
[ ] Existing industrial site
[X] Existing residential site

☐ Existing paved and/or unpaved roads
☐ Undeveloped (Cleared)
☐ Undeveloped (Undisturbed/Not cleared)
☐ Other: _____

12. The type of project is:

☐ Residential: # of Lots: _____
☐ Residential: # of Living Unit Equivalents: _____
☒ Commercial
☐ Industrial
☐ Other: _____

13. Total project area (size of site): 115.74 Acres

Total disturbed area: 115.74 Acres

14. Estimated projected population: 100

15. The amount and type of impervious cover expected after construction is complete is shown below:

Table 1 - Impervious Cover

Impervious Cover of Proposed Project	*Sq. Ft.*	*Sq. Ft./Acre*	*Acres*
Structures/Rooftops	1,533,100	÷ 43,560 =	35.19 *(-4.95 ac)
Parking	1,692,826	÷ 43,560 =	38.86
Other paved surfaces	N/A	÷ 43,560 =	N/A
Total Impervious Cover	3,245,926	÷ 43,560 =	74.51 *(69.54)

* Rooftop IC has been reduced by 4.95ac per use of Rainwater Harvesting/Re-irrigation

Total Impervious Cover 69.56 **÷ Total Acreage** 115.74 **X 100 =** 60.0 **% Impervious Cover**

16. ☒ **Attachment D - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water quality is attached. If applicable, this includes the location and description of any discharge associated with industrial activity other than construction.

17. ☒ Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

For Road Projects Only

Complete questions 18 - 23 if this application is exclusively for a road project.

☒ N/A

18. Type of project:

- ☐ TXDOT road project.
- ☐ County road or roads built to county specifications.
- ☐ City thoroughfare or roads to be dedicated to a municipality.
- ☐ Street or road providing access to private driveways.

19. Type of pavement or road surface to be used:

- ☐ Concrete
- ☐ Asphaltic concrete pavement
- ☐ Other: _____

20. Right of Way (R.O.W.):

Length of R.O.W.: _____ feet.
Width of R.O.W.: _____ feet.
L x W = _____Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

21. Pavement Area:

Length of pavement area: _____ feet.
Width of pavement area: _____ feet.
L x W = _____Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

22. ☐ A rest stop will be included in this project.

☐ A rest stop will not be included in this project.

23. ☐ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

Stormwater to be generated by the Proposed Project

24. ☒ **Attachment E - Volume and Character of Stormwater**. A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

Wastewater to be generated by the Proposed Project

25. ☒ Wastewater is to be discharged in the contributing zone. Requirements under 30 TAC §213.6(c) relating to Wastewater Treatment and Disposal Systems have been satisfied.

☐ N/A

26. Wastewater will be disposed of by:

☐ On-Site Sewage Facility (OSSF/Septic Tank):

☐ **Attachment F - Suitability Letter from Authorized Agent**. An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☒ Sewage Collection System (Sewer Lines):
The sewage collection system will convey the wastewater to the Brushy Creek Regional (name) Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

☐ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

Complete questions 27 - 33 if this project includes the installation of AST(s) with volume(s) greater than or equal to 500 gallons.

☒ N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
1			
2			
3			
4			
5			

Total x 1.5 = _____ Gallons

28. ☐ The AST will be placed within a containment structure that is sized to capture one and one-half (1 1/2) times the storage capacity of the system. For facilities with more than

one tank system, the containment structure is sized to capture one and one-half (1 1/2) times the cumulative storage capacity of all systems.

N/A ☐ **Attachment G - Alternative Secondary Containment Methods**. Alternative methods for providing secondary containment are proposed. Specifications showing equivalent protection for the Edwards Aquifer are attached.

29. Inside dimensions and capacity of containment structure(s):

Table 3 - Secondary Containment

Length (L)(Ft.)	*Width(W)(Ft.)*	*Height (H)(Ft.)*	*L x W x H = (Ft3)*	*Gallons*

Total: _____ Gallons

30. Piping:

☐ All piping, hoses, and dispensers will be located inside the containment structure.
☐ Some of the piping to dispensers or equipment will extend outside the containment structure.
☐ The piping will be aboveground
☐ The piping will be underground

31. ☐ The containment area must be constructed of and in a material impervious to the substance(s) being stored. The proposed containment structure will be constructed of: _____.

32. ☐ **Attachment H - AST Containment Structure Drawings**. A scaled drawing of the containment structure is attached that shows the following:

☐ Interior dimensions (length, width, depth and wall and floor thickness).
☐ Internal drainage to a point convenient for the collection of any spillage.
☐ Tanks clearly labeled
☐ Piping clearly labeled
☐ Dispenser clearly labeled

33. ☐ Any spills must be directed to a point convenient for collection and recovery. Spills from storage tank facilities must be removed from the controlled drainage area for disposal within 24 hours of the spill.

☐ In the event of a spill, any spillage will be removed from the containment structure within 24 hours of the spill and disposed of properly.

☐ In the event of a spill, any spillage will be drained from the containment structure through a drain and valve within 24 hours of the spill and disposed of properly. The drain and valve system are shown in detail on the scaled drawing.

Site Plan Requirements

Items 34 - 46 must be included on the Site Plan.

34. ☒ The Site Plan must have a minimum scale of 1" = 400'.

    Site Plan Scale: 1" = 200 '.

35. 100-year floodplain boundaries:

    ☐ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

    ☒ No part of the project site is located within the 100-year floodplain.

    The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM 48491C0462F; December 20,2019

36. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.

    ☐ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot contour intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.

37. ☒ A drainage plan showing all paths of drainage from the site to surface streams.

38. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.

39. ☒ Areas of soil disturbance and areas which will not be disturbed.

40. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

41. ☒ Locations where soil stabilization practices are expected to occur.

42. ☐ Surface waters (including wetlands).

    ☒ N/A

43. ☐ Locations where stormwater discharges to surface water.

    ☒ There will be no discharges to surface water.

44. ☐ Temporary aboveground storage tank facilities.

    ☒ Temporary aboveground storage tank facilities will not be located on this site.

45. ☐ Permanent aboveground storage tank facilities.

☒ Permanent aboveground storage tank facilities will not be located on this site.

46. ☒ Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

Practices and measures that will be used during and after construction is completed.

47. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

☐ N/A

48. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____.

☐ N/A

49. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

☐ N/A

50. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.

☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.

☒ The site will not be used for low density single-family residential development.

51. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

    ☐ **Attachment I - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
    ☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
    ☒ The site will not be used for multi-family residential developments, schools, or small business sites.

52. ☒ **Attachment J - BMPs for Upgradient Stormwater**.

    ☐ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
    ☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
    ☒ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

53. ☒ **Attachment K - BMPs for On-site Stormwater**.

    ☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.
    ☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

54. ☐ **Attachment L - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams is attached.

    ☒ N/A

55. ☒ **Attachment M - Construction Plans**. Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. Construction plans for the proposed permanent BMPs and measures are

attached and include: Design calculations, TCEQ Construction Notes, all proposed structural plans and specifications, and appropriate details.

☐ N/A

56. ☒ **Attachment N - Inspection, Maintenance, Repair and Retrofit Plan**. A site and BMP specific plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan fulfills all of the following:

    ☒ Prepared and certified by the engineer designing the permanent BMPs and measures
    ☒ Signed by the owner or responsible party
    ☒ Outlines specific procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofit.
    ☒ Contains a discussion of record keeping procedures

    ☐ N/A

57. ☐ **Attachment O - Pilot-Scale Field Testing Plan**. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

    ☒ N/A

58. ☐ **Attachment P - Measures for Minimizing Surface Stream Contamination**. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that result in water quality degradation.

    ☒ N/A

Responsibility for Maintenance of Permanent BMPs and Measures after Construction is Complete.

59. ☒ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

60. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development,

or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

Administrative Information

61. [X] Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.

62. [X] Any modification of this Contributing Zone Plan may require TCEQ review and Executive Director approval prior to construction, and may require submission of a revised application, with appropriate fees.

63. [X] The site description, controls, maintenance, and inspection requirements for the storm water pollution prevention plan (SWPPP) developed under the EPA NPDES general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) of the technical report. All requirements of 30 TAC §213.24(1-5) have been met by the SWPPP document.

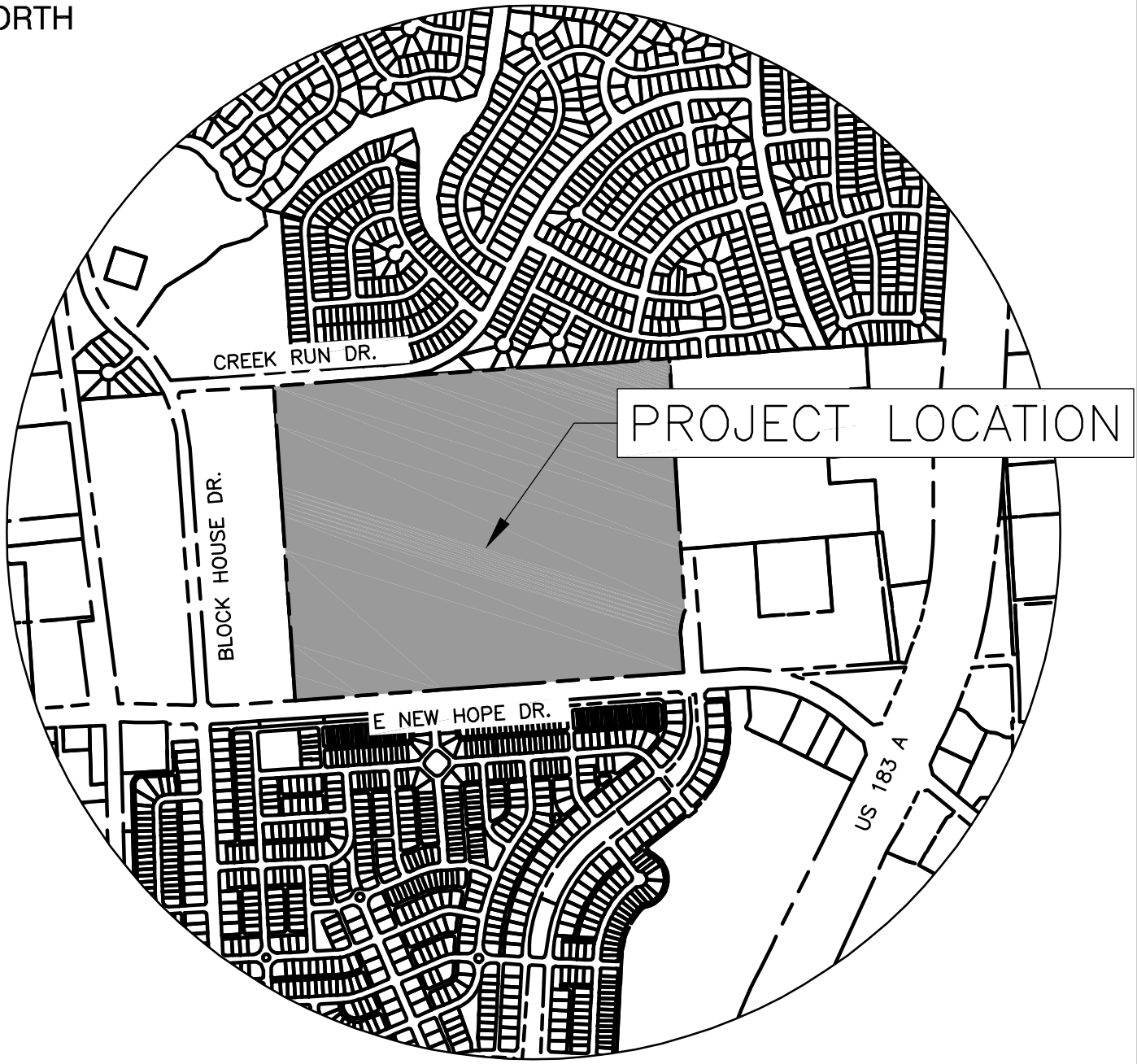
[X] The Temporary Stormwater Section (TCEQ-0602) is included with the application.

ATTACHMENT A – ROAD MAP

NFM CEDARVIEW

CITY OF CEDAR PARK,
WILLIAMSON COUNTY, TEXAS

NORTH



VICINITY MAP

SCALE IN FEET

0 1000 2000

Civil & Environmental Consultants, Inc.

1221 South MoPac Expressway · Suite 350 · Austin, TX 78746

Ph: 512.439.0400 · Fax: 512.329.0096

www.cecinc.com

Texas Registered Engineering Firm F-38

NFM CEDARVIEW
CITY OF CEDAR PARK
WILLIAMSON COUNTY, TX

VICINITY MAP

DRAWN BY:	QU	CHECKED BY:	SEB	APPROVED BY:	MT	FIGURE NO.:	EXH
DATE:	MAY 15, 2023	DWG SCALE:	1"=1000'	PROJECT NO:	331-715		

P:\330-000\331-715\-CADD\Dwg\EXHIBITS\VICINITY MAP.dwg{LAYOUT1} LS:(2/15/2024 - jdepwe) - LP: 2/15/2024 10:18 AM

ATTACHMENT B – USGS/EDWARDS RECHARGE ZONE MAP

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map
US Topo

LEANDER QUADRANGLE
TEXAS
7.5-MINUTE SERIES

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14R
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery....................NAIP, September 2016 - November 2016
Roads....................U.S. Census Bureau, 2015 - 2019
Names....................GNIS, 1979 - 2022
Hydrography....................National Hydrography Dataset, 2002 - 2020
Contours....................National Elevation Dataset, 2019
Boundaries....................Multiple sources; see metadata file 2019 - 2021
Wetlands....................FWS National Wetlands Inventory Not Available

MN
GN
0°36´
11 MILS
3°46´
67 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
PU
Grid Zone Designation 14R

SCALE 1:24 000
KILOMETERS 1 0.5 0 1 2
METERS 1000 500 0 1000 2000
MILES 1 0.5 0 1
FEET 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the
National Geospatial Program US Topo Product Standard.

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES
1 Liberty Hill
2 Leander NE
3 Georgetown
4 Nameless
5 Round Rock
6 Mansfield Dam
7 Jollyville
8 Pflugerville West

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

LEANDER, TX
2022

NSN. 7643016396981
NGA REF NO. USGSX24K25238

ATTACHMENT C

Project Description

On behalf of 121 Acquisition Company LLC, CEC is submitting development plans for the NFM CedarView Private development located at 750 E New Hope Dr in the City of Cedar Park city limits, Williamson County, Texas. The site is approximately 115.74 acres as shown in the recorded final plat document #2024003635. The existing tract contains single family home and large gravel pile present on site. According to FEMA Panel No. 48491C0462F, dated December 20, 2019, no portion of the site lies within the 100-year floodplain.

The proposed development consists of a one private and one public lot, with roughly 1,533,100 SF of building space. This will include retail, warehouse/distribution, commercial, and a hotel/convention center with the associated parking, drive aisles, utilities, and other items addressed in the site data table submitted with the SDP plan set concurrently with this submittal. The site will include 64.3% of impervious cover. The site lies within the Edwards Aquifer contributing zone and therefore a TCEQ Contributing Zone Plan is being submitted.

The TCEQ Contributing Zone Plan will utilize the following BMPs: UpFlo Filters, Batch Detention and Rainwater Harvesting. The BMPs have been designed for future development on this tract, however only cover the impervious cover shown within Table 1 of the CZP application. Future development on this tract will need to seek TCEQ CZP approval for use of the BMPs included in this application. The Rainwater Harvesting basin is 4.95 acres in size and 100% impervious cover. The 4.95 acres of impervious cover draining to the Rainwater Harvesting System has been removed from Step 1 in the TSS removal calculations and Table 1 of the CZP application. With this IC reduction, the impervious cover shown within Step 1 of the TSS removal calculations results to 69.56 acres. The proposed use of the Rainwater Harvesting System is to irrigate the 30’ buffer setback along the northern property line. Designed irrigation plans are included within the site development plans.

The wastewater service for this area is the City of Cedar Park and flows from this site will be conveyed to the existing wastewater system located within E New Hope Dr to the south of the site. The wastewater service flows to the Brushy Creek Regional Wastewater Treatment Plant. The private wastewater system has been designed such that all flows within the pipe achieve a minimum velocity of 2.0 feet per second but will not exceed 10.0 feet per second. All vertical and horizontal bends in the gravity line will occur at proposed manholes spaced no more than 500 feet apart.

ATTACHMENT D

Factors Affecting Surface Water Quality

Possible factors that could affect ground water quality during construction:

Activities include sediment laden storm water and pollutants from construction materials and equipment including concrete, petroleum, oil, diesel, detergents, lubricants, fertilizers, lead-based paint, solvents, cleaners, concrete water, concrete curing compound, pipe joint lubrication and sanitary waste from onsite portable units.

Possible factors that could affect ground water quality post construction:

Activities include pollutants from oil, petroleum, and diesel spills, landscape fertilizers, concrete wash, solvent and cleaners.

ATTACHMENT E

Volume and Character of Stormwater

NFM CedarView Private will utilize onsite facilities for all water quality and detention purposes. These facilities will be constructed of sufficient size to effectuate the drainage and water quality requirements of the entire site. The contributing drainage area to the proposed system is 115.74-acres. Please refer to the drainage area calculations shown within the drainage area maps as part of Attachment M.

ATTACHMENT F

Sustainability Letter from Authorized Agent

Wastewater will be treated at the City of Cedar Park Wastewater Treatment Facility; therefore, a Sustainability Letter from an Authorized Agent will not be necessary for this project.

ATTACHMENT G

Alternative Secondary Storage Method

There are no Aboveground Storage Tanks proposed for this site, therefore an alternative secondary containment method will not be necessary for the purposes of this development.

ATTACHMENT H

AST Containment Structure Drawing

There are no Aboveground Storage Tanks proposed for this site, therefore an alternative secondary containment method will not be necessary for the purposes of this development.

ATTACHMENT I

20% or Less Impervious Cover Waiver

The proposed impervious cover is approximately 64.6% before the rainwater harvesting/re-irrigation reduction (4.95 ac impervious cover) is applied. Once the reduction is applied, the proposed impervious cover is approximately 60.0%. Therefore, a waiver is not allowed.

ATTACHMENT J

BMPs for Upgradient Stormwater

There is roughly 13.70 acres of upgradient flow (adjacent private property) that will route through the NFM CedarView property and thus Batch Detention Pond A. This 13.70-acre offsite basin is undeveloped property with no impervious cover. The NFM CedarView BMPs are not required to treat stormwater or prevent pollution of the upgradient flow. Once the adjacent private property is developed, the developer will be required to treat the associated stormwater through a TCEQ CZP permit and connect into the public stormwater stub that is provided to the tract as per the New Hope Roadway Expansion project.

The NFM CedarView project is responsible for accepting this offsite flow at the existing characteristics (impervious cover, Time of Concentration, etc.) until the time of the adjacent tract development. The 13.70-acre offsite flow is included in the TSS removal spreadsheet for Batch Detention Pond A.

ATTACHMENT K

BMPs for On-Site Stormwater

The NFM CedarView Site Development plans propose constructing an onsite stormwater collection system that feeds into a UpFlo Filters, Batch Detention Ponds and a Rainwater Harvesting filtration system before being discharged into the Block House MUD and City of Cedar Park storm systems. The facilities have been designed under the rules and regulations set forth by TCEQ. All calculations have been included in the construction plans submitted under Attachment M.

ATTACHMENT L

BMPs for Surface Streams

There are no surface streams found on this site.

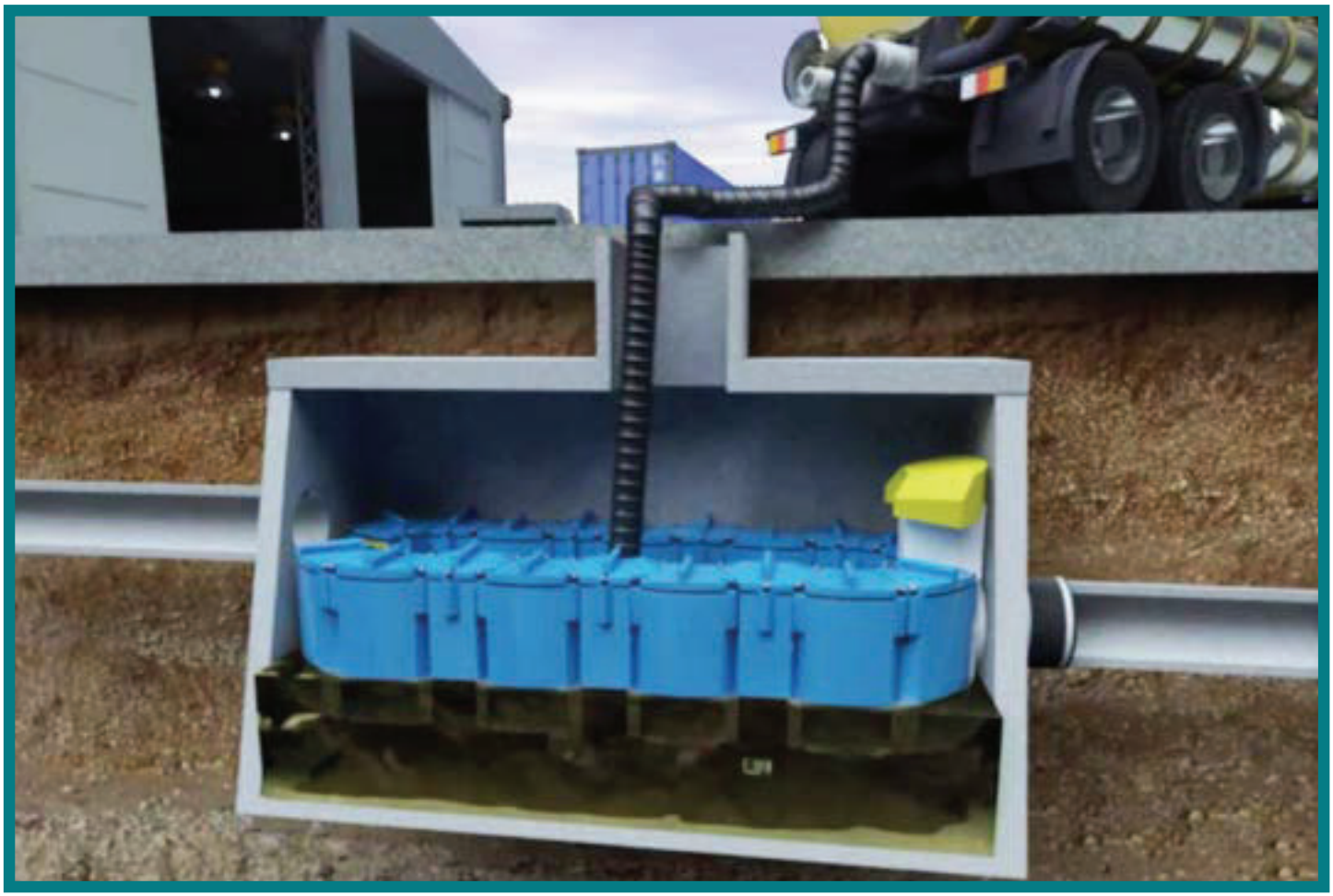
ATTACHMENT M

Construction Plans

Submitted under a separate cover.

ATTACHMENT N

Hydro International®



Operation and Maintenance Manual

Stormwater Solutions

Up-Flo® Filter

Filtration System for Stormwater Treatment

94 Hutchins Drive
Portland, ME 04102

Tel: (207) 756-6200
Fax: (207) 756-6212
stormwaterinquiry@hydro-int.com

www.hydro-int.com

Table of Contents

IMPORTANT - ORDER REPLACEMENT PARTS FOR MAINTENANCE - **IMPORTANT**

Annual maintenance requires replacement of the Media Packs and the Drain Down Filter. Contact Hydro International to order replacements. Allow 2-4 weeks for delivery.

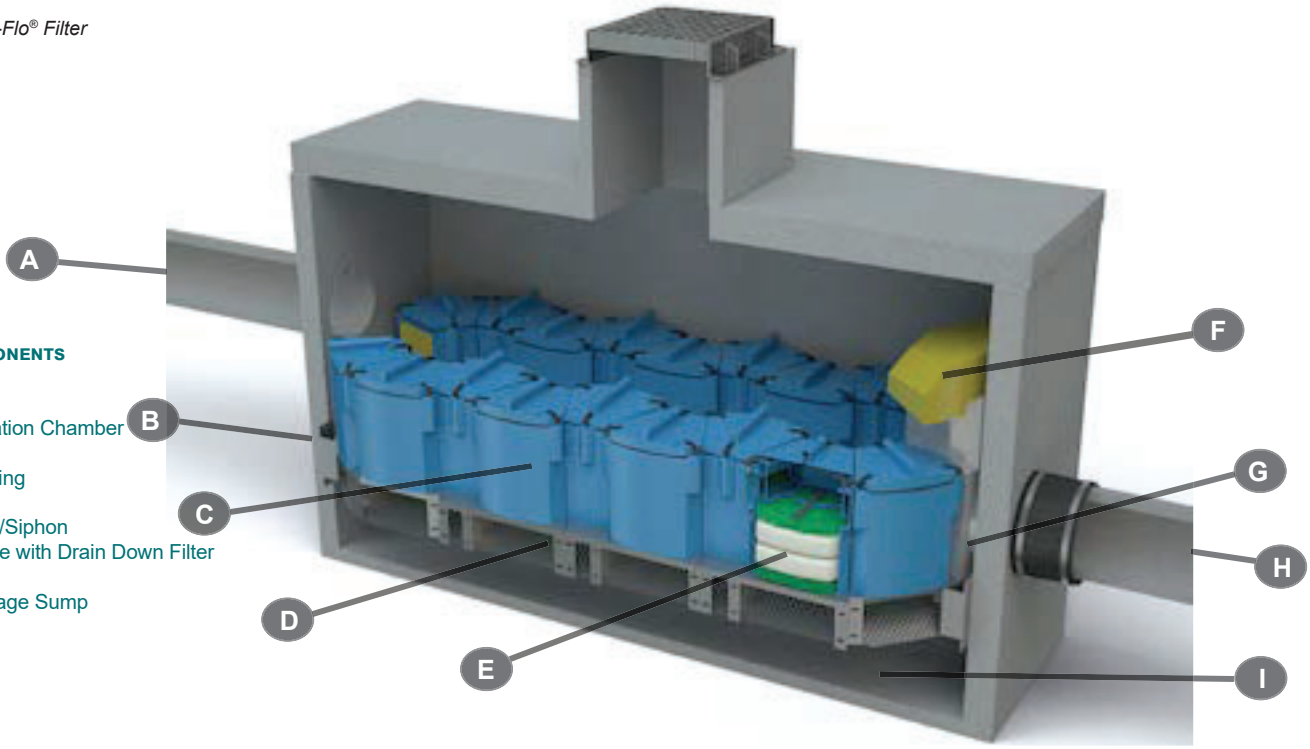
Office hours Monday thru Friday 8:00 A.M. to 5:00 P.M. EST
Toll free: 1-888-382-7808
Phone: 207-756-6200
Fax: 207-756-6212
Email: services@hydro-int.com

Overview & Product Description

The Up-Flo® Filter is a modular high-rate stormwater filtration device designed to capture trash, oil, sediment and remove fine pollutants such as dissolved and particulate metals and nutrients from stormwater runoff. Designed with efficiency, longevity and upkeep in mind, this high performance, low maintenance filter option that offers higher loading rates and longer media life for higher quality stormwater for longer periods between servicings.

In general, a minimum of two inspections are required per year to monitor sediment and gross pollutant accumulations. In order to achieve an annual TSS removal rate of 80% for the Up-Flo® Filter, the minimum maintenance frequency specified in the maintenance section for replacement of the Media Pack and removal of accumulated sediment from the sump is mandatory.

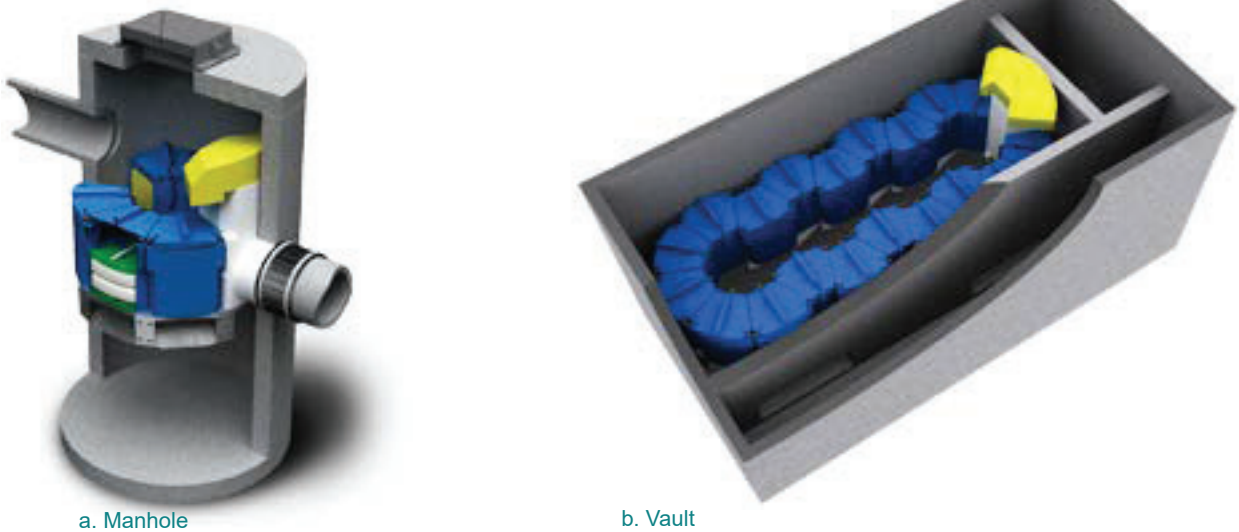
Fig.1 *The Up-Flo® Filter*



System Components

A. Inlet Pipe
B. Precast Filtration Chamber
C. Filter Module
D. 4mm Screening
E Media bag
F. Bypass Hood/Siphon
G. Outlet Module with Drain Down Filter
H. Outlet pipe
I. Pollutant Storage Sump

Product Configurations



a. Manhole

b. Vault

Fig.2 *The Up-Flo® Filter is installed in a) 4-ft (1.2m) round manholes or b) in rectangular precast vaults. Both configurations have a wide central opening in the Up-Flo® Filter.*

Operation

Introduction

The Up-Flo® Filter operates on simple fluid hydraulics. It is self-activating, has no moving parts, no external power requirements and is fabricated with durable non-corrosive components. Personnel are not required to operate the unit and maintenance is limited to periodic inspections, sediment and floatables removal, Media Pack replacement and Drain Down Filter replacement.

Pollutant Capture

The Up-Flo® Filter is designed to operate as a "treatment train" by incorporating multiple treatment technologies into a single device. Trash and gross debris are removed by sedimentation and screening before they are introduced to the filtration media, preventing surface blinding of the filter media. The Up-Flo® Filter is a wet-sump device. Between storm events, oil and floatables are stored on the water surface separate from the sediment storage volume in the sump (see **Fig.1**). The high-capacity bypass siphon acts as a floatables baffle to prevent washout of captured floatable pollutants during high intensity events.

Reduced Clogging

The Up-Flo® Filter has been designed to minimize the occurrence of clogging and blinding and employs a unique Drain Down Filter that allows the water level in the chamber to drop below the filter media between events. The Drain Down Filter mechanism creates a reverse flow that flushes captured pollutants off the surface of the Media Bag, helping to prevent blinding. By allowing the water to drain out, the Drain Down Filter also reduces the weight of the Media Bags. This makes the bags easier and safer to remove during maintenance operations.

Overflow Protection

The Angled Screens are designed to prevent ragging and blinding and are situated below the Filter Modules, sheltering them from the direct path of the influent. Coarse debris settles in the sump before the runoff flows up through the screens, protecting them from blinding. In the unlikely event of a blockage, the high capacity siphonic Bypass Hood is designed to convey high enough flow to minimize the risk of large storm creating upstream flooding.

Best Practices

Good housekeeping upstream of the Up-Flo® Filter can significantly extend Media Bag life. For example, sweeping paved surfaces, collecting leaves and grass trimmings, and protecting bare ground from erosion will reduce loading to the system. Media Packs should not be installed in the Filter Modules until construction activities are complete and site stabilization is effective.

Damage Due to Lack of Maintenance

Delayed maintenance would result in clogged Media Bags and/or blinded Angled Screens. In that situation, the Up-Flo® Filter would go into bypass and there would be no treatment of the incoming stormwater. Because the Bypass Weir can easily convey all of the flow to the Outlet Module, there would be no lasting damage to the system. Replacement of the Media Bags and removal of sediment from the sump would restore the Up-Flo® Filter to its original treatment efficiency. Establishing and adhering to a regular maintenance schedule ensures optimal performance of the system.

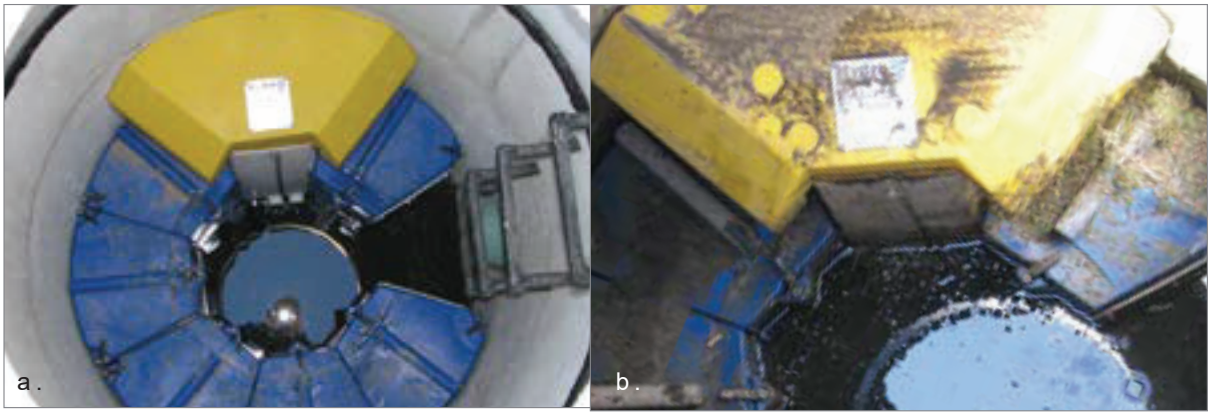


Fig.3 a) The water level in a properly functioning Up-Flo® Filter will drain down to the base of the Filter Modules. b) When the Drain Down Filter becomes clogged, the base of the Filter Modules will be submerged in standing water. Note, above right, that the Drain Down Filter is submerged in standing water.

Inspection & Maintenance

Overview

The Up-Flo® Filter protects the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captured pollutants is essential to the proper functioning of the Up-Flo® Filter.

Maintenance activities can be categorized as those that may be performed from outside the Up-Flo® vessel and those that are performed inside the vessel. Maintenance performed from outside the modules includes removal of floatables and oils that have accumulated on the water surface and removal of sediment from the sump. Maintenance performed inside the vessel includes removal and replacement of Media Bags, Flow Distribution Media and the Drain Down Filter. A vactor truck is required for removal of oils, water, sediment, and to completely pump out the vessel to allow for maintenance inside. If you are not using Hydro Internatioanl or a trained servcie provider you must follow OSHA Confined Space Entry procedures when entering the Up-Flo® vessel.

The Up-Flo® Filter design has a wide central opening between the Filter Modules for easy access to all of the components (see **Fig.3**). In the case of inspection and floatables removal, a vactor truck is not required. Otherwise, a vactor truck is normally required for oil removal, removal of sediment from the sump, and replacement of the Media Packs and Drain Down Filter. In most cases, entry into the Up-Flo® Filter vessel is required for replacement of the Media Packs and Drain Down Filter.

The minimum required frequency for replacement of the Media Pack is annually, whereas the minimum required frequency for removal of accumulated sediment from the sump is dependent on the Up-Flo® Filter configuration. Configurations with a larger sediment storage volume per module will require less frequent removal of accumulated sediment. Regardless, whenever sediment depth in the sump is found to be greater than 16 inches, sediment removal is required.

Fig.4 a) A new Media Bag of Hydro Filter Sand. b) A spent media bag of Hydro Filter Sand.

At a minimum, media bags must be replaced at least once a year.

Make Sure your System was Installed Correctly

First Year Inspection and Maintenance

The frequency of inspection and maintenance can be determined in the field after installation. The frequency of ongoing maintenance needs is based on site characteristics such as contributing area, types of surfaces (e.g., paved and/or landscaped), site activities (e.g., short-term or long-term parking), and other site maintenance (e.g., sanding and sweeping). At a minimum, inspection and maintenance should be conducted at intervals of no more than six months during the first year of operation. Maintenance personnel should observe and record pollutant accumulations during the first year of service in order to benchmark the maintenance intervals that will later be established for the site. Pollutant accumulations should be measured or monitored using the following procedures:

- Measurement of sediment depth in the sump: A minimum of 8 inches (20 cm) should separate the Drain Down Filter inlet from stored sediment in the sump in order to minimize sediment migration into the Drain Down Filter. A simple probe, such as the Sludge-Judge®, can be used to determine the depth of the solids in the sump. In a typical 4-ft (1.2m) diameter manhole installation, the sediment depth should be no more than 16 inches (41 cm).

- Maintenance personnel should then enter the structure, remove the Media Pack from one of the Filter Modules, and weigh the Media Bags. Media Bags with a wet weight of approximately 40 lbs (18 kg) or more are an indication that the filter media has become full and that the Media Packs in all of the Filter Modules will require replacement (Fig.4). Minimum filtration rate is generally reached when the Media Bags have accumulated approximately 20 lbs (9 kg) of sediment. Determining the amount of accumulated sediment will be accomplished by removing both of the Media Bags from one of the Media Packs and weighing the bags separately. Since a new Media Bag weighs approximately 30 lbs (14 kg) wet, the difference in weight will approximately equal the weight of solids that have accumulated in the bag. A spent Media Bag weighs approximately 50 lbs (23 kg) wet.

- Measurement of oil layer on water surface: Since water in the Up-Flo® vessel drains down to an elevation below the bottom of the Filter Modules when the system is idle, the amount of accumulated oil must be minimized so that oil is not entrained in the Media Pack when stormwater begins to fill the vessel at the start of a storm event. Oil accumulation should be limited to 1.5 inches (4 cm) or less. Probes can be used to measure oil thickness.

- Monitoring for Drain Down Filter clogging: The water level in the Up-Flo® Filter should be monitored to ensure that the Drain Down Filter is operating properly. The Drain Down Filter is designed to lower the water level in the Up-Flo® vessel to an elevation below the bottom of the Filter Modules between storm events. Periodically conduct an inspection one to two days after a storm event during the first year of operation. Approximately 36 hours after a 1-in (2.5-cm) rainfall, the water level inside the vessel should have dropped to a point where it is equal with the base of the Filter Modules. If the water level has not reached that point, then the Drain Down Filter has either become clogged or blinded by trash or debris (Fig.5 a and b). If there is no evidence of trash or debris around the Drain Down Filter inlet, then it has likely become clogged with particles.

- Monitoring for slime and debris covering the Flow Distribution Media or Angled Screens: After removal of the Media Bags, the bottom Flow Distribution Media should be removed and inspected to determine if it is coated with slime or debris. Similarly, the Angled Screen should be inspected for blockages and ragging.

Find out how Frequently your System Needs Maintenance

Monitoring for floatables on the water surface: Similar to oil, the amount of accumulated floatables must be minimized to prevent trash and loose debris from becoming trapped on the Angled Screens when stormwater begins to fill the Up-Flo® vessel at the start of a storm event. Visual inspection is adequate to determine the amount of floatables. Floatables should be removed before they form a mat on the surface of the water.

The solids loading rate in the sump will be calculated by measuring the sediment depth in the sump and dividing the depth by the correlating interval of time since the sump was last cleaned. Similarly, starting with fresh Media Bags, the solids loading rate in the Media Packs will be calculated by weighing the Media Bags and dividing the weights by the correlating interval of time since they were installed. The wet weight of the heaviest bag will be used to determine the loading rate. As previously mentioned, a spent Media Bag weighs approximately 50 lbs (23 kg) wet. The spent Media Bag weight estimate was based on calculations of sediment loading in an Up-Flo® Filter that was run to exhaustion during laboratory testing.

The rate of oil accumulation will be calculated by measuring the thickness of the oil layer and dividing the thickness by the correlating interval of time since the sump was last cleaned. Ordinarily, oil thickness will not be measurable unless a spill has occurred. Consequently, any oil will typically be removed along with water when cleaning the sump.

Monitoring the Drain Down Filter for clogging, monitoring the Flow Distribution Media and Angled Screens for slime and debris, and monitoring the accumulation of floatables will provide an estimate of how long the Up-Flo® Filter can operate before its performance can become impaired by one of these factors.

Routine Inspection and Maintenance

After completion of the first year of operation, determining and then following the established inspection and maintenance intervals will keep pollutant loadings within their respective limits. Removal of oils and floatables, replacement of the Drain Down Filter, replacement of Flow Distribution Media (see Fig.9, pg 11), and cleaning of Angled Screens will occur at the same frequency as cleaning of the sump and replacement of Media Bags unless the first year of operation indicates otherwise. Keeping to the established maintenance intervals will keep treatment flow rates at, or above, the design flow rate. Typically, annual maintenance is adequate.

In addition to scheduled maintenance, occasional checks for Up-Flo® Filter clogging can be performed by removing the manhole cover during a storm, monitoring the water level in the manhole or vault, and determining whether the filter is in bypass. A properly-sized filter (on-line or off-line) that is in bypass during a storm that is producing runoff at, or below, the filter's design filtration rate needs maintenance.

Inspection & Maintenance

Routine Inspection

Inspection is a simple process that requires monitoring pollutant accumulations. Maintenance crews should be familiar with the Up-Flo® Filter and its components prior to inspection.

The following instructions are intended for non-Hydro maintenance service providers and/or those intending to maintain thier own Up-Flo® Filter:

Scheduling

- Inspection may be conducted during any season of the year but should occur shortly after a predicted rainfall to ensure components are operating properly.

Necessary Equipment

- Safety Equipment and Personal Protective Equipment (traffic cones, work gloves, etc.)
- Scale to measure the weight of the Media Bags
- Crow bar to remove grate or lid
- Pole with skimmer or net
- Sediment probe (such as a Sludge-Judge®)
- Hydro International Up-Flo® Filter Maintenance Log
- Trash bags for removed floatables

Routine Inspection Procedures

1. Set up any necessary safety equipment (such as traffic cones) to provide access to the Up-Flo® Filter. Safety equipment should notify passing pedestrian and road traffic that work is being done.
2. Remove the grate or lid to the manhole or vault.
3. Without entering the vessel, look down into the chamber to inspect the inside and to determine whether the high-water level indicator has been activated. Make note of any irregularities. See Fig.6 for a typical Inspection View.
4. Without entering the vessel, use the pole with the skimmer net to remove floatables and loose debris from the chamber.
5. Using a sediment probe such as a Sludge-Judge®, measure the depth of sediment that has collected in the sump of the vessel.
   Maximum sediment depth is 16 inches (41 cm).
6. If the high-water level indicator has been activated after two consecutive storms, remove the Filter Module lid by turning the cam latch and remove the Filter Media Pack (*refer to page 11 Replacement Procedures*). Weigh the Media Bags from one or two modules. Media Bags should be replaced if the wet weight exceeds 40 lbs (18 kg).
7. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or a high standing water level (see Fig.6 for the standard standing water level).
8. Securely replace the grate or lid.
9. Remove safety equipment.
10. Contact Hydro International at (800) 848-2706 to discuss any irregularities noted during inspection.

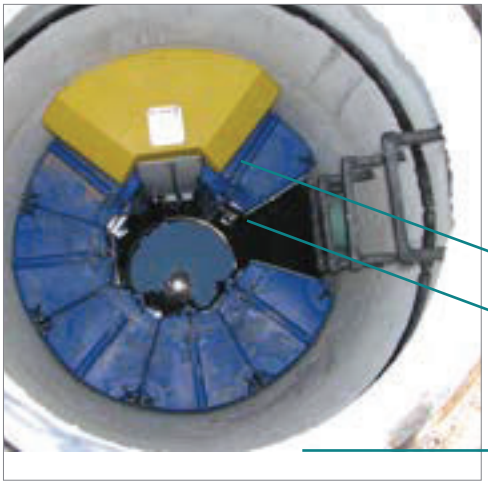


Fig.6 Inspection view of the Up-Flo® Filter.

Routine Maintenance

Maintenance activities are grouped into two categories:

- *Activities **Not Requiring** Man Entry Into the Up-Flo® Filter*
  These activities include floatables removal, oil removal and removal of sediment from the sump.
- *Activities **Requiring** Man Entry Into the Up-Flo® Filter*
  Media Pack replacement and Drain Down Filter replacement.

Maintenance intervals are determined from monitoring the Up-Flo® Filter during its first year of operation. Depending on the site, some maintenance activities may have to be performed on a more frequent basis than others. In the case of floatables removal, a vactor truck is not required. Floatables and loose debris can be netted with a skimmer and pole.

A vactor truck is normally required for oil removal, removal of sediment from the sump, and to dewater the vessel for replacement of the Media Packs and Drain Down Filter (Fig.7). All inspection and maintenance activities would be recorded in an Inspection and Maintenance Log.

Completion of all the maintenance activities for a typical 4-ft (1.2m) diameter manhole installation takes less than one hour. Approximately 360 gallons of water and up to 0.6 yd^3 (0.5 m^3) of sediment may be removed in the process. In an installation equipped with six Filter Modules, 12 Media Bags (2 bags per module) would be removed and replaced. Assuming a spent Media Bag weight of 50 lbs (23 kg), up to 600 lbs (272 kg) of spent Media Bags would be removed. All consumables, including Media Bags, Flow Distribution Media, and replacement Drain Down Filters are supplied by Hydro International.

The access port located at the top of the manhole provides unobstructed access for a vactor hose and/or skimmer pole to be lowered to the base of the sump.

Maintenance Activities Not Requiring Man Entry

These activities include floatables removal, oil removal and removal of sediment from the sump.

Scheduling

- Floatables and sump cleanout may typically be done during any season of the year - before and after rainy season
- Floatables and sump cleanout should occur as soon as possible following a contaminated spill in the contributing drainage area

Recommended Equipment

- Safety Equipment (traffic cones, etc)
- Crow bar to remove grate or lid
- Pole with skimmer or net (if only floatables are being removed)
- Sediment probe (such as a Sludge-Judge®)
- Vactor truck (flexible hose preferred)
- Pressure nozzle attachment or other screen-cleaning device

Fig.7 Sediment is removed from the sump with a vactor hose. Man entry is not required for this step.

No Man Entry Required: Floatables, Oil and Sediment:

1. Set up any necessary safety equipment (such as traffic cones) around the access of the Up-Flo® Filter. Safety equipment should notify passing pedestrian and road traffic that work is being done.

2. Remove the grate or lid to the manhole or vault.

3. Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities.

4. If the standing water level in the sump is above the base of the Filter Modules (see Fig.8), tug the Pull Chain(s) to release the Drain Down Filter plug(s). Allow the excess water to drain out of the chamber.

5. Use the skimmer pole to fit the Drain Down Filter plug back into the open port.

6. Once all floatables and oil have been removed, drop the vactor hose to the base of the sump. Vactor out the sediment and gross debris from the sump floor. Up to 0.3 yd^3 (0.2 m^3) of sediment and 360 gallons (1,363 L) of water will be removed from a typical manhole Up-Flo® Filter during this process.

7. Retract the vactor hose from the vessel.

8. Inspect the Angled Screens for blockages and ragging. If present, remove the obstruction or ragging materials from the surface using a hose or other screen-cleaning device.

9. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables, oils, and gross debris removed, and the depth of sediment measured. Note any apparent irregularities such as damaged components or blockages.

10. Securely replace the grate or lid. Remove safety equipment.

11. Dispose of sediment and gross debris following local regulations.

12. Dispose of oil and sump water at a licensed water treatment facility or following local regulations.

13. Contact Hydro International at (800) 848-2706 to discuss any irregularities noted during cleanout.

Maintenance Activities Requiring Man Entry

These activities include replacement of the Media Packs and Drain Down Filter.

Unless the Up-Flo® Filter has been installed as a very shallow unit, it is necessary to have an OSHA-confined space entry trained person enter the vessel to replace Media Packs.

The access port located at the top of the manhole or vault provides access to the Up-Flo® vessel for maintenance personnel to enter the vessel and remove and replace Media Packs. The same access would be used for maintenance personnel working from the surface to net or skim debris and floatables or to vactor out sediment, oil, and water. Unless the Up-Flo® Filter has been installed in a very shallow configuration, it is necessary to have personnel with OSHA Confined Space Entry training performing the maintenance that occurs inside the vessel.

Scheduling

- Call Hydro International to order replacement Media Packs and Drain Down Filter prior to scheduling maintenance.

- Because Media Pack replacement requires entry into the Up-Flo® chamber, maintenance events should be scheduled during dry weather.

- Media Pack replacement should occur immediately after a contaminated spill in the contributing drainage area.

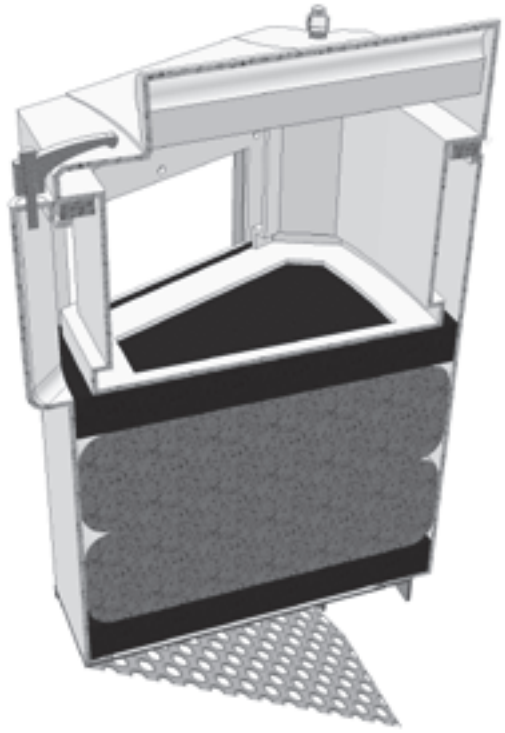


Fig.8 Cutaway view of the Filter Module

Recommended Equipment

- Safety Equipment (traffic cones, etc.)
- Crow bar to remove grate or lid
- Pole with skimmer or net (if floatables removal is not to be done with vactor hose)
- Sediment probe (such as a Sludge-Judge®)
- Vactor truck (flexible hose preferred)
- OSHA Confined Space Entry Equipment
- Up-Flo® Filter Replacement Media Packs (available from Hydro International)
- Hydro International Up-Flo® Filter Maintenance Log
- Screwdriver (flat head)
- Replacement Drain Down Filter components supplied by Hydro International

Man Entry Required: Media Pack and Drain Down Filter

1. Follow Floatables and Sump Cleanout Procedures, 1 – 13.
2. Following OSHA Confined Space Entry procedures, enter the Up-Flo® Filter Chamber.
3. Open the Filter Module by turning the three cam latches on the front and sides of the module. Remove the lid (1) to gain access to the Media Pack (Fig.9).
4. Remove and discard the spent Media Pack. The Media Pack contents include:
    - A top layer of (A) Flow Distributing Sheets
    - Two (2) Media Bags (B) equipped with nylon handles.
    - A bottom layer of (A) Flow Distributing Media.
5. Insert a new Media Pack, supplied by Hydro International.
    - First, insert a bottom layer of green Flow Distributing Media. Be sure that the media sits snugly and level at the bottom of the Filter Module.
    - Next, insert the first of two (2) replacement Media Bags. Smooth the bag out with your hands to make sure that the bag extends snugly to the walls and corners of the Filter Module.
    - Insert the second Media Bag, following the same procedure.
    - Insert the top layer of green Flow Distributing Media.

1. Filter Module Cover and Media Restraint

2. Replaceable Media Pack:
    a) Flow distribution sheets
    b) Filter Media Bags

3. Cam Latch

4. Conveyance Channel

5. Filter Module

6. Support Bracket / Angled Screen

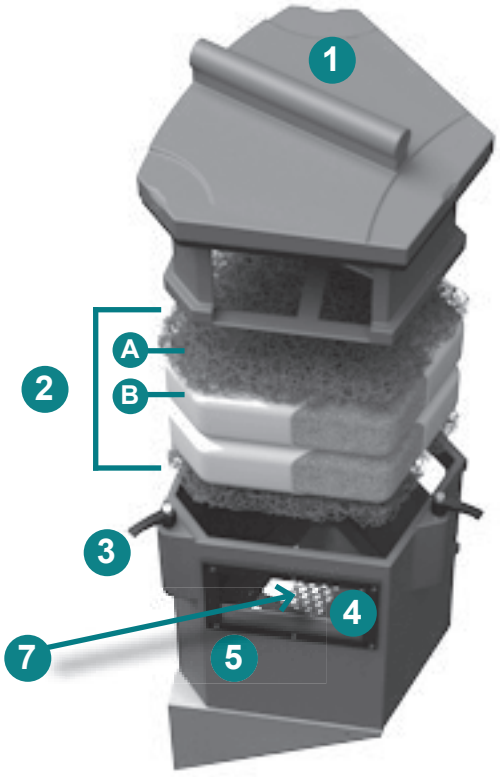


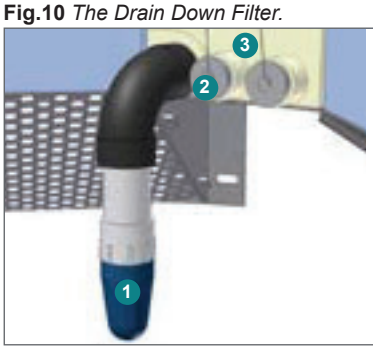
Fig.9 The Filter Module houses the Media Restraint and the Media Pack.

Be sure that the piece fits snugly against the walls and corners of the Filter Module.

- Put the lid on and secure the three latches. Check to make sure that the latches are closed properly.

6. Use a screwdriver to unscrew the Drain Down Filter from the face of the Outlet Module (see Fig.10). DO NOT DISCARD THIS PIECE.
7. Install new Drain Down Filter supplied by Hydro International.
8. Exit the Up-Flo® Filter chamber and securely replace the grate __or lid.
9. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables, oil and gross debris removed, and the depth of sediment measured. Note the number of Media Packs replaced. Note any irregularities such as damaged components or blockages.

Fig.10 *The Drain Down Filter.*



1. Drain Down Filter
2. Drain Down Plug
3. Pull Chain for Drain Down

10. Remove safety equipment.
11. Dispose of spent media packs at your local landfill, following local regulations.
12. Return the spent Drain Down Filter to Hydro International.
13. Contact Hydro International to discuss any irregularities noted during annual maintenance.

Solids Disposal

Sediment, floatables, gross debris, and spent Media Bags can generally be disposed of at the local landfill in accordance with local regulations. The toxicity of the residues captured will depend on the activities in the contributing drainage area, and testing of the residues may be required if they are considered potentially hazardous.

Sump water can generally be disposed of at a licensed water treatment facility but the local sewer authority should be contacted for permission prior to discharging the liquid. Significant accumulations of oil removed separately from sump water should be transported to a licensed hazardous waste treatment facility for treatment or disposal. **In all cases, local regulators should be contacted about disposal requirements.**

Maintenance at a Glance

Activity	Frequency
Inspection	- Regularly during first year of installation - Every 6 months after the first year of installation
Floatables/Oils Removal	- Twice per year or as needed - Following a contaminated spill in the drainage area
Sediment Removal	- Every six to 12 months, depending on the Up-Flo® Filter Configuration - The maximum allowable sediment depth in any Up-Flo Filter configuration is 16 inches (41 cm) - Following a contaminated spill in the drainage area
Media Pack Replacement	- Once per year - Replacement is required anytime inspection reveals that the high-water level indicator has been activated after two consecutive storms and the subsequent weighing of the Media Bags shows a wet weight greater than 40 lbs - Following a contaminated spill in the drainage area
Drain Down Filter Replacement	- Once per year with Media Pack replacement - Replacement is required anytime inspection reveals that the water level inside the vessel has not reached a level equal with the base of the Filter Modules approximately 36 hours after a 1-inch (2.5 cm) rainfall - As needed, in the event of continuous base flow conditions

Up-Flo® Filter Installation Log

SITE REFERENCE NAME OR NUMBER FOR THIS UP-FLO® FILTER LOCATION:	
SITE NAME:	
SITE LOCATION:	
OWNER:	**SITE CONTRACTOR:**
CONTACT NAME:	**CONTACT NAME:**
COMPANY NAME:	**COMPANY NAME:**
ADDRESS:	**ADDRESS:**
TELEPHONE:	**TELEPHONE:**
FAX:	**FAX:**

INSTALLATION DATE: / /

CONFIGURATION (CIRCLE ONE): **MANHOLE** **VAULT SYSTEM**

TOTAL NUMBER OF UP-FLO® FILTER MODULES: _____

Hydro International (Stormwater), 94 Hutchins Drive, Portland ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

Up-Flo® Filter Inspection Log

Site Name: _____ Owner Change since last inspection? Y N

Location: _____

Owner Name: _____

Address: _____ Phone Number: _____

Site Status: _____

Date: _____ Time: _____ Site conditions*: _____

(Stable, Under Construction, Needing Maintenance, etc.)

Inspection Frequency Key: A=annual; M=monthly; S=after major storms

Inspection Items	Inspection Frequency	Inspected? (Yes/No)	Maintenance Needed? (Yes/No)	Comments/Description
Debris Removal				
Adjacent area free of debris?	M			
Inlets and Outlets free of debris?	M			
Facility (internally) free of debris?	M			
Vegetation				
Surrounding area fully stabilized? (no evidence of eroding material into Up-Flo® Filter)	A			
Grass mowed?	M			
Water retention where required				
Water holding chamber(s) at normal pool?	A			
Evidence of erosion?	A			
Sediment Deposition				
Filtration Chamber free of sediments?	A			
Sedimentation sump not more than 50% full?	A			
Structural Components				
Any evidence of structural deterioration?	A			
Grates in good condition?	A			
Spalling or cracking of structural parts?	A			
Outlet/Overflow Spillway	A			
Other				
Noticeable odors?	A			
Any evidence of filter(s) clogging?	M			
Evidence of flow bypassing facility?	A			

Inspector Comments: _____

_____

_____

_____

Overall Condition of Up-Flo® Filter**: ☐ Acceptable ☐ Unacceptable

***"Acceptable" would mean properly functioning; "unacceptable" would mean damaged or required further maintenance.*

If any of the above Inspection Items are checked "Yes" for "Maintenance Needed", list Maintenance actions and their completion dates below or on the Maintenance Log provided on page 15 of the Up-Flo® Filter Operation & Maintenance Manual:

Maintenance Action Needed	Due Date

The next routine inspection is schedule for approximately: (date) _____

Inspected by: (signature) _____

Inspected by: (printed) _____

Up-Flo® Filter Maintenance Log

Site Name: _____ Owner Change since last inspection? Y N

Location: _____

Owner Name: _____

Address: _____ Phone Number: _____

Site Status: _____

Date: _____ Time: _____ Site conditions: _____
**(Stable, Under Construction, Needing Maintenance, etc.)*

Estimated volume of oil/floatable trash removed: _____

Sediment depth measured in sump prior to removal: _____

Number of Filter Modules fitted with new media packs: _____

Inspector Comments: _____

_____

_____

_____

Overall Condition of Up-Flo® Filter: ☐ Acceptable ☐ Unacceptable
***"Acceptable" would mean properly functioning; "unacceptable" would mean damaged or required further maintenance.*

Maintained by: (signature) _____

Maintained by: (printed) _____

Hydro International (Stormwater), 94 Hutchins Drive, Portland ME 04102
Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

ATTACHMENT O

Pilot-Scale Field Testing Plan

No Pilot-Scale Testing Plan is necessary.

ATTACHMENT P

Measures for Minimizing Surface Stream Contamination

There are no surface streams found on this site.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Construction General Permit Stormwater Pollution Prevention Plan (SWP3) Worksheets
February 2018

Texas Pollutant Discharge Elimination Systems (TPDES)

Construction Stormwater General Permit (TXR150000)

Stormwater Pollution Prevention Plan (SWP3)

Company: CEC, Inc.

Role: Agent/Civil Engineer

Project Name: NFM CedarView

and/or Other Operators:

Plan Date: 4/12/2024

Table of Contents

Section Page

Certification Page

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sign as required by 30 TAC 305.128

Signed: _____ Date: 4/12/2024

name Michael Theone, P.E.
title Project Manager

If plan is shared by more than one entity:

Signed: _____ Date: 4/12/2 TPDES#:_____

name
title

Signed: _____ Date: 4/12/2 TPDES#:_____

name
title

Signed: _____ Date: 4/12/2 TPDES#:_____

name
title

Primary Operators

_____

_____

_____

Site Description

Section 1

Nature of Construction and List of Pollutants

Part III, Sect. F.1. (a)

Description of the general nature of construction activities:

The 115.74-acre tract is a land development project that will be utilized as commercial and retail.

Part III, Sect. F.1. (b)

List of ALL potential pollutants and their sources:

Potential Pollutants	*Source*
Acid and Caustic Chemicals	Construction/Equipment
Asphalt	Construction/Equipment
Antifreeze	Construction/Equipment
Brick and Other Siding Material	Construction/Equipment
Concrete	Construction/Equipment
Concrete Curing Compound	Construction/Equipment
Fertilizer, Herbicides, & Pesticides	Construction/Equipment
Glue Adhesives	Construction/Equipment
Grease	Construction/Equipment
Hydrocarbons	Construction/Equipment
Joint Compound	Construction/Equipment
Lead Acid Batteries	Construction/Equipment
Lumber	Construction/Equipment
Paint, Thinner, & Solvents	Construction/Equipment
Roofing Tar	Construction/Equipment
Roofing Materials	Construction/Equipment
Sand and Base Material	Construction/Equipment
Sanitary Waste	Construction/Equipment
Solid Waste	Construction/Equipment
Windows/Glass	Construction/Equipment

Section 2

Construction Schedule

Part III Sect. F.1. (c)

Description of the intended schedule, or a sequence of the major activities that will be disturbing soil for the major portions of the site. Add or subtract rows as needed.

Name of Operator	*Phase of Project Projected dates Month/year*	*Activity Disturbing Soil clearing, excavation, etc.*	*Location on-site where activity will be conducted*	*Acreage being disturbed*
NFM	1	Install Sediment and Erosion Controls		115.74
NFM	1	Clearing, Grubbing, and Grading		115.74
NFM	2	Excavate and Install Utilities		115.74
NFM	2	Grade, Form, and Pave Drive Aisles and Parking Areas		115.74
NFM	2	Building Construction		115.74
NFM	2	Stabilization and Re-vegetation		115.74

Section 3

Acreage, Material Storage, and Soil Type

Part III, Sect. F.1. (d)

The total acreage of the entire property and the total acreage where construction activity will occur. Include off-site material storage areas, overburden and stockpiles of dirt or aggregates, and borrow areas. Also, include the acreage for construction support activities, such as equipment staging or storage areas, and chemical storage areas.

Material Storage	***Material (s)/Equipment***	***Acreage***	***Location***
Off-site			
On-site			
Overburden/Stockpiles of Dirt			
Borrow Areas			
Other areas used as part of the project			
Construction Support Activities			
Total acreage of project property:	115.74	**Total acreage of disturbed soil:**	115.74

Part III Sect. F.1. (e)

Description of the soil type (e.g., loamy, clayey, sandy, rocky) or the quality of any discharge from the site.

CfB - Crawford clay,
1 to 3 percent slopes
Hydrologic Soil Group: D

DoC - Doss silty clay, moist
1 to 5 percent slopes
Hydrologic Soil Group: D

FaA - Fairlie clay
0 to 1 percent slopes
Hydrologic Soil Group: D

DnB - Denton silty clay
1 to 3 percent slopes
Hydrologic Soil Group: D

EeB - Eckrant stony clay
0 to 3 percent slopes
Hydrologic Soil Group: D

FaB - Fairlie clay
1 to 2 percent slopes
Hydrologic Soil Group: D

Section 4

Location Map

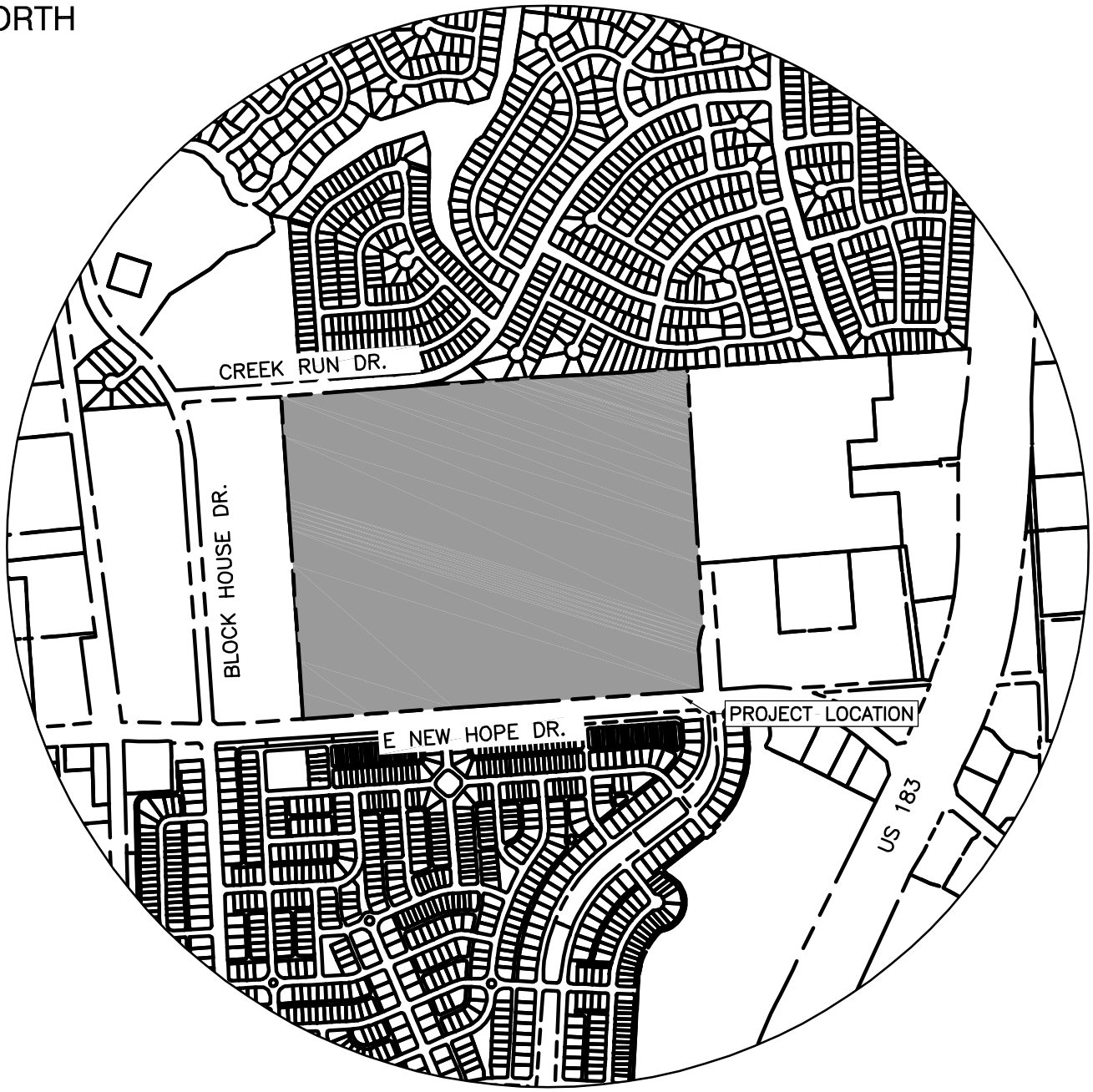
Part III Sect. F.1. (f)

Attach Map

NFM CEDARVIEW

CITY OF CEDAR PARK,
WILLIAMSON COUNTY, TEXAS

NORTH



VICINITY MAP

SCALE IN FEET

0 1000 2000

Civil & Environmental Consultants, Inc.

1221 South MoPac Expressway · Suite 350 · Austin, TX 78746

Ph: 512.439.0400 · Fax: 512.329.0096

www.cecinc.com

Texas Registered Engineering Firm F-38

NFM CEDARVIEW
CITY OF CEDAR PARK
WILLIAMSON COUNTY, TX

VICINITY MAP

DRAWN BY:	QU	CHECKED BY:	SEB	APPROVED BY:	MT	FIGURE NO.:	EXH
DATE:	MAY 15, 2023	DWG SCALE:	1"=1000'	PROJECT NO:	331-715		

P:\330-000\331-715\-CADD\Dwg\EXHIBITS\VICINITY MAP.dwg{LAYOUT1} LS:(5/26/2023 - qury) - LP: 8/15/2023 3:04 PM

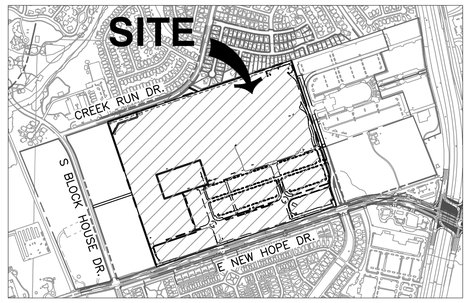
Section 5

Detailed Site Map(s)

Part III Sect. F.1.g (i)-(viii)

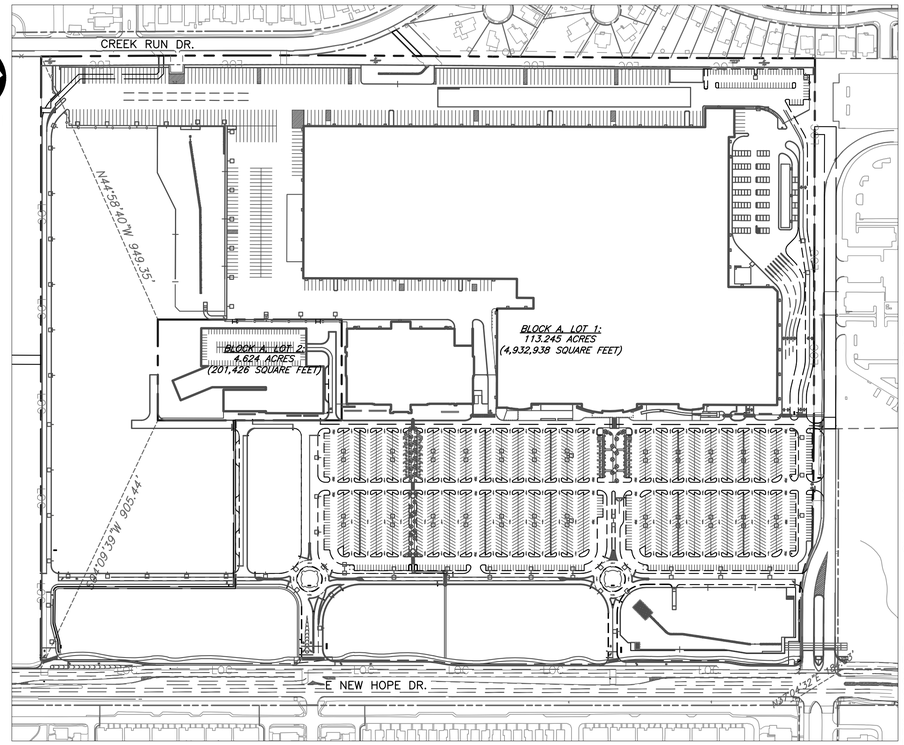
Attach Map(s)

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
CITY OF CEDAR PARK
WILLIAMSON COUNTY, TEXAS



VICINITY MAP
SCALE: 1"= 1000'

NORTH



SITE MAP
SCALE: 1" = 250'

OWNER/TEAM INFORMATION

CIVIL ENGINEER & LAND SURVEYOR

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
1221 S. MOPAC EXPRESSWAY, SUITE 350
AUSTIN, TX 78746
PH: (512) 439-0400

CONTACT: MICHAEL A. THEONE, P.E.

DEVELOPER

121 ACQUISITION COMPANY LLC
700 S 72ND STREET
OMAHA, NE 68114
PH: (402) 392-3270

CONTACT: RYAN BLUMKIN

ARCHITECT

KENNETH HAHN ARCHITECTS
1343 S 75TH STREET
OMAHA, NE 68124
PH: (402) 391-2111

CONTACT: KENNETH HAHN

LANDSCAPE ARCHITECT

BENKENDORFER AND ASSOCIATES
2901 BEE CAVES RD, SUITE P
AUSTIN, TX 78746
PH: (512) 366-5259

CONTACT: DARYL BENKENDORFER

UTILITY COMPANIES

SANITARY SEWER SERVICE

CITY OF CEDAR PARK
2401 BRUSHY CREEK LOOP
CEDAR PARK, TX 78613
PHONE: (512) 401-5550

ELECTRIC SERVICE

PERDERNALES ELECTRIC COOPERATIVE
1949 W WHITESTONE BLVD
CEDAR PARK, TX 78613
PH: (512) 331-8883

TELECOMMUNICATION SERVICE

AT&T
PH: (866) 861-6075

WATER SERVICE

CITY OF CEDAR PARK
2401 BRUSHY CREEK LOOP
CEDAR PARK, TX 78613
PHONE: (512) 401-5550

GAS SERVICE

ATMOS ENERGY
3110 N INTERSTATE 35
ROUND ROCK, TX 78681
PH: (888) 286-6700

BENCHMARKS (NAVD88)

BENCHMARK A: MAG NAIL SET AT THE SOUTHWEST CORNER OF A CURB INLET APPROXIMATELY 25' WEST OF THE EASTERLY PROPERTY LINE.
ELEV.: 679.88'

BENCHMARK B: MAG NAIL SET IN THE MEDIAN CURB ISLAND APPROXIMATELY THE MIDDLE OF THE TAPER FOR THE WESTBOUND LEFT TURN LANE.
ELEV.: 676.23'

ELEVATIONS GIVEN ARE IN REFERENCE TO THE NAVD88 VERTICAL DATUM.

LEGAL DESCRIPTION

LOT 1 AND 2, BLOCK A, NFM CEDARVIEW, A SUBDIVISION OF RECORD IN DOCUMENT NO. 2024003635.

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF THE FOLLOWING ON A ±117 ACRE TRACT: ONE (1) FOUR-STORY HOTEL/CONVENTION CENTER TOTALING 188,000 GROSS SQUARE FEET (153,000 SF HOTEL-250 ROOMS AND 30,000SF CONVENTION CENTER), ONE (1) TWO-STORY RETAIL BUILDING TOTALING 522,100 GROSS SQUARE FEET, ONE (1) TWO-STORY RETAIL BUILDING (153,997 RETAIL SF, 11,767 OFFICE SF, AND 203,434 WAREHOUSE SF) AND ONE (1) WAREHOUSE TOTALING 761,000 GROSS SQUARE FEET, AND THE ASSOCIATED PARKING, STORMWATER, AND UTILITY IMPROVEMENTS

SITE DEVELOPMENT SITE DATA

TOTAL AREA OF EX. LEASE TRACT: 117.869 ACRES
PRINCIPAL STREET: E NEW HOPE DR.
WATERSHED: BLOCKHOUSE/COTTONWOOD CREEK
WATERSHED REGULATION AREA: SUBURBAN CITY LIMITS

SITE DEVELOPMENT ZONING DATA

ZONING: PLANNED DEVELOPMENT-GENERAL BUSINESS (PD-GB)

	MIN
FRONT BUILDING SETBACK:	25'
INTERIOR SIDE SETBACK:	0'
STREET SIDE SETBACK:	25'
REAR TO PROPERTY LINE SETBACK:	5'
REAR TO STREET ROW SETBACK:	25'

SHEET LIST

I CERTIFY THAT THESE ENGINEERING DOCUMENTS ARE COMPLETE, ACCURATE, AND IN COMPLIANCE WITH THE SUBDIVISION AND BUILDING REGULATION ORDINANCES AND STORMWATER DRAINAGE POLICY ADOPTED BY THE CITY OF CEDAR PARK, TEXAS.

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

SUBMITTED BY:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
DATE

I, MICHAEL THEONE, PE, DOES HEREBY CERTIFY THAT THE PUBLIC WORKS AND DRAINAGE IMPROVEMENTS DESCRIBED HEREIN HAVE BEEN DESIGNED IN COMPLIANCE WITH THE SUBDIVISION AND BUILDING REGULATION ORDINANCES AND STORM WATER DRAINAGE POLICY ADOPTED BY THE CITY OF CEDAR PARK, TEXAS.

LIMITATION OF LIABILITY – CEC ASSUMES NO LIABILITY FOR ANY DESIGN OR DRAWINGS IN THESE PLANS THAT ARE NOT SIGNED AND SEALED BY A PROFESSIONAL ENGINEER EMPLOYED BY THE FIRM. OTHER CONSULTANTS' WORK SHOWN IN THESE PLANS IS THE RESPONSIBILITY OF THE CONSULTANT WHO PREPARED SUCH WORK, AND IS INCLUDED IN THIS PLAN SET FOR REVIEW REQUIREMENTS ONLY.

SITE PLAN COMPONENTS – ALL BUILDING AND STRUCTURAL IMPROVEMENTS SHOWN HEREON ARE SHOWN FOR CONCEPTUAL PURPOSES ONLY. CEC IS NOT RESPONSIBLE OR LIABLE FOR THE DESIGN OF BUILDING AND STRUCTURAL IMPROVEMENTS BY OTHERS.

STRUCTURAL COMPONENTS – ALL STRUCTURAL DESIGN IS THE RESPONSIBILITY OF THE OWNER'S STRUCTURAL ENGINEER. STRUCTURAL DESIGN SHOWN HEREON IS THE DESIGN OF THE OWNER'S STRUCTURAL ENGINEER.

PAVEMENT DESIGN – PAVEMENT DESIGN SHOWN HEREON IS THE DESIGN OF THE OWNER'S GEOTECHNICAL CONSULTANT. CEC MAKES NO WARRANTY OR GUARANTEE AS TO ITS SUITABILITY, AND ASSUMES NO LIABILITY THEREFOR.

NOTES IN LIEU OF BUILDING ELEVATIONS

1. PROJECT SHALL COMPLY WITH THE STANDARDS OF THE NEBRASKA FURNITURE MART PLANNED DEVELOPMENT (PD) GENERAL PROVISIONS AND DEVELOPMENT REGULATIONS (ORD 213.23.02.23.E1).
2. BUILDING DESIGN SHALL BE REVIEWED AND APPROVED WITH THE BUILDING PERMIT APPLICATION.
3. EACH BUILDING FACADE SHALL INCLUDE A MINIMUM OF FOUR (4) FACADE TREATMENTS IN ACCORDANCE WITH SECTION 11.03.154(B)(1)(J) OF THE CITY CODE OF ORDINANCES.
4. NO PORTION OF THE BUILDING SHALL EXCEED 35 FEET IN HEIGHT, MEASURED FROM EXISTING GRADE, WHEN LOCATED WITHIN 100 FEET OF A SINGLE-FAMILY RESIDENTIAL USE. BEYOND 100 FEET, BUILDING HEIGHT SHALL NOT EXCEED 100 FEET.
5. THE GROUND FLOOR ENTRANCE FACADE(S) OF THE BUILDING SHALL HAVE ARCADES, DISPLAY WINDOWS, ENTRY AREAS, AWNINGS, OR OTHER SUCH DESIGN FEATURES ALONG NO LESS THAN 60 PERCENT OF THE ENTRANCE FACADE.
6. MECHANICAL EQUIPMENT THAT IS MOUNTED ON A BUILDING WALL THAT IS WITHIN PUBLIC VIEW SHALL BE ENCLOSED, SCREENED BY OPAQUE FENCING, LANDSCAPING, OR PAINTED TO MATCH THE BUILDING FACADE.
7. EACH BUILDING FACADE THAT EXCEEDS 100 FEET IN LENGTH AND FACES A PUBLIC OR PRIVATE STREET, PUBLIC OR PRIVATE PARK, RESIDENTIAL USE OR DISTRICT, OR HAS A PUBLIC ENTRANCE OF A BUILDING LESS THAN 500,000 SQUARE FEET SHALL BE ARTICULATED IN ACCORDANCE WITH SECTION 11.03.154(B)(1)(b) of CITY CODE OF ORDINANCES

SITE PLAN NOTES

1. THIS PROJECT IS SUBJECT TO THE STANDARDS PURSUANT TO THE ADOPTED NEBRASKA FURNITURE MART PLANNED DEVELOPMENT (PD) DISTRICT ORDINANCE NO. Z13.23.02.23.E1.
2. ALL RESPONSIBILITY FOR THE ACCURACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF CEDAR PARK MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
3. NO SECTION OF THE SITE LIES WITHIN A FLOODPLAIN. REFERENCE FEMA MAP 48491C0462F DATED DECEMBER 20, 2019.
4. TCEQ EDWARDS AQUIFER PROTECTION PROGRAM ID. 11003766.
5. TABS REGISTRATION NO. 2024000802.
6. THIS PROJECT IS BEING REVIEWED UNDER THE 2021 IFC.
7. LOCATION AND DESIGN OF ALL TRASH COLLECTION, COMPACTION, OR OTHER SIMILAR USES AND ENCLOSURES SHALL BE REVIEWED AND APPROVED WITH AN SD PERMIT REVISION.
8. TRASH COLLECTION, COMPACTION OR OTHER SIMILAR USES AND ENCLOSURES LOCATED WITHIN 500 FEET OF A MAJOR CORRIDOR SHALL BE LOCATED NO CLOSER TO THE DESIGNATED ROADWAY THAN THE FRONT WALL OF THE PRINCIPAL STRUCTURE.
9. OUTDOOR CONDENSERS, UTILITY HUTS, AND OTHER BUILDING SERVICE EQUIPMENT SHALL BE COMPLETELY SCREENED FROM VIEW ON ALL SIDES USING VEGETATIVE SCREEN WITH AT LEAST TWO (2) VARIETIES OF PLANT MATERIAL FROM THE PREFERRED PLANT LIST THAT, AT MATURITY, IS AT LEAST THE HEIGHT OF THE EQUIPMENT TO BE SCREENED.
10. CITY EMERGENCY CONTACT: PUBLIC WORKS DEPARTMENT 24/7 BY CALLING 512-401-5550.
11. CONTRACTOR 24-HOUR CONTACT: TED FITZMAURICE (512)-538-4728.
12. NO PAVEMENT, CONCRETE, RETAINING WALLS, UTILITIES, OR OTHER IMPROVEMENTS WILL BE PERMITTED WITH THIS APPLICATION. THE ONLY ACTIVITIES APPROVED SHALL BE ROUGH SITE GRADING ACHIEVED BY EXCAVATION OR EMBANKMENT.

SITE INFORMATION:

OWNER: 121 ACQUISITION COMPANY, LLC ADDRESS: 700 S 72ND ST, OMAHA, NE 68114
PHONE: (402) 392-3270 ACREAGE: 117.869 TOTAL IMPERVIOUS COVER: 77 AC
LEGAL DESCRIPTION: LOT 1 AND 2, BLOCK A, NFM CEDARVIEW, A SUBDIVISION OF RECORD IN DOCUMENT NO. 2024003635.
ADDRESS: 750 E NEW HOPE DR, CEDAR PARK, TX 78613
LAND USE SUMMARY: 967,434 SF WAREHOUSE, 11,767 OFFICE, 188,000 SF HOTEL/CONVENTION CENTER, 676,097 SF RETAIL
ZONING: PLANNED DEVELOPMENT-GENERAL BUSINESS (PD-GB) DATE: 4/17/2023
PERSON PREPARING PLAN: MICHAEL THEONE COMPANY: CEC INC.
ADDRESS: 1221 S MOPAC EXPRESSWAY, SUITE 350, AUSTIN, TX 78746
PHONE: (512) 439-0400
ENGINEER: MICHAEL THEONE COMPANY: CEC INC.
ADDRESS: 1221 MOPAC EXPRESSWAY, SUITE 350, AUSTIN, TX 78746
PHONE: (512) 439-0400

APPROVED BY:
BLOCKHOUSE MUD,GRAY ENGINEERING

811 !!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISIONS

NO.	DESCRIPTION	REVISE (R) / ADD (A) SHEET NO.	PLAN SET SHEET TOTAL	NET IC CHANGE	SITE IC	% IC	APPROVED / DATE

IMPERVIOUS COVER

DRIVEWAYS IN RIGHT OF WAY, PUBLIC SIDEWALK, STREETS, CURB & GUTTER	0
PARKING, PRIVATE SIDEWALK, PRIVATE STREETS	1,692,826 SF
PROPOSED BUILDING FOOTPRINT	1,553,100 SF
TOTAL AREA OF DISTURBANCE	5,135,724 SF
TOTAL IMPERVIOUS COVER	3,245,926 SF

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

COVER SHEET

DATE:	4/29/2024	DRAWN BY:	QU
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MT

DRAWING NO.: 01
SHEET 01 OF 175

2023-23-SD

P:\330-001\331-715\-CAD\Dwg\CVD\331715-CVD1-C000-COVER SHEET.dwg[COVER SHEET] LS:(4/30/2024 - mtheone) - LP: 4/30/2024 12:02 PM

GENERAL NOTES: REVISED MARCH 23, 2023

1. GENERAL CONTRACTOR SHALL CALL FOR ALL UTILITY LOCATES PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL DELINEATE AREAS OF EXCAVATION USING WHITE PAINT (WHITE LINING) IN ACCORDANCE WITH 16 TAC 18.3. WATER & WASTEWATER OWNED BY THE CITY OF CEDAR PARK CAN BE LOCATED BY CALLING TEXAS 811 AT 1-800-344-8377. ALLOW THREE BUSINESS DAYS FOR UTILITY LOCATES BY THE CITY OF CEDAR PARK.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST CITY OF AUSTIN STANDARD SPECIFICATIONS. CITY OF AUSTIN STANDARDS SHALL BE USED UNLESS OTHERWISE NOTED.
3. DESIGN PROCEDURES SHALL BE IN GENERAL COMPLIANCE WITH THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL. ALL VARIANCES TO THE MANUAL ARE LISTED BELOW: N/A
4. BENCHMARKS SHOULD BE TIED TO THE CITY OF CEDAR PARK BENCHMARKS AND BE CORRECTLY "GEO REFERENCED" TO STATE PLANE COORDINATES. A LIST OF THE CITY'S BENCHMARKS CAN BE FOUND AT:HTTP://WWW.CEDARPARKTEXAS.GOV/INDEX.ASPX?PAGE=793.
5. PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR A SITE DEVELOPMENT PERMIT, THE RIGHT OF WAY BETWEEN THE PROPERTY LINE AND EDGE OF PAVEMENT / BACK OF CURB SHALL BE REVEGETATED ACCORDING TO COA SPECIFICATION 602S AND 606S. PRIOR TO CITY ACCEPTANCE OF SUBDIVISION IMPROVEMENTS ALL GRADED AND DISTURBED AREAS SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE CITY OF AUSTIN SPECIFICATION ITEM #604 NATIVE SEEDING UNLESS NON- NATIVE IS SPECIFICALLY APPROVED.
6. THE CONTRACTOR SHALL PROVIDE THE CITY OF CEDAR PARK COPIES OF ALL TEST RESULTS PRIOR TO ACCEPTANCE OF SUBDIVISION IMPROVEMENTS.
7. CITY, OWNER, ENGINEER, CONTRACTOR, REPRESENTATIVES OF ALL UTILITY COMPANIES, AND A REPRESENTATIVE FROM THE TESTING LAB SHALL ATTEND PRE-CONSTRUCTION CONFERENCE PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL SCHEDULE THE MEETING WITH THE CITY OF CEDAR PARK ENGINEERING DEPARTMENT A MINIMUM OF 48 HOURS PRIOR TO THIS PRE-CONSTRUCTION MEETING (512-401-5000). FINAL CONSTRUCTION PLANS SHALL BE DELIVERED TO ENGINEERING A MINIMUM OF SEVEN BUSINESS DAYS PRIOR TO REQUESTING A PRE-CONSTRUCTION MEETING.
8. EXCESS SOIL SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE. NOTIFY THE CITY OF CEDAR PARK IF THE DISPOSAL SITE IS INSIDE THE CITY'S JURISDICTIONAL BOUNDARIES.
9. BURNING IS PROHIBITED.
10. ANY CHANGES OR REVISIONS TO THESE PLANS MUST FIRST BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO CONSTRUCTION OF THE REVISION. ALL CHANGES AND REVISIONS MADE TO THE DESIGN OF UTILITIES OR IMPACTS UTILITIES SHALL USE REVISION CLOUDS TO HIGHLIGHT ALL REVISIONS OR CHANGES WITH EACH SUBMITTAL. REVISION TRIANGLES SHALL BE USED TO MARK REVISIONS. ALL CLOUDS AND TRIANGLE MARKERS FROM PREVIOUS REVISIONS MAY BE REMOVED. REVISION INFORMATION SHALL BE UPDATED IN THE APPROPRIATE AREAS OF THE TITLE BLOCK.
11. MINIMUM SETBACK REQUIREMENTS FOR EXISTING AND NEWLY PLANTED TREES FROM THE EDGE OF PAVEMENT TO CONFORM TO THE REQUIREMENTS AS SHOWN IN TABLE 6-1 OF THE CITY OF AUSTIN'S TRANSPORTATION CRITERIA MANUAL.
12. THE CONTRACTOR WILL REIMBURSE THE CITY FOR ALL COST INCURRED AS A RESULT OF ANY DAMAGE TO ANY CITY UTILITY OR ANY INFRASTRUCTURE WITHIN THE RIGHT-OF-WAY BY THE CONTRACTOR, REGARDLESS OF THESE PLANS.
13. AN ENGINEER'S CONCURRENCE LETTER AND ELECTRONIC 22"X34" RECORD DRAWINGS SHALL BE SUBMITTED TO THE ENGINEERING DEPARTMENT PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY OR SUBDIVISION ACCEPTANCE. THE ENGINEER AND CONTRACTOR SHALL VERIFY THAT ALL FINAL REVISIONS AND CHANGES HAVE BEEN MADE TO RECORD DRAWINGS PRIOR TO CITY SUBMITTAL. RECORD CONSTRUCTION DRAWINGS, INCLUDING ROADWAY AND ALL UTILITIES, SHALL BE PROVIDED TO THE CITY IN AUTOCAD ". DWG" FILES AND ".PDF" FORMAT ON A CD OR DVD. LINE WEIGHTS, LINE TYPES AND TEXT SIZE SHALL BE SUCH THAT IF HALF-SIZE PRINTS (11"X 17") WERE PRODUCED, THE PLANS WOULD STILL BE LEGIBLE. ALL REQUIRED DIGITAL FILES SHALL CONTAIN A MINIMUM OF TWO (2) CONTROL POINTS REFERENCED TO THE STATE PLANE GRID COORDINATE SYSTEM – TEXAS CENTRAL ZONE (4203), IN US FEET AND SHALL INCLUDE ROTATION INFORMATION AND SCALE FACTOR REQUIRED TO REDUCE SURFACE COORDINATES TO GRID COORDINATES IN US FEET.
14. THE CITY OF CEDAR PARK HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT. IT IS THE RESPONSIBILITY OF THE OWNER TO PROVIDE COMPLIANCE WITH ALL LEGISLATION RELATED TO ACCESSIBILITY WITHIN THE LIMITS OF CONSTRUCTION SHOWN IN THESE PLANS.
15. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF CEDAR PARK MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
16. NO BLASTING IS ALLOWED ON THIS PROJECT.
17. A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO ANY PARTIAL OR COMPLETE ROADWAY CLOSURES. TRAFFIC CONTROL PLANS SHALL BE SITE SPECIFIC AND SEAL BY A REGISTERED PROFESSIONAL ENGINEER.
18. THE CONTRACTOR SHALL KEEP THE SITE CLEAN AND MAINTAINED AT ALL TIMES, TO THE SATISFACTION OF THE CITY. THE SUBDIVISION WILL NOT BE ACCEPTED (OR CERTIFICATE OF OCCUPANCY ISSUED) UNTIL THE SITE HAS BEEN CLEANED TO THE SATISFACTION OF THE CITY.
19. SIGNS ARE NOT PERMITTED IN PUBLIC UTILITY EASEMENTS, SET BACKS OR DRAINAGE EASEMENTS.
20. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT TEMPORARY EROSION CONTROLS ON A DAILY ADJUST THE CONTROLS AND/OR REMOVE ANY SEDIMENT BUILDUP AS NECESSARY. A STOP WORK ORDER AND/OR FINE MAY BE IMPOSED IF THE EROSION CONTROLS ARE NOT MAINTAINED.
21. A FINAL CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED ON COMMERCIAL SITES UNTIL ALL DISTURBED AREAS HAVE BEEN RE-VEGETATED. SUBSTANTIAL GRASS COVER, AS DETERMINED BY ENGINEERING DEPARTMENT, MUST BE ACHIEVED PRIOR TO THE ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY. ALL EROSION CONTROLS MUST REMAIN IN PLACE AND MAINTAINED UNTIL ALL DISTURBED AREAS HAVE BEEN RE-VEGETATED TO THE ACCEPTANCE OF THE CITY OF CEDAR PARK ENGINEERING DEPARTMENT. PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR A SITE DEVELOPMENT PERMIT, THE RIGHT OF WAY BETWEEN THE PROPERTY LINE AND EDGE OF PAVEMENT / BACK OF CURB SHALL BE REVEGETATED ACCORDING TO COA SPECIFICATION 602S AND 606S.
22. CONTRACTOR WILL BE RESPONSIBLE FOR KEEPING ROADS AND DRIVES ADJACENT TO AND NEAR THE SITE FREE FROM SOIL, SEDIMENT AND DEBRIS. CONTRACTOR WILL NOT REMOVE SOIL, SEDIMENT OR DEBRIS FROM ANY AREA OR VEHICLE BY MEANS OF WATER, ONLY SHOVELING AND SWEEPING WILL BE ALLOWED. CONTRACTOR WILL BE RESPONSIBLE FOR DUST CONTROL FROM THE SITE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN A STOP WORK ORDER OR A FINE.
23. ALL WET UTILITIES SHALL BE INSTALLED AND ALL DENSITIES MUST HAVE PASSED INSPECTION(S) PRIOR TO THE INSTALLATION OF DRY UTILITIES.
24. A MINIMUM OFSEVEN DAYS OF CURE TIME IS REQUIRED FOR HMAC PRIOR TO THE INTRODUCTION OF VEHICULAR TRAFFIC TO ANY STREETS.
25. PRIOR TO PLAN APPROVAL, THE ENGINEER SHALL SUBMIT TO THE ENGINEERING DEPARTMENT DOCUMENTATION OF SUBDIVISION/SITE REGISTRATION WITH THE TEXAS DEPARTMENT OF LICENSING AND REGULATIONS (TDLR) AND PROVIDE DOCUMENTATION OF REVIEW AND COMPLIANCE OF THE SUBDIVISION/SITE CONSTRUCTION PLANS WITH TEXAS ARCHITECTURAL BARRIERS ACT (TABA).
26. PRIOR TO SUBDIVISION/SITE ACCEPTANCE, THE ENGINEER/DEVELOPER-OWNERSHALL SUBMIT TO THE ENGINEERING DEPARTMENT DOCUMENTATION THAT THE SUBDIVISION/SITE WAS INSPECTED BY TDLR OR A REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND THE SUBDIVISION/SITE IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE TABA.
27. ALL CONSTRUCTION AND CONSTRUCTION RELATED ACTIVITIES SHALL BE PERFORMED MONDAY THRU FRIDAY FROM 7:00 A.M. TO 6:00 P.M. HOWEVER, CONSTRUCTION ACTIVITIES WITHIN ONE HUNDRED FEET (100') OF A DWELLING OR DWELLING UNIT SHALL BE PERFORMED BETWEEN THE HOURS OF 8:00 A.M. AND 6:00 P.M. OTHERWISE ALL CONSTRUCTION AND CONSTRUCTION RELATED ACTIVITIES SHALL CONFORM TO CITY OF CEDAR PARK CODE OF ORDINANCES, SPECIFICALLY ARTICLE 8.08.
28. APPROVAL FOR CONSTRUCTION ACTIVITIES PERFORMED ON OWNER'S HOLIDAYS, AND/OR SATURDAYS, OUTSIDE OF MONDAY THROUGH FRIDAY 8 AM TO 5 PM, OR IN EXCESS OF 8 HOURS PER DAY SHALL BE OBTAINED IN WRITING 48 HOURS IN ADVANCE, AND INSPECTION FEES AT 1.5 TIMES THE HOURLY INSPECTION RATE SHALL BE BILLED DIRECTLY TO THE CONTRACTOR. THERE SHALL BE NO CONSTRUCTION OR CONSTRUCTION RELATED ACTIVITIES PERFORMED ON SUNDAY. THE CITY RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER ALL WORK PERFORMED WITHOUT CITY INSPECTION.
29. ALL POLES TO BE APPROVED BY CITY AND PEC, NO CONDUIT SHALL BE INSTALLED DOWN LOT LINES / BETWEEN HOMES. ALL CONDUIT SHALL BE LOCATED IN THE PUBLIC ROW OR IN AN EASEMENT ADJACENT TO AND PARALLEL TO THE PUBLIC ROW.
30. DRY UTILITIES SHALL BE INSTALLED AFTER SUBGRADE IS CUT AND BEFORE FIRST COURSE BASE. NO TRENCHING OF COMPACTED BASE. IF NECESSARY DRY UTILITIES INSTALLED AFTER FIRST COURSE BASE SHALL BE BORED ACROSS THE FULL WIDTH OF THE ROW.
31. NO PONDING OF WATER SHALL BE ALLOWED TO COLLECT ON OR NEAR THE INTERSECTION OF PRIVATE DRIVEWAY(S) AND A PUBLIC STREET. RECONSTRUCTION OF THE DRIVEWAY APPROACH SHALL BE AT THE CONTRACTOR'S EXPENSE.
32. ALL DRIVEWAY APPROACHES SHALL HAVE A UNIFORM TWO PERCENT SLOPE WITHIN THE ROW UNLESS APPROVED IN WRITING BY THE ENGINEERING DEPARTMENT.
33. CONTRACTORS ON SITE SHALL HAVE AN APPROVED SET OF PLANS AT ALL TIMES. FAILURE TO HAVE AN APPROVED SET MAY RESULT IN A STOP WORK ORDER.
34. CONTRACTOR TO CLEAR FIVE FEET BEYOND ALL RIGHT OF WAY TO PREVENT FUTURE VEGETATIVE GROWTH INTO THE SIDEWALK AREAS.
35. THERE SHALL BE NO WATER OR WASTEWATER APPURTENANCES, INCLUDING BUT NOT LIMITED TO, VALVES, FITTINGS, METERS, CLEAN-OUTS, MANHOLES, OR VAULTS IN ANY DRIVEWAY, SIDEWALK, TRAFFIC OR PEDESTRIAN AREA.
36. SIDEWALKS SHALL NOT USE CURB INLETS AS A PARTIAL WALKING SURFACE. SIDEWALKS SHALL NOT USE TRAFFIC CONTROL BOXES, METER OR CHECK VALVE VAULTS, COMMUNICATION VAULTS, OR OTHER BURIED OR PARTIALLY BURIED INFRASTRUCTURE AS A VEHICULAR OR PEDESTRIAN SURFACE.

STREET NOTES:

1. NO TRENCHING OF COMPACTED BASE WILL BE ALLOWED. A PENALTY AND/OR FINE MAY BE IMPOSED TO THE GENERAL CONTRACTOR IF TRENCHING OF COMPACTED BASE OCCURS WITHOUT CITY APPROVAL, REGARDLESS OF WHO PERFORMED THE TRENCHING.
2. ALL SIDEWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THE CITY OF CEDAR PARK HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, OR ANY OTHER ACCESSIBILITY LEGISLATION, AND DOES NOT WARRANTY OR APPROVE THESE PLANS FOR ANY ACCESSIBILITY STANDARDS.
3. STREET BARRICADES SHALL BE INSTALLED ON ALL DEAD END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB SAFETY.
4. ANY DAMAGE CAUSED TO EXISTING PAVEMENT, CURBS, SIDEWALKS, RAMPS, ETC., SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE SUBDIVISION.
5. AT INTERSECTIONS, WHICH HAVE VALLEY DRAINAGE, THE CROWN TO THE INTERSECTING STREET WILL BE CULMINATED AT A DISTANCE OF 40 FT. FROM THE INTERSECTING CURB LINE UNLESS OTHERWISE NOTED.
6. THE SUBGRADE MATERIAL WAS TESTED BY RABA KISTNER, 8100 CAMERON RD, SUITE B-150, AUSTIN, TX 78754, (512) 339-1745 ON MAY 18, 2023 THE PAVEMENT SECTIONS WERE DESIGNED ACCORDINGLY. THE PAVEMENT SECTIONS ARE TO BE CONSTRUCTED AS FOLLOWS:

Traffic Type	ACI 330 Traffic Spectrum*	Portland Cement Concrete	Flexible Base	Subgrade
Passenger Vehicles Only	A	5.0 in.	4 in.	12 in. Alternate Select, Lime Treated Soil or Stratum II/III
Up to 50 Heavy Trucks/Day	D	6.0 in.	4 in.	
Up to 500 Heavy Trucks/Day	D	7.0 in.	4 in.	
Up to 1,000 Heavy Trucks/Day	D	8.0 in.	4 in.	

* Spectrum A – Passenger cars only
Spectrum D – Tractor semitrailer trucks with gross weights of 80 kips

	Layer Description	Layer Thickness
Passenger Vehicles Only	HMAC Surface Course, Type "D" Flexible Base **Combined Total**	2.0 in. 8.0 in. **10.0 in.**
Up To 50 Trucks Per Day	HMAC Surface Course, Type "C" Flexible Base **Combined Total**	3.0 in. 9.0 in. **12.0 in.**

ANCILLARY STRUCTURE FOUNDATION RECOMMENDATIONS

7. DENSITY TESTING OF COMPACTED SUBGRADE MATERIAL, FIRST COURSE AND SECOND COURSE COMPACTED BASE, SHALL BE MADE AT 500 FOOT INTERVALS.
8. ALL DENSITY TESTING IS THE RESPONSIBILITY OF THE OWNER OR CONTRACTOR AND SHALL BE WITNESSED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE. THE CONTRACTOR IS TO NOTIFY THE CITY 48 HOURS PRIOR TO SCHEDULED DENSITY TESTING.
9. TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND INSTALLED AS DIRECTED BY THE CITY OF CEDAR PARK PRIOR TO CITY ACCEPTANCE OF THE SUBDIVISION.
10. SLOPE OF NATURAL GROUND ADJACENT TO THE RIGHT-OF-WAY SHALL NOT EXCEED 3:1. IF A 3:1 SLOPE IS NOT POSSIBLE, A RETAINING WALL ORSOME OTHER FORM OF SLOPE PROTECTION APPROVED BY THE CITY SHALL BE PLACED IN A LOCATION ACCEPTABLE TO THE CITY.
11. THE CITY, ENGINEER, CONTRACTOR, AND A REPRESENTATIVE FROM THE ASPHALT TESTING LAB SHALL ATTEND A PRE-PAVING CONFERENCE PRIOR TO THE START OF HMAC PAVING. THE CONTRACTOR SHALL GIVE THE CITY A MINIMUM OF 48 HOURS NOTICE PRIOR TO THIS MEETING (512-401-5000).
12. THE CONTRACTOR OR OWNER IS RESPONSIBLE FOR CONDUCTING TESTS ON ASPHALT PAVEMENT IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE CITY OF AUSTIN STANDARD SPECIFICATION NO. 340. ANY RE-TESTING OF THE ASPHALT PAVEMENT SHALL BE CONDUCTED UNDER THE SUPERVISION OF THE ENGINEER AND THE CITY OF CEDAR PARK. RE-TESTING OF THE ASPHALT PAVEMENT SHALL BE LIMITED TO ONE RETEST PER PROJECT.
13. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL COMPLY WITH MUTCD STANDARDS. STREET NAME LETTERSIZING SHALL BE IN ACCORDANCE WITH MUTCDTABLE2D-2.PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED.
14. ALL STREET NAME SIGNS SHALL BE HIGH INTENSITY RETRO GRADE.
15. NO FENCING OR WALL IS ALLOWED TO BE CONSTRUCTED SO THAT IT OBSTRUCTS THE SIGHT LINES OF DRIVERS FROM AN INTERSECTING PUBLIC ROADWAY OR FROM AN INTERSECTING PRIVATE DRIVEWAY. SIGHT LINES ARE TO BE MAINTAINED AS DESCRIBED IN CITY CODE SECTION 14.05.007. INSTALLING A FENCE OR WALL WHICH DOES NOT COMPLY WITH THE CITY'S SIGHT DISTANCE REQUIREMENTS OR FENCING REGULATIONS IS A VIOLATION OF THE CITY'S ORDINANCE AND MAY BE PUNISHABLE PURSUANT TO SECTION 1.01.009 OF CITY CODE.
16. TEMPORARY ROCK CRUSHING OPERATIONS ARE NOT ALLOWED. ALL SOURCES FOR FLEXIBLE BASE MATERIAL ARE REQUIRED TO BE APPROVED BY THE CITY. PRIOR TO BASE PLACEMENT ALL CURRENT TRIAXIAL TEST REPORTS FOR THE PROPOSED STOCKPILES ARE TO BE SUBMITTED TO THE CITY'S PROJECT REPRESENTATIVE FOR REVIEW AND APPROVAL.
17. UTILITY SERVICE BOXES OR OTHER UTILITY FACILITIES SHALL NOT BE INSTALLED WITHIN AREAS DETERMINED TO BE REQUIRED SIGHT LINES OF TWO INTERSECTING PUBLIC STREETS OR WITHIN SIGHT LINES OF A PRIVATE DRIVEWAY. SIGHT LINES ARE TO BE MAINTAINED COMPLIANT WITH TABLE 1-1 OF THE AUSTIN TRANSPORTATION CRITERIA MANUAL. UTILITIES DETERMINED BY THE DIRECTOR OF ENGINEERING TO BE PLACED WITHIN REQUIRED SIGHT LINES MAY BE REQUIRED TO BE RELOCATED AT THE EXPENSE OF THE CONTRACTOR PRIOR TO THE CITY ISSUING A CERTIFICATE OF OCCUPANCY OR PRIOR TO THE CITY'S ACCEPTANCE OF THE PROJECT IMPROVEMENTS.
18. ALL LANE CLOSURES SHALL OCCUR ONLY BETWEEN THE HOURS OF 9 AM AND 4 PM. ANY NIGHT TIME LANE CLOSURES REQUIRE APPROVAL BY THE DIRECTOR OF ENGINEERING AND SHALL OCCUR BETWEEN THE HOURS OF 8 PM AND 6 AM. LANE CLOSURES OBSERVED BY CITY DURING THE PEAK HOURS OF 6 AM TO 9 AM, OR 4 PM TO 8 PM WILL BE SUBJECT TO FINE PER CHAPTER 1 OF CITY ORDINANCE, AND/OR SUBSEQUENT ISSUANCE OF WORK STOPPAGE.
19. IMPROVEMENTS THAT INCLUDE RECONSTRUCTION OF AN EXISTING TYPE II DRIVEWAY SHALL BE DONE IN A MANNER WHICH RETAINS OPERATIONS OF NOT LESS THAN HALF OF THE DRIVEWAY AT ALL TIMES. FULL CLOSURE OF SUCH DRIVEWAY CAN BE CONSIDERED WITH WRITTEN AUTHORIZATION RETAINED BY THE CONTRACTOR FROM THE PROPERTY OWNER(S) OR ACCESS EASEMENT RIGHT HOLDER(S) OF THE DRIVEWAY ALLOWING FULL CLOSURE OF THE DRIVEWAY.
20. TREES MUST NOT OVERHANG WITHIN 10' VERTICALLY OF A SIDEWALK, OR 18' VERTICALLY OF A ROADWAY OR DRIVEWAY.

WASTEWATER NOTES:

1. REFER TO THE CITY OF CEDAR PARK PUBLIC WORKS UTILITY POLICY AND SPECIFICATIONS MANUAL.
2. MANHOLE FRAMES AND COVERS AND WATER VALVE BOXES SHALL BE RAISED TO FINISHED PAVEMENT GRADE AT THE OWNER'S EXPENSE BY THE CONTRACTOR WITH THE CITY APPROVAL. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION.
3. THE LOCATION OF ANY EXISTING UTILITY LINES SHOWN ON THESE PLANS MAY NOT BE ACCURATE. ANY DAMAGE TO EXISTING UTILITY LINES, BOTH KNOWN AND UNKNOWN, SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO BIDDING THE PROJECT.
4. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH AT LEAST 8 MIL. POLYETHYLENE WRAP.
5. ALL WATER MAINS, WASTEWATER MAINS AND SERVICE LINES SHALL MEET CITY OF AUSTIN MINIMUM COVER SPECIFICATIONS. ALL STREETS ARE TO BE CUT TO SUBGRADE PRIOR TO INSTALLATION OF WATER MAINS OR CUTS WILL BE ISSUED BY THE ENGINEER.
6. WHERE 48-INCHES OF COVER BELOW SUBGRADE CANNOT BE ACHIEVED FOR WASTEWATER SERVICE LINES ALTERNATE MATERIALS MAY BE USED. A MINIMUM OF 36-INCHES OF COVER BELOW SUBGRADE SHALL BE ACHIEVED. ANY WASTEWATER SERVICE LINE WITH COVER BETWEEN 36-INCH AND 48- INCHES SHALL BE SDR-26 PVC PRESSURE PIPE.
7. GASKETED PVC SEWER MAIN FITTINGS SHALL BE USED TO CONNECT SDR-35 PVC TO SDR-26 PVC PRESSURE PIPE OR C-900.
8. PIPE MATERIALS TO BE USED FOR CONSTRUCTION OF UTILITY LINES:
WASTEWATER- SDR-26
FORCE MAIN- N/A
(NOTE: IF USING PVC, SDR-26 IS REQUIRED, SDR-35 WW IS NOT ALLOWED. FORCEMAINS SHALL BE EPOXY LINED DUCTILE IRON)
9. ALL SANITARY SEWERS, EXCLUDING SERVICE LINES, SHALL BE MANDREL TESTED PER TCEQ (TEXAS COMMISSION ON ENVIRONMENTAL QUALITY) CRITERIA. A MANDREL TEST WILL NOT BE PERFORMED UNTIL BACKFILL HAS BEEN IN PLACE FOR A MINIMUM OF 30 DAYS.
10. ALL WASTEWATER LINES 10" AND LARGER SHALL BE VIDEO INSPECTED IN ACCORDANCE WITH CITY OF CEDAR PARK PUBLIC WORKS DEPARTMENT UTILITY POLICY AND STANDARD SPECIFICATIONS MANUAL APPENDIX E: REQUIREMENTS FOR VIDEO INSPECTION OF WASTEWATER LINES AT THE CONTRACTOR'S EXPENSE. NO SEPARATE PAY UNLESS NOTED ON THE BID FORM.
11. ALL SANITARY SEWERS, INCLUDING SERVICE LINES, SHALL BE AIR TESTED PER CITY OF AUSTIN STANDARD SPECIFICATIONS.
12. DENSITY TESTING OF COMPACTED BACKFILL SHALL BE MADE AT A RATE OF ONE TEST PER TWO FOOT LIFTS PER 500 FEET OF INSTALLED PIPE.
13. CITY SHALL BE GIVEN 48 HOURS NOTICE PRIOR TO ALL TESTING OF WATER AND WASTEWATER LINES. CITY INSPECTION IS REQUIRED FOR ALL TESTING OF WATER AND WASTEWATER LINES.
14. WHERE A WATER OR WASTEWATER LINE CROSSES ABOVE (OR BELOW) A STORM SEWER STRUCTURE AND THE BOTTOM (OR TOP) OF THE PIPE IS WITHIN 18 INCHES OF THE TOP (OR BOTTOM) OF THE UTILITY STRUCTURE, THE PIPE SHALL BE ENCASED WITH CONCRETE FOR A DISTANCE OF AT LEAST 1 FT. ON EITHER SIDE OF THE DITCH LINE OF THE UTILITY STRUCTURE OR THE STORM SEWER. CONCRETE ENCASEMENT WILL NOT BE REQUIRED FOR DUCTILE IRON (THICKNESS CLASS 50), AWWA C-900 (SDR- 18) 150 PSI RATED PVC IN SIZES TO 12 INCHES OR AWWA C-905 (SDR-25) 165 PSI RATED PVC IN SIZES LARGER THAN 12 INCHES. CONCRETE ENCASEMENT SHALL CONFORM TO C.O.A. STANDARD DETAIL 505-1.
15. THE ALLOWABLE (MAXIMUM) ADJUSTMENT FOR A MANHOLE SHALL BE 12" (INCHES) OR LESS.
16. WHERE A SEWER LINE CROSSES A WATER LINE, THE SEWER LINE SHALL BE ONE 20 FT. JOINT OF 150 PSI RATED PVC CENTERED ON CROSSING.
17. ALL MANHOLE AND INLET COVERS SHALL READ "CITY OF CEDAR PARK".
18. CONTRACTOR TO NOTIFY, AND OBTAIN APPROVAL FROM, THE CITY OF CEDAR PARK 48 HOURS PRIOR TO CONNECTING TO EXISTING CITY UTILITIES.
19. ALL PIPE BEDDING MATERIAL SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATIONS.
20. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER ALL CONCRETE IS TO BE CLASS "A" (5 SACK, 3000 PSI ~ 28-DAYS), AND ALL REINFORCING STEEL TO BE ASTM A615 60.
21. ALL WASTEWATER MANHOLES TO BE COATED WITH ORGANIC MATERIALS AND PROCEDURES LISTED IN CITY OF AUSTIN QUALIFIED PRODUCTS LIST NO. WW-511 (WW-511A AND WW-511B ARE NOT ALLOWED UNLESS MANHOLE IS BEING STRUCTURALLY REHABILITATED WITH APPROVAL BY PUBLIC WORKS). ALL MANHOLES WILL BE PRE-COATED OR COATED AFTER TESTING.
22. POLYBRID COATINGS ON WASTEWATER MANHOLES WILL NOT BE ALLOWED. ANY OTHER PRODUCT APPEARING ON THE COA SPL WW-511 IS ACCEPTABLE.
23. ALL PENETRATIONS OF EXISTING WASTEWATER MANHOLES ARE REQUIRED TO BE RE-COATED IN ACCORDANCE WITH THE SPECIFICATIONS LISTED IN NOTE 20.
24. ALL MANHOLES WILL BE VACUUM TESTED ONLY.
25. TRACER TAPE AND MARKING TAPE SHALL BE INSTALLED ON ALL WATER AND WASTEWATER MAINS IN ACCORDANCE WITH CITY OF AUSTIN STANDARDS, REGARDLESS OF THE TYPE OF PIPE.
26. ALL PRESSURE PIPE SHALL HAVE MECHANICAL RESTRAINT AND CONCRETE THRUST BLOCKING AT ALL VALVES, BENDS, TEES, PLUGS, AND OTHER FITTINGS.

WATER NOTES:

1. REFER TO THE CITY OF CEDAR PARK PUBLIC WORKS UTILITY POLICY AND SPECIFICATIONS MANUAL.
2. THE TOP OF VALVE STEMS SHALL BE AT LEAST 18", AND NO MORE THAN 36", BELOW FINISHED grade. VALVE STEM RISERS SHALL BE WELDED ON EACH END TO THE CITY'S SATISFACTION.
3. FIRE HYDRANT LEADS TO BE DUCTILE IRON, CLASS 350, AND INSTALLED PER CITY OF AUSTIN STANDARD SPECIFICATIONS AND DETAIL.
4. PRIOR TO INSTALLATION OF FIRE HYDRANTS, THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) CUT FROM A HUB PIN, ESTABLISHING THE ELEVATION OF THE BURY LINE.
5. THE ENGINEER SHALL PROVIDE CUTS FOR ALL WATER LINES AT ALL STORM SEWER CROSSINGS TO THE CITY OF CEDAR PARK.
6. PIPE MATERIALS TO BE USED FOR CONSTRUCTION OF UTILITY LINES:
• WATER – CLASS 350 D.I. OR C900 DR-14 PVC
COPPER PIPE AND FITTINGS ARE NOT PERMITTED WITHIN THE RIGHT-OF-WAY.
MINIMUM DR-14 12" DIA AND SMALLER. MINIMUM CLASS 250 DI LARGER THAN 12" DIA.
7. APPROVED 5 ¼" FIRE HYDRANTS:
□ AMERICAN FLOW CONTROL, B84B
□ MUELLER COMPANY, SUPER CENTURION 250
□ CLOW MEDALLION HYDRANT
– REQUIREMENTS FOR PRIVATE FIRE HYDRANTS (BEHIND DOUBLE CHECK BACKFLOW PREVENTION ASSEMBLY): MUST BE IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATIONS.
□ ALL FIRE HYDRANTS MUST MEET CITY OF CEDAR PARK THREAD SPECIFICATIONS (NATIONAL THREAD)
□ BLUE REFLECTOR MARKERS SHALL BE LOCATED ON THE CENTERLINE OF THE PAVEMENT ACROSS FROM ALL FIRE HYDRANTS. PAVEMENT MARKERS AT INTERSECTIONS SHALL BE FOUR-SIDED.
8. SHOULD A TAPPING SADDLE BE APPROVED BY PUBLIC WORKS, THE SADDLE SHALL BE SMITH-BLAIR 662 STAINLESS STEEL TAPPING SLEEVES WITH ALL STAINLESS HARDWARE, OR APPROVED EQUAL. REQUESTS FOR ALTERNATE PROVIDERS SHALL BE MADE TO THE CITY OF CEDAR PARK PUBLIC WORKS. NO TAP EXCEEDING 2" IN DIAMETER WILL BE APPROVED.
9. ALL WATER LINES, INCLUDING SERVICE LINES, SHALL BE PRESSURE AND LEAK TESTED PER CITY OF AUSTIN STANDARD SPECIFICATIONS AND WITNESSED BY THE CITY OF CEDAR PARK REPRESENTATIVE. ALL TESTING IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR, AND THE CONTRACTOR MAY BE REQUIRED TO RE-TEST LINES IF THE TESTING IS NOT WITNESSED BY THE CITY. CONTRACTOR MUST NOTIFY THE CITY OF CEDAR PARK 48 HOURS PRIOR TO ANY TESTING.
10. ALL WATER LINES SHALL BE STERILIZED AND BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH CITY OF AUSTIN STANDARDS. THE CONTRACTOR IS RESPONSIBLE FOR STERILIZATION AND THE CITY OF CEDAR PARK IS RESPONSIBLE FOR SUBMITTING BACTERIOLOGICAL SAMPLES TO THE STATE. PUBLIC WORKS WILL REQUIRE A CONTRACTOR SPECIALIZED IN DISINFECTION FOR LARGE DIAMETER LINES OR CRITICAL INFRASTRUCTURE, SUBSIDIARY TO PIPE INSTALLATION.
11. DENSITY TESTING OF COMPACTED BACKFILL SHALL BE MADE AT A RATE OF ONE TEST PER TWO FOOT LIFTS PER 500 FEET OF INSTALLED PIPE.
12. CONTRACTOR TO OBTAIN A WATER METER FROM THE CITY OF CEDAR PARK FOR ANY WATER THAT MAY BE REQUIRED DURING CONSTRUCTION. (512-401-5000)
13. ALL WATER METER BOXES SHALL BE FORD GULF METER BOX WITH LOCKING LID.
• SINGLE G-148-233
• DUAL DG-148-243
• 1" METER YL111 – 444
• 1 ½" - 2" METER 1730-R (LID) & 1730-12 (BOX)/ACCEPTABLE BOXES FOR THIS SIZE OF METER
14. MANHOLE FRAMES AND COVERS AND WATER VALVE BOXES SHALL BE RAISED TO FINISHED PAVEMENT GRADE, WHEN IN PUBLIC STREETS, AT THE OWNER'S EXPENSE BY THE CONTRACTOR WITH CITY INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION.
15. THE LOCATION OF ANY EXISTING UTILITY LINES SHOWN ON THESE PLANS IS THE BEST AVAILABLE AND MAY NOT BE ACCURATE. ANY DAMAGE TO EXISTING UTILITY LINES, BOTH KNOWN AND UNKNOWN, SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
16. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH AT LEAST 8 MIL. POLYETHYLENE WRAP.
17. ALL WATER MAINS, WASTEWATER MAINS AND SERVICE LINES SHALL MEET CITY OF AUSTIN SPECIFICATIONS FOR MINIMUM COVER REQUIREMENTS. ALL STREETS ARE TO BE CUT TO SUBGRADE PRIOR TO INSTALLATION OF WATER MAINS OR CUTS WILL BE ISSUED BY THE ENGINEER.
18. CITY TO BE GIVEN 48 HOURS NOTICE PRIOR TO ALL TESTING OF WATER AND WASTEWATER LINES. CITY INSPECTION IS REQUIRED FOR ALL TESTING OF WATER AND WASTEWATER LINES.
19. WHERE A WATER OR WASTEWATER LINE CROSSES ABOVE (OR BELOW) A STORM SEWER STRUCTURE AND THE BOTTOM (OR TOP) OF THE PIPE IS WITHIN 18 INCHES OF THE TOP (OR BOTTOM) OF THE UTILITY STRUCTURE, THE PIPE SHALL BE ENCASED WITH CONCRETE FOR A DISTANCE OF AT LEAST 1 FT. ON EITHER SIDE OF THE DITCH LINE OF THE UTILITY STRUCTURE OR THE STORM SEWER. CONCRETE ENCASEMENT WILL NOT BE REQUIRED FOR DUCTILE IRON (THICKNESS CLASS 50), AWWA C-900 (SDR- 18) 150 PSIRATED PVC IN SIZESTO 12 INCHES OR AWWA C-905 (SDR-25) 165 PSI RATED PVC IN SIZESLARGER THAN 12 INCHES. CONCRETE ENCASEMENT SHALL CONFORM TO C.O.A. STANDARD DETAIL 505-1.
20. CONTRACTOR TO NOTIFY THE CITY OF CEDAR PARK 48 HOURS PRIOR TO CONNECTING TO EXISTING UTILITIES.
21. ALL PIPE BEDDING MATERIAL SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATIONS.
22. TRACER TAPE SHALL BE INSTALLED ON ALL WATER AND WASTEWATER MAINS REGARDLESS OF THE TYPE OF PIPE OR DEPTH OF PIPE INSTALLED.
23. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER ALL CONCRETE IS TO BE CLASS "A" (5 SACK, 3000 PSI ~ 28-DAYS), AND ALL REINFORCING STEEL TO BE ASTM A615 60.
24. THE CITY CONSIDERS PROTECTION OF ITS WATER SYSTEM PARAMOUNT TO CONSTRUCTION ACTIVITIES. CITY PERSONNEL WILL OPERATE, OR AUTHORIZE THE CONTRACTOR TO OPERATE, ALL WATER VALVES THAT WILL PASS THROUGH THE CITY'S POTABLE WATER. THE CONTRACTOR MAY NOT OPERATE ANY WATER VALVE, EXISTING OR PROPOSED, THAT WILL ALLOW WATER FROM THE CITY'S WATER SYSTEM TO FLOW TO A PROPOSED OR EXISTING WATER SYSTEM WITHOUT THE EXPRESS CONSENT OF THE CITY. NOTIFY THE CITY TWO BUSINESS DAYS IN ADVANCE OF ANY REQUEST TO OPERATE A WATER VALVE. THE GENERAL CONTRACTOR MAY BE FINED $500 OR MORE, INCLUDING ADDITIONAL THEFT OF WATER FINES, IF A WATER VALVE IS OPERATED IN AN UNAUTHORIZED MANNER, REGARDLESS OF WHO OPERATED THE VALVE.
25. ALL WATER VALVES OVER 24" IN SIZE SHALL HAVE A BY-PASS LINE AND VALVE INSTALLED. BY-PASS VALVES AND LINES ARE SUBSIDIARY TO THE COST OF THE VALVE UNLESS SPECIFICALLY IDENTIFIED ON THE BID FORM.
26. ALL WATER VALVES, INCLUDING THOSE OVER 12" IN SIZE, SHALL BE GATE VALVES.
27. A DOUBLE CHECK BACKFLOW DEVICE IN A VAULT SHALL BE INSTALLED AT THE PROPERTY LINE ON ALL PRIVATE FIRE LINES. A DETECTOR WATER METER WILL BE INSTALLED ON THIS BACKFLOW DEVICE, AND IT MUST BE A SENSUS SRII 3/4" METER WITH AMI RADIO READ CAPABILITY. THE CITY WILL PROVIDE THIS METER. PLEASE REFERENCE THE CITY OF CEDAR PARK DOUBLE CHECK BACKFLOW PREVENTION ASSEMBLY DETAIL.
28. ALL POTABLE WATER SYSTEM COMPONENTS INSTALLED AFTER JANUARY 4, 2014, SHALL BE "LEAD FREE" ACCORDING TO THE UNITED STATES SAFE DRINKING WATER ACT. THE ONLY COMPONENTS EXEMPT FROM THIS REQUIREMENT ARE FIRE HYDRANTS. COMPONENTS THAT ARE NOT CLEARLY IDENTIFIED BY THE MANUFACTURER AS MEETING THIS REQUIREMENT BY MARKING, OR ON THE PRODUCT PACKAGING, OR BY PRE-APPROVED SUBMITTAL, WILL BE REJECTED FOR USE. A NSF CERTIFICATION WILL BE ADEQUATE IF THE CERTIFICATION HAS NOT EXPIRED AS OF JANUARY 4, 2014 AND REMAINS UNEXPIRED AT THE TIME OF CONSTRUCTION.
29. ALL PRESSURE PIPE SHALL HAVE MECHANICAL RESTRAINT AND CONCRETE THRUST BLOCKING AT ALL VALVES, BENDS, TEES, PLUGS, AND OTHER FITTINGS.

STORM SEWER NOTES:

1. MANHOLE FRAMES AND COVERS AND WATER VALVE BOXES SHALL BE RAISED TO FINISHED PAVEMENT GRADE AT THE OWNER'S EXPENSE BY THE CONTRACTOR WITH CITY INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION. CONTRACTOR SHALL BACKFILL AROUND MANHOLES AND JUNCTION BOXES WITH CLASS A CONCRETE.
2. ALL MANHOLE LIDS SHALL BE 32" OR LARGER, UNLESS EXPRESSLY APPROVED IN WRITING BY THE ENGINEERING DEPARTMENT.
3. THE LOCATION OF ANY EXISTING UTILITY LINES SHOWN ON THESE PLANS IS THE BEST AVAILABLE AND MAY NOT BE ACCURATE. ANY DAMAGE TO EXISTING UTILITY LINES, BOTH KNOWN AND UNKNOWN, SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
4. PIPE MATERIALS TO BE USED FOR CONSTRUCTION OF UTILITY LINES: UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, ALL STORM SEWER RCP SHALL BE CLASS III. CORRUGATED METAL PIPE IS NOT PERMITTED.
5. ALL MANHOLE AND INLET COVERS SHALL READ "CITY OF CEDAR PARK".
6. CONTRACTOR TO NOTIFY THE CITY OF CEDAR PARK 48 HOURS PRIOR TO CONNECTING TO EXISTING UTILITIES.
7. ALL PIPE BEDDING MATERIAL SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATIONS.
8. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER ALL CONCRETE IS TO BE CLASS "A" (5 SACK, 3000 PSI ~ 28-DAYS), AND ALL REINFORCING STEEL TO BE ASTM A615 60.
9. CONTRACTOR TO INSTALL AND MAINTAIN GEO-TEXTILE FABRIC BARRIER (INLET PROTECTION) AROUND STORM SEWER LEADS AND INLETS TO PREVENT SILT AND OTHER MATERIAL FROM ENTERING THE STORM SEWER COLLECTION SYSTEM.
10. INSTALL CONCRETE SAFETY END TREATMENTS TO ALL CULVERTS AND ENDS OF DRAINAGE PIPE.
11. ALL CURB INLETS SHALL HAVE AN ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER.

SEQUENCE OF CONSTRUCTION NOTES:

THE FOLLOWING SEQUENCE OF CONSTRUCTION SHALL BE USED FOR ALL DEVELOPMENT. THE APPLICANT IS ENCOURAGED TO PROVIDE ANY ADDITIONAL DETAILS APPROPRIATE FOR THE PARTICULAR DEVELOPMENT.

1. TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED AS INDICATED ON THE APPROVED SITE PLAN OR SUBDIVISION CONSTRUCTION PLAN AND IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS REQUIRED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION AND INITIATE TREE MITIGATION MEASURES.
2. THE GENERAL CONTRACTOR MUST CONTACT THE CITY INSPECTOR AT 512-401-5000, 72 HOURS PRIOR TO THE SCHEDULED DATE OF THE REQUIRED ON-SITE PRECONSTRUCTION MEETING.
3. THE GENERAL CONTRACTOR WILL FOLLOW THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH CITY INSPECTORS' DIRECTIVES, AND REVISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND THE EROSION PLAN.
4. ROUGH GRADE THE POND(S) AT 100% PROPOSED CAPACITY. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM MUST CONSIST OF A SUMP PIT OUTLET AND AN EMERGENCY SPILLWAY MEETING THE REQUIREMENTS OF THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL, AS REQUIRED. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL INSTALLATION OF THE PERMANENT WATER QUALITY POND(S).
5. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE.
6. BEGIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION) ACTIVITIES.
7. UNDERGROUND UTILITIES WILL BE INSTALLED, INCLUDING FIRE HYDRANTS.
8. 8FIRE DEPARTMENT ACCESS WILL BE INSTALLED WHERE REQUIRED BY APPROVED SITE PLAN.
9. VERTICAL CONSTRUCTION MAY OCCUR AFTER THE PRE-VERTICAL INSPECTION HAS BEEN CLEARED BY THE FIRE MARSHAL.
10. PERMANENT WATER QUALITY PONDS OR CONTROLS WILL BE CLEANED OUT AND FILTER MEDIA WILL BE INSTALLED PRIOR TO/CONCURRENTLY WITH REVEGETATION OF SITE.
11. COMPLETE CONSTRUCTION AND START REVEGETATION OF THE SITE AND INSTALLATION OF LANDSCAPING.
12. UPON COMPLETION OF THE SITE CONSTRUCTION AND REVEGETATION OF A PROJECT SITE, THE DESIGN ENGINEER SHALL SUBMIT AN ENGINEER'S LETTER OF CONCURRENCE BEARING THE ENGINEER'S SEAL, SIGNATURE, AND DATE TO THE CITY INDICATING THAT CONSTRUCTION, INCLUDING REVEGETATION, IS COMPLETE AND IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE CITY INSPECTOR.
13. UPON COMPLETION OF LANDSCAPE INSTALLATION OF A PROJECT SITE, THE LANDSCAPE ARCHITECT SHALL SUBMIT A LETTER OF CONCURRENCE TO THE CITY INDICATING THAT THE REQUIRED LANDSCAPING IS COMPLETE AND IN SUBSTANTIAL CONFORMITY WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE CITY INSPECTOR.
14. AFTER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, REMOVE THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY NECESSARY FINAL REVEGETATION RESULTING FROM REMOVAL OF THE CONTROLS. CONDUCT ANY MAINTENANCE AND REHABILITATION OF THE WATER QUALITY PONDS OR CONTROLS

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

811
!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

GENERAL NOTES

DATE:	1/15/2024	DRAWN BY:	JD
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:	MAT		

DRAWING NO.: 02
SHEET 02 OF 175

2023-23-SD

P:\330-000\331-715\-CADD\Dwg\CV01\331715-CV01-C001-GENERAL NOTES.dwg{GENERAL NOTES} LS:(1/15/2024 - qurry) - LP: 4/30/2024 12:02 PM

GEOTECHNICAL NOTES FOR THE CONTRACTOR:
METHODS FOR REDUCING EXPANSIVE SOIL–RELATED MOVEMENTS
- TO OBTAIN MAXIMUM ALLOWABLE POTENTIAL VERTICAL RISE (PVR) REQUIREMENT OF 1IN. IN PAVEMENT AND FLATWORK AREAS, 1FT OF THE STRATUM CLAY SHOULD BE REMOVED AND REPLACED WITH EITHER SELECT OR ALTERNATE SELECT FILL. HOWEVER, IN BUILDING AREAS, THE STRATUM I CLAYS MAY PROVIDE VARIABLE FOUNDATION SUPPORT FOR SLABS AND SHALLOW FOUNDATIONS; THEREFORE, WE RECOMMEND THE COMPLETE REMOVAL OF THE STRATUM I CLAYS IN THE BUILDING AREAS. COMPLETE REMOVAL OF THE STRATUM I CLAYS SHOULD RESULT IN A MAXIMUM PVR NOT EXCEEDING 1/2 INCH.

PAVEMENT AREAS
- ANY KNOWN NATURAL OR MAN–MADE SUBSURFACE SEEPAGE AT THE SITE WHICH MAY OCCUR AT SUFFICIENTLY SHALLOW DEPTHS AS TO INFLUENCE MOISTURE CONTENTS WITHIN THE SUBGRADE SHOULD BE INTERCEPTED BY DRAINAGE DITCHES OR BELOW GRADE FRENCH DRAINS.
- CURBS ADJACENT TO IRRIGATED ISLANDS AND LANDSCAPE AREAS SHOULD COMPLETELY PENETRATE THE FLEXIBLE BASE MATERIALS AND PENETRATE AT LEASE THREE (3) INCHES INTO THE SUBGRADE TO REDUCE INFILTRATION OF WATER BENEATH THE CURBS. SEE DETAIL SHEET 64
- THE CONSTRUCTION OF CURB JOINTS ADJACENT TO IRRIGATED AREAS SHOULD CONSIDER MEANS TO PREVENT WATER INTRUSION INTO THE ADJACENT PAVEMENT BASE MATERIAL SUCH AS THE USE OF JOINT/CRACK SEALANTS.
- FINAL SITE GRADING SHOULD ELIMINATE ISOLATED DEPRESSIONS ADJACENT TO CURBS WHICH MAY ALLOW SURFACE WATER TO POND AND INFILTRATE INTO THE UNDERLYING SOILS.

RIGID PAVEMENTS
- AS A MINIMUM, THE BAR MATS SHOULD BE NO.3 REINFORCING BARS SPACED 18IN. ON CENTER IN BOTH DIRECTIONS. THE CONCRETE REINFORCING SHOULD BE PLACE APPROXIMATELY 1/3 THE SLAB THICKNESS BELOW THE SURFACE OF THE SLAB, BUT NOT LESS THAN 2IN. THE REINFORCING SHOULD NOT EXTEND ACROSS EXPANSION JOINTS.
- JOINTS IN CONCRETE PAVEMENTS AID IN THE CONSTRUCTION AND CONTROL THE LOCATION AND MAGNITUDE OF CRACKS. WHERE PRACTICAL, LAY OUT THE CONSTRUCTION, EXPANSION, CONTROL AND SAWED JOINTS TO FORM SQUARE PANELS. THE RATIO OF SLAB LENGTH–TO–WIDTH SHOULD NOT EXCEED 1.25. THE RECOMMENDED JOINT SPACING IS 24 TIMES THE THICKNESS OF THE SLAB UP TO A MAXIMUM OF 15FT.
- ALL CONTROL JOINTS SHOULD BE FORMED OR SAWED TO A DEPTH OF AT LEAST 1/4 THE THICKNESS OF THE CONCRETE SLAB. SAWING OF CONTROL JOINTS SHOULD BEGIN AS SOON AS THE CONCRETE WILL NOT RAVEL, GENERALLY THE DAY AFTER PLACEMENT.
- EXPANSION AND ISOLATION JOINTS SHOULD BE HAND FORMED BY USING PRE–MOLDED FILLER. ISOLATION JOINTS ARE NEEDED TO SEPARATE THE CONCRETE SLAB FROM FIXED OBJECTS SUCH AS DROP INLETS, LIGHT STANDARDS, AND BUILDINGS. TO LIMIT WATER INTRUSION, JOINTS MAY BE SEALANTS MAY BE PLACED. THE SEALANTS SHOULD BE OF A FLEXIBLE MATERIAL THAT IS CAPABLE TO WITHSTAND SEASONAL EXPANSION AND CONTRACTION OF THE SLAB.

RETAINING WALL STRUCTURES
- IF DOWNSLOPES ARE PRESENT, THE EMBEDMENT SHOULD INCREASE SO THAT A MINIMUM HORIZONTAL DISTANCE OF 5FT IS PROVIDED BETWEEN THE BOTTOM OUTER EDGE OF THE FOOTING AND THE FACE OF THE ADJACENT DOWNSLOPE.
- THE USE OF DRAINAGE SYSTEMS IS A POSITIVE DESIGN STEP TOWARD REDUCING THE POSSIBILITY OF HYDROSTATIC PRESSURE ACTING AGAINST RETAINING WALL STRUCTURES. DRAINAGE MAY BE PROVIDED BY THE SUE OF DRAIN TRENCH AND PIPE.
- THE DRAIN TRENCH SHOULD BE FILLED WITH GRAVEL (MEETING THE REQUIREMENTS OF ASTM D 448 COARSE CONCRETE AGGREGATE SIZE NO.57 OR 67) AND EXTEND FROM THE BASE OF THE STRUCTURE TO WITHIN 2FT OF THE TOP OF THE STRUCTURE.

STORMWATER MANAGEMENT RECOMMENDATIONS
- UTILITY LINES ENCASED IN PIPE BEDDING MATERIAL ENTERING AND EXITING THE STORMWATER FACILITIES SHOULD CONSIDER WATER SLOPE/TRENCH DAMS TO REDUCE THE RISK OF WATER IN THE FACILITIES MIGRATING THROUGH THE PIPE BEDDING MATERIAL. THE MIGRATION OF WATER THROUGH THE BEDDING MATERIAL CAN POTENTIALLY RESULT IN SETTLEMENTS OF THE BACKFILL MATERIALS. THEREFORE, WATER STOPS/TRENCH DAMS SHOULD BE LOCATED AT OR BELOW THE 100–YEAR STORMWATER ELEVATION. THE WATER STOP SHOULD CONSIST OF A 18UN. SECTION OF CONCRETE, BENTONITE CLAY, OR FLOWABLE BACKFILL. WATER STOPS SHOULD EXTEND A MINIMUM OF 12IN. ABOVE THE PIPE BEDDING OR PENETRATE TRENCH WALLS A MINIMUM OF 6IN. ON ALL SIDES.

FOR ANY FURTHER DETAILS REGARDING GEOTECH, PLEASE REFERENCE THE GEOTECHNICAL REPORT AAA23–052–00 DATED NOVEMBER 7, 2023.

TCEQ CONTRIBUTING ZONE PLAN CONSTRUCTION NOTES:
1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY GROUND DISTURBANCE OR CONSTRUCTION ACTIVITIES. THIS NOTICE MUST INCLUDE:
   – THE NAME OF THE APPROVED PROJECT;
   – THE ACTIVITY START DATE; AND
   – THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN (CZP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ON SITE.
3. NO HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
4. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
5. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
6. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
7. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
8. ALL EXCAVATED MATERIAL THAT WILL BE STORED ON–SITE MUST HAVE PROPER E&S CONTROLS.
9. IF PORTIONS OF THE SITE WILL HAVE A CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL TCEQ–0592A (REV. JULY 15, 2015) PAGE 2 OF 2STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
10. THE FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
   – THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
   – THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
   – THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
11. THE HOLDER OF ANY APPROVED CZP MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
   A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES (BMPS) OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES;
   B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED;
   C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER; OR
   D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE APPROVED CONTRIBUTING ZONE PLAN.

AUSTIN REGIONAL OFFICE: 12100 PARK THIRTY FIVE CIRCLE, AUSTIN, TX 78753
(P) (512) 239–1000

TAC 290 SUBCHAPTER D: WATER/WASTEWATER CROSSING NOTES

(B) NEW WATERLINE INSTALLATION – CROSSING LINES.

(i) WHERE A NEW POTABLE WATERLINE CROSSES ABOVE A WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND MUST BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. WHEN CROSSING AN EXISTING WASTEWATER MAIN OR LATERAL AND IT IS DISTURBED OR SHOWS SIGNS OF LEAKING, THE WASTEWATER MAIN OR LATERAL SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE–RATED PIPE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

(I) THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE AN EXISTING, NON–PRESSURE RATED WASTEWATER MAIN OR LATERAL.

(II) THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE AN EXISTING, PRESSURE–RATED WASTEWATER MAIN OR LATERAL.

(ii) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON–PRESSURE RATED WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END. THE MATERIALS AND METHOD OF INSTALLATION SHALL CONFORM TO ONE OF THE FOLLOWING OPTIONS:

(I) WITHIN NINE FEET HORIZONTALLY OF EITHER SIDE OF THE WATERLINE, THE WASTEWATER PIPE AND JOINTS SHALL BE CONSTRUCTED WITH PIPE MATERIAL HAVING A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. AN ABSOLUTE MINIMUM VERTICAL SEPARATION DISTANCE OF TWO FEET SHALL BE PROVIDED. THE WASTEWATER MAIN OR LATERAL SHALL BE LOCATED BELOW THE WATERLINE.

(II) ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18–FOOT (OR LONGER) SECTION OF PIPE. FLEXIBLE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE ENCASING PIPE SHALL BE CENTERED ON THE WATERLINE AND SHALL BE AT LEAST TWO NOMINAL PIPE DIAMETERS LARGER THAN THE WASTEWATER MAIN OR LATERAL. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE–FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATERTIGHT NON–SHRINK CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF SIX INCHES BETWEEN THE ENCASEMENT PIPE AND THE WATERLINE SHALL BE PROVIDED. THE WASTEWATER LINE SHALL BE LOCATED BELOW THE WATERLINE.

(iii)WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN OR LATERAL, THE WATERLINE SHALL BE ENCASED AS DESCRIBED FOR WASTEWATER MAINS OR LATERALS IN CLAUSE (II) OF THIS SUBPARAGRAPH OR CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF ONE FOOT BETWEEN THE WATERLINE AND THE WASTEWATER MAIN OR LATERAL SHALL BE PROVIDED. WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN, THE PROCEDURES IN §217.53(D) OF THIS TITLE (RELATING TO PIPE DESIGN) MUST BE FOLLOWED.

(iv) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER LINE SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTER LINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

(v) WHERE CEMENT STABILIZED SAND BEDDING IS REQUIRED, THE CEMENT STABILIZED SAND SHALL HAVE A MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME (AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE). THE CEMENT STABILIZED SAND BEDDING SHALL BE A MINIMUM OF SIX INCHES ABOVE AND FOUR INCHES BELOW THE WASTEWATER MAIN OR LATERAL. THE USE OF BROWN COLORING IN CEMENT STABILIZED SAND FOR WASTEWATER MAIN OR LATERAL BEDDING IS RECOMMENDED FOR THE IDENTIFICATION OF PRESSURE RATED WASTEWATER MAINS DURING FUTURE CONSTRUCTION.

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

811
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CEC
Texas Registered Engineering Firm F-38
Civil & Environmental Consultants, Inc.
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

GENERAL NOTES 2

DATE:	1/15/2024
DWG SCALE:	NTS
PROJECT NO:	331-715
DRAWN BY:	JD
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 03
SHEET 03 OF 175

2023-23-SD

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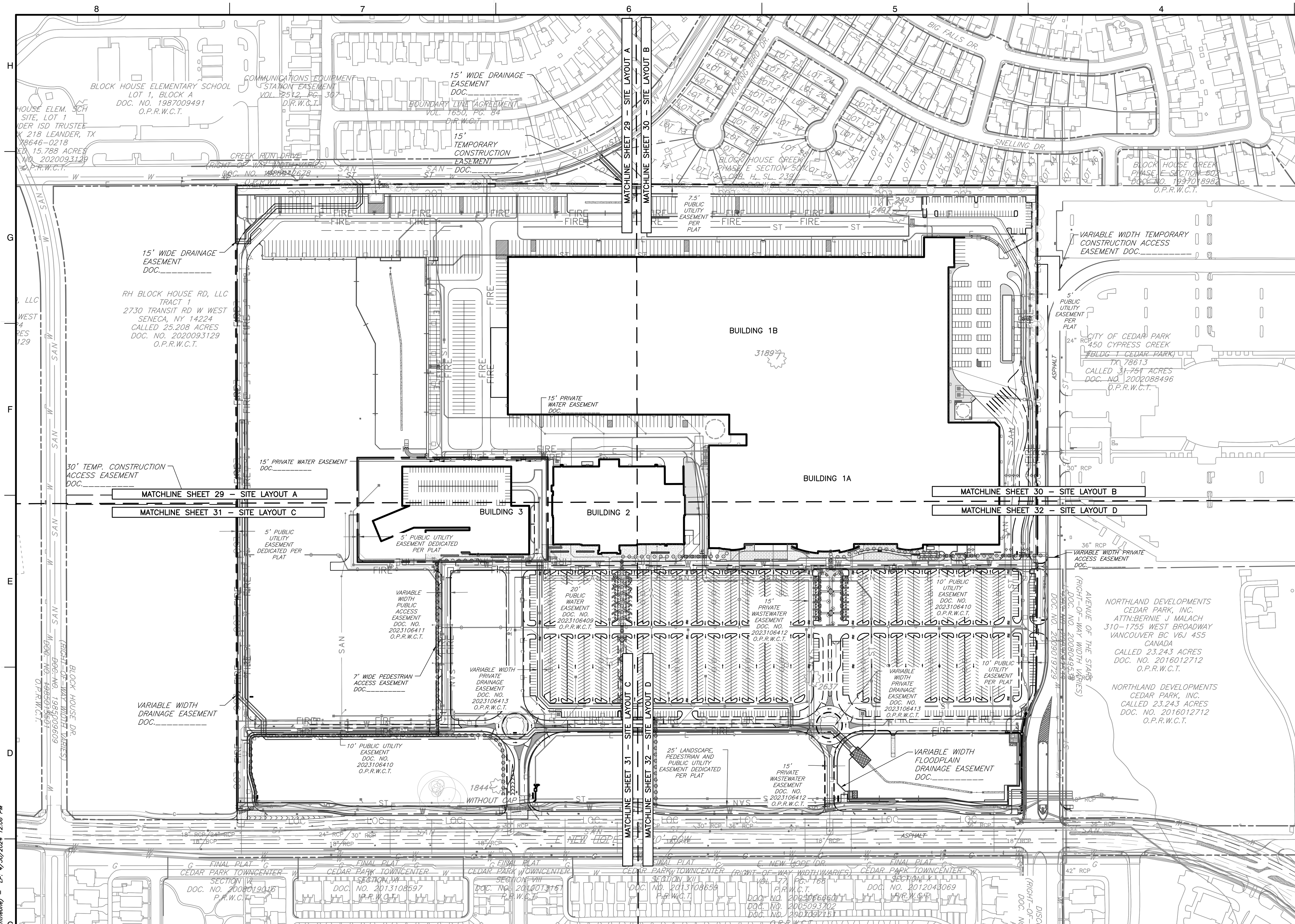

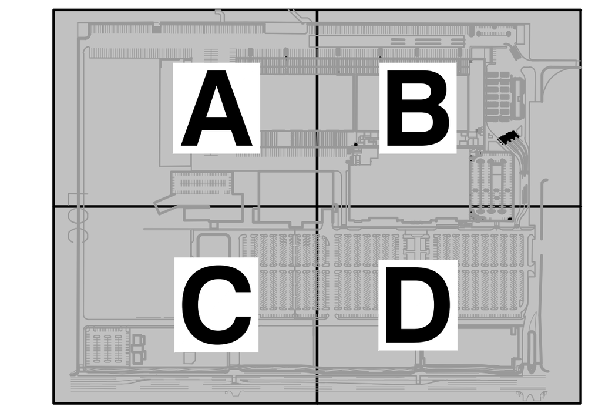

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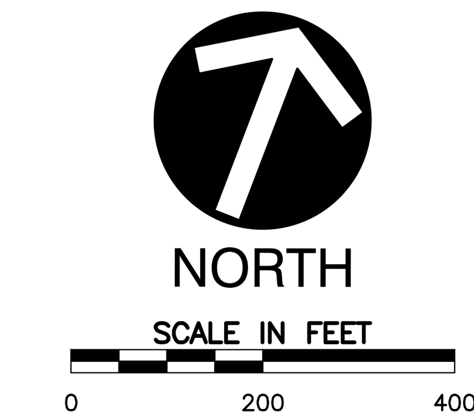

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL
		GUARDRAIL

LAYOUT NOTES

1. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES, INCLUDING IRRIGATION LINES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. RELOCATE EXISTING UTILITIES AS INDICATED, OR AS NECESSARY FOR CONSTRUCTION.
3. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES, INCLUDING IRRIGATION SLEEVING, PRIOR TO INSTALLATION OF PAVED SURFACES.
4. THE CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN IN ACCORDANCE WITH THE SPECIFICATIONS.
5. SITE WORK CONCRETE WALKS AND PADS SHALL HAVE A BROOM FINISH TO ALL SURFACES. SITE WORK CONCRETE SHALL BE CLASS "M15" (2175 PSI @ 28 DAYS) UNLESS OTHERWISE NOTED.
6. ALL DAMAGE TO EXISTING PAVEMENT TO REMAIN, WHICH RESULTS FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH LIKE MATERIALS AT THE CONTRACTOR'S EXPENSE.
7. SITE DIMENSIONS SHOWN ARE TO THE BACK OF CURB, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
8. COORDINATES ARE FOR BUILDING COLUMNS, EXTERIOR BUILDING WALL, CENTER OF DRIVEWAYS, CENTER OF SANITARY SEWER MANHOLES, AND CENTER OF STRUCTURE PLACED SIX INCHES INSIDE FACE OF CURB FOR DRAIN INLETS, UNLESS OTHERWISE NOTED.
9. CONTRACTOR SHALL MAINTAIN ONE SET OF AS-BUILT / RECORD DRAWINGS ON-SITE DURING CONSTRUCTION FOR DISTRIBUTION TO THE OWNER AND/OR OWNER'S REPRESENTATIVE UPON COMPLETION.
10. REFER TO THE ARCHITECTURAL, PLUMBING & ELECTRICAL DRAWINGS FOR EXACT DIMENSIONS AND LOCATIONS OF UTILITY SERVICE ENTRY LOCATIONS AND PRECISE BUILDING DIMENSIONS.
11. THIS SITE LAYOUT IS SPECIFIC TO THE APPROVALS NECESSARY FOR THE CONSTRUCTION IN ACCORDANCE WITH THE CITY OF CEDAR PARK. NO CHANGES TO THE SITE LAYOUT ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. CHANGES MADE TO THE SITE LAYOUT WITHOUT APPROVAL IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. CHANGES INCLUDE BUT ARE NOT LIMITED TO, INCREASED IMPERVIOUS PAVEMENT, ADDITION / DELETION OF PARKING SPACES, MOVEMENT OF CURB LINES, CHANGES TO DRAINAGE STRUCTURES AND PATTERNS, LANDSCAPING, ETC.
12. NO PERMANENT STRUCTURES HAVE BEEN LOCATED IN THE PUBLIC UTILITY EASEMENT.
13. LIGHT SOURCES SHALL BE COMPLETELY CONCEALED WITHIN OPAQUE HOUSINGS AND SHALL NOT BE VISIBLE FROM ADJACENT STREETS OR PROPERTIES. ALL EXTERIOR LIGHTING FIXTURES SHALL BE FULL CUT-OFF TYPE FIXTURES. LIGHTING FIXTURES SHALL BE NO MORE THAN TWENTY-FIVE (25) FEET IN HEIGHT AS MEASURED FROM ADJACENT, FINISHED GRADE.
14. BICYCLE REQUIREMENTS TO FOLLOW RATIOS ESTABLISHED BY ZONING CASE #2022-12-Z.
15. ALL STANDARD AT-GRADE PERPENDICULAR PARKING SPACES SHALL NOT BE LESS THAN 18.5' X 9'
16. THE CONTRACTOR IS TO PROVIDE AND MAINTAIN SUFFICIENT SITE CONTROL TO AVOID COSTLY CONSTRUCTION PROBLEMS
17. LOCATION AND DESIGN OF ALL EXTERIOR DUMPSTER ENCLOSURES SHALL BE REVIEWED AND APPROVED WITH AN SD PERMIT REVISION
18. DUMPSITES LOCATED WITHIN 500 FEET OF A MAJOR CORRIDOR SHALL BE LOCATED NO CLOSER THE THE DESIGNATED ROADWAY THAN THE FRONT WALL OF THE PRINCIPLE STRUCTURE. LOCATION AND DESIGN OF THE ENCLOSURE SHALL BE REVIEWED AND APPROVED WITH AN SD PERMIT REVISION.
19. LOCATION AND DESIGN OF ALL TRASH COLLECTION, COMPACTION OR OTHER SIMILAR USES SHALL BE REVIEWED AND APPROVED WITH AN SD PERMIT REVISION.
20. TRAFFIC CALMING DEVICES ARE NOT PERMITTED IN THE FIRE LANE UNLESS THEY MEET THE CoCP DETAIL.
21. EXTERIOR LIGHTING FIXTURES FOR BUILDINGS 2 AND 3, AND ANY NEW OUTDOOR LIGHTING FIXTURE WITHIN THE SITE SHALL BE REVIEWED AND APPROVED WITH AN SD PERMIT REVISION.
22. FOOT CANDLES AT THE PROPERTY LINE ARE PER THE APPROVED ALTERNATIVE LIGHTING PLAN DATED NOVEMBER 20, 2023.

BUILDING DATA TABLE

BUILDING	PROPOSED USE	SQUARE FOOTAGE	UNITS	STORIES	HEIGHT	FFE	FOUNDATION	PARKING RATIO	REQ PARKING	PR PARKING (GARAGE)	REQ ADA	PR ADA (GARAGE)
1A	RETAIL	522100	N/A	2	76'	961.00	SLAB ON GRADE	1SP/300SF	1741	1022 (1163)	32	19 (32)
1B	WAREHOUSE	761000	N/A	1	76'	961.00	SLAB ON GRADE	1SP/2,150SF	354			
2	RETAIL	153997	N/A	2	79'5"	962.10	SLAB ON GRADE	1SP/250SF	616	960	20	20
2	WAREHOUSE	203434	N/A	2	79'5"	962.10	SLAB ON GRADE	1SP/2000SF	102			
2	RETAIL OFFICE	11767	N/A	2	79'5"	962.10	SLAB ON GRADE	1SP/300SF	40			
3	HOTEL	N/A	250	8	96'	962.50	SLAB ON GRADE	1SP/1 UNIT	250	(411)	9	(9)
3	CONFERENCE CENTER	30000	N/A	1	96'	962.50	SLAB ON GRADE	1SP/400SF	75			

NOTES: ALL PARKING WILL BE STANDARD SPOTS OTHER THAN ADA
PARKING CALCULATIONS FOR BUILDINGS 1A AND 1B ARE PER THE APPROVED ALTERNATIVE PARKING PLAN DATED JANUARY 19, 2023. (RETAIL 1SP/300SF, WAREHOUSE 1SP/2,150SF)

SITE DATA TABLE

ZONING	PLANNED DEVELOPMENT–GENERAL BUSINESS (PD–GB)
LAND USE	COMMERCIAL, RETAIL, HOTEL/CONFERENCE CENTER
TOTAL SITE AREA (AC)	117.86
EXISTING IMPERVIOUS COVER AREA AC (SF)	0.05 (2178)
EXISTING IMPERVIOUS COVER PERCENT	5.50
PROPOSED IMPERVIOUS COVER AREA AC (SF)	74.51 (3,245,926)
PROPOSED IMPERVIOUS COVER PERCENT	63.20
MAXIMUM IMPERVIOUS COVER (AC)	94.31
MAXIMUM IMPERVIOUS COVER PERCENT	80.00
PROPOSED BUILDING COVERAGE AC (SF)	35.65 (1,553,100)
PROPOSED BUILDING COVERAGE (%)	30.2
PROPOSED FOUNDATION TYPE	SLAB ON GRADE
PROPOSED PARKING	3556
REQUIRED PARKING	3177
PROPOSED BICYCLE PARKING	76
REQUIRED BICYCLE PARKING	75

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REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

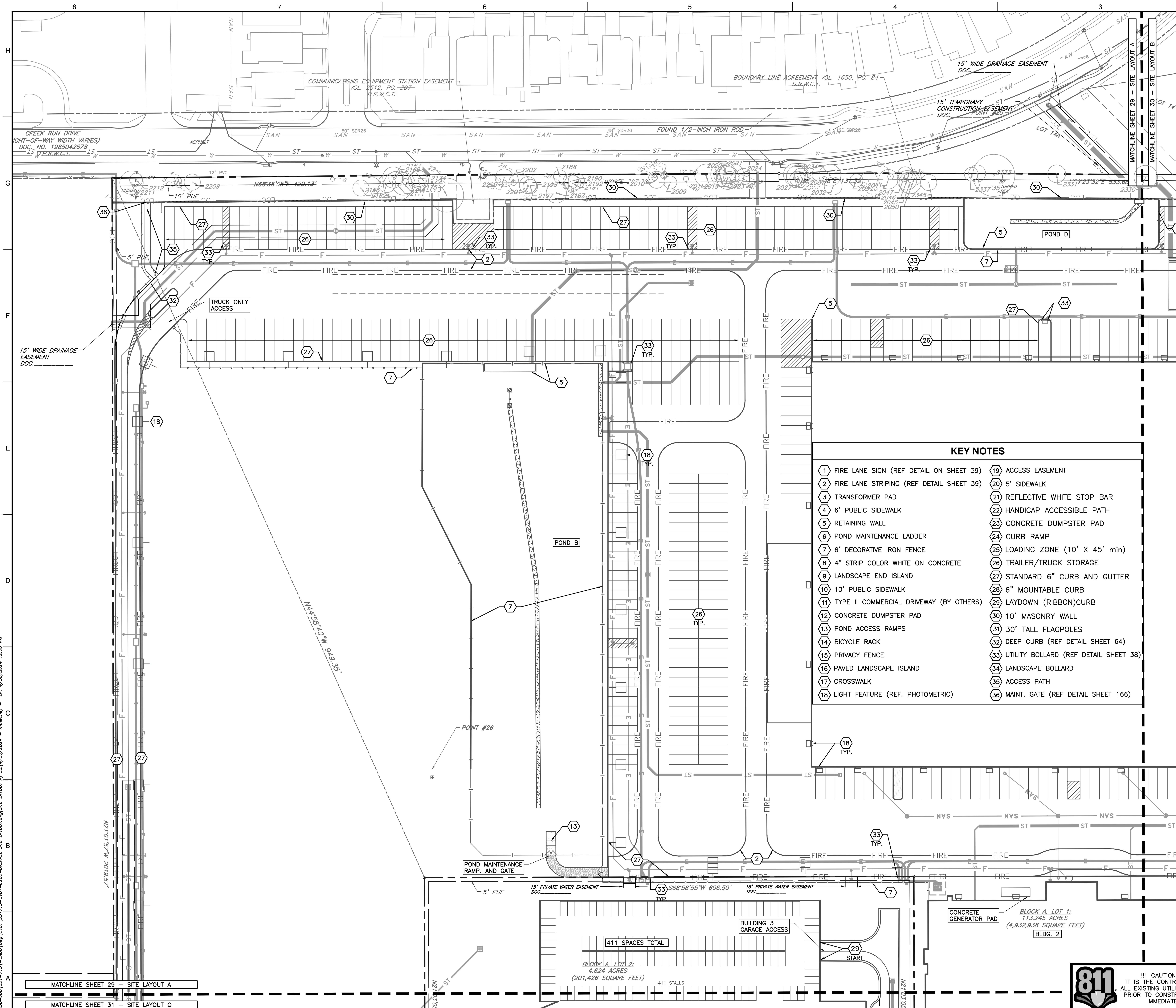
NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

OVERALL SITE LAYOUT

DATE:	4/29/2024	DRAWN BY:	QU
DWG SCALE:	1" = 200'	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:	MAT		

DRAWING NO.: 28

2023-23-SD



SHEET INDEX

A B C D

NORTH

SCALE IN FEET

0 60 120

KEY NOTES

1 FIRE LANE SIGN (REF DETAIL ON SHEET 39)	19 ACCESS EASEMENT
2 FIRE LANE STRIPING (REF DETAIL SHEET 39)	20 5' SIDEWALK
3 TRANSFORMER PAD	21 REFLECTIVE WHITE STOP BAR
4 6' PUBLIC SIDEWALK	22 HANDICAP ACCESSIBLE PATH
5 RETAINING WALL	23 CONCRETE DUMPSTER PAD
6 POND MAINTENANCE LADDER	24 CURB RAMP
7 6' DECORATIVE IRON FENCE	25 LOADING ZONE (10' X 45' min)
8 4" STRIP COLOR WHITE ON CONCRETE	26 TRAILER/TRUCK STORAGE
9 LANDSCAPE END ISLAND	27 STANDARD 6" CURB AND GUTTER
10 10' PUBLIC SIDEWALK	28 6" MOUNTABLE CURB
11 TYPE II COMMERCIAL DRIVEWAY (BY OTHERS)	29 LAYDOWN (RIBBON)CURB
12 CONCRETE DUMPSTER PAD	30 10' MASONRY WALL
13 POND ACCESS RAMPS	31 30' TALL FLAGPOLES
14 BICYCLE RACK	32 DEEP CURB (REF DETAIL SHEET 64)
15 PRIVACY FENCE	33 UTILITY BOLLARD (REF DETAIL SHEET 38)
16 PAVED LANDSCAPE ISLAND	34 LANDSCAPE BOLLARD
17 CROSSWALK	35 ACCESS PATH
18 LIGHT FEATURE (REF. PHOTOMETRIC)	36 MAINT. GATE (REF DETAIL SHEET 166)

BLOCK LEGEND

PROPOSED EXISTING

BENCHMARK
CUT IN CONCRETE
CONTROL POINT
IRON PIPE
IRON ROD
IRON ROD W/ CAP
MONUMENT TYPE 1
MONUMENT TYPE 2
NAIL
PIPE BREAK
PIPE CAP
PIPE FLOW
REDUCER
AIR RELEASE VALVE
BLOW-OFF VALVE
POST INDICATOR VALVE
MISCELLANEOUS VALVE
UTILITY VALVE
UTILITY METER
BACKFLOW PREVENTER
FLUSH CONNECTION
FIRE HYDRANT
(MONITORING) WELL
UTILITY RISER
HOSE BIB
SANITARY M.H.
CLEANOUT
WW INSPECTION PORTAL
DRAINAGE M.H.
DOWN SPOUT
AREA INLET
CURB INLET
HEADWALL
SAFETY END TREATMENT
DRAINAGE FLOW
ELEC. M.H.
ELEC./TELE. POLE
GUY WIRE
LIGHT FIXTURE
TRAFFIC SIGNAL
UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED EXISTING

RIGHT-OF-WAY
LOT BOUNDARY
EASEMENT
FENCE: BARBED
FENCE: WOOD (PICKET)
FENCE: GUARDRAIL
FENCE: CHAIN LINK
FENCE: IRON
MAJOR CONTOUR
MINOR CONTOUR
ELECTRIC LINE
OVERHEAD ELECTRIC WIRE
UNDERGROUND ELECTRIC LINE
TELEPHONE
COMMUNICATIONS LINE
CABLE TELEVISION
FIBER OPTIC LINE
GAS LINE
OVERHEAD UTILITY
UNDERGROUND UTILITY
SANITARY SEWER LINE
WATER LINE
FIRE LINE
ROAD CENTERLINE
CURB & GUTTER
DEEP CURB & GUTTER
STRIPING
FIRE LANE STRIPING
H.C. ACCESSIBLE ROUTE
LIMITS OF CONSTRUCTION
DRAINAGE AREA
FLOODWAY
CWQZ
STORM SEWER
DRAINAGE CHANNEL
GUARDRAIL

811

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

CEC
Texas Registered Engineering Firm F-38
Civil & Environmental Consultants, Inc.
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

SITE LAYOUT A

DATE:	4/29/2024	DRAWN BY:	QU
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 29

SHEET 29 OF 175

2023-23-SD

MATCHLINE SHEET 29 – SITE LAYOUT A

MATCHLINE SHEET 30 – SITE LAYOUT B

LOT 13 LOT 18 LOT 27 LOT 31 LOT 14 LOT 17 LOT 28 LOT 30 LOT 16 LOT 15 LOT 29 LOT 34 LOT 35 LOT 36 LOT 37 LOT 38 LOT 39 LOT 40 LOT 41 LOT 42 LOT 43 LOT 44 LOT 45 LOT 46

BLOCK HOUSE CREEK PHASE E SECTION 501 CAB. H, SL. 239 O.P.R.W.C.T.

SNELLING DR.

7.5' PUBLIC UTILITY EASEMENT PER PLAT

TRANSPLANT TREE SEE LANDSCAPE PLANS FOR DETAILS

MAINTENANCE

UNDERGROUND POND C

TYPICAL 18.5" X 9"

GUARDRAIL

SECURE TRUCK ACCESS

CUSTOMER EXIT ONLY

VARIABLE CONSTRUCTION EASEMENT

5' PUBLIC UTILITY EASEMENT PER PLAT

WAREHOUSE

TRANSPLANT TREE SEE LANDSCAPE PLANS FOR DETAILS

MATCHLINE SHEET 30 – SITE LAYOUT B

MATCHLINE SHEET 32 – SITE LAYOUT D

KEY NOTES

1 FIRE LANE SIGN (REF DETAIL ON SHEET 39)	19 ACCESS EASEMENT
2 FIRE LANE STRIPING (REF DETAIL SHEET 39)	20 5' SIDEWALK
3 TRANSFORMER PAD	21 REFLECTIVE WHITE STOP BAR
4 6' PUBLIC SIDEWALK	22 HANDICAP ACCESSIBLE PATH
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14 BICYCLE RACK	32 DEEP CURB (REF DETAIL SHEET 64)
15 PRIVACY FENCE	33 UTILITY BOLLARD (REF DETAIL SHEET 38)
16 PAVED LANDSCAPE ISLAND	34 LANDSCAPE BOLLARD
17 CROSSWALK	35 ACCESS PATH
18 LIGHT FEATURE (REF. PHOTOMETRIC)	36 MAINT. GATE (REF DETAIL SHEET 166)

SHEET INDEX

NORTH

SCALE IN FEET

0 60 120

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
S	S	PIPE BREAK
]	]	PIPE CAP
>	>	PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
	HB	HOSE BIB
S	S	SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
D	D	DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
E	E	ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
M	M	UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST	ST	STORM SEWER
		DRAINAGE CHANNEL
		GUARDRAIL

STATE OF TEXAS
MICHAEL A. THEONE
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NFM CEDARVIEW
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750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

SITE LAYOUT B

DATE:	4/29/2024
DWG SCALE:	1" = 60'
PROJECT NO:	
DRAWN BY:	QU
CHECKED BY:	SRB
	331-715
APPROVED BY:	MAT

DRAWING NO.: 30

SHEET 30 OF 175

2023-23-SD

P:\330-000\331-715\--CAD\Dwg\CVD\331715-CVD1-C200-OVERALL SITE LAYOUT.dwg[SITE LAYOUT B] LS(4/30/2024 - mtheone) - LP: 4/30/2024 12:07 PM

KEY NOTES

(1) FIRE LANE SIGN (REF DETAIL ON SHEET 39)	(19) ACCESS EASEMENT
(2) FIRE LANE STRIPING (REF DETAIL SHEET 39)	(20) 5' SIDEWALK
(3) TRANSFORMER PAD	(21) REFLECTIVE WHITE STOP BAR
(4) 6' PUBLIC SIDEWALK	(22) HANDICAP ACCESSIBLE PATH
(5) RETAINING WALL	(23) CONCRETE DUMPSTER PAD
(6) POND MAINTENANCE LADDER	(24) CURB RAMP
(7) 6' DECORATIVE IRON FENCE	(25) LOADING ZONE (10' X 45' min)
(8) 4" STRIP COLOR WHITE ON CONCRETE	(26) TRAILER/TRUCK STORAGE
(9) LANDSCAPE END ISLAND	(27) STANDARD 6" CURB AND GUTTER
(10) 10' PUBLIC SIDEWALK	(28) 6" MOUNTABLE CURB
(11) TYPE II COMMERCIAL DRIVEWAY (BY OTHERS)	(29) LAYDOWN (RIBBON)CURB
(12) CONCRETE DUMPSTER PAD	(30) 10' MASONRY WALL
(13) POND ACCESS RAMPS	(31) 30' TALL FLAGPOLES
(14) BICYCLE RACK	(32) DEEP CURB (REF DETAIL SHEET 64)
(15) PRIVACY FENCE	(33) UTILITY BOLLARD (REF DETAIL SHEET 38)
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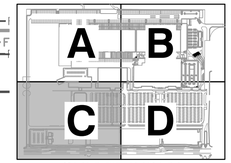
(17) CROSSWALK	(35) ACCESS PATH
(18) LIGHT FEATURE (REF. PHOTOMETRIC)	(36) MAINT. GATE (REF DETAIL SHEET 166)



SHEET INDEX

NORTH

SCALE IN FEET

0 60 120

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
FIRE	FIRE	STRIPING
		FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST	ST	STORM SEWER
		DRAINAGE CHANNEL
		GUARDRAIL

MICHAEL A. THEONE 142972 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

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NFM CEDARVIEW
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750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

SITE LAYOUT C

DATE:	4/29/2024	DRAWN BY:	OU
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MAT

DRAWING NO.: 31

SHEET 31 OF 175

2023-23-SD

P:\330-2001\331-715\-CAD\Dwg\CIVIL\331715-CVD1-C200-OVERALL SITE LAYOUT.dwg|SITE LAYOUT C| LS:(4/30/2024 - mtheone) - LP: 4/30/2024 12:07 PM

KEY NOTES

1 FIRE LANE SIGN (REF DETAIL ON SHEET 39)	19 ACCESS EASEMENT
2 FIRE LANE STRIPING (REF DETAIL SHEET 39)	20 5' SIDEWALK
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17 CROSSWALK	35 ACCESS PATH
18 LIGHT FEATURE (REF. PHOTOMETRIC)	36 MAINT. GATE (REF DETAIL SHEET 166)

BLDG. 1

MATCHLINE SHEET 30 – SITE LAYOUT B

MATCHLINE SHEET 32 – SITE LAYOUT D

MATCHLINE SHEET 31 – SITE LAYOUT C

MATCHLINE SHEET 32 – SITE LAYOUT D

CUSTOMER EXIT ONLY

CUSTOMER ENTRANCE

CUSTOMER ENTRANCE (NO TRUCKS)

CUSTOMER ENTRANCE (NO TRUCKS)

VARIABLE WIDTH PR ACCESS EASEMENT DOC.

10' PUBLIC UTILITY EASEMENT DOC. NO. 2023106410 O.P.R.W.C.T.

20' PUBLIC WATER EASEMENT DOC. NO. O.P.R.W.C.T.

10' PUBLIC UTILITY EASEMENT PER PLAT

15' PRIVATE WASTEWATER EASEMENT DOC. NO. 2023106412 O.P.R.W.C.T.

15' PRIVATE WASTEWATER EASEMENT DOC. NO. 2023106412 O.P.R.W.C.T.

VARIABLE WIDTH PRIVATE DRAINAGE EASEMENT DOC. NO. 2023106413 O.P.R.W.C.T.

VARIABLE WIDTH FLOODPLAIN DRAINAGE EASEMENT DOC._____

25' LANDSCAPE, PEDESTRIAN AND PUBLIC UTILITY EASEMENT DEDICATED PER PLAT

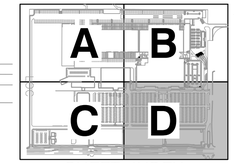
POND MAINTENANCE RAMP. AND GATE

WROUGHT IRON FENCING AROUND PONDS TYP.

POND A 54,684 SQ. FT.

TYPE II COMMERCIAL DRIVEWAY PER COA DETAIL 433S-2. ON SHEET 38

SHEET INDEX



NORTH

SCALE IN FEET

0 60 120

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
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		AREA INLET
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		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
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		FENCE: BARBED
		FENCE: WOOD (PICKET)
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		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL
		GUARDRAIL

!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

SITE LAYOUT D

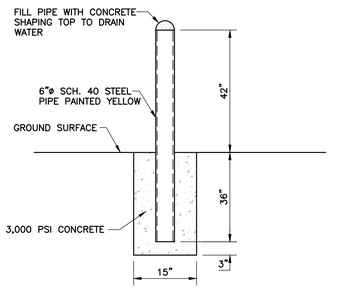
DATE:	4/29/2024
DWG SCALE:	1" = 60'
PROJECT NO:	331-715
DRAWN BY:	CU
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 32

SHEET 32 OF 175

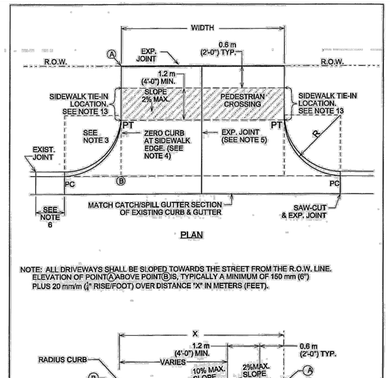
2023-23-SD

P:\330-2023\331-715\-CAD\dwg\CV01\331715-CV01-C200-OVERALL SITE LAYOUT.dwg[SITE LAYOUT D] LS(4/30/2024 - mtheone) - LP: 4/30/2024 12:07 PM



PIPE BOLLARD

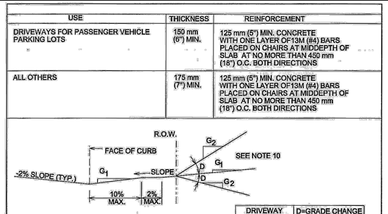
NOT TO SCALE



NOTE: ALL DRIVEWAYS SHALL BE SLOPED TOWARDS THE STREET FROM THE R.O.W. LINE. ELEVATION OF POINT (A) ABOVE POINT (B) IS, TYPICALLY A MINIMUM OF 150 mm (6") PLUS 20 mm/m (¼" RISE/FOOT) OVER DISTANCE "X" IN METERS (FEET).

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE II DRIVEWAY	
ADOPTED 2/04/16	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 1 OF 2

USE	THICKNESS	REINFORCEMENT
DRIVEWAYS FOR PASSENGER VEHICLE PARKING LOTS	150 mm (6") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS
ALL OTHERS	175 mm (7") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS

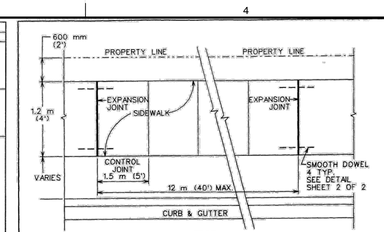


ALLOWABLE GRADES

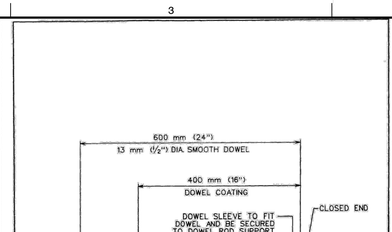
DRIVEWAY VOLUME (ADT)	D=GRADE CHANGE STD.	MAX
>1500	0%	3%
500-1500	3%	6%
<500	6%	15%

NOTES:
1. ALL TYPE II DRIVEWAYS SHALL HAVE RADIUS ENDS.
2. DRIVEWAY WIDTHS AND RADII DIMENSIONS, ONE/TWO WAY TRAVEL REQUIREMENTS, AND GEOMETRIC LAY-OUT ARE HIGHLY VARIABLE, SUBJECT TO SITE SPECIFIC CONDITIONS AND REQUIREMENTS. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 9 "DRIVEWAYS".
3. THE DRIVEWAY EDGE SHALL BE SMOOTHLY TRANSITIONED INTO THE SIDEWALK TIE-IN LOCATION BEGINNING AT THE RADIUS P.C.LINE.
4. "ZERO" CURB AT PT OR SIDEWALK EDGE, WHICHEVER IS ENCOUNTERED FIRST.
5. PLACE AN EXPANSION JOINT DOWN THE CENTER OF DRIVEWAY ALL DRIVEWAYS.
6. IF DIMENSION (E) LESS THAN 1.5 METERS (5 FEET), REMOVE CURB AND GUTTER TO EXISTING JOINT AND POUR MONOLITHICALLY WITH DRIVEWAY.
7. IF THE BASE IS OVER-EXCAVATED WHERE THE CURB AND GUTTER WERE REMOVED, BACKFILL WITH CONCRETE MONOLITHICALLY WITH THE DRIVEWAY.
8. TYPE I DRIVEWAYS ARE TO BE LOCATED NO CLOSER TO THE CORNER OF INTERSECTING RIGHT OF WAY THAN 60% OF PARCEL FRONTAGE AT 30 METERS (100 FEET); WHICHEVER IS LESS.
9. DRIVEWAY SHALL NOT BE CONSTRUCTED WITHIN THE CURB RETURN OF A STREET INTERSECTION.
10. WHILE THE PROPERTY OWNER REMAINS RESPONSIBLE FOR GRADE BREAKS WITHIN PRIVATE PROPERTY, THE PUBLIC DEPARTMENT SHALL BE CONSULTED WHERE THE DRIVEWAY IS ESSENTIAL TO EMERGENCY VEHICLE ACCESS AND "G2" IS GREATER THAN 15%.
11. USE 12 MM (1/2") ASPHALTIC BOARD OR OTHER APPROVED EXPANSION MATERIAL FOR CURB AND GUTTER EXPANSION JOINTS. SIDEWALK, AT THE R.O.W. LINE AND AT MIDWIDTH, SEE NOTE 5.
12. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 9 FOR OTHER DRIVEWAY REQUIREMENTS.
13. THE SIDEWALK RUNNING OUT IN TO CONFORM WITH RESPECT TO THE CURB OR PROPERTY LINE, SHALL BE CONNECTED TO THE DRIVEWAY AT THESE LOCATIONS.
14. WATER METER BOXES AND WASTEWATER CLEAN OUTS ARE PROHIBITED FROM BEING LOCATED IN DRIVEWAY AREAS.

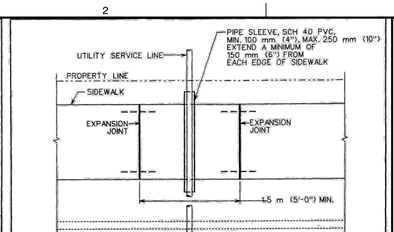
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE II DRIVEWAY	
ADOPTED 2/04/16	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 2 OF 2



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
ADOPTED 2/04/16	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 1 OF 3

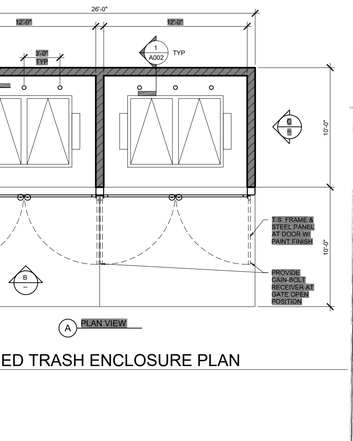


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
ADOPTED 2/04/16	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 2 OF 3



NOTES:
1. THIS STANDARD APPLIES TO THE INSTALLATION OF NEW UTILITIES OR UTILITIES BEING REPLACED BY A NEW LINE.
2. NO JOINTS IN UTILITY SERVICE PIPE TO BE LOCATED INSIDE PVC PIPE SLEEVE.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
ADOPTED 3/24/08	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 3 OF 3



MOUNTABLE/ROLLOVER CURB DETAIL

GENERAL NOTES:
1. THIS STANDARD IS APPLICABLE FOR RAMP CONSTRUCTION ON CITY PROPERTY AND EASEMENT AREAS ONLY.
2. PAVERS ARE REQUIRED FOR ALL CURB RAMP INSTALLATIONS.
3. PAVERS WILL HAVE DETECTABLE WARNING THAT CONSISTS OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9" (23 mm), A NOMINAL HEIGHT OF 0.2" (5 mm) AND A NOMINAL CENTER TO CENTER SPACING OF 2.35" (60 mm) AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT (REF. ADAAG SECTION 4.29.2). MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. PAVER PATTERN SHALL BE BASKET WEAVE UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
4. TYPICAL SIDEWALK WIDTHS AND CURB RAMP ARE SHOWN FOR ILLUSTRATION ONLY. REFER TO THE TRANSPORTATION CRITERIA MANUAL FOR SIDEWALK WIDTHS, CURB RADII AND CURB BASIS.
5. THE PERMISSIBLE CONSTRUCTION JOINT BETWEEN THE PAVERS AND THE ADJOINING SURFACE SHALL BE LIMITED TO ¼" (6 mm) JOINT SIZE. GAPS LARGER THAN ¼" (6 mm) MUST BE APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. ALL JOINTS BETWEEN BRICKS AND ADJOINING SURFACE SHALL BE MORTAR FILLED UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
6. MORTAR SHALL CONFORM TO STD. SPECIFICATION ITEM 4035.3.5, MORTAR AND GROUT; ALL OTHER CONCRETE SHALL CONFORM TO STD. SPECIFICATION ITEM 4035, CONCRETE FOR STRUCTURES, UNLESS OTHERWISE NOTED.
7. CURB RAMPS WITH RETURNED CURB MAY ONLY BE USED WHERE PEDESTRIANS WOULD NOT NORMALLY WALK DIAGONALLY ACROSS THE RAMP.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	DETECTABLE WARNING-PAVER (CITY PROPERTY/EASEMENTS)	
ADOPTED 4/21/17	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-2A 2 OF 2

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 CURB RAMPS-FULL INTERSECTION	
ADOPTED 3/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3 1 OF 3

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 CURB RAMPS-FULL INTERSECTION	
ADOPTED 3/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3 2 OF 3

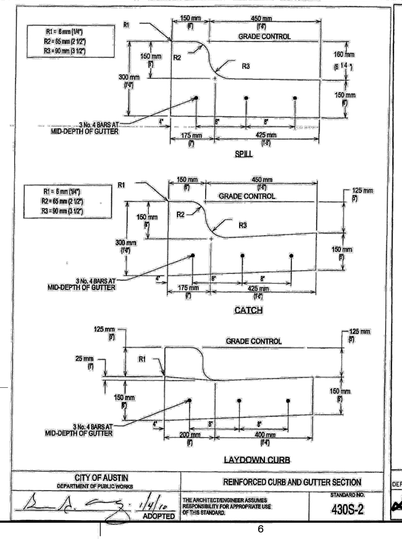
GENERAL NOTES:
1. THIS STANDARD IS APPICABLE FOR RAMP CONSTRUCTION WITHIN RIGHT-OF-WAY OR EASEMENT ONLY.
2. THIS STANDARD REPRESENTS A TYPICAL CURB RAMP DESIGN FOR A NEWLY CONSTRUCTED INTERSECTION WITH A 6 m (20') RADIUS, LARGER RADII, STREET GRADES, LIMITED SIGHT DISTANCES, STREET CLASSIFICATION, SIGNALIZATION AND OTHER FACTORS MAY REQUIRE THE ENGINEER OR DESIGNATED REPRESENTATIVE TO MODIFY THIS STANDARD. SUFFICIENT RIGHT-OF-WAY SHALL BE DEDICATED SUCH THAT THE ENTIRE CURB RAMP, INCLUDING LANDING, AND THE INTER-CONNECTING SIDEWALK ARE CONTAINED WITHIN THE RIGHT-OF-WAY.
3. THE CURB, GUTTER AND RAMP SYSTEM SHALL BE CONFIGURED TO MAINTAIN ALL RUNOFF FROM A 25-YEAR FREQUENCY STORM WITHIN THE RIGHT-OF-WAY (DRAINAGE CRITERIA MANUAL SECTION 1.2.2.B). WHEN THERE IS AN ELEVATION DIFFERENCE BETWEEN THE BOTTOM OF RAMPS (E) ELEVATION AT THE GUTTER) WITHIN A QUADRANT OF AN INTERSECTION, THE LOWER ELEVATION RAMP SHALL BE CONSTRUCTED WITH A POSITIVE RAMP SLOPE OF 1:12 IN ACCORDANCE WITH STANDARDS 432S-5, 432S-5A AND 432S-5B.
4. STANDARD ASSIGNMENT OF SIDEWALKS IS 600 mm (2') OFF PROPERTY LINE, EXCEPT AS INDICATED ON THE DRAWINGS.
5. ALTHOUGH CURB RAMPS MAY BE PLACED WITHIN THE RADIUS, PLACING THE RAMP OUTSIDE OF THE RADIUS WILL ALLOW FOR THE GREATEST DIFFERENCE IN ELEVATION BETWEEN THE RAMPS.
6. WINGS ARE REQUIRED ONLY IF PEDESTRIANS WOULD NORMALLY CROSS THE RAMP.
7. LANDINGS SHALL BE FLAT AND MATCH PT, PC OR TOP OF CURB ELEVATION.
8. CURB RAMPS WILL BE PERPENDICULAR TO ROADWAY CENTERLINES AND SHALL ALIGN WITH EACH OTHER.
9. GRADES ON SIDEWALKS LEADING TO OR FROM THE RAMPS SHALL FOLLOW CURB GRADES.
10. THE SLOPE OF THE SIDEWALK WHICH IS LOCATED WITHIN THE RADIUS AND CONNECTS TWO CURB RAMPS SHALL NOT EXCEED 1:20. THE DEVELOPER, AS PART OF THE CURB RAMP INSTALLATION, SHALL CONSTRUCT THIS CONNECTING SIDEWALK.
11. STRIPING AND SIGNAGE NOT REQUIRED IN ALL INSTANCES. STOP BARS, IF REQUIRED, SHALL BE LOCATED 1.2 m (4') FROM CROSSWALK.
12. IF A MEDIAN EXTENDS INTO THE CROSSWALK AREA, AN OPENING SHALL BE PROVIDED IN THE MEDIAN THE SAME WIDTH AS THE CURB RAMP.
13. CURB INLETS SHALL NOT BE LOCATED WITHIN 3.0 m (10') OF A CURB RAMP.
14. GUTTER SHALL PROVIDE SMOOTH TRANSITION TO RAMPS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 CURB RAMPS-FULL INTERSECTION	
ADOPTED 3/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3 3 OF 3

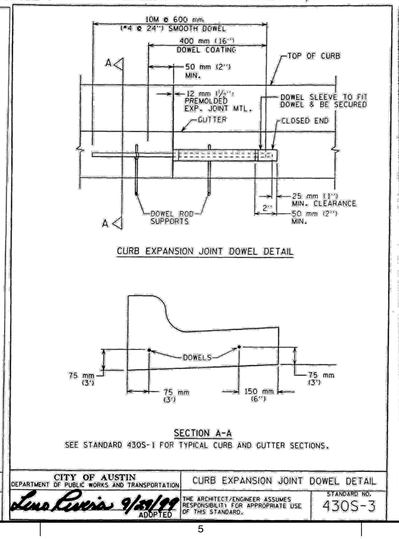
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	CURB AND GUTTER SECTION	
ADOPTED 9/29/22	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-1

7 ENLARGED TRASH ENCLOSURE PLAN

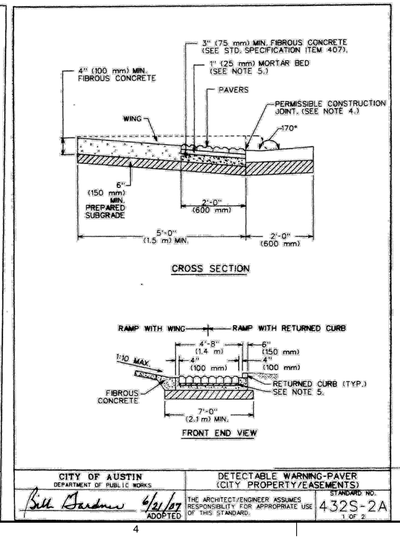
1/4" = 1'-0"



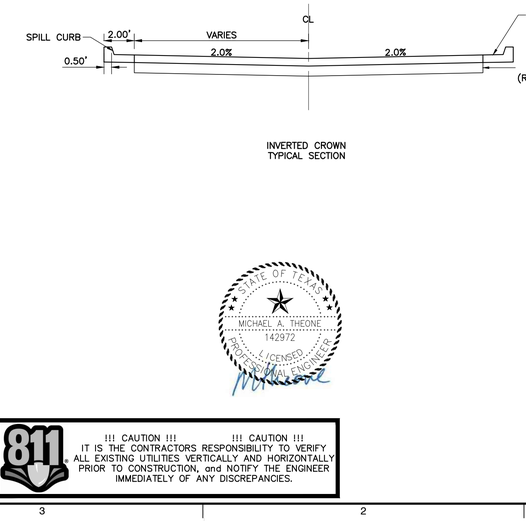
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	REINFORCED CURB AND GUTTER SECTION	
ADOPTED 1/1/10	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-2



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	CURB EXPANSION JOINT DOWEL DETAIL	
ADOPTED 9/29/22	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-3



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	DETECTABLE WARNING-PAVER (CITY PROPERTY/EASEMENTS)	
ADOPTED 4/21/17	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-2A 1 OF 2



STATE OF TEXAS
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REVISION RECORD

NO	DATE	DESCRIPTION

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Texas Registered Engineering Firm F-38
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www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

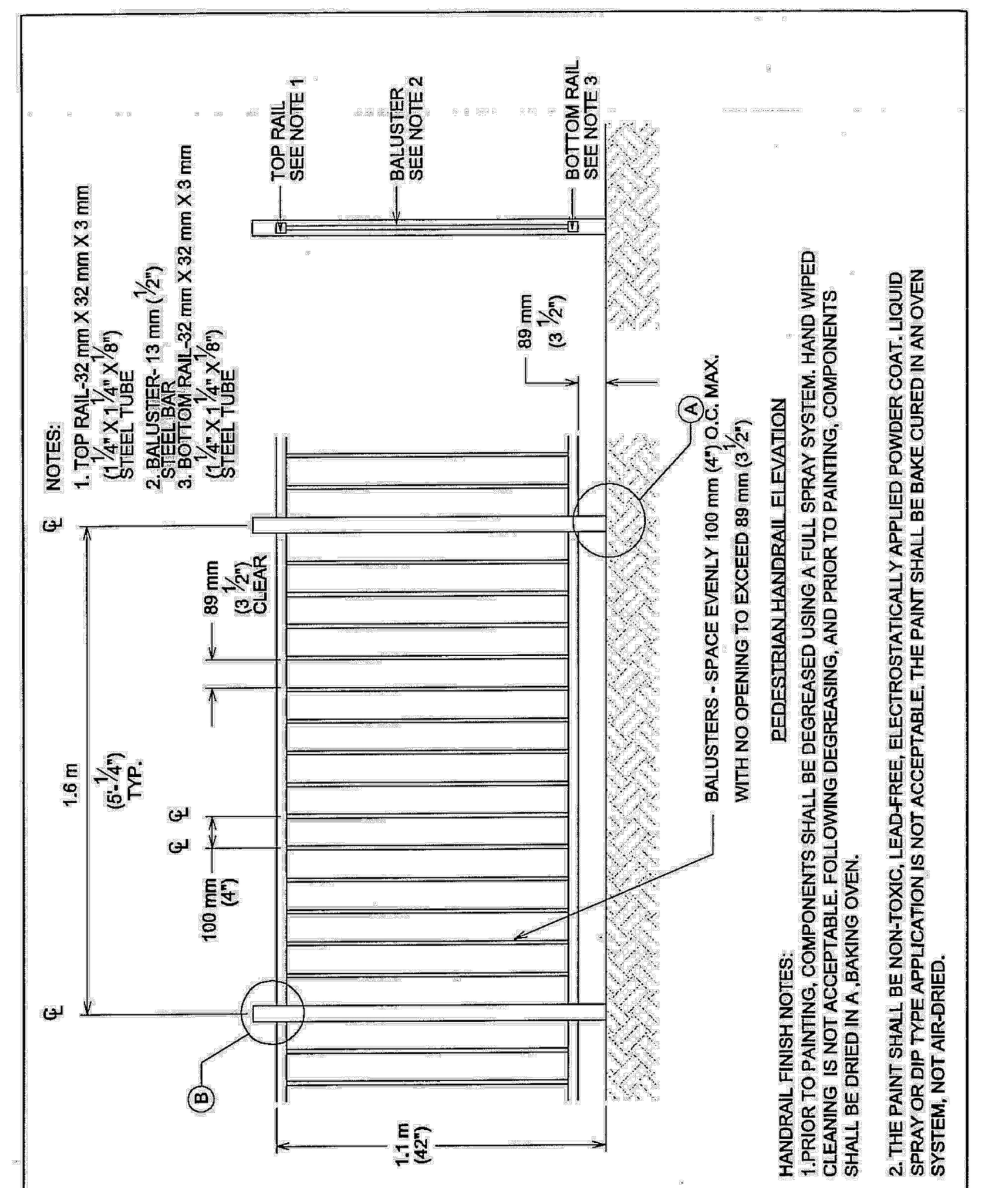
SITE DETAILS 1

DATE:	3/7/2024	DRAWN BY:	OAT
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MAT

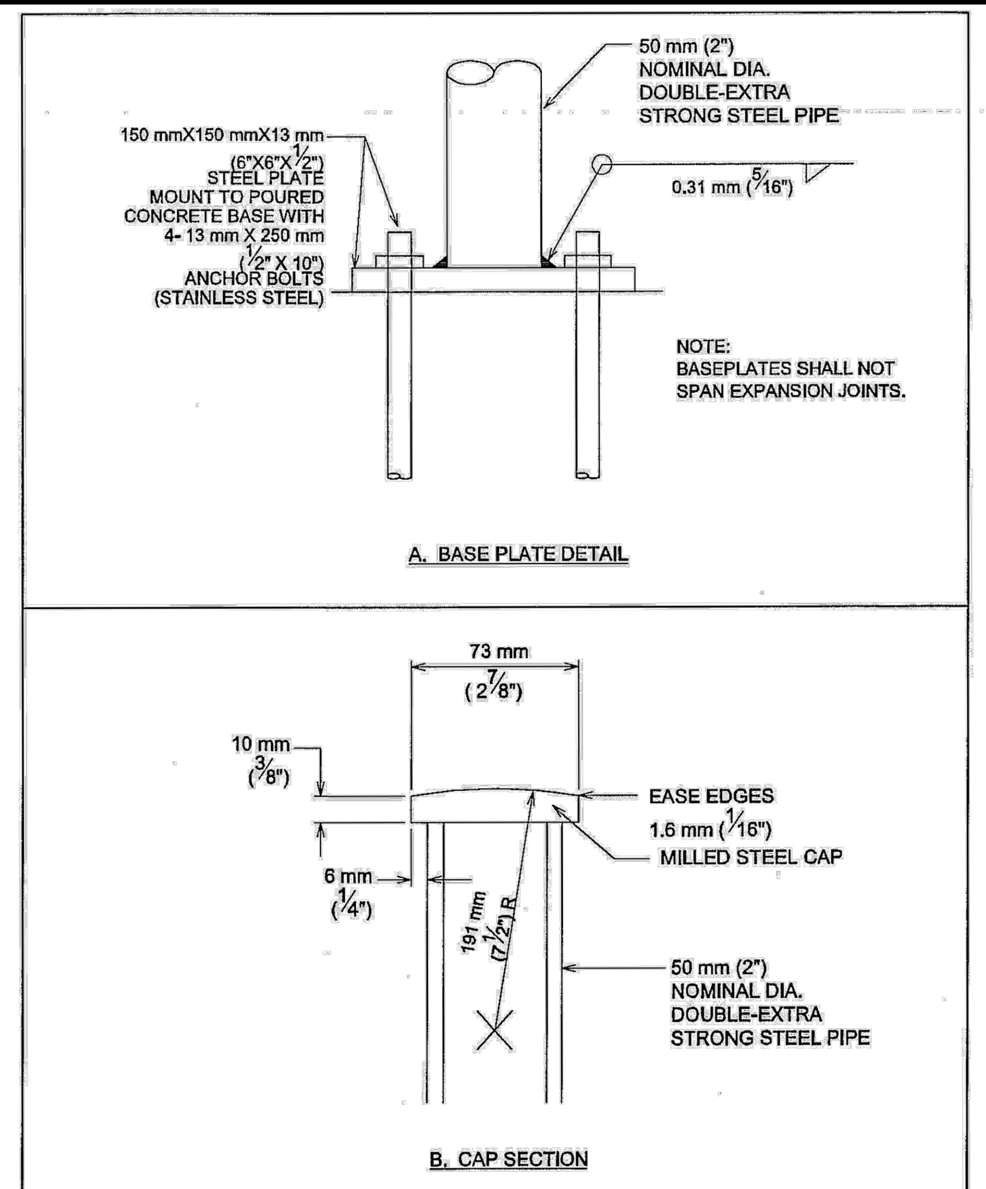
DRAWING NO.: 38
SHEET 38 OF 175

2023-23-SD

P:\330-000\331-715\-CADD\Dwg\CVD1\331715-CVD1-C200-SITE DETAILS.dwg[SITE DETAILS 1] LS:(4/29/2024 - olivo) - LP: 4/30/2024 12:09 PM



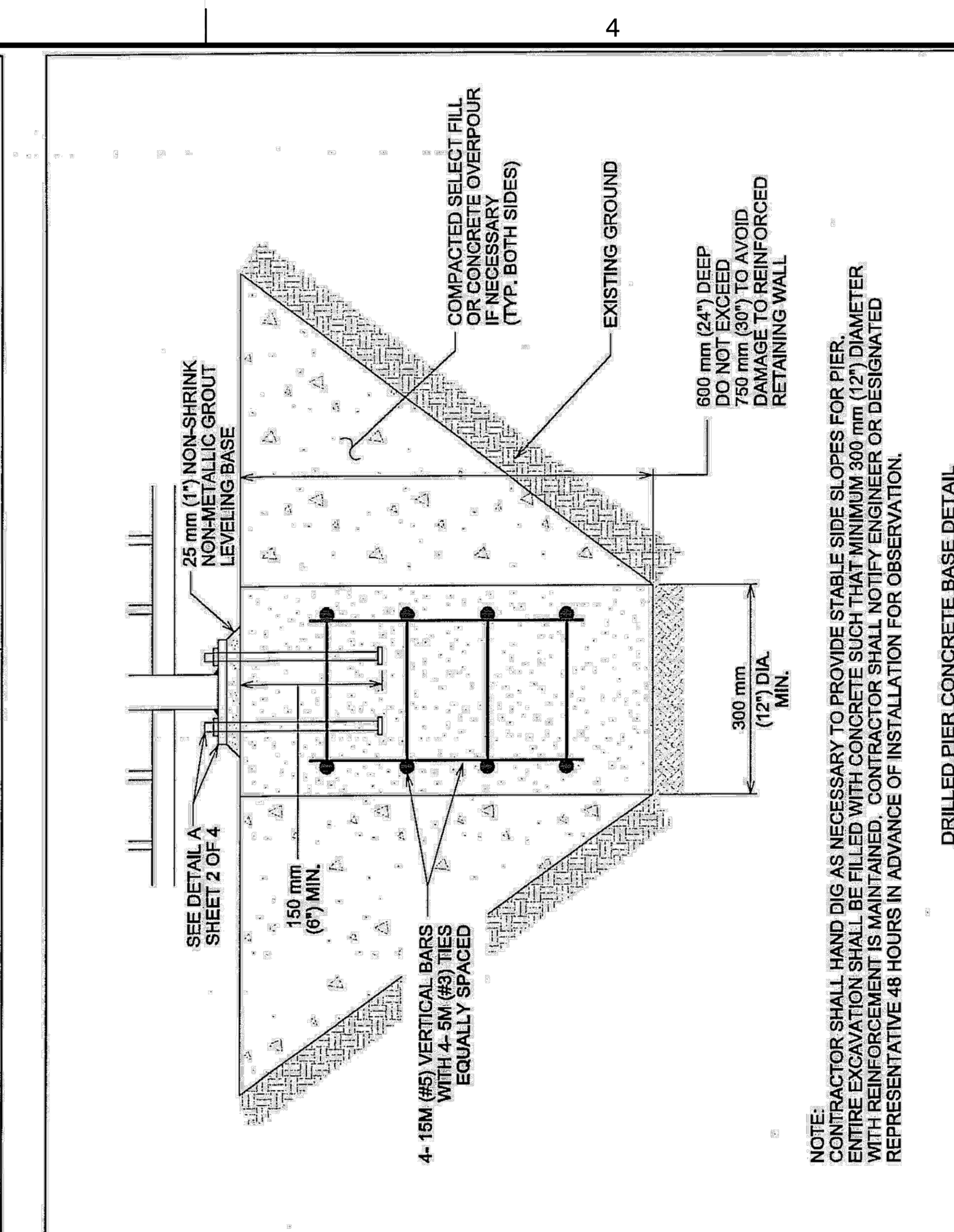
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
ADOPTED 1/4/11
PEDESTRIAN HANDRAIL
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 707S-1
1 OF 4



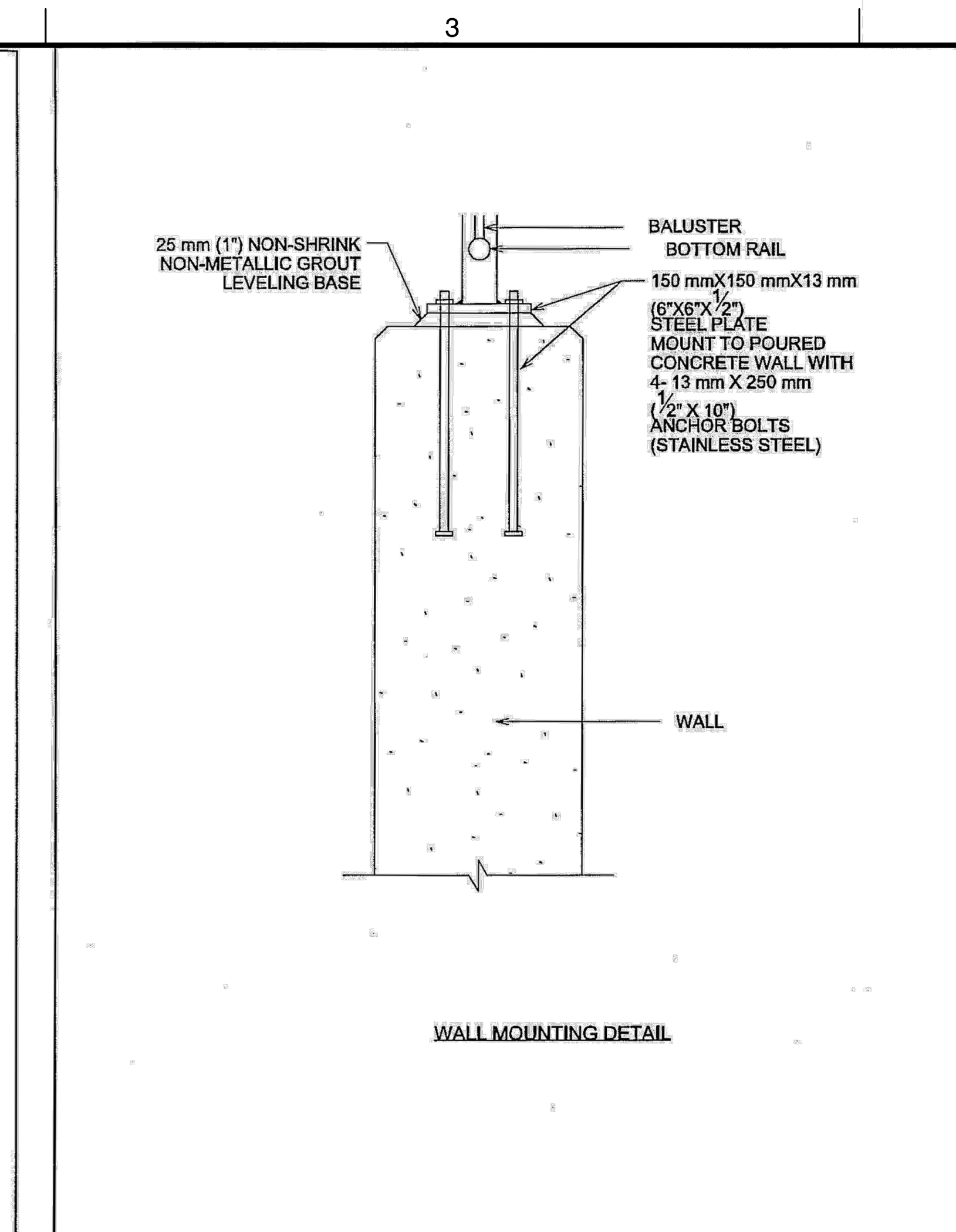
A. BASE PLATE DETAIL

B. CAP SECTION

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
ADOPTED 1/4/11
PEDESTRIAN HANDRAIL
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 707S-1
2 OF 4

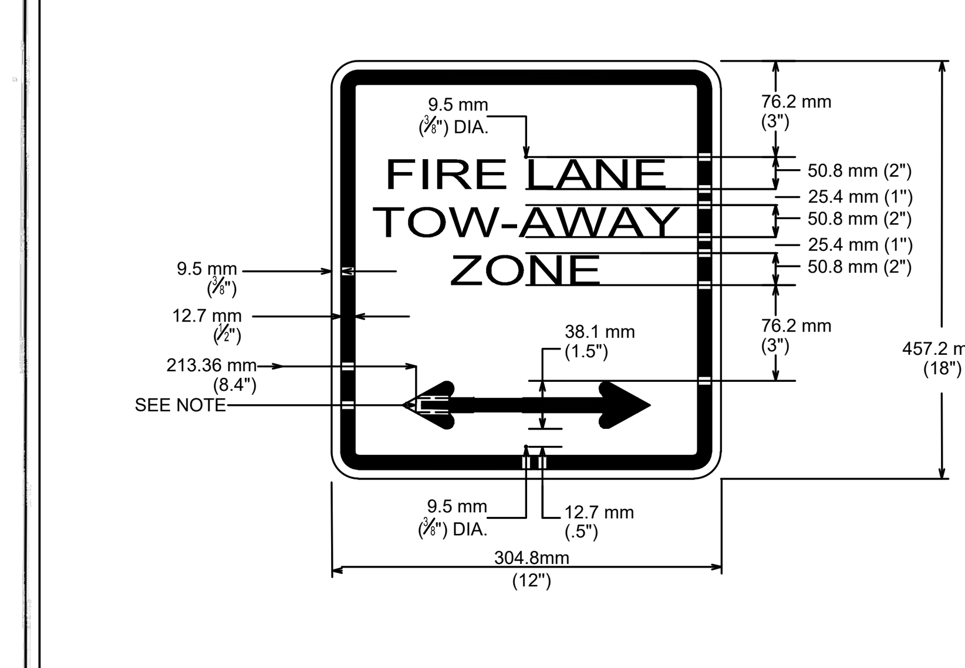


CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
ADOPTED 1/4/11
PEDESTRIAN HANDRAIL
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 707S-1
3 OF 4



WALL MOUNTING DETAIL

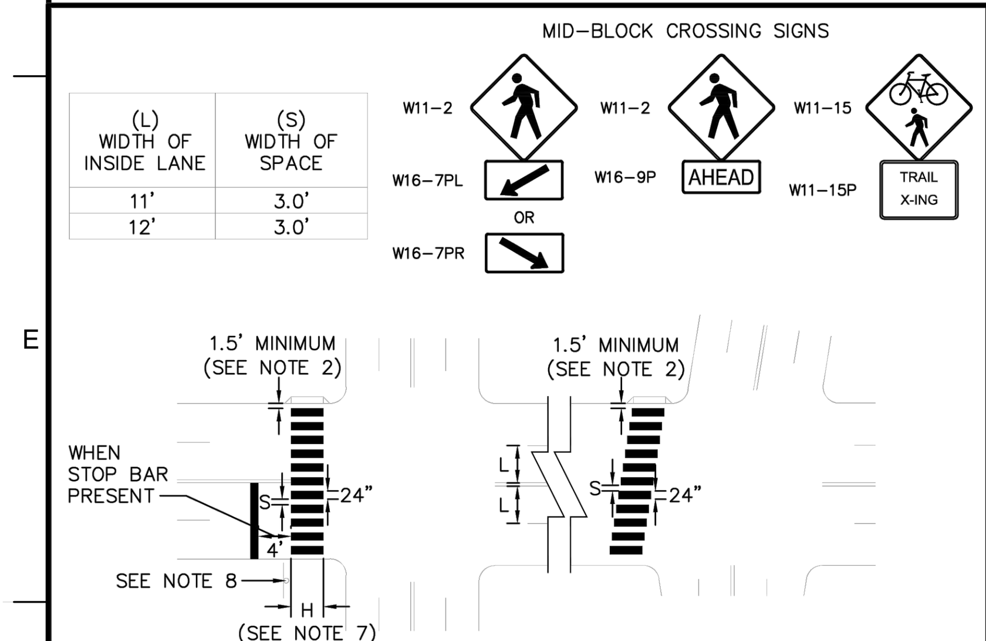
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
ADOPTED 1/4/11
PEDESTRIAN HANDRAIL
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 707S-1
4 OF 4



LETTERING, ARROW AND BORDER: RED TRANSPARENT
BACKGROUND - SILVER REFLECTIVE SHEETING

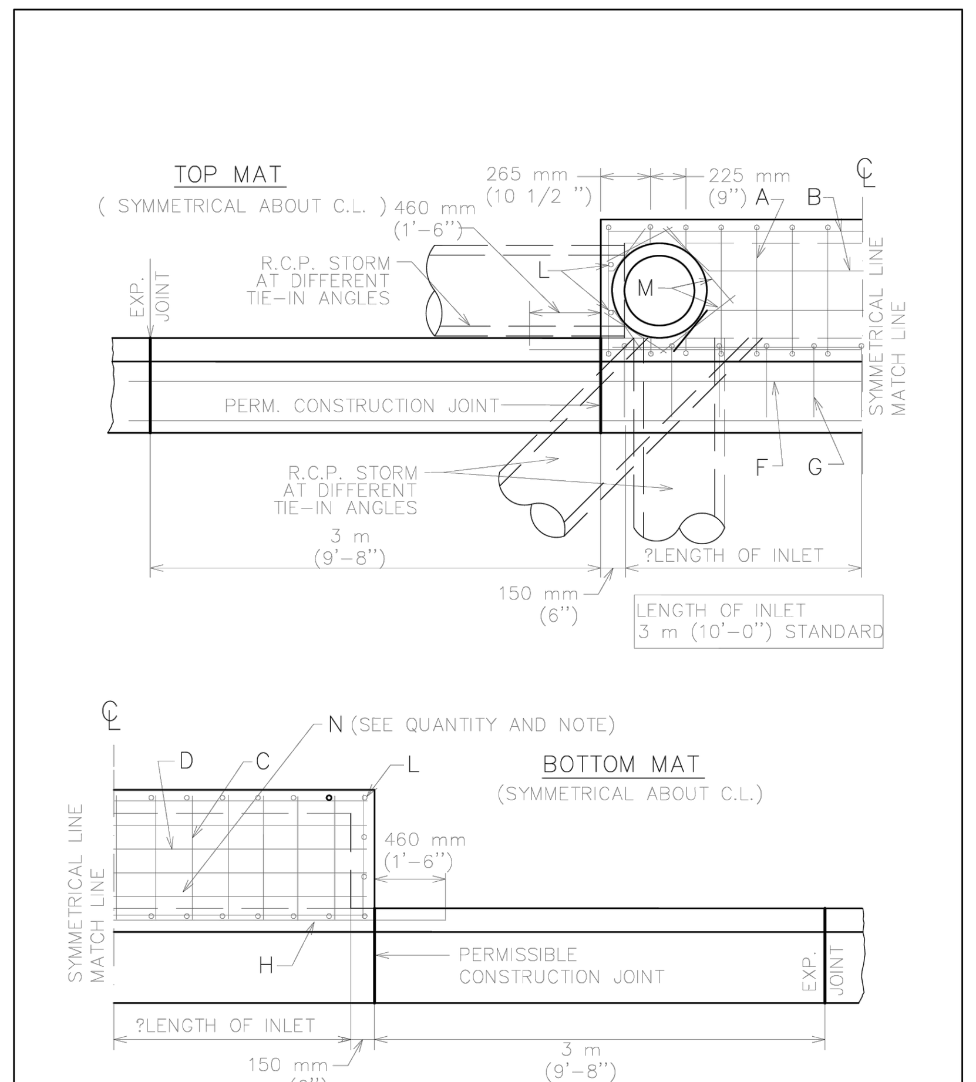
NOTE - ARROW MAY BE LEFT, RIGHT, OR DOUBLE
NOTE - SIGNS SHALL BE PERMANENTLY AFFIXED TO A STATIONARY POST AND THE BOTTOM OF THE SIGN SHALL BE 6'6" ABOVE FINISHED GRADE. SIGNS SHALL BE SPACED NOT MORE THAN 50 FEET APART

MID-BLOCK CROSSING SIGNS



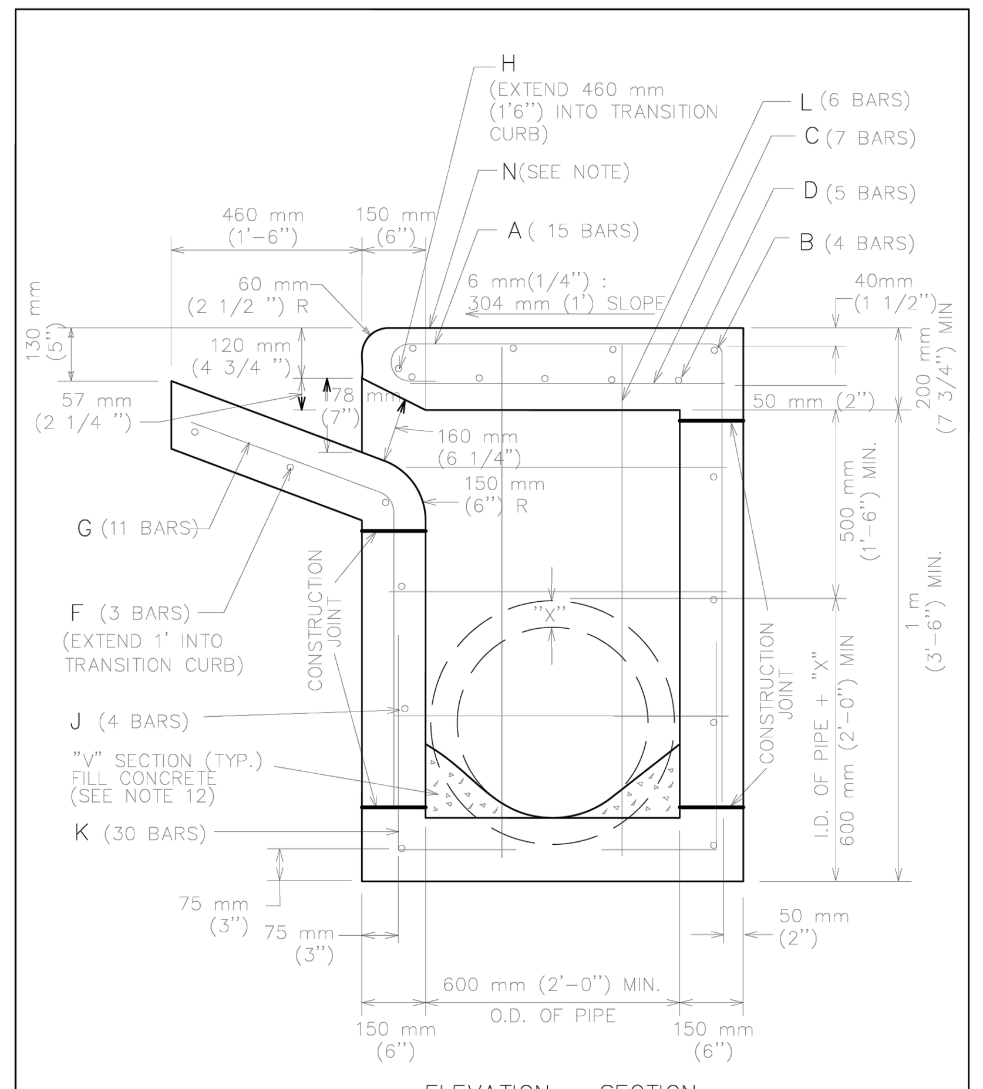
NOTES:
1. THERMOPLASTIC STRIPES TO BE CENTERED ON CENTERLINE AND LANE LINES.
2. A MINIMUM OF 1.5 FT. CLEAR DISTANCE SHALL BE LEFT ADJACENT TO THE CURB FACE. IF LAST PAINTED AREA FALLS INTO THIS DISTANCE IT MUST BE OMITTED.
3. FOR DIVIDED ROADWAYS, ADJUSTMENTS IN SPACING OF THE BLOCKS SHOULD BE MADE IN THE MEDIAN SO THAT THE BLOCKS ARE MAINTAINED IN THEIR PROPER LOCATION ACROSS THE TRAVELED PORTION OF THE ROADWAY.
4. AT SKEWED CROSSWALKS, THE BLOCKS ARE TO REMAIN PARALLEL TO THE LANE LINES AS SHOWN.
5. THE BLOCKS SHALL BE PLACED SO THAT THEY ARE NOT LOCATED IN THE WHEEL PATH OF THE VEHICLES.
6. THE BLOCKS SHALL BE A MINIMUM OF 10' LONG.
7. MAXIMUM WIDTH OF SPACE (S) SHALL BE 5'.
8. FOR MID-BLOCK CROSSINGS W11-2 WITH W16-7P OR W16-9P OR W11-15 WITH W11-15P SIGNS TO BE INSTALLED AT AND ON APPROACH EXCEPT WHERE STOP SIGNS ARE PROVIDED.

CEDAR PARK Construction Standards | CONTINENTAL CROSSWALK | REVISED MAY 2023 | RD-01



NOTE: INSTALL ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER

CITY OF CEDAR PARK
DEPARTMENT OF PUBLIC WORKS
12/03/09 ADOPTED
TYPICAL DETAILS FOR CURB INLET
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 1 OF 4



ELEVATION – SECTION

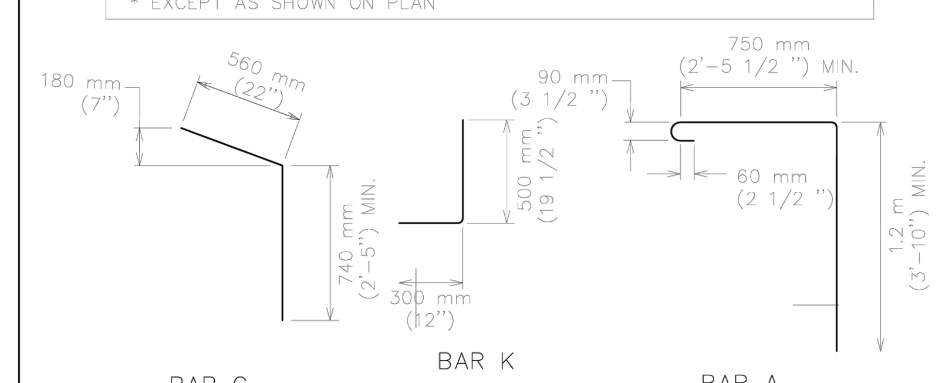
NOTE: INSTALL ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER

CITY OF CEDAR PARK
DEPARTMENT OF PUBLIC WORKS
12/03/09 ADOPTED
TYPICAL DETAILS FOR CURB INLET
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 2 OF 4

TABLE OF QUANTITIES
FOR 18" OUTLET PIPE
REINFORCING STEEL QUANTITIES

BARS	SIZE	SPACING	NUMBER	LENGTH	WEIGHT
A	4	230mm (9")*	15	2 m (7'-0")	73
B	4	250 mm (10")	4	3.25 m (10'-8")	29
C	4	460 mm (18")	7	760 mm (2'-6")	12
D	6	150 mm (6")	5	3.25 m (10'-8")	80
E	4	300 mm (12")	6	760 mm (2'-6")	10
F	4	250 mm (10")	3	4 m (13'-0")	35
G	4	300 mm (12")	11	1.25 m (4'-3")	31
H	6	–	1	4.25 m (14'-0")	20
J	4	300 mm (12")	7	3.25 m (10'-8")	50
K	4	230 mm (9")*	30	800 mm (2'-7 1/2")	52
L	4	300 mm (12")*	6	1.3 m (4'-4")	17
M	4	–	4	500 mm (1'-8") AVG	4
N	ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER MODEL SD-SP, SQUARE HOLE OPTION, SYMBOL: FISH, COLOR: BLUE. USE ALMETEK SPECS FOR THEFT RESISTANT RIVET SURFACE MOUNT W/ ADHESIVE FOR DRY CONCRETE INSTALLATION.				
TOTAL STEEL, LB.					413
TOTAL CONCRETE, C.Y.					4.06

* EXCEPT AS SHOWN ON PLAN



BAR G BAR K BAR A

CITY OF CEDAR PARK
DEPARTMENT OF PUBLIC WORKS
12/03/09 ADOPTED
TYPICAL DETAILS FOR CURB INLET
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 3 OF 4

NOTES:
1. ALL CONCRETE SHALL BE CLASS "A"
2. ALL REINFORCING STEEL SHALL BE GRADE 60
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. VERTICAL STEEL MAY BE SPLICED (380 mm or 15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
6. QUANTITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S INFORMATION ONLY. PAYMENT WILL BE MADE FOR EACH INLET OF THE TYPE SPECIFIED, COMPLETE IN PLACE INCLUDING MANHOLE FRAME AND OVER.
7. CHAMFER ALL EXPOSED EDGES 20 mm (3/4 ").
8. MANHOLE FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 503S-1.
9. THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR THE CONSTRUCTION OF INLETS, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION.
10. ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE. WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES THE WALL THICKNESS SHALL NOT EXCEED 10 INCHES.
11. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
12. INVERT OF INLET SHALL BE SLOPED 1:20 WITH FILL CONCRETE, SHAPED AS "V" SECTION
13. NO SPLICING OF REINFORCING STEEL SHALL BE PERMITTED UNLESS OTHERWISE NOTED ON THE PLANS OR PERMITTED IN WRITING BY THE ENGINEER.
14. INSTALL ALMETEK 4" DISC "NO DUMPING DRAINS TO WATER" MARKER, MODEL SD-SP, SQUARE OPTION, SYMBOL: FISH, COLOR: BLUE. USE ALMETEK INSTALL SPECIFICATIONS FOR THEFT RESISTANT RIVET SURFACE MOUNT W/ADHESIVE FOR DRY CONCRETE INSTALL.

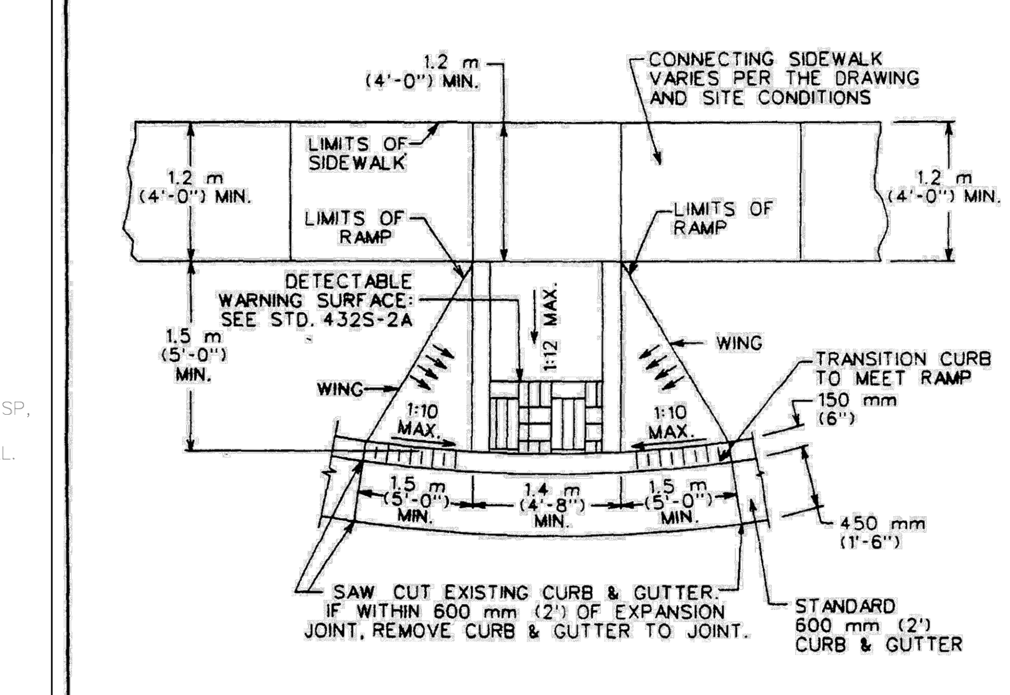
REFERENCES:

FOR EXPANSION JOINT DOWEL AND DOWEL LOCATION DETAILS SEE STD. 430S-3, "CURB EXPANSION JOINT DOWEL DETAIL".

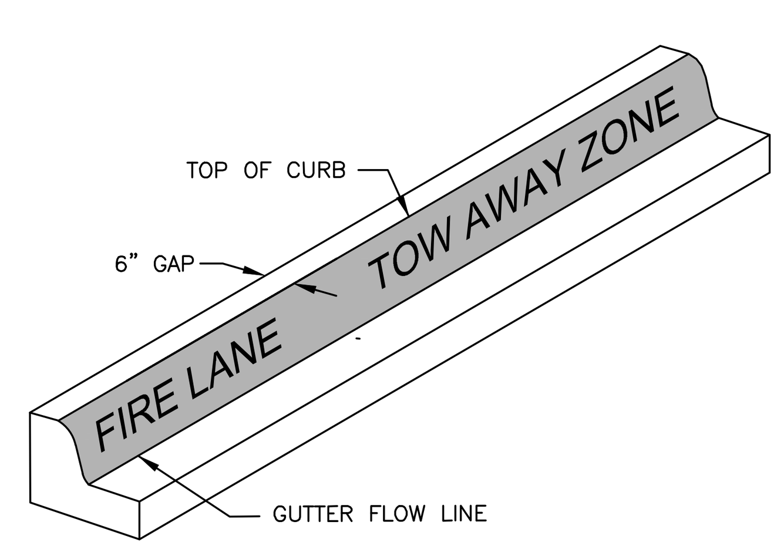
FOR 18" MANHOLE FRAME AND COVER DETAILS SEE STD. 503S-1, "18" COVER AND FRAME".

ALMETEK "NO DUMPING DRAINS TO WATERWAY" MARKERS
WWW.ALMETEK.COM

CITY OF CEDAR PARK
DEPARTMENT OF PUBLIC WORKS
12/03/09 ADOPTED
TYPICAL DETAILS FOR CURB INLET
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 4 OF 4



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
ADOPTED 9/14/05
TYPE 1 SIDEWALK CURB RAMP
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 432S-5



FIRE LANE STRIPING TO BE 6" WIDE RED STRIP WITH WHITE PAINT WITH "FIRE LANE TOW AWAY ZONE" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED GREATER THAN 35' APART. STRIPING TO BE PAINTED ON THE FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN IT IS NOT.

1 OF 1

FIRE LANE STRIPING

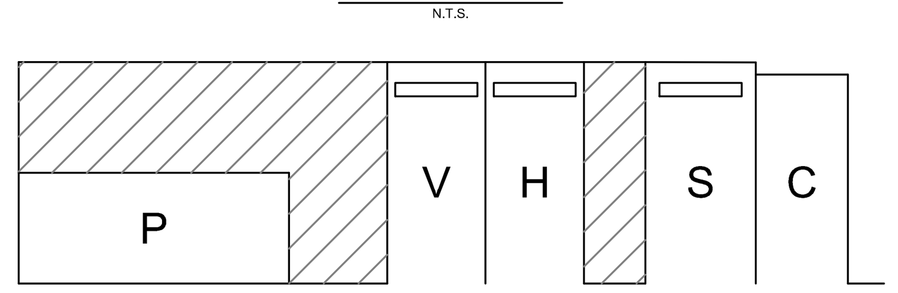
TABLE 9-1 PARKING LOT CRITERIA

A Angle of Parking (degrees)	B Width of Stall	C Depth of Stall 90° to Aisle	D Width of Aisle One Way	D Width of Aisle Two Way	E Width of Stall Parallel to Aisle One Way	E Width of Stall Parallel to Aisle Two Way	F Module Width
Standard Parking Spaces							
30	8'6"	16'	13'	—	17'	45'	—
30	9'	16'	12'	—	18'	44'	—
45	8'6"	17'	16'	—	12'	50'	—
45	9'	17'	14'	—	12'9"	48'	—
60	8'6"	18'6"	17'	—	9'10"	54'	—
60	9'	18'6"	16'	—	10'5"	53'	—
75	8'6"	18'6"	21'	—	8'10"	58'	—
75	9'	18'6"	18'	—	9'4"	55'	—
90	8'6"	17'6"	—	27'	8'6"	—	62'
90	9'	17'6"	—	25'	9'	—	60'
Compact Parking Spaces							
45	7'6"	15'11"	13'	18'	10'7"	45'	50'
60	7'6"	16'8"	18'	—	8'8"	52'	—
75	7'6"	16'5"	18'	—	7'10"	51'	—
90	7'6"	15'	—	18'	7'6"	—	48'
Parallel Parking Spaces							
0	8'6"	8'6"					
(Width)	12'6"	25'	22'				
(Length)	30'	42'					

TABLE 9-2 ALTERNATIVE PARKING LOT AND GARAGE CRITERIA

A Angle of Parking (degrees)	B Width of Stall	C Depth of Stall 90° to Aisle	D Width of Aisle One Way	D Width of Aisle Two Way	E Width of Stall Parallel to Aisle One Way	E Width of Stall Parallel to Aisle Two Way	F Module Width
Standard Parking Spaces							
30	8'6"	15'6"	11'	—	17'	42'	—
30	9'	15'6"	10'	—	18'	41'	—
45	8'6"	16'6"	13'	—	12'	46'	—
45	9'	16'6"	12'	—	12'9"	45'	—
60	8'6"	18'	14'6"	—	9'10"	50'6"	—
60	9'	18'	13'	—	10'5"	49'	—
75	8'6"	18'	18'	—	8'10"	54'	—
75	9'	18'	17'	—	9'4"	53'	—
90	8'6"	17'	—	24'	8'6"	—	58'
90	9'	17'	—	23'	9'	—	57'

PARKING TABLES
N.T.S.

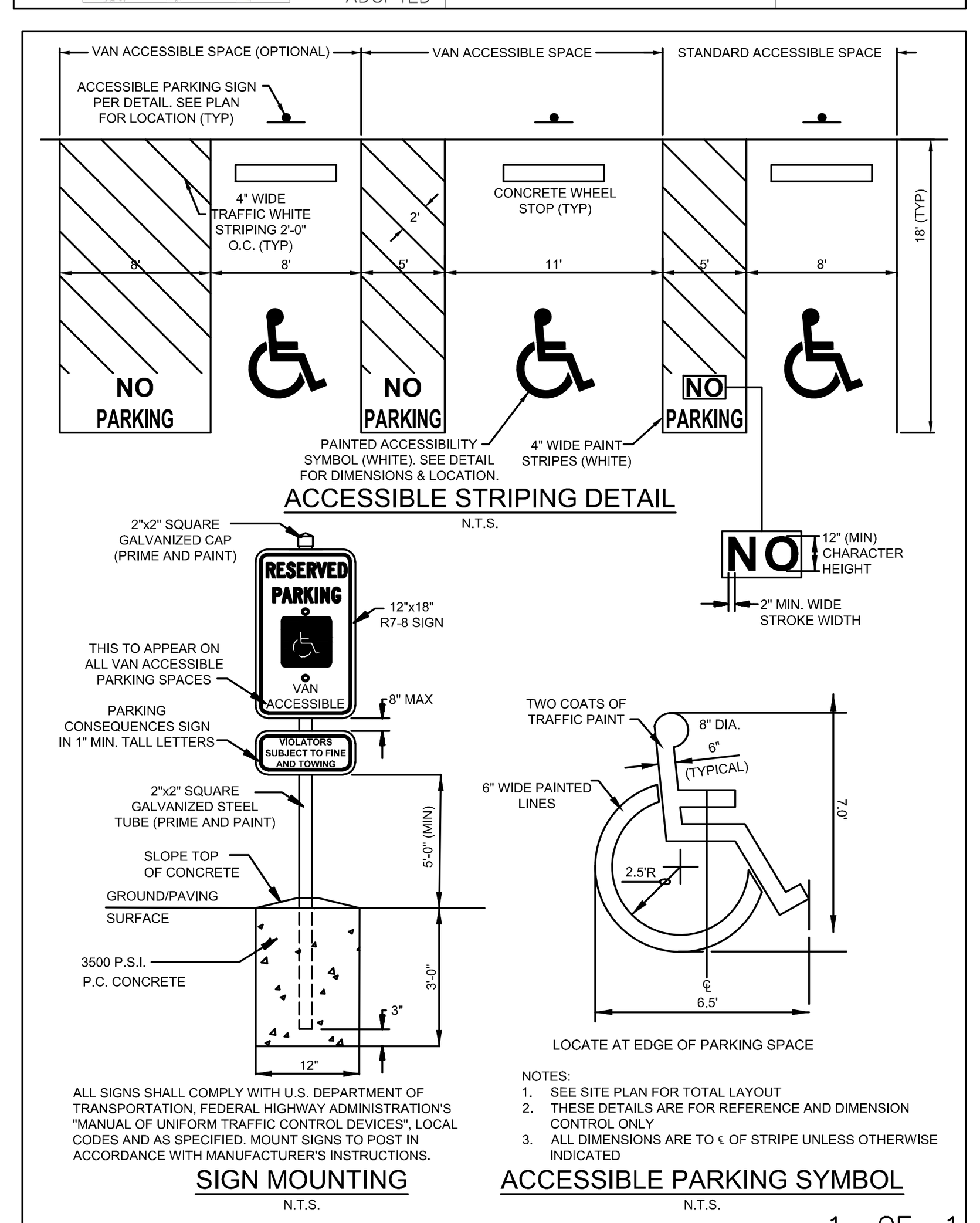


P - PARALLEL SPACE PER TCM TABLE 9.1
C - COMPACT SPACE PER TCM TABLE 9.1
S - STANDARD SPACE PER TCM TABLE 9.2
HC - HANDICAP SPACE PER TEXAS ACCESSIBILITY STANDARDS
V - VAN ACCESSIBLE SPACE PER TEXAS ACCESSIBILITY STANDARDS

PARKING DESIGNATION
N.T.S.

1 OF 1

PARKING DETAIL



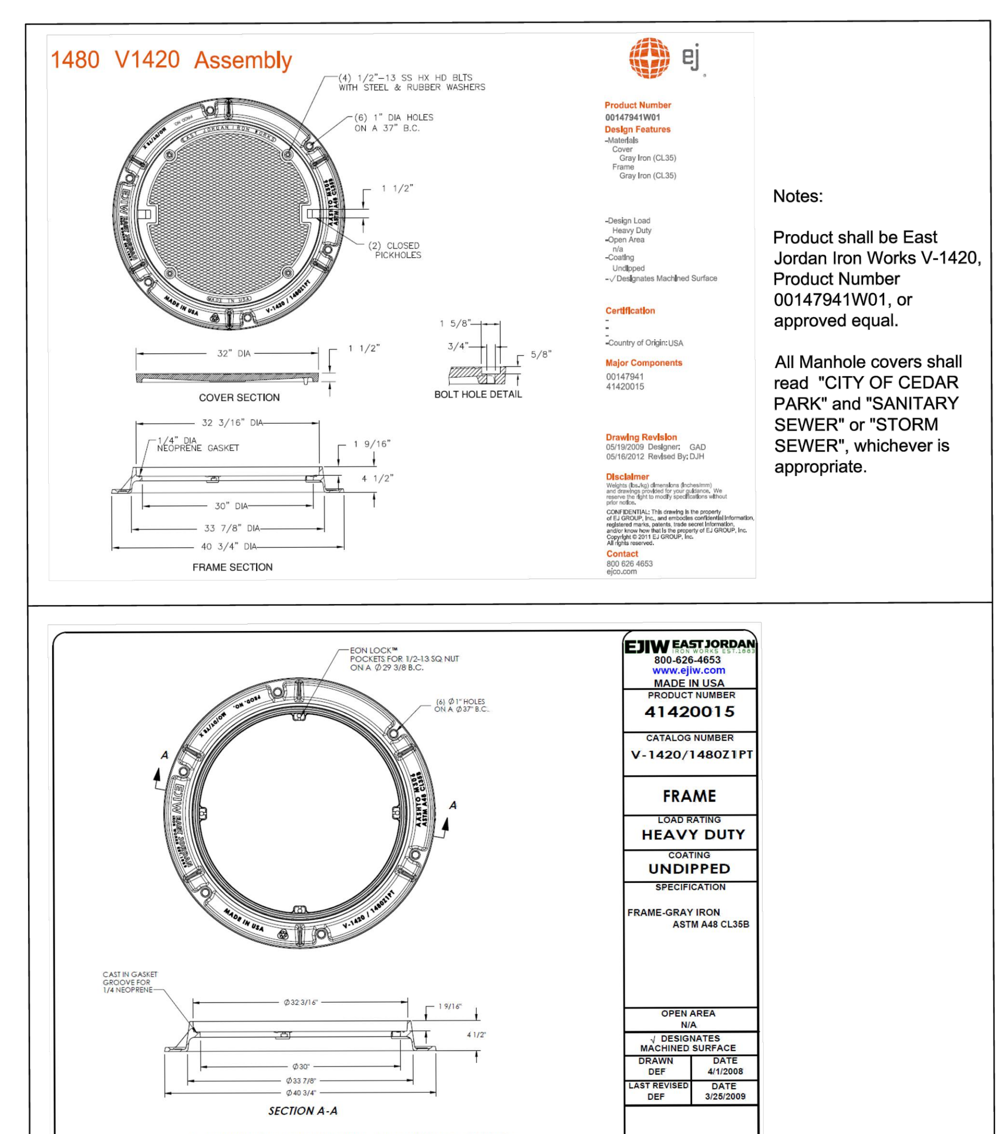
ACCESSIBLE STRIPING DETAIL
N.T.S.

SIGN MOUNTING
N.T.S.

ACCESSIBLE PARKING SYMBOL
N.T.S.

1 OF 1

HANDICAP STRIPING & SIGNAGE DETAIL



Notes:
Product shall be East Jordan Iron Works V-1420, Product Number 00147941W01, or approved equal.

All Manhole covers shall read "CITY OF CEDAR PARK" and "SANITARY SEWER" or "STORM SEWER", whichever is appropriate.

CITY OF CEDAR PARK
ENGINEERING DEPARTMENT
DARWIN MARCHELL 09/02/16
APPROVED DATE
MANHOLE RING AND COVER OUTSIDE OF PAVED AREAS
ADOPTED: 09/02/2016
SCALE: N.T.S.
INITIAL:
1 OF 1

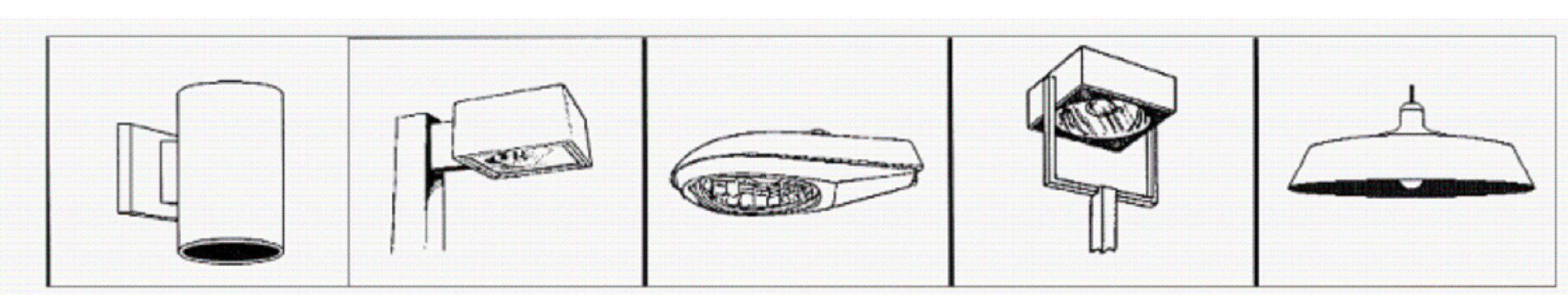


Figure 34:
Examples of fully-shielded light fixtures.

!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, AND TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

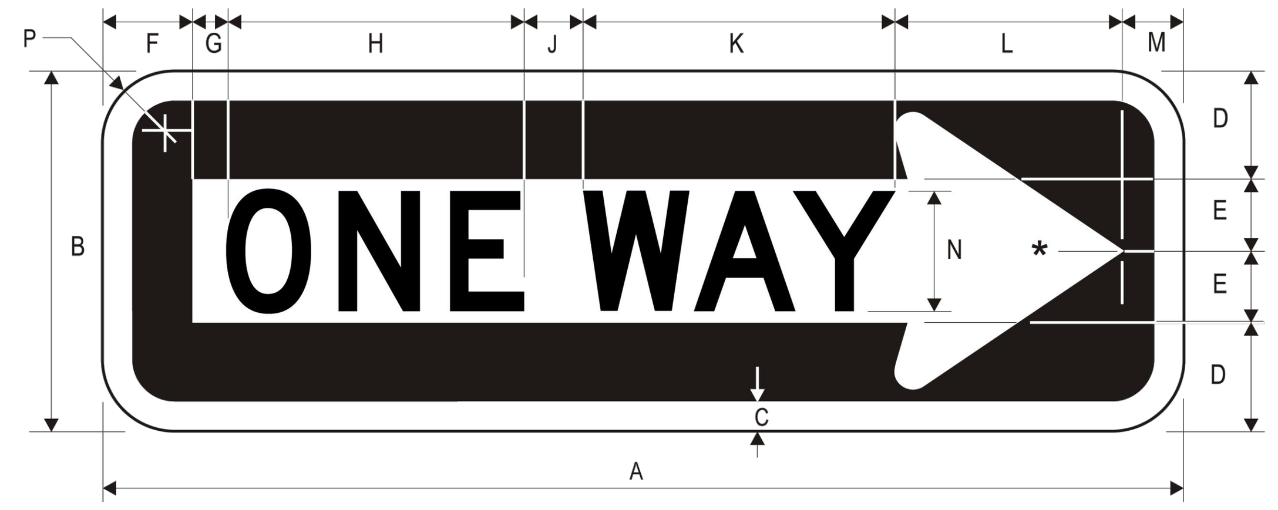
NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

SITE DETAILS 2

DATE: 3/7/2024 | DRAWN BY: OAT
DWG SCALE: NTS | CHECKED BY: SRB
PROJECT NO: 331-715
APPROVED BY: MAT

DRAWING NO.: 39
SHEET 39 OF 175

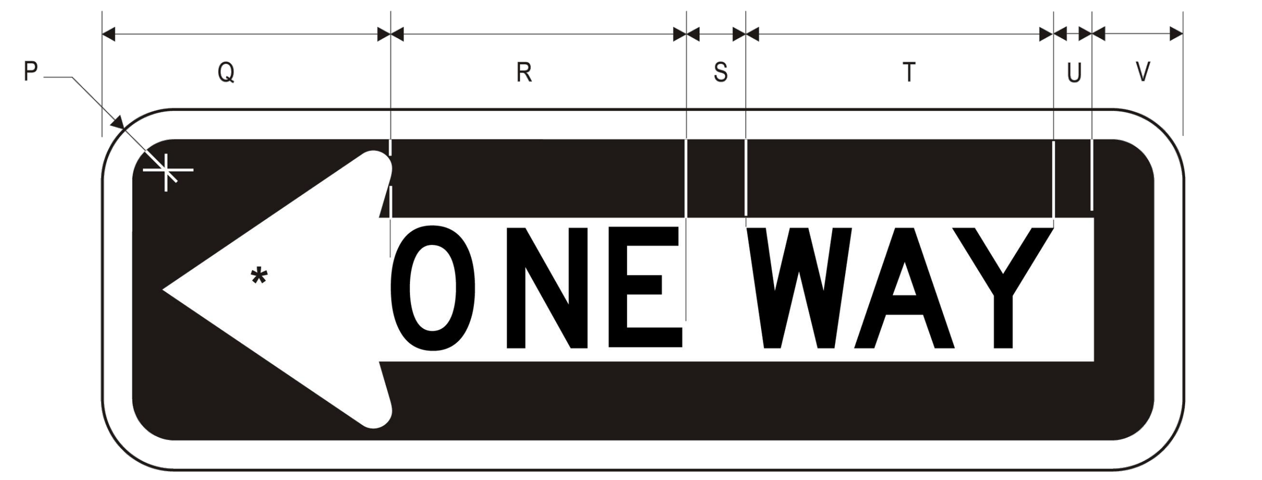
2023-23-SD



R6-1R
ONE WAY (Right)

A	B	C	D	E	F	G	H	J	K	L	M
36	12	.5	3.375	2.625	3	1.25	9.125	2	9.625	9	2
54	18	1	5.5	3.5	5	4	12.309	2.929	12.762	13	4

N	P	Q	R	S	T	U	V
4 D	1.5	11	9.125	2	9.625	1.25	3
5 D	1.875	17	12.309	2.929	12.762	4	5



R6-1L
ONE WAY (Left)

* See Symbol section for arrow design

COLORS: ARROW - WHITE
LEGEND & BACKGROUND - BLACK

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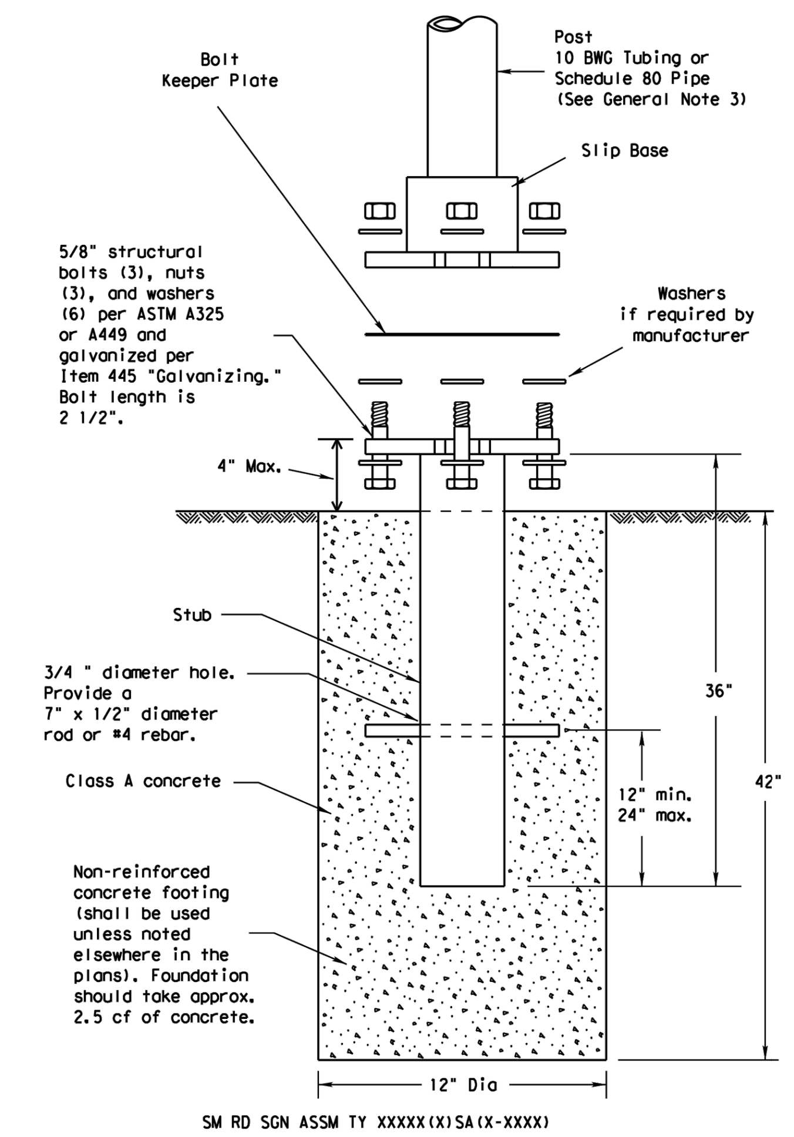
TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS

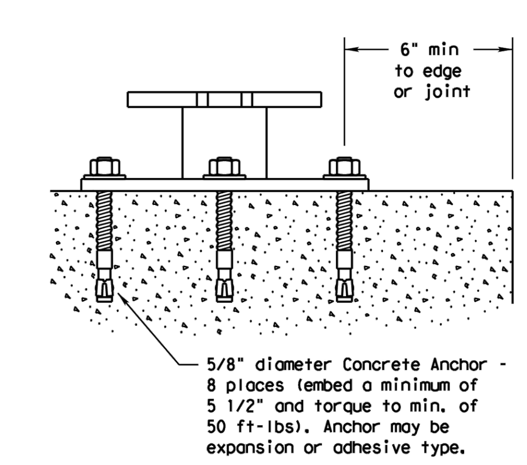


SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)

NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. http://www.txdot.gov/business/producer_list.htm The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.

CONCRETE ANCHOR



SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

GENERAL NOTES:

1. Slip base shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
2. Material used as post with this system shall conform to the following specifications:
   10 BWG Tubing (2.875" outside diameter)
   - 0.134" nominal wall thickness
   - Seamless or electric-resistance welded steel tubing or pipe
   - Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
   - Other steels may be used if they meet the following:
     - 55,000 PSI minimum yield strength
     - 70,000 PSI minimum tensile strength
     - 20% minimum elongation in 2"
   - Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
   - Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
   - Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.

   Schedule 80 Pipe (2.875" outside diameter)
   - 0.276" nominal wall thickness
   - Steel tubing per ASTM A500 Gr C
   - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
     - 46,000 PSI minimum yield strength
     - 62,000 PSI minimum tensile strength
     - 21% minimum elongation in 2"
   - Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
   - Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
   - Galvanization per ASTM A123
3. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: http://www.txdot.gov/publications/traffic.htm
4. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

Foundation
1. Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
3. Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground.
4. Plumb the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
5. The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support
1. Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the travelway. The cut shall be plumb and straight.
2. Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM
SMD(SLIP-1)-08

©TxDOT July 2002 | DN: TXDOT | CK: TXDOT | DW: TXDOT | CK: TXDOT
9-08 REVISIONS | CONT | SECT | JOB | HIGHWAY
DIST | COUNTY | SHEET NO.
268

DATE:
FILE:

REVISION RECORD
NO | DATE | DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

SITE DETAILS 3

DATE: 3/7/2024 | DRAWN BY: OAT
DWG SCALE: NTS | CHECKED BY: SRB
PROJECT NO: 331-715 | APPROVED BY: MAT

DRAWING NO.: 40
SHEET 40 OF 175

811
!!! CAUTION !!! !!! CAUTION !!!
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2023-23-SD

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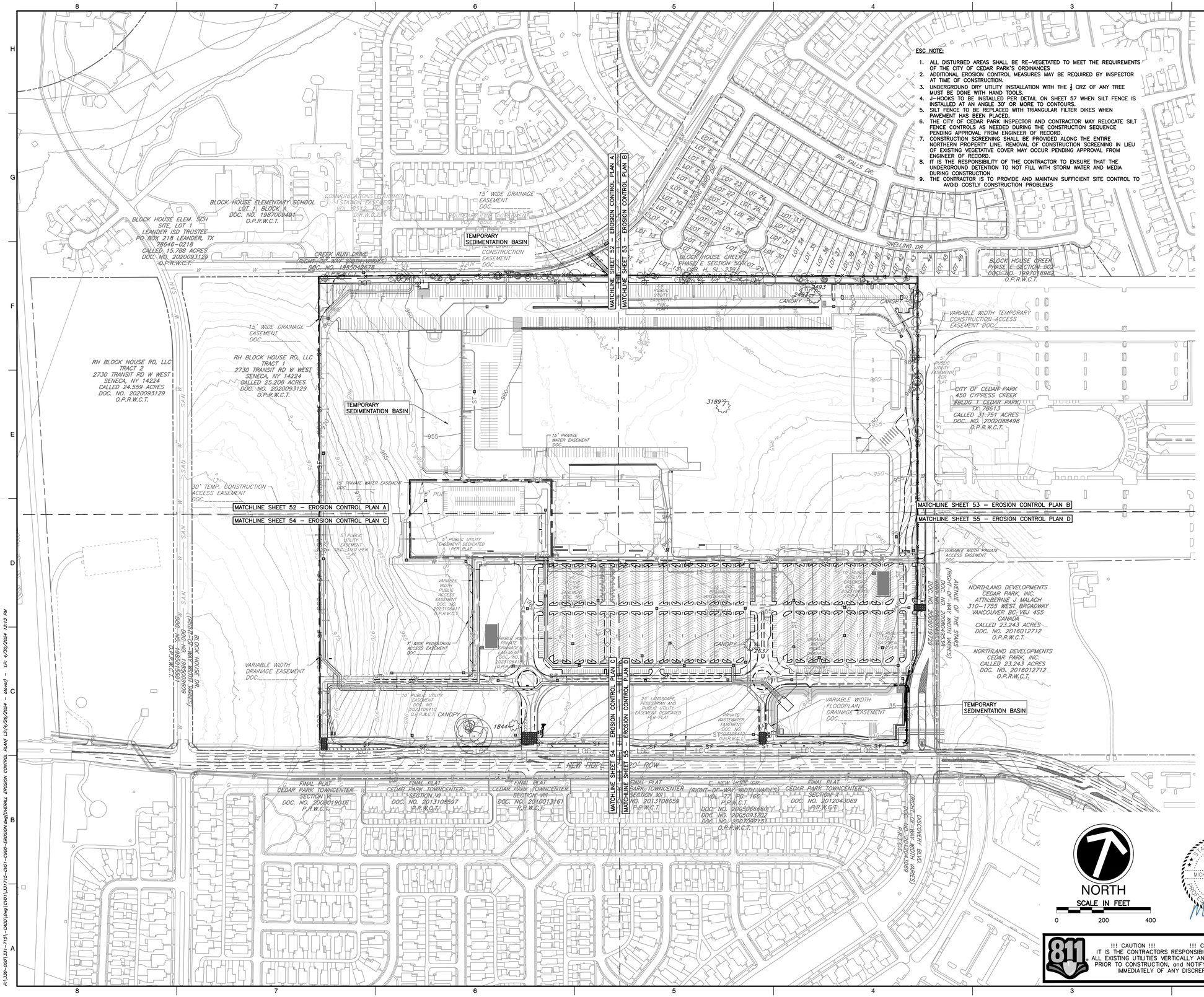

A B
C D

SHEET INDEX

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING DRAINAGE DITCH
- EXISTING FENCE LINE
- EXISTING ROADWAY CENTERLINE
- EXISTING CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING ASPHALT PAVEMENT
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRE
- EXISTING ELECTRIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FIBER OPTIC LINE
- EXISTING STREAM
- EXISTING WETLAND
- EXISTING FLOODWAY
- EXISTING GUIDE RAIL
- PROPOSED ROADWAY CENTERLINE
- PROPOSED CURB & GUTTER
- PROPOSED EDGE OF PAVED DRIVE
- PROPOSED EDGE OF UNPAVED DRIVE
- PROPOSED GRAVEL DRIVE
- PROPOSED CONCRETE
- PROPOSED STRIPING
- PROPOSED PAVEMENT SHOULDER
- PROPOSED SIDEWALK
- PROPOSED EASEMENT
- PROPOSED MUNICIPAL BOUNDARY
- PROPOSED PARCEL LINE
- PROPOSED SUBJECT PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- PROPOSED BUILDING
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED TREELINE
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED FILTER SOCK
- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED CONSTRUCTION EXIT
- PROPOSED CHECK DAM
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED EROSION CONTROL MATTING
- PROPOSED STORM INLET PROTECTION
- PROPOSED CURB STORM INLET PROTECTION
- PROPOSED TREE PROTECTION

REVISION RECORD		
NO	DATE	DESCRIPTION

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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

OVERALL EROSION CONTROL PLAN

DRAWN BY:	QU
CHECKED BY:	SRB
DATE:	4/25/2024
DWG SCALE:	1" = 200'
PROJECT NO:	331-715
APPROVED BY:	MAT

DRAWING NO.: 51

SHEET 51 OF 175

2023-23-SD

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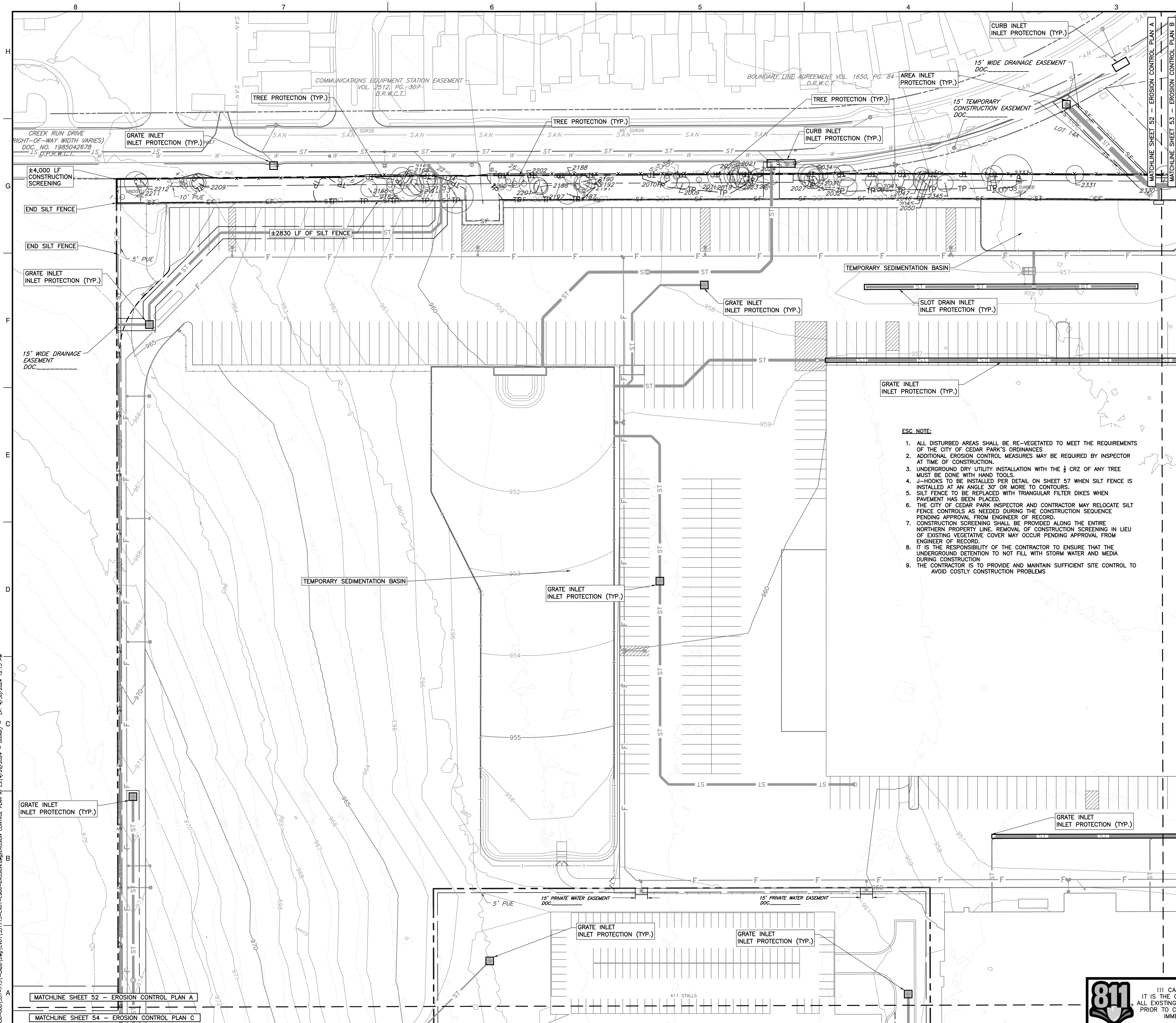

NORTH

SCALE IN FEET 0 60 120

SHEET INDEX: A B C D

ESC NOTE:

1. ALL DISTURBED AREAS SHALL BE RE–VEGETATED TO MEET THE REQUIREMENTS OF THE CITY OF CEDAR PARK'S ORDINANCES
2. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY INSPECTOR AT TIME OF CONSTRUCTION.
3. UNDERGROUND DRY UTILITY INSTALLATION WITH THE ½ CRZ OF ANY TREE MUST BE DONE WITH HAND TOOLS.
4. J–HOOKS TO BE INSTALLED PER DETAIL ON SHEET 57 WHEN SILT FENCE IS INSTALLED AT AN ANGLE 30° OR MORE TO CONTOURS.
5. SILT FENCE TO BE REPLACED WITH TRIANGULAR FILTER DIKES WHEN PAVEMENT HAS BEEN PLACED.
6. THE CITY OF CEDAR PARK INSPECTOR AND CONTRACTOR MAY RELOCATE SILT FENCE CONTROLS AS NEEDED DURING THE CONSTRUCTION SEQUENCE PENDING APPROVAL FROM ENGINEER OF RECORD.
7. CONSTRUCTION SCREENING SHALL BE PROVIDED ALONG THE ENTIRE NORTHERN PROPERTY LINE. REMOVAL OF CONSTRUCTION SCREENING IN LIEU OF EXISTING VEGETATIVE COVER MAY OCCUR PENDING APPROVAL FROM ENGINEER OF RECORD.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE UNDERGROUND DETENTION TO NOT FILL WITH STORM WATER AND MEDIA DURING CONSTRUCTION
9. THE CONTRACTOR IS TO PROVIDE AND MAINTAIN SUFFICIENT SITE CONTROL TO AVOID COSTLY CONSTRUCTION PROBLEMS

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING DRAINAGE DITCH
- EXISTING FENCE LINE
- EXISTING ROADWAY CENTERLINE
- EXISTING CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING ASPHALT PAVEMENT
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRE
- EXISTING ELECTRIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FIBER OPTIC LINE
- EXISTING STREAM
- EXISTING WETLAND
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- EXISTING GUIDE RAIL
- PROPOSED ROADWAY CENTERLINE
- PROPOSED CURB & GUTTER
- PROPOSED EDGE OF PAVED DRIVE
- PROPOSED EDGE OF UNPAVED DRIVE
- PROPOSED GRAVEL DRIVE
- PROPOSED CONCRETE
- PROPOSED STRIPING
- PROPOSED PAVEMENT SHOULDER
- PROPOSED SIDEWALK
- PROPOSED EASEMENT
- PROPOSED MUNICIPAL BOUNDARY
- PROPOSED PARCEL LINE
- PROPOSED SUBJECT PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- PROPOSED BUILDING
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED TREELINE
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED FILTER SOCK
- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED CONSTRUCTION EXIT
- PROPOSED CHECK DAM
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED EROSION CONTROL MATTING
- PROPOSED STORM INLET PROTECTION
- PROPOSED CURB STORM INLET PROTECTION
- PROPOSED TREE PROTECTION

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

811

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REVISION RECORD

NO	DATE	DESCRIPTION

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www.cecinc.com

NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

EROSION CONTROL PLAN A

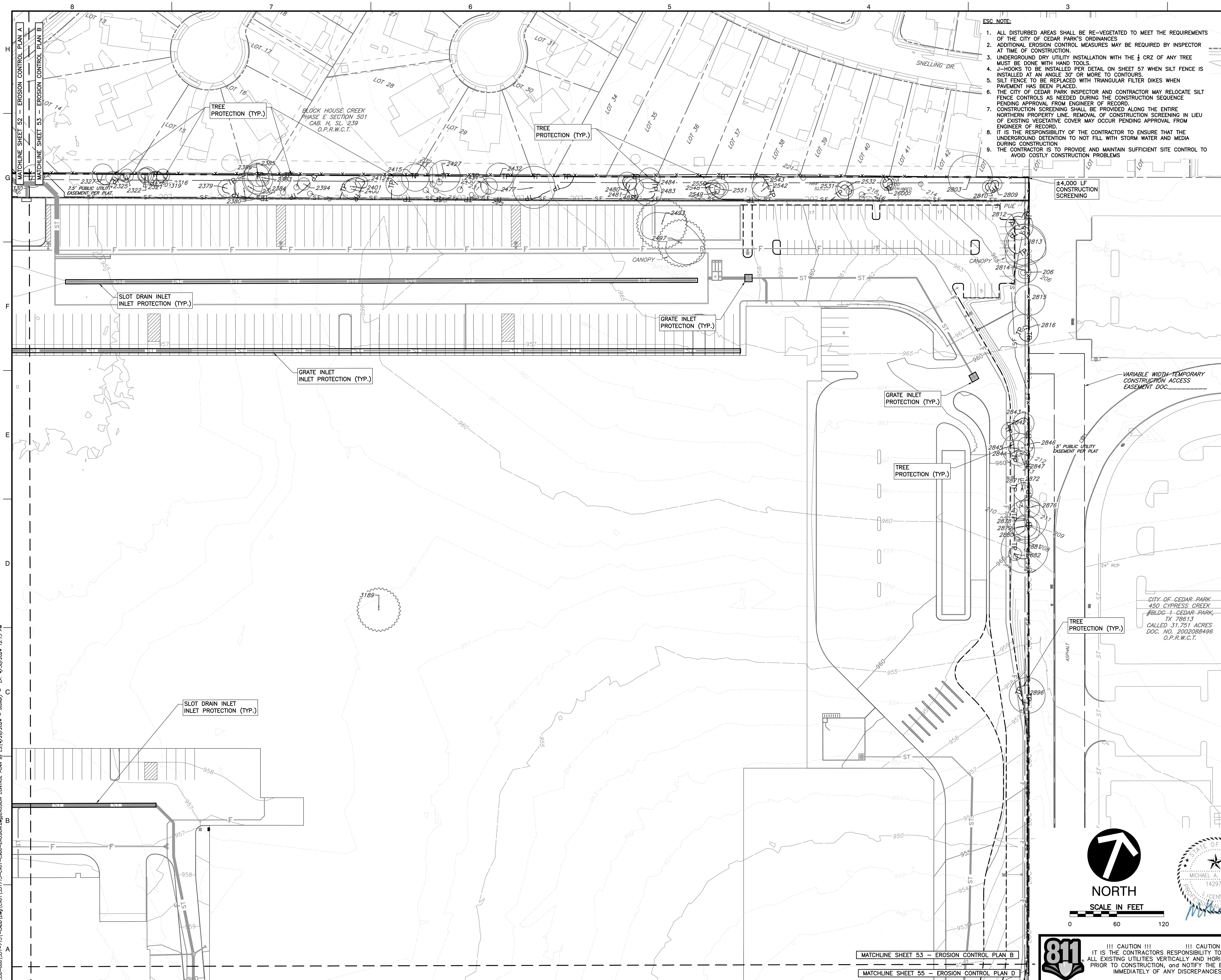
DATE:	4/25/2024	DRAWN BY:	QU
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:	MAT		

DRAWING NO.: 52

SHEET 52 OF 175

2023-23-SD

P:\330-000\331-715\-CADD\Dwg\CIVIL\331715-CV01-C900-EROSION.dwg{EROSION CONTROL PLAN A} LS:(4/26/2024 - oliverr) - LP: 4/30/2024 12:13 PM



ESC NOTE:

1. ALL DISTURBED AREAS SHALL BE RE–VEGETATED TO MEET THE REQUIREMENTS OF THE CITY OF CEDAR PARK'S ORDINANCES
2. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY INSPECTOR AT TIME OF CONSTRUCTION.
3. UNDERGROUND DRY UTILITY INSTALLATION WITH THE ½ CRZ OF ANY TREE MUST BE DONE WITH HAND TOOLS.
4. J–HOOKS TO BE INSTALLED PER DETAIL ON SHEET 57 WHEN SILT FENCE IS INSTALLED AT AN ANGLE 30° OR MORE TO CONTOURS.
5. SILT FENCE TO BE REPLACED WITH TRIANGULAR FILTER DIKES WHEN PAVEMENT HAS BEEN PLACED.
6. THE CITY OF CEDAR PARK INSPECTOR AND CONTRACTOR MAY RELOCATE SILT FENCE CONTROLS AS NEEDED DURING THE CONSTRUCTION SEQUENCE PENDING APPROVAL FROM ENGINEER OF RECORD.
7. CONSTRUCTION SCREENING SHALL BE PROVIDED ALONG THE ENTIRE NORTHERN PROPERTY LINE. REMOVAL OF CONSTRUCTION SCREENING IN LIEU OF EXISTING VEGETATIVE COVER MAY OCCUR PENDING APPROVAL FROM ENGINEER OF RECORD.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE UNDERGROUND DETENTION TO NOT FILL WITH STORM WATER AND MEDIA DURING CONSTRUCTION
9. THE CONTRACTOR IS TO PROVIDE AND MAINTAIN SUFFICIENT SITE CONTROL TO AVOID COSTLY CONSTRUCTION PROBLEMS

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING DRAINAGE DITCH
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- EXISTING ROADWAY CENTERLINE
- EXISTING CURB
- EXISTING EDGE OF PAVEMENT
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- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRE
- EXISTING ELECTRIC LINE
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- EXISTING STREAM
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- PROPOSED TREE PROTECTION

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MICHAEL A. THEONE 142972 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

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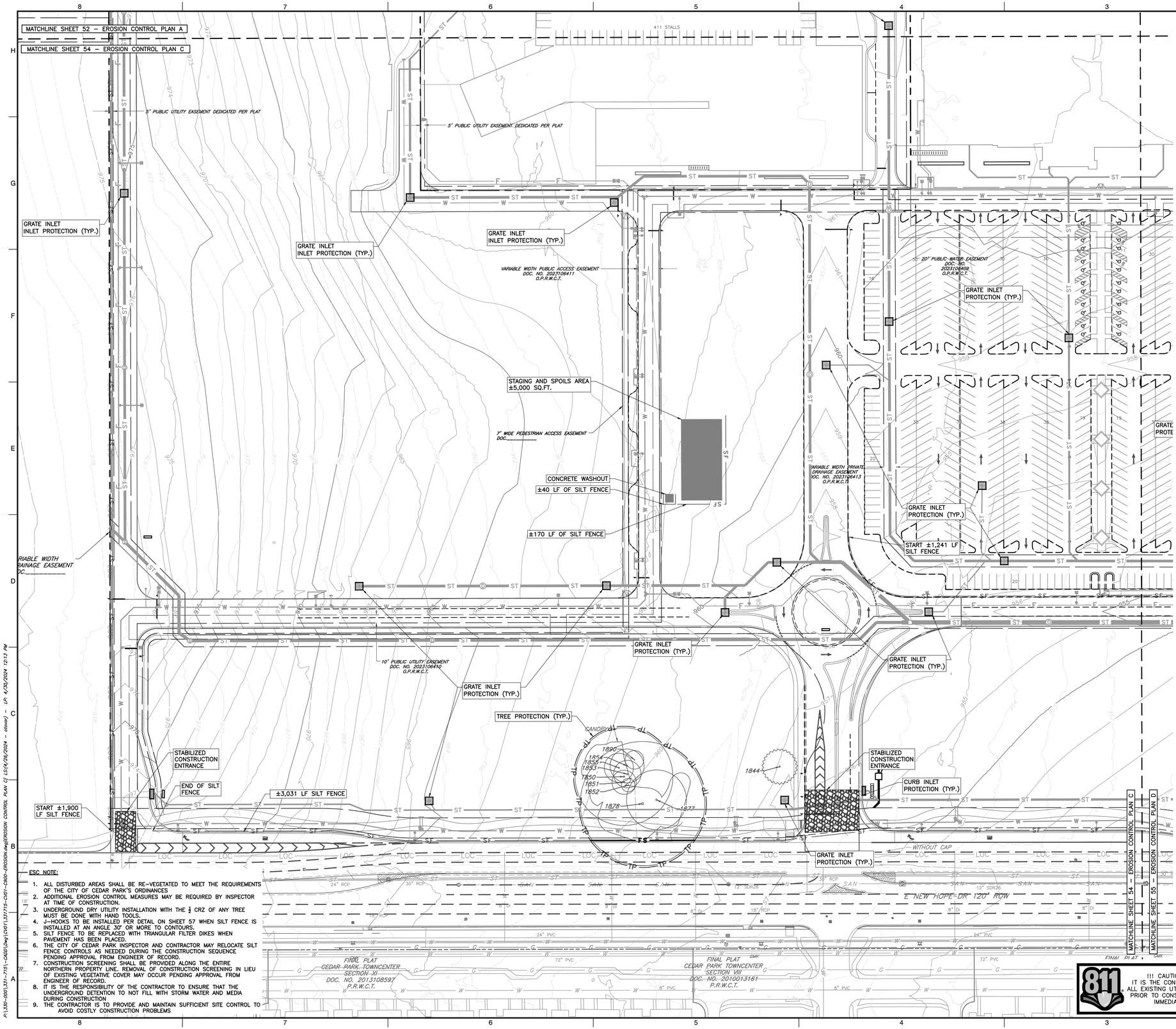
WILLIAMSON COUNTY

EROSION CONTROL PLAN B

DATE:	4/25/2024	DRAWN BY:	QU
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 53
SHEET 53 OF 175

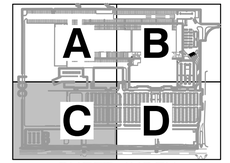
2023-23-SD



NORTH

SCALE IN FEET

0 60 120



SHEET INDEX

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

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WILLIAMSON COUNTY

EROSION CONTROL PLAN C

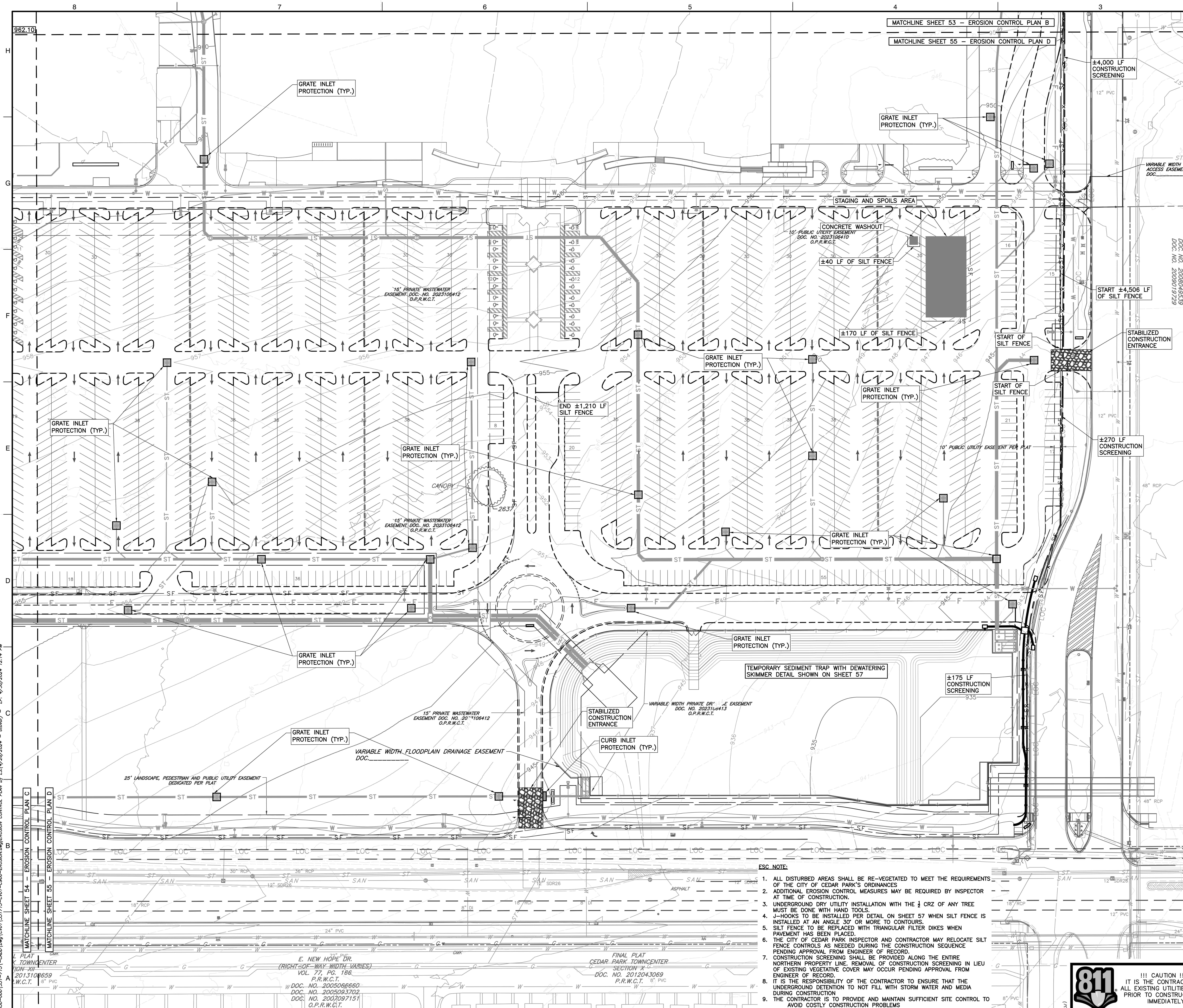
DATE:	4/25/2024
DWG SCALE:	1" = 60'
PROJECT NO:	331-715
DRAWN BY:	QU
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 54

SHEET 54 OF 175

2023-23-SD

P:\330-001\331-715\-CAD\dwg\C01\331715-C01-C900-EROSION.dwg(EROSION CONTROL PLAN C) LS(4/26/2024 - steve) - LP: 4/30/2024 12:13 PM



NORTH

SCALE IN FEET

0 60 120

SHEET INDEX

A B C D

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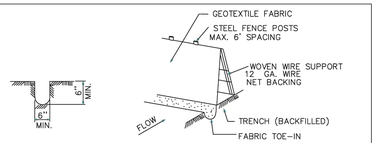
DATE:	4/25/2024	DRAWN BY:	QU
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:	MAT		

DRAWING NO.: 55

2023-23-SD



TRENCH CROSS SECTION — SILT FENCE

GENERAL NOTES:

1. SILT FENCE LOCATED ADJACENT TO PLAYGROUNDS, PARKS, SIDEWALKS, AND OTHER LOCATIONS AS DETERMINED BY CITY OF CEDAR PARK REPRESENTATIVES SHALL HAVE CITY APPROVED SAFETY CAPS ON ALL STEEL POSTS.

2. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.

3. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

4. WHERE FENCE CAN NOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE. 6 INCHES DEEP AND 6 INCHES WIDE TO THE TRENCH MUST BE A MINIMUM OF ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.

6. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

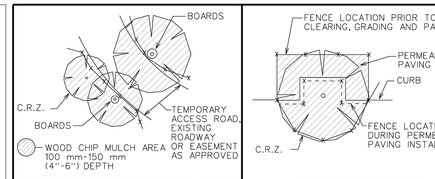
7. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES.

8. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

STANDARD SYMBOL SF / L=

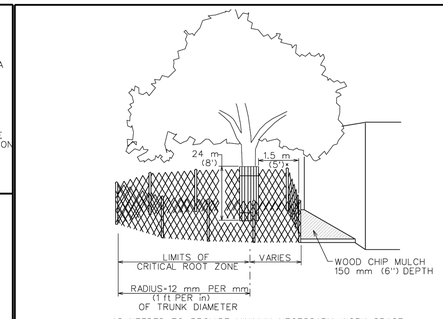
REV. DATE: 09/13/01

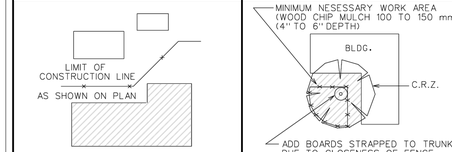
CITY OF CEDAR PARK ENGINEERING DEPARTMENT		SILT FENCE
DARWIN MARCHELL 09/13/2001	ADOPTED: 09/13/2001	
APPROVED DATE	SCALE: N.T.S.	
	INITIAL:	



LINEAR CONSTRUCTION THROUGH TREES

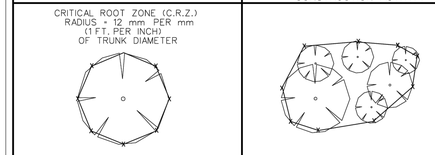
TREES IN PAVING AREA





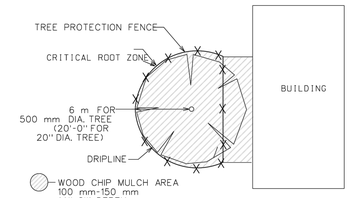
NATURAL AREAS

TREES NEAR CONSTRUCTION ACTIVITY



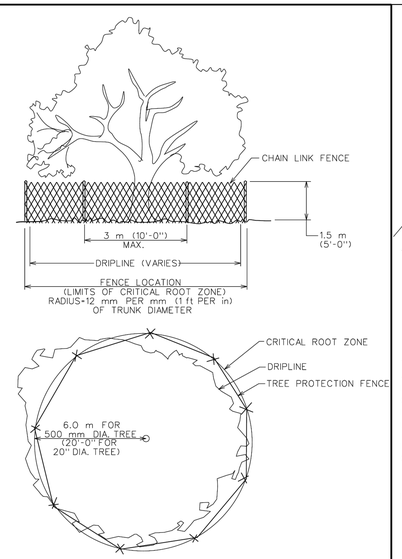
INDIVIDUAL TREE

GROUP OF TREES

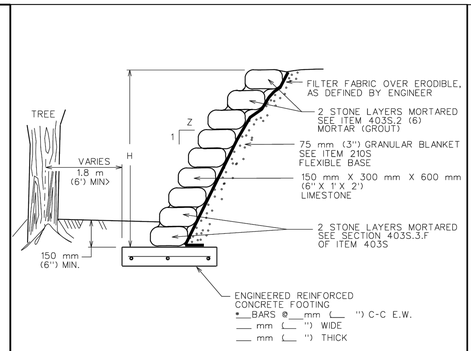


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE LOCATIONS
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-1

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE MODIFIED TYPE A - CHAIN LINK
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-4



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROPTECTION FENCE TYPE A - CHAIN LINK
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-2



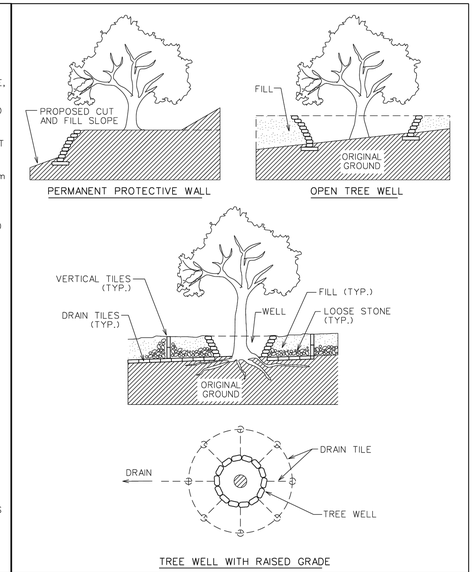
THIS STANDARD APPLIES ONLY UNDER THE FOLLOWING CONDITIONS:

A. H AND Z ARE SPECIFIED ON THE DRAWING.
B. GROUNDWATER IS NO HIGHER THAN THE BOTTOM OF THE FOOTING.
C. THE MATERIAL BELOW THE FOOTING IS FIRM AND STABLE.
D. THE MATERIAL BEHIND THE WALL HAS A LEVEL SURFACE.
E. THE MATERIAL IN FRONT OF THE WALL HAS A SLOPE NO STEEPER THAN 4 HORIZONTAL TO 1 VERTICAL.
F. THE FACE OF THE WALL IS NO STEEPER THAN 1 HORIZONTAL TO 2 VERTICAL.
G. SURCHARGE LOADS BEHIND THE WALL ARE NO CLOSER THAN DISTANCE H FROM THE TOP OF WALL.

NOTES:

1. DESIGN AND CONSTRUCTION OF ROCK WALL SHALL CONFORM TO THE REQUIREMENTS OF CITY CODE 16-7-2, PLACEMENT OF FENCES IN STREET CORNER AREAS, AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL FOR MINIMIM SIGHT DISTANCE.
2. CONCRETE SHALL CONFORM TO ITEM 403S, "CONCRETE FOR STRUCTURES".

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		SLOPE PROTECTION AND TREE WELLS
RECORD COPY SIGNED BY J. PATRICK MURPHY	03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-6 1 OF 2



PERMANENT PROTECTIVE WALL — OPEN TREE WELL

TREE WELL WITH RAISED GRADE

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		SLOPE PROTECTION AND TREE WELLS
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STATE OF TEXAS
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WILLIAMSON COUNTY

EROSION AND SEDIMENTATION CONTROL DETAILS

DATE:	11/15/2023	DRAWN BY:	CS
DWG SCALE:		CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MAT

DRAWING NO.: 56

SHEET 56 OF 89

2023-23-SD

F:\330-000\331-715\-CADD\dwg\CIVD\331715-CIVD-GN00-EROSION DETAILS.dwg(EROSION CONTROL DETAILS 1) LS(4/29/2024 - etowe) - LP: 4/30/2024 12:14 PM

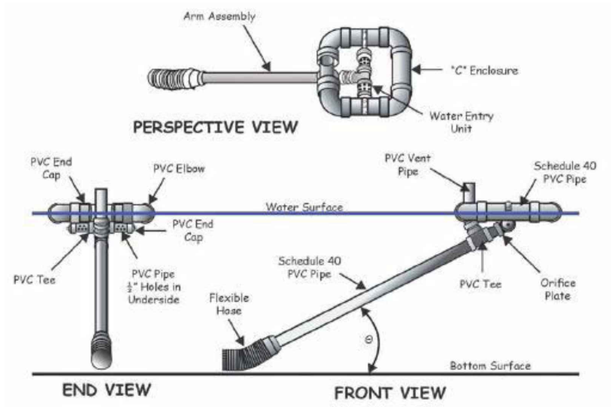
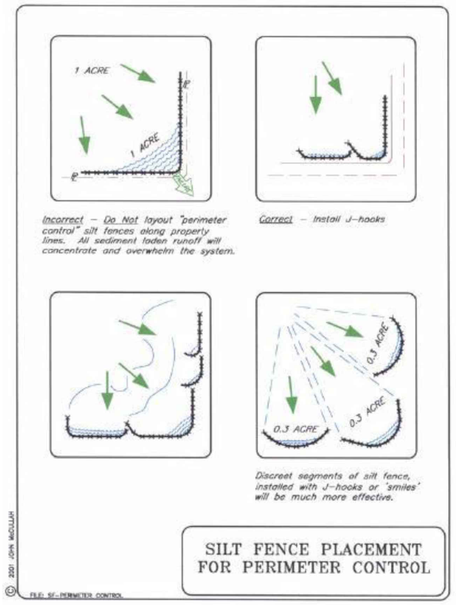
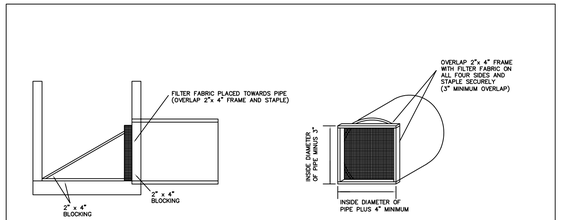


Figure 6.64a Schematic of a skimmer, from Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.





NOTES:
STORM INLET SEDIMENT TRAPS SHALL BE PLACED IN ALL PROPOSED CURB INLETS AND AREA INLETS AS DIRECTED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

THE LATERAL BRACING SHALL BE PLACED IN A MANNER AS TO ADEQUATELY SECURE THE FILTER FRAME TO THE SIDE OF THE INLET, INSURING THE PROPER FUNCTION OF THE SEDIMENT TRAP.

FILTER FABRIC MAY BE IDENTICAL TO THAT SPECIFIED AS "TEMPORARY SEDIMENT CONTROL FENCE". OTHER MATERIAL MAY BE USED UPON APPROVAL OF THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

THE "STORM INLET SEDIMENT TRAPS" SHALL BE INSTALLED UPON COMPLETION OF THE PROPOSED INLET WALLS OR AS DIRECTED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

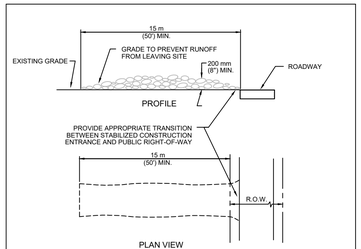
THE CONTRACTOR WILL BE REQUIRED TO PERFORM PERIODIC MAINTENANCE OF THE SEDIMENT TRAP AND REMOVE ACCUMULATED SILT AS DIRECTED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

"STORM INLET SEDIMENT TRAPS" SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OF THE PROPOSED INLET DECK BEGINS.

ALL WOOD SHALL BE PRESSURE TREATED.

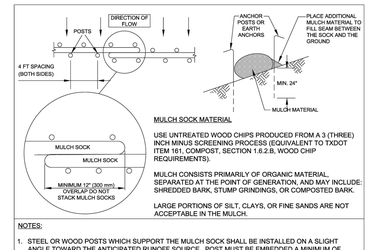
STORM INLET SEDIMENT TRAP

CITY OF CEDAR PARK PUBLIC WORKS ENGINEERING	STANDARD DETAIL STORM INLET SEDIMENT TRAP	
DARWIN MARCHELL, P.E.	ADOPTED: 01/02/01 SCALE: NTS INITIAL:	



NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STABILIZED CONSTRUCTION ENTRANCE	
RECORD COPY SIGNED BY J. PATRICK MURPHY 5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1



MULCH SOCK MATERIAL

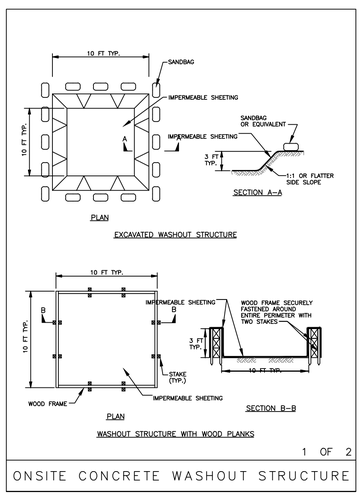
USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP REQUIREMENTS).

MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

NOTES:
1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

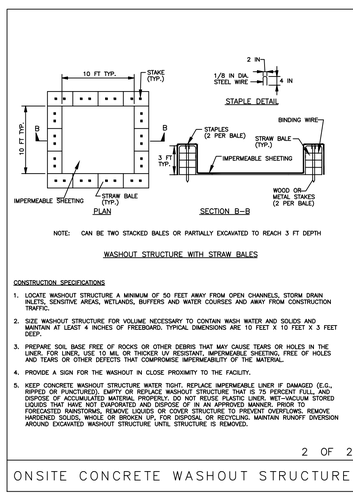
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	MULCH SOCK	
RECORD COPY SIGNED BY MORGAN BYARS 08/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 648S-1



NOTE:
J-HOOKS SHALL ALSO BE USED WHEN THE SILT FENCE IS INSTALLED AT AN ANGLE OF 30 DEGREES OR GREATER FROM PARALLEL TO THE CONTOURS.

1 OF 2

ONSITE CONCRETE WASHOUT STRUCTURE



NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

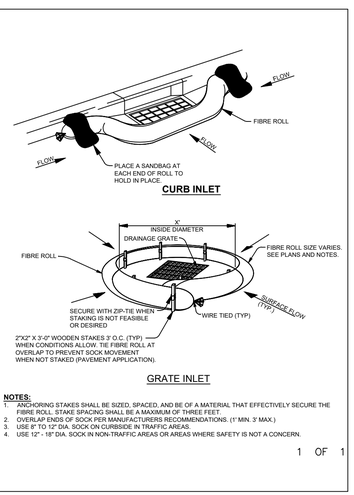
WASHOUT STRUCTURE WITH STRAW BALES

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

2 OF 2

ONSITE CONCRETE WASHOUT STRUCTURE



NOTES:
1. ANCHORING STAKES SHALL BE SIZED, SPACED, AND BE OF A MATERIAL THAT EFFECTIVELY SECURE THE FIBRE ROLL. STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET.
2. OVERLAP ENDS OF SOCK PER MANUFACTURERS RECOMMENDATIONS. (1" MIN. 3' MAX.)
3. USE 8" TO 12" DIA. SOCK ON CURBSIDE IN TRAFFIC AREAS.
4. USE 12" - 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

1 OF 1

811 !!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

EROSION AND SEDIMENTATION CONTROL DETAILS

DATE:	11/15/2023	DRAWN BY:	CS
DWG SCALE:		CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MAT

DRAWING NO.: 57

SHEET 57 OF 89

2023-23-SD

P:\330-001\331-715\-CAD\Dwg\C401\331715-C401-CBDD-EROSION CONTROL DETAILS.dwg|EROSION CONTROL DETAILS 3] LS:(4/29/2024 - elevy) - LP: 4/30/2024 12:14 PM

Section 6

Site Description – Support Facilities

Part III Sect. F.1. (h)

A description of the activities and their locations of any asphalt plants, concrete batch plants or other activity supporting this construction site.

Facility	*Description*	*Location*
Asphalt Plant		Off site
Concrete Batch Plant		Off site
Other Support Activity		Off site

Part III Sect. F.1. (i)

List of receiving waters at or near the site that will be disturbed or that will receive discharges from the project's disturbed areas.

Name of Receiving	*Will Receiving Water Be Disturbed?*	*Location of Receiving water*
Block House Creek	No	North of Site
Cottonwood Creek	No	South of Site

Section 7

Copies of Construction General Permit (CGP) TXR150000 or description of location of CGP NOI, certificate, and/or site notice

General Permit to Discharge Under the Texas Pollutant Discharge Elimination System

Stormwater Discharges Associated with Construction Activities

TXR150000

Link to Full Permit:

https://www.tceq.texas.gov/assets/public/permitting/stormwater/txr150000-cgp.pdf

Effective March 5, 2018

printed on recycled paper

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Best Management Practices

Section 8

Best Management Practices (BMPs) Erosion and Sediment Controls

Part III Section F.2.a.(i)-(ii) and F.2. (c)

Description of Erosion and Sediment Controls designed to retain sediment. Add as many rows as needed.

BMPs Installed	***Schedule of BMP installation***	***Location(s) On-Site***	***Inspection/Maintenance Schedule***	***Modifications/Replacement Activities***
Silt Fences		Reference Site Development Plans		
Temp. Sediment Basins		Reference Site Development Plans		
Tree Protection		Reference Site Development Plans		
Stabilized Construction Entrance		Reference Site Development Plans		
Spoils Area		Reference Site Development Plans		
Inlet Protection		Reference Site Development Plans		

Are there sedimentation basins or traps?* *If yes, list the measures taken to reduce the pollutants transported off-site by pumping activities.*	***Yes*** ■	***No*** □
Prevention Measure	***Location On-Site***	***Implementation Date***
Silt Fence	Per Plan	prior to construction activities
Dewatering Skimmer with influent/effluent filter sock media	Per Plan	

* Part III Section F.6. (c) Sediment must be removed from sediment traps and basins no later than the time that the design capacity has been reduced by 50 percent.

Section 9

BMPs, Off-Site Transfer of Pollutant Controls

Part III Section F.2.a. (iii)

List of good housekeeping practices implemented to limit the off-site transport of litter, construction debris, and construction materials.

Litter Controls:	
Good Housekeeping Activity	***Location(s) On-Site***
Contained on site	Designated staging and spoils area
Construction Debris Controls:	
Good Housekeeping Activity	***Location(s) On-Site***
Contained on site	Designated staging and spoils area
Removed appropriately	Designated staging and spoils area
Construction Material Controls:	
Good Housekeeping Activity	***Location(s) On-Site***
Stored on site	Designated staging and spoils area
Covered	Designated staging and spoils area
Kept in original container	Designated staging and spoils area
Appropriate disposal	Designated staging and spoils area

Section 10

BMPs, Stabilization and Erosion Control Practices

Part III Section F.2.b. (i)

Stabilization and erosion control practices may include, but are not limited to: establishing temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, and protecting existing trees and vegetation. List practices used where they are located, when they will be implemented, and whether they are temporary (interim) or permanent.

Stabilization Practices	*Location On-Site*	*Implementation Date*	*Interim or Permanent*
Stabilized Construction Entrance	Reference Site Development Plans		
Permanent Vegetation (Hydromulch)	Reference Site Development Plans	within 14-days of completed construction	Permanent Soil stablilization
Existing Tree Protection	Reference Site Development Plans		

Section 11

Dates of Major Grading Activities and Construction Stoppage

Part III Section F.2.b. (ii) (A)-(C), (iii-iv)

If you do not list activities below, either attach documentation or state where records for the activities can be accessed:

Documentation attached? Yes ☐ No ■

Where can documentation be found (if not included in SWP3)?
Contact Person Phone Number Ron Lazenby (972) 668-1515

Dates when major grading activities will occur and locations on-site:

Activity	*Location*	*Dates when Activity is Scheduled*
Install Erosion & Sedimentation Controls	Reference Site Development Plans	
Demolish Existing Site Improvements	Reference Site Development Plans	
Rough Grading, Utility Installation	Reference Site Development Plans	
Building Construction	Reference Site Development Plans	
Fine Grading, Paving	Reference Site Development Plans	

Dates when construction activity will temporarily or permanently cease:

Location on-site	*Date activity is to be stopped*	*Temporary or Permanent?*	*Stabilization Initiation Date*

Section 12

Sediment Control Practices

Part III Section F.2. (c)

Will the project disturb 10 acres or more at one time? Yes ☒ No ☐

If yes, is it feasible to install a sediment basin? Yes ☒ No ☐

Calculate the volume of runoff from a 2-year, 24 hour storm event. Volume of sediment basin: Pond A: 23.5 ac-ft Pond B: 6.6 ac-ft Pond C: 3.6 ac-ft Pond D: 1.0 ac-f

In determining feasibility have you considered (attach any additional justification in determining feasibility):

Site Factor	*Considered?*	*Site Factor*	*Considered?*
Site Soils	Yes	Precipitation pattern	Yes
Slope	Yes	Site geometry	Yes
Available area	Yes	Site vegetation	Yes
Public safety	Yes	Geotechnical factors	Yes
Groundwater depth	Yes	Infiltration capacity	Yes
Other? (list)		Other? (list)	

Based on above information, sedimentation basin will ☐ be used ***OR*** ■ is not feasible.

If a sediment basin is not feasible, list of alternative structural control practices that will be used:

Article II. Structural Control	*Used? Yes/No*	*Location On-Site*
A series of smaller sediment basins	Yes ☐ No ■	
Silt fences	Yes ■ No ☐	See Site Plan
Vegetative buffer strips	Yes ☐ No ■	
Sediment traps	Yes ■ No ☐	See Site Plan
Other (list): Inlet Protection	Yes ■ No ☐	See Site Plan
Other (list):	Yes ☐ No ■	
Other (list):	Yes ☐ No ■	
Other (list):	Yes ☐ No ■	

Section 13

Permanent Stormwater Controls

Part III Section F.3

The following measures will be constructed to control post-construction runoff:

Control Measure	*Location on Project Site*	*Control runoff from what areas*
Storm Sewer	Reference Subdivision Plans	Entire Subdivision
Rainwater Harvesting	Reference Subdivision Plans	Part of Lot 1 (5.01 ac)
UpFlo Filter	Reference Site Development Plans	Entire Subdivision
Batch Detention Pond	Reference Site Development Plans	Entire Subdivision
Permanent Vegetation	Reference Site Development Plans	Entire Subdivision

Section 14

Other Stormwater Controls

Part III Section F.4. (a)

Control to minimize dust generation and off-site tracking of sediment:

Control Practice Used	*Location(s) On-Site*
Paved streets off-site cleaned	See Site Plan
Stabilized construction entrance	See Site Plan

Part III Section F.4. (b)

The following construction and waste materials will be stored on-site:

Materials Stored On-Site	*Average Amount Stored*	*Location On-Site*	*Controls Used to Prevent Pollutants*
Construction Debris			On-site dumpster
Trash			On-site dumpster

Other Stormwater Controls

Part III Section F.4. (c)- (d)

Describe pollutant sources from areas other than construction (make additional copies of this worksheet as needed):

Type of pollutant source	*Pollutant(s)*	*Control(s) or measure(s) used to minimize pollutants*
Portable restroom	Sanitary waste	Waste management contractor collect

Describe the velocity dissipation devices that will be placed at discharge locations and/or along the length of any outfall channels:

Dissipation Device (hay bales, silt fence, pond, etc.)	*Outfall Discharging to (MS4, bar ditch, creek/stream)*	*At Outfall or Channel (distance interval for channel)*
Concrete Outfall Structure	Block House MUD Storm System	
Concrete Outfall Structure	City of Cedar Park Storm System	

Section 15

Inspection of Controls Worksheets/Report

Part III Section F.7.

Complete this worksheet every seven days; **OR**, every 14 days and within 24 hours of a 0.5 inch rainfall event, and retain in your SWP3.

Inspector (name/title): **Inspection Date:** 4/12/ **Day:** **Time:** **am/pm**

Scope of inspection: 14 Day Inspection ☐ **or** **Weekly Inspection** ☐

Day of week normally conducted: _____ **0.5 inch Rainfall Event** ☐

Inspection Type:	*Inspected? (Y/N)*	*Areas of Concern (Describe in detail in the narrative section)*
Disturbed Soil Areas	Yes ☐ No☐	
Material Storage Areas	Yes ☐ No☐	
Structural Controls	Yes☐ No☐	
Sediment & Erosion Controls	Yes☐ No☐	
Entrance(s) and Exit(s)	Yes☐ No ☐	

Discharges:

Nature of discharge (silt, gravel, sand, other pollutant)	*Location on-site discharge*

Inspection of Controls Worksheets (contd.)

Part III Section F.7.

Best Management Practices Inspected: Add additional rows if needed.

BMP and Location	*OK (no action required)*	*BMP failed (describe failure)*	*Required Maintenance (describe corrective actions needed)*
	☐		
	☐		
	☐		
	☐		
	☐		
	☐		

Additional BMPs Needed

Location	*Best Management Practice*	*Replacing Existing BMP?*

Inspection Narrative Description/Certification

Part III Section F.7.

Complete this worksheet every seven days; **OR**, every 14 days and within 24 hours of a 0.5 inch rainfall event and retain in your SWP3.

Describe the inspector's qualifications to conduct the inspections:

Describe how your inspection was conducted:

Describe all incidents of non-compliance (i.e. major discharges, BMP failures):

"I certify that the facility or site is in compliance with the stormwater pollution prevention plan and this permit."

I further certify that I am authorized to sign this report under TCEQ rules at 30 TAC 305.128 (relating to Signatories to Reports)

Name/Title: Date:

Section 16

Eligible Non-Stormwater Discharges (listed in Part II.3. [a]-[h])

Part III, Sect. F.8

Eligible Non-stormwater Discharge	*Used? Yes/No*	*Pollution Prevention Measure(s)*	*Implementation Date*
Fire Fighting Activities	Yes☐ No☐		
Fire Hydrant Flushing	Yes☐ No☐		
Washing of Vehicles, Buildings, or Pavement without detergents or soap (see description in Part II.3.[c])	Yes☐ No☐		
Dust Control	Yes☐ No☐		
Potable Water Sources (water line flushing)	Yes☐ No☐		
Air Conditioning Condensate	Yes☐ No☐		
Uncontaminated Ground/Spring Water	Yes☐ No☐		
Other? (List)	Yes☐ No☐		

List any other non-stormwater discharge permitted by a separate NPDES, TPDES, or TCEQ Permit.

Non-stormwater Discharge	*Pollution Prevention Measure*	*Implementation Date*

Section 17

Stormwater Runoff from Concrete Batch Plants

Part IV

See Instructions for information regarding Concrete Batch Plants associated with Construction Projects.

Section 18

Concrete Truck Washout Requirements

Part V

Location of concrete washout area on site and description of BMPs established to prevent the concrete wash out water from contributing to groundwater contamination or entering the waters of the state.

TCEQ Office Use Only
Permit No:
CN:
RN:

Notice of Intent (NOI) for an Authorization for Stormwater Discharges Associated with Construction Activity under TPDES General Permit TXR150000

IMPORTANT INFORMATION

Please read and use the General Information and Instructions prior to filling out each question in the NOI form.

Use the NOI Checklist to ensure all required information is completed correctly. **Incomplete applications delay approval or result in automatic denial.**

Once processed your permit authorization can be viewed by entering the following link into your internet browser: http://www2.tceq.texas.gov/wq_dpa/index.cfm or you can contact TCEQ Stormwater Processing Center at 512-239-3700.

ePERMITS

Effective September 1, 2018, this paper form must be submitted to TCEQ with a completed electronic reporting waiver form (TCEQ–20754).

To submit an NOI electronically, enter the following web address into your internet browser and follow the instructions: https://www3.tceq.texas.gov/steers/index.cfm

APPLICATION FEE AND PAYMENT

The application fee for submitting a paper NOI is $325. The application fee for electronic submittal of a NOI through the TCEQ ePermits system (STEERS) is $225.

Payment of the application fee can be submitted by mail or through the TCEQ ePay system. The payment and the NOI must be mailed to separate addresses. To access the TCEQ ePay system enter the following web address into your internet browser: http://www.tceq.texas.gov/epay.

Provide your payment information for verification of payment:

- If payment was mailed to TCEQ, provide the following:
  - Check/Money Order Number: Click here to enter text
  - Name printed on Check: Click here to enter text
- If payment was made via ePay, provide the following:
  - Voucher Number: Click here to enter text
  - A copy of the payment voucher is attached to this paper NOI form.

RENEWAL (This portion of the NOI is not applicable after June 3, 2018)

Is this NOI for a renewal of an existing authorization? ☐ Yes ☐ No

If Yes, provide the authorization number here: TXR15 Click here to enter text

NOTE: If an authorization number is not provided, a new number will be assigned.

SECTION 1. OPERATOR (APPLICANT)

a) If the applicant is currently a customer with TCEQ, what is the Customer Number (CN) issued to this entity? CN Click here to enter text

(Refer to Section 1.a) of the Instructions)

b) What is the Legal Name of the entity (applicant) applying for this permit? (The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal document forming the entity.)

Click here to enter text

c) What is the contact information for the Operator (Responsible Authority)?

Prefix (Mr. Ms. Miss): Click here to enter text

First and Last Name: Click here to enter text Suffix: Click here to enter text

Title: Click here to enter text Credentials: Click here to enter text

Phone Number: Click here to enter text Fax Number: Click here to enter text

E-mail: Click here to enter text

Mailing Address: Click here to enter text

City, State, and Zip Code: Click here to enter text

Mailing Information if outside USA:

Territory: Click here to enter text

Country Code: Click here to enter text Postal Code: Click here to enter text

d) Indicate the type of customer:

☐ Individual
☐ Limited Partnership
☐ General Partnership
☐ Trust
☐ Sole Proprietorship (D.B.A.)
☐ Corporation
☐ Estate
☐ Federal Government
☐ County Government
☐ State Government
☐ City Government
☐ Other Government
☐ Other: Click here to enter text

e) Is the applicant an independent operator? ☐ Yes ☐ No

(If a governmental entity, a subsidiary, or part of a larger corporation, check No.)

f) Number of Employees. Select the range applicable to your company.

☐ 0-20
☐ 21-100
☐ 101-250
☐ 251-500
☐ 501 or higher

g) Customer Business Tax and Filing Numbers: (**Required** for Corporations and Limited Partnerships. **Not Required** for Individuals, Government, or Sole Proprietors.)

State Franchise Tax ID Number: Click here to enter text.

Federal Tax ID: Click here to enter text.

Texas Secretary of State Charter (filing) Number: Click here to enter text.

DUNS Number (if known): Click here to enter text.

SECTION 2. APPLICATION CONTACT

Is the application contact the same as the applicant identified above?

☐ Yes, go to Section 3

☐ No, complete this section

Prefix (Mr. Ms. Miss): Click here to enter text.

First and Last Name: Click here to enter text. Suffix: Click here to enter text.

Title: Click here to enter text. Credential: Click here to enter text.

Organization Name: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail: Click here to enter text.

Mailing Address: Click here to enter text.

Internal Routing (Mail Code, Etc.): Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Mailing information if outside USA:

Territory: Click here to enter text.

Country Code: Click here to enter text. Postal Code: Click here to enter text.

SECTION 3. REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

a) If this is an existing permitted site, what is the Regulated Entity Number (RN) issued to this site? RN Click here to enter text.

(Refer to Section 3.a) of the Instructions)

b) Name of project or site (the name known by the community where it's located): Click here to enter text

c) In your own words, briefly describe the type of construction occurring at the regulated site (residential, industrial, commercial, or other): Click here to enter text

d) County or Counties (if located in more than one): Click here to enter text

e) Latitude: Click here to enter text Longitude: Click here to enter text

f) Site Address/Location

If the site has a physical address such as 12100 Park 35 Circle, Austin, TX 78753, complete *Section A*.

If the site does not have a physical address, provide a location description in *Section B*. Example: located on the north side of FM 123, 2 miles west of the intersection of FM 123 and Highway 1.

Section A:

Street Number and Name: Click here to enter text

City, State, and Zip Code: Click here to enter text

Section B:

Location Description: Click here to enter text

City (or city nearest to) where the site is located: Click here to enter text

Zip Code where the site is located: Click here to enter text

SECTION 4. GENERAL CHARACTERISTICS

a) Is the project or site located on Indian Country Lands?

☐ Yes, do not submit this form. You must obtain authorization through EPA Region 6.

☐ No

b) Is your construction activity associated with a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources?

☐ Yes. Note: The construction stormwater runoff may be under jurisdiction of the Railroad Commission of Texas and may need to obtain authorization through EPA Region 6.

☐ No

c) What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site? Click here to enter text

d) What is the Secondary SIC Code(s), if applicable? Click here to enter text

e) What is the total number of acres to be disturbed? Click here to enter text

f) Is the project part of a larger common plan of development or sale?

☐ Yes

☐ No. The total number of acres disturbed, provided in e) above, must be 5 or more. If the total number of acres disturbed is less than 5, do not submit this form. See the requirements in the general permit for small construction sites.

g) What is the estimated start date of the project? Click here to enter text.

h) What is the estimated end date of the project? Click here to enter text.

i) Will concrete truck washout be performed at the site? ☐ Yes ☐ No

j) What is the name of the first water body(ies) to receive the stormwater runoff or potential runoff from the site? Click here to enter text.

k) What is the segment number(s) of the classified water body(ies) that the discharge will eventually reach? Click here to enter text.

l) Is the discharge into a Municipal Separate Storm Sewer System (MS4)?

☐ Yes ☐ No

If Yes, provide the name of the MS4 operator: Click here to enter text.

Note: The general permit requires you to send a copy of this NOI form to the MS4 operator.

m) Is the discharge or potential discharge from the site within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, as defined in 30 TAC Chapter 213?

☐ Yes, complete the certification below.

☐ No, go to Section 5

I certify that the copy of the TCEQ-approved Plan required by the Edwards Aquifer Rule (30 TAC Chapter 213) that is included or referenced in the Stormwater Pollution Prevention Plan will be implemented. ☐ Yes

SECTION 5. NOI CERTIFICATION

a) I certify that I have obtained a copy and understand the terms and conditions of the Construction General Permit (TXR150000). ☐ Yes

b) I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas. ☐ Yes

c) I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed. ☐ Yes

d) I certify that a Stormwater Pollution Prevention Plan has been developed, will be implemented prior to construction and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the Construction General Permit (TXR150000). ☐ Yes

Note: For multiple operators who prepare a shared SWP3, the confirmation of an operator may be limited to its obligations under the SWP3, provided all obligations are confirmed by at least one operator.

SECTION 6. APPLICANT CERTIFICATION SIGNATURE

Operator Signatory Name: Click here to enter text.

Operator Signatory Title: Click here to enter text.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under 30 Texas Administrative Code §305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signature (use blue ink): _____Date: _____

NOTICE OF INTENT CHECKLIST (TXR150000)

Did you complete everything? Use this checklist to be sure!

Are you ready to mail your form to TCEQ? Go to the General Information Section of the Instructions for mailing addresses.

Confirm each item (or applicable item) in this form is complete. This checklist is for use by the applicant to ensure a complete application is being submitted. **Missing information may result in denial of coverage under the general permit.** (See NOI process description in the General Information and Instructions.)

APPLICATION FEE

If paying by check:

☐ Check was mailed **separately** to the TCEQs Cashier's Office. (See Instructions for Cashier's address and Application address.)

☐ Check number and name on check is provided in this application.

If using ePay:

☐ The voucher number is provided in this application and a copy of the voucher is attached.

RENEWAL

☐ If this application is for renewal of an existing authorization, the authorization number is provided.

OPERATOR INFORMATION

☐ Customer Number (CN) issued by TCEQ Central Registry

☐ Legal name as filed to do business in Texas. (Call TX SOS 512-463-5555 to verify.)

☐ Name and title of responsible authority signing the application.

☐ Phone number and e-mail address

☐ Mailing address is complete & verifiable with USPS. www.usps.com

☐ Type of operator (entity type). Is applicant an independent operator?

☐ Number of employees.

☐ For corporations or limited partnerships – Tax ID and SOS filing numbers.

☐ Application contact and address is complete & verifiable with USPS. http://www.usps.com

REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

☐ Regulated Entity Number (RN) (if site is already regulated by TCEQ)

☐ Site/project name and construction activity description

☐ County

☐ Latitude and longitude http://www.tceq.texas.gov/gis/sqmaview.html

☐ Site Address/Location. Do not use a rural route or post office box.

GENERAL CHARACTERISTICS

☐ Indian Country Lands –the facility is not on Indian Country Lands.

☐ Construction activity related to facility associated to oil, gas, or geothermal resources

☐ Primary SIC Code that best describes the construction activity being conducted at the site. www.osha.gov/oshstats/sicser.html

☐ Estimated starting and ending dates of the project.

☐ Confirmation of concrete truck washout.

☐ Acres disturbed is provided and qualifies for coverage through a NOI.

☐ Common plan of development or sale.

☐ Receiving water body or water bodies.

☐ Segment number or numbers.

☐ MS4 operator.

☐ Edwards Aquifer rule.

CERTIFICATION

☐ Certification statements have been checked indicating Yes.

☐ Signature meets 30 Texas Administrative Code (TAC) §305.44 and is original.

Instructions for Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity under TPDES General Permit (TXR150000)

GENERAL INFORMATION

Where to Send the Notice of Intent (NOI):

By Regular Mail:
TCEQ
Stormwater Processing Center (MC228)
P.O. Box 13087
Austin, Texas 78711-3087

By Overnight or Express Mail:
TCEQ
Stormwater Processing Center (MC228)
12100 Park 35 Circle
Austin, TX

Application Fee:

The application fee of $325 is required to be paid at the time the NOI is submitted. Failure to submit payment at the time the application is filed will cause delays in acknowledgment or denial of coverage under the general permit. Payment of the fee may be made by check or money order, payable to TCEQ, or through EPAY (electronic payment through the web).

Mailed Payments:

Use the attached General Permit Payment Submittal Form. The application fee is submitted to a different address than the NOI. Read the General Permit Payment Submittal Form for further instructions, including the address to send the payment.

ePAY Electronic Payment: http://www.tceq.texas.gov/epay

When making the payment you must select Water Quality, and then select the fee category "General Permit Construction Storm Water Discharge NOI Application". You must include a copy of the payment voucher with your NOI. Your NOI will not be considered complete without the payment voucher.

TCEQ Contact List:

Application – status and form questions:	512-239-3700, swpermit@tceq.texas.gov
Technical questions:	512-239-4671, swgp@tceq.texas.gov
Environmental Law Division:	512-239-0600
Records Management - obtain copies of forms:	512-239-0900
Reports from databases (as available):	512-239-DATA (3282)
Cashier's office:	512-239-0357 or 512-239-0187

Notice of Intent Process:

When your NOI is received by the program, the form will be processed as follows:

- **Administrative Review**: Each item on the form will be reviewed for a complete response. In addition, the operator's legal name must be verified with Texas Secretary of State as valid and active (if applicable). The address(es) on the form must be verified with the US Postal service as receiving regular mail delivery. Do not give an overnight/express mailing address.

- **Notice of Deficiency:** If an item is incomplete or not verifiable as indicated above, a notice of deficiency (NOD) will be mailed to the operator. The operator will have 30 days to respond to the NOD. The response will be reviewed for completeness.
- **Acknowledgment of Coverage:** An Acknowledgment Certificate will be mailed to the operator. This certificate acknowledges coverage under the general permit.

  or

  Denial of Coverage: If the operator fails to respond to the NOD or the response is inadequate, coverage under the general permit may be denied. If coverage is denied, the operator will be notified.

General Permit (Your Permit)

For NOIs submitted **electronically** through ePermits, provisional coverage under the general permit begins immediately following confirmation of receipt of the NOI form by the TCEQ.

For **paper** NOIs, provisional coverage under the general permit begins **7 days after a completed NOI is postmarked for delivery** to the TCEQ.

You should have a copy of your general permit when submitting your application. You may view and print your permit for which you are seeking coverage, on the TCEQ web site http://www.tceq.texas.gov. Search using keyword TXR150000.

Change in Operator

An authorization under the general permit is not transferable. If the operator of the regulated project or site changes, the present permittee must submit a Notice of Termination and the new operator must submit a Notice of Intent. The NOT and NOI must be submitted no later than 10 days prior to the change in Operator status.

TCEQ Central Registry Core Data Form

The Core Data Form has been incorporated into this form. Do not send a Core Data Form to TCEQ. After final acknowledgment of coverage under the general permit, the program will assign a Customer Number and Regulated Entity Number, if one has not already been assigned to this customer or site.

For existing customers and sites, you can find the Customer Number and Regulated Entity Number by entering the following web address into your internet browser: http://www15.tceq.texas.gov/crpub/ or you can contact the TCEQ Stormwater Processing Center at 512-239-3700 for assistance. On the website, you can search by your permit number, the Regulated Entity (RN) number, or the Customer Number (CN). If you do not know these numbers, you can select “Advanced Search” to search by permittee name, site address, etc.

The Customer (Permittee) is responsible for providing consistent information to the TCEQ, and for updating all CN and RN data for all authorizations as changes occur. For this permit, a Notice of Change form must be submitted to the program area.

INSTRUCTIONS FOR FILLING OUT THE NOI FORM

Renewal of General Permit. Dischargers holding active authorizations under the expired General Permit are required to submit a NOI to continue coverage. The existing permit number is required. If the permit number is not provided or has been terminated, expired, or denied, a new permit number will be issued.

Section 1. OPERATOR (APPLICANT)

a) Customer Number (CN)

TCEQ's Central Registry will assign each customer a number that begins with CN, followed by nine digits. **This is not a permit number, registration number, or license number**.

If the applicant is an existing TCEQ customer, the Customer Number is available at the following website: http://www15.tceq.texas.gov/crpub/. If the applicant is not an existing TCEQ customer, leave the space for CN blank.

b) Legal Name of Applicant

Provide the current legal name of the applicant. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, as filed in the county. You may contact the SOS at 512-463-5555, for more information related to filing in Texas. If filed in the county, provide a copy of the legal documents showing the legal name.

c) Contact Information for the Applicant (Responsible Authority)

Provide information for the person signing the application in the Certification section. This person is also referred to as the Responsible Authority.

Provide a complete mailing address for receiving mail from the TCEQ. The mailing address must be recognized by the US Postal Service. You may verify the address on the following website: https://tools.usps.com/go/ZipLookupAction!input.action.

The phone number should provide contact to the applicant.

The fax number and e-mail address are optional and should correspond to the applicant.

d) Type of Customer (Entity Type)

Check only one box that identifies the type of entity. Use the descriptions below to identify the appropriate entity type. Note that the selected entity type also indicates the name that must be provided as an applicant for an authorization.

Individual

An individual is a customer who has not established a business, but conducts an activity that needs to be regulated by the TCEQ.

Partnership

A customer that is established as a partnership as defined by the Texas Secretary of State Office (TX SOS). If the customer is a 'General Partnership' or 'Joint Venture' filed in the county (not filed with TX SOS), the legal name of each partner forming the 'General Partnership' or 'Joint Venture' must be provided. Each 'legal entity' must apply as a co-applicant.

Trust or Estate

A trust and an estate are fiduciary relationships governing the trustee/executor with respect to the trust/estate property.

Sole Proprietorship (DBA)

A sole proprietorship is a customer that is owned by only one person and has not been incorporated. This business may:

1. be under the person's name
2. have its own name (doing business as or DBA)
3. have any number of employees.

If the customer is a Sole Proprietorship or DBA, the 'legal name' of the individual business 'owner' must be provided. The DBA name is not recognized as the 'legal name' of the entity. The DBA name may be used for the site name (regulated entity).

Corporation

A customer that meets all of these conditions:

1. is a legally incorporated entity under the laws of any state or country
2. is recognized as a corporation by the Texas Secretary of State
3. has proper operating authority to operate in Texas

The corporation's 'legal name' as filed with the Texas Secretary of State must be provided as applicant. An 'assumed' name of a corporation is not recognized as the 'legal name' of the entity.

Government

Federal, state, county, or city government (as appropriate)

The customer is either an agency of one of these levels of government or the governmental body itself. The government agency's 'legal name' must be provided as the applicant. A department name or other description of the organization is not recognized as the 'legal name'.

Other

This may include a utility district, water district, tribal government, college district, council of governments, or river authority. Provide the specific type of government.

e) Independent Entity

Check No if this customer is a subsidiary, part of a larger company, or is a governmental entity. Otherwise, check Yes.

f) Number of Employees

Check one box to show the number of employees for this customer's entire company, at all locations. This is not necessarily the number of employees at the site named in the application.

g) Customer Business Tax and Filing Numbers

These are required for Corporations and Limited Partnerships. These are not required for Individuals, Government, and Sole Proprietors.

State Franchise Tax ID Number

Corporations and limited liability companies that operate in Texas are issued a franchise tax identification number. If this customer is a corporation or limited liability company, enter the Tax ID number.

Federal Tax ID

All businesses, except for some small sole proprietors, individuals, or general partnerships should have a federal taxpayer identification number (TIN). Enter this number here. Use no prefixes, dashes, or hyphens. Sole proprietors, individuals, or general partnerships do not need to provide a federal tax ID.

TX SOS Charter (filing) Number

Corporations and Limited Partnerships required to register with the Texas Secretary of State are issued a charter or filing number. You may obtain further information by calling SOS at 512-463-5555.

DUNS Number

Most businesses have a DUNS (Data Universal Numbering System) number issued by Dun and Bradstreet Corp. If this customer has one, enter it here.

Section 2. APPLICATION CONTACT

Provide the name and contact information for the person that TCEQ can contact for additional information regarding this application.

Section 3. REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

a) Regulated Entity Number (RN)

The RN is issued by TCEQ's Central Registry to sites where an activity is regulated by TCEQ. This is not a permit number, registration number, or license number. Search TCEQ's Central Registry to see if the site has an assigned RN at http://www15.tceq.texas.gov/crpub/. If this regulated entity has not been assigned an RN, leave this space blank.

If the site of your business is part of a larger business site, an RN may already be assigned for the larger site. Use the RN assigned for the larger site.

If the site is found, provide the assigned RN and provide the information for the site to be authorized through this application. The site information for this authorization may vary from the larger site information.

An example is a chemical plant where a unit is owned or operated by a separate corporation that is accessible by the same physical address of your unit or facility. Other examples include industrial parks identified by one common address but different corporations have control of defined areas within the site. In both cases, an RN would be assigned for the physical address location and the permitted sites would be identified separately under the same RN.

b) Name of the Project or Site

Provide the name of the site or project as known by the public in the area where the site is located. The name you provide on this application will be used in the TCEQ Central Registry as the Regulated Entity name.

c) Description of Activity Regulated

In your own words, briefly describe the primary business that you are doing that requires this authorization. Do not repeat the SIC Code description.

d) County

Provide the name of the county where the site or project is located. If the site or project is located in more than one county, provide the county names as secondary.

e) Latitude and Longitude

Enter the latitude and longitude of the site in degrees, minutes, and seconds or decimal form. For help obtaining the latitude and longitude, go to: http://www.tceq.texas.gov/gis/sqmaview.html.

f) Site Address/Location

If a site has an address that includes a street number and street name, enter the complete address for the site in *Section A*. If the physical address is not recognized as a USPS delivery address, you may need to validate the address with your local police (911 service) or through an online map site used to locate a site. Please confirm this to be a complete and valid address. Do not use a rural route or post office box for a site location.

If a site does not have an address that includes a street number and street name, provide a complete written location description in *Section B.* For example: "The site is located on the north side of FM 123, 2 miles west of the intersection of FM 123 and Highway 1."

Provide the city (or nearest city) and zip code of the site location.

Section 4. GENERAL CHARACTERISTICS

a) Indian Country Lands

If your site is located on Indian Country Lands, the TCEQ does not have authority to process your application. You must obtain authorization through EPA Region 6, Dallas. Do not submit this form to TCEQ.

b) Construction activity associated with facility associated with exploration, development, or production of oil, gas, or geothermal resources

If your activity is associated with oil and gas exploration, development, or production, you may be under jurisdiction of the Railroad Commission of Texas (RRC) and may need to obtain authorization from EPA Region 6.

Construction activities associated with a facility related to oil, gas or geothermal resources may include the construction of a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a carbon dioxide geologic storage facility; and a gathering, transmission, or distribution

pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel.

Where required by federal law, discharges of stormwater associated with construction activities under the RRC's jurisdiction must be authorized by the EPA and the RRC, as applicable. Activities under RRC jurisdiction include construction of a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources, such as a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a carbon dioxide geologic storage facility under the jurisdiction of the RRC; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel. The RRC also has jurisdiction over stormwater from land disturbance associated with a site survey that is conducted prior to construction of a facility that would be regulated by the RRC. Under 33 U.S.C. §1342(l)(2) and §1362(24), EPA cannot require a permit for discharges of stormwater from field activities or operations associated with {oil and gas} exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities unless the discharge is contaminated by contact with any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the facility. Under §3.8 of this title (relating to Water Protection), the RRC prohibits operators from causing or allowing pollution of surface or subsurface water. Operators are encouraged to implement and maintain best management practices (BMPs) to minimize discharges of pollutants, including sediment, in stormwater during construction activities to help ensure protection of surface water quality during storm events.

For more information about the jurisdictions of the RRC and the TCEQ, read the Memorandum of Understanding (MOU) between the RRC and TCEQ at 16 Texas Administrative Code, Part 1, Chapter 3, Rule 3.30, by entering the following link into an internet browser: http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=30 or contact the TCEQ Stormwater Team at 512-239-4671 for additional information.

c) Primary Standard Industrial Classification (SIC) Code

Provide the SIC Code that best describes the construction activity being conducted at this site.

Common SIC Codes related to construction activities include:

- 1521 - Construction of Single Family Homes
- 1522 - Construction of Residential Buildings Other than Single Family Homes
- 1541 - Construction of Industrial Buildings and Warehouses

- 1542 - Construction of Non-residential Buildings, other than Industrial Buildings and Warehouses
- 1611 - Highway and Street Construction, except Highway Construction
- 1622 - Bridge, Tunnel, and Elevated Highway Construction
- 1623 - Water, Sewer, Pipeline and Communications, and Power Line Construction

For help with SIC Codes, enter the following link into your internet browser: http://www.osha.gov/pls/imis/sicsearch.html or you can contact the TCEQ Small Business and Local Government Assistance Section at 800-447-2827 for assistance.

d) Secondary SIC Code

Secondary SIC Code(s) may be provided. Leave this blank if not applicable. For help with SIC Codes, enter the following link into your internet browser: http://www.osha.gov/pls/imis/sicsearch.html or you can contact the TCEQ Small Business and Environmental Assistance Section at 800-447-2827 for assistance.

e) Total Number of Acres Disturbed

Provide the approximate number of acres that the construction site will disturb. Construction activities that disturb less than one acre, unless they are part of a larger common plan that disturbs more than one acre, do not require permit coverage. Construction activities that disturb between one and five acres, unless they are part of a common plan that disturbs more than five acres, do not require submission of an NOI. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

If you have any questions about this item, please contact the stormwater technical staff by phone at 512-239-4671 or by email at swgp@tceq.texas.gov.

f) Common Plan of Development

Construction activities that disturb less than five acres do not require submission of an NOI unless they are part of a common plan of development or for sale where the area disturbed is five or more acres. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

For more information on what a common plan of development is, refer to the definition of "Common Plan of Development" in the Definitions section of the general permit or enter the following link into your internet browser: www.tceq.texas.gov/permitting/stormwater/common_plan_of_development_steps.html

For further information, go to the TCEQ stormwater construction webpage enter the following link into your internet browser: www.tceq.texas.gov/goto/construction and search for "Additional Guidance and Quick Links". If you have any further questions about the Common Plan of Development you can contact the TCEQ Stormwater Team at 512-239-4671 or the TCEQ Small Business and Environmental Assistance at 800-447-2827.

g) Estimated Start Date of the Project

This is the date that any construction activity or construction support activity is initiated at the site. If renewing the permit provide the original start date of when construction activity for this project began.

h) Estimated End Date of the Project

This is the date that any construction activity or construction support activity will end and final stabilization will be achieved at the site.

i) Will concrete truck washout be performed at the site?

Indicate if you expect that operators of concrete trucks will washout concrete trucks at the construction site.

j) Identify the water body(s) receiving stormwater runoff

The stormwater may be discharged directly to a receiving stream or through a MS4 from your site. It eventually reaches a receiving water body such as a local stream or lake, possibly via a drainage ditch. You must provide the name of the water body that receives the discharge from the site (a local stream or lake).

If your site has more than one outfall you need to include the name of the first water body for each outfall, if they are different.

k) Identify the segment number(s) of the classified water body(s)

Identify the classified segment number(s) receiving a discharge directly or indirectly. Enter the following link into your internet browser to find the segment number of the classified water body where stormwater will flow from the site: www.tceq.texas.gov/waterquality/monitoring/viewer.html or by contacting the TCEQ Water Quality Division at (512) 239-4671 for assistance.

You may also find the segment number in TCEQ publication GI-316 by entering the following link into your internet browser: www.tceq.texas.gov/publications/gi/gi-316 or by contacting the TCEQ Water Quality Division at (512) 239-4671 for assistance.

If the discharge is into an unclassified receiving water and then crosses state lines prior to entering a classified segment, select the appropriate watershed:

- 0100 (Canadian River Basin)
- 0200 (Red River Basin)
- 0300 (Sulfur River Basin)
- 0400 (Cypress Creek Basin)
- 0500 (Sabine River Basin)

Call the Water Quality Assessments section at 512-239-4671 for further assistance.

l) Discharge into MS4 – Identify the MS4 Operator

The discharge may initially be into a municipal separate storm sewer system (MS4). If the stormwater discharge is into an MS4, provide the name of the entity that operates the MS4 where the stormwater discharges. An MS4 operator is often a city, town, county, or utility district, but possibly can be another form of government. Please note that the Construction General Permit requires the Operator to supply the MS4 with a

copy of the NOI submitted to TCEQ. For assistance, you may call the technical staff at 512-239-4671.

m) Discharges to the Edwards Aquifer Recharge Zone and Certification

The general permit requires the approved Contributing Zone Plan or Water Pollution Abatement Plan to be included or referenced as a part of the Stormwater Pollution Prevention Plan.

See maps on the TCEQ website to determine if the site is located within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer by entering the following link into an internet browser: www.tceq.texas.gov/field/eapp/viewer.html or by contacting the TCEQ Water Quality Division at 512-239-4671 for assistance.

If the discharge or potential discharge is within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, a site-specific authorization approved by the Executive Director under the Edwards Aquifer Protection Program (30 TAC Chapter 213) is required before construction can begin.

For questions regarding the Edwards Aquifer Protection Program, contact the appropriate TCEQ Regional Office. For projects in Hays, Travis and Williamson Counties: Austin Regional Office, 12100 Park 35 Circle, Austin, TX 78753, 512-339-2929. For Projects in Bexar, Comal, Kinney, Medina and Uvalde Counties: TCEQ San Antonio Regional Office, 14250 Judson Rd., San Antonio, TX 78233-4480, 210-490-3096.

Section 5. NOI CERTIFICATION

Note: Failure to indicate Yes to all of the certification items may result in denial of coverage under the general permit.

a) Certification of Understanding the Terms and Conditions of Construction General Permit (TXR150000)

Provisional coverage under the Construction General Permit (TXR150000) begins 7 days after the completed paper NOI is postmarked for delivery to the TCEQ. Electronic applications submitted through ePermits have immediate provisional coverage. You must obtain a copy and read the Construction General Permit before submitting your application. You may view and print the Construction General Permit for which you are seeking coverage at the TCEQ web site by entering the following link into an internet browser: www.tceq.texas.gov/goto/construction or you may contact the TCEQ Stormwater processing Center at 512-239-3700 for assistance.

b) Certification of Legal Name

The full legal name of the applicant as authorized to do business in Texas is required. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, that is filed in the county where doing business. You may contact the SOS at 512-463 5555, for more information related to filing in Texas.

c) Understanding of Notice of Termination

A permittee shall terminate coverage under the Construction General Permit through the submittal of a NOT when the operator of the facility changes, final stabilization has

been reached, the discharge becomes authorized under an individual permit, or the construction activity never began at this site.

d) Certification of Stormwater Pollution Prevention Plan

The SWP3 identifies the areas and activities that could produce contaminated runoff at your site and then tells how you will ensure that this contamination is mitigated. For example, in describing your mitigation measures, your site's plan might identify the devices that collect and filter stormwater, tell how those devices are to be maintained, and tell how frequently that maintenance is to be carried out. You must develop this plan in accordance with the TCEQ general permit requirements. This plan must be developed and implemented before you complete this NOI. The SWP3 must be available for a TCEQ investigator to review on request.

Section 6. APPLICANT CERTIFICATION SIGNATURE

The certification must bear an original signature of a person meeting the signatory requirements specified under 30 Texas Administrative Code (TAC) §305.44.

If you are a corporation:

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(1) (see below). According to this code provision, any corporate representative may sign an NOI or similar form so long as the authority to sign such a document has been delegated to that person in accordance with corporate procedures. By signing the NOI or similar form, you are certifying that such authority has been delegated to you. The TCEQ may request documentation evidencing such authority.

If you are a municipality or other government entity:

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(3) (see below). According to this code provision, only a ranking elected official or principal executive officer may sign an NOI or similar form. Persons such as the City Mayor or County Commissioner will be considered ranking elected officials. In order to identify the principal executive officer of your government entity, it may be beneficial to consult your city charter, county or city ordinances, or the Texas statute(s) under which your government entity was formed. An NOI or similar document that is signed by a government official who is not a ranking elected official or principal executive officer does not conform to §305.44(a)(3). The signatory requirement may not be delegated to a government representative other than those identified in the regulation. By signing the NOI or similar form, you are certifying that you are either a ranking elected official or principal executive officer as required by the administrative code. Documentation demonstrating your position as a ranking elected official or principal executive officer may be requested by the TCEQ.

If you have any questions or need additional information concerning the signatory requirements discussed above, please contact the TCEQ's Environmental Law Division at 512-239-0600.

30 Texas Administrative Code

§305.44. Signatories to Applications

(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the

corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

(2) For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

Texas Commission on Environmental Quality
General Permit Payment Submittal Form

Use this form to submit your Application Fee only if you are mailing your payment.

Instructions:

- Complete items 1 through 5 below:
- Staple your check in the space provided at the bottom of this document.
- *Do not mail this form with your NOI form.*
- *Do not mail this form to the same address as your NOI.*

Mail this form and your check to either of the following:

By Regular U.S. Mail
Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, TX 78711-3088

By Overnight or Express Mail
Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, TX 78753

Fee Code: GPA General Permit: TXR150000

1. Check or Money Order No: Click here to enter text
2. Amount of Check/Money Order: Click here to enter text
3. Date of Check or Money Order: Click here to enter text
4. Name on Check or Money Order: Click here to enter text
5. NOI Information:

   If the check is for more than one NOI, list each Project or Site (RE) Name and Physical Address exactly as provided on the NOI. **Do not submit a copy of the NOI with this form, as it could cause duplicate permit application entries!**

   If there is not enough space on the form to list all of the projects or sites the authorization will cover, then attach a list of the additional sites.

   Project/Site (RE) Name: Click here to enter text

   Project/Site (RE) Physical Address: Click here to enter text

Staple the check or money order to this form in this space.

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I RON LAZENBY,
Print Name

DEVELOPMENT PROJECT MANAGER,
Title - Owner/President/Other

of 121 ACQUISITION COMPANY, LLC,
Corporation/Partnership/Entity Name

have authorized MICHAEL THEONE, P.E.
Print Name of Agent/Engineer

of CIVIL AND ENVIRONMENTAL CONSULTANTS INC.
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature

9/13/2023
Date

THE STATE OF Texas §

County of Denton §

BEFORE ME, the undersigned authority, on this day personally appeared Ron Lazenby known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 18 day of September 2023

NOTARY PUBLIC

Rebecca Belinda Clary
Typed or Printed Name of Notary

Rebecca Belinda Clary
My Commission Expires
12/11/2024
ID No 126808928

MY COMMISSION EXPIRES: 12/11/2024

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: NFM CedarView
Regulated Entity Location: 750 E New Hope Dr, Cedar Park, Texas 78613
Name of Customer: 121 Acquisition Company LLC
Contact Person: Michael Theone Phone: 512-439-0400
Customer Reference Number (if issued):CN 606193043
Regulated Entity Reference Number (if issued):RN 111830360

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment**. This payment is being submitted to:

☒ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	115.74 Acres	$ 10,000
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: MTheone Date: 4/12/2024

Application Fee Schedule

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

Project	*Project Area in Acres*	*Fee*
One Single Family Residential Dwelling	< 5	$650
Multiple Single Family Residential and Parks	< 5 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

Project	*Cost per Linear Foot*	*Minimum Fee-Maximum Fee*
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	*Cost per Tank or Piping System*	*Minimum Fee-Maximum Fee*
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 606193043		RN 111830360

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* — *If new Customer, enter previous Customer below:*

121 Acquisition Company, LLC

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*
0801491560	32045261404	45-3621249	

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☐ **Yes** ☒ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☒ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:							
	PO BOX 3456						
	ATTN: RON LAZENBY						
City	Omaha	State	NE	ZIP	68103	ZIP + 4	0456

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*
	ron@grandscape.com

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*

(972) 668-1515		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

☒ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

NFM CedarView

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	750 E New Hope Dr.						
	ATTN: RON LAZENBY						
	City	Cedar Park	**State**	TX	**ZIP**	78613	**ZIP + 4**	6206
24. County	Williamson						

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:	The northwest corner of New Hope Dr. and Avenue of the Stars				
26. Nearest City			**State**	**Nearest ZIP Code**	
Cedar Park			TX	78613	

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:	30.53742		**28. Longitude (W) In Decimal:**	097.82391	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	32	14	97	49	26

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
5712	5941	442110	451110

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Furniture retail and warehouse/distribution

34. Mailing Address:	PO BOX 3456						
	ATTN: RON LAZENBY						
	City	Omaha	**State**	NE	**ZIP**	68103	**ZIP + 4**	0456
35. E-Mail Address:							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
( ) - (972) 668-1515		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Michael Theone	41. Title:	Project Manager

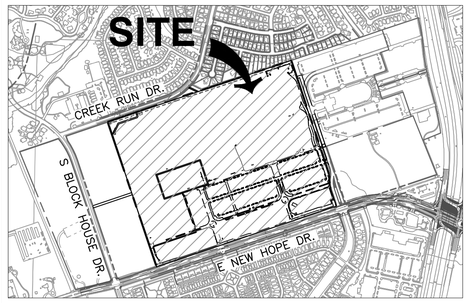
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 439-0400		( ) -	mtheone@cecinc.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

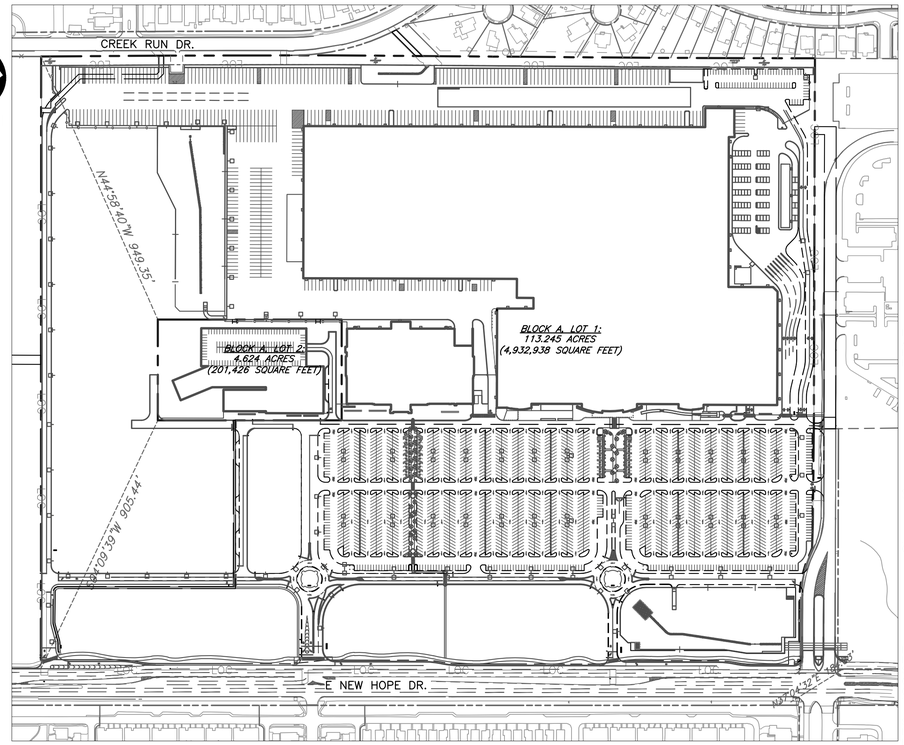
Company:	Civil and Environmental Consultants Inc.	Job Title:	Project Manager
Name *(In Print):*	Michael Theone	Phone:	(512) 439-0400
Signature:		Date:	10/3/2023

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
CITY OF CEDAR PARK
WILLIAMSON COUNTY, TEXAS



VICINITY MAP
SCALE: 1"= 1000'

NORTH



SITE MAP
SCALE: 1" = 250'

OWNER/TEAM INFORMATION

CIVIL ENGINEER & LAND SURVEYOR

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
1221 S. MOPAC EXPRESSWAY, SUITE 350
AUSTIN, TX 78746
PH: (512) 439-0400

CONTACT: MICHAEL A. THEONE, P.E.

DEVELOPER

121 ACQUISITION COMPANY LLC
700 S 72ND STREET
OMAHA, NE 68114
PH: (402) 392-3270

CONTACT: RYAN BLUMKIN

ARCHITECT

KENNETH HAHN ARCHITECTS
1343 S 75TH STREET
OMAHA, NE 68124
PH: (402) 391-2111

CONTACT: KENNETH HAHN

LANDSCAPE ARCHITECT

BENKENDORFER AND ASSOCIATES
2901 BEE CAVES RD, SUITE P
AUSTIN, TX 78746
PH: (512) 366-5259

CONTACT: DARYL BENKENDORFER

UTILITY COMPANIES

SANITARY SEWER SERVICE

CITY OF CEDAR PARK
2401 BRUSHY CREEK LOOP
CEDAR PARK, TX 78613
PHONE: (512) 401-5550

ELECTRIC SERVICE

PERDERNALES ELECTRIC COOPERATIVE
1949 W WHITESTONE BLVD
CEDAR PARK, TX 78613
PH: (512) 331-8883

TELECOMMUNICATION SERVICE

AT&T
PH: (866) 861-6075

WATER SERVICE

CITY OF CEDAR PARK
2401 BRUSHY CREEK LOOP
CEDAR PARK, TX 78613
PHONE: (512) 401-5550

GAS SERVICE

ATMOS ENERGY
3110 N INTERSTATE 35
ROUND ROCK, TX 78681
PH: (888) 286-6700

BENCHMARKS (NAVD88)

BENCHMARK A: MAG NAIL SET AT THE SOUTHWEST CORNER OF A CURB INLET APPROXIMATELY 25' WEST OF THE EASTERLY PROPERTY LINE.
ELEV.: 679.88'

BENCHMARK B: MAG NAIL SET IN THE MEDIAN CURB ISLAND APPROXIMATELY THE MIDDLE OF THE TAPER FOR THE WESTBOUND LEFT TURN LANE.
ELEV.: 676.23'

ELEVATIONS GIVEN ARE IN REFERENCE TO THE NAVD88 VERTICAL DATUM.

LEGAL DESCRIPTION

LOT 1 AND 2, BLOCK A, NFM CEDARVIEW, A SUBDIVISION OF RECORD IN DOCUMENT NO. 2024003635.

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF THE FOLLOWING ON A ±117 ACRE TRACT: ONE (1) FOUR-STORY HOTEL/CONVENTION CENTER TOTALING 188,000 GROSS SQUARE FEET (153,000 SF HOTEL-250 ROOMS AND 30,000SF CONVENTION CENTER), ONE (1) TWO-STORY RETAIL BUILDING TOTALING 522,100 GROSS SQUARE FEET, ONE (1) TWO-STORY RETAIL BUILDING (153,997 RETAIL SF, 11,767 OFFICE SF, AND 203,434 WAREHOUSE SF) AND ONE (1) WAREHOUSE TOTALING 761,000 GROSS SQUARE FEET, AND THE ASSOCIATED PARKING, STORMWATER, AND UTILITY IMPROVEMENTS

SITE DEVELOPMENT SITE DATA

TOTAL AREA OF EX. LEASE TRACT: 117.869 ACRES
PRINCIPAL STREET: E NEW HOPE DR.
WATERSHED: BLOCKHOUSE/COTTONWOOD CREEK
WATERSHED REGULATION AREA: SUBURBAN CITY LIMITS

SITE DEVELOPMENT ZONING DATA

ZONING: PLANNED DEVELOPMENT-GENERAL BUSINESS (PD-GB)

	MIN
FRONT BUILDING SETBACK:	25'
INTERIOR SIDE SETBACK:	0'
STREET SIDE SETBACK:	25'
REAR TO PROPERTY LINE SETBACK:	5'
REAR TO STREET ROW SETBACK:	25'

SHEET LIST

I CERTIFY THAT THESE ENGINEERING DOCUMENTS ARE COMPLETE, ACCURATE, AND IN COMPLIANCE WITH THE SUBDIVISION AND BUILDING REGULATION ORDINANCES AND STORMWATER DRAINAGE POLICY ADOPTED BY THE CITY OF CEDAR PARK, TEXAS.

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

SUBMITTED BY:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
DATE

I, MICHAEL THEONE, PE, DOES HEREBY CERTIFY THAT THE PUBLIC WORKS AND DRAINAGE IMPROVEMENTS DESCRIBED HEREIN HAVE BEEN DESIGNED IN COMPLIANCE WITH THE SUBDIVISION AND BUILDING REGULATION ORDINANCES AND STORM WATER DRAINAGE POLICY ADOPTED BY THE CITY OF CEDAR PARK, TEXAS.

LIMITATION OF LIABILITY – CEC ASSUMES NO LIABILITY FOR ANY DESIGN OR DRAWINGS IN THESE PLANS THAT ARE NOT SIGNED AND SEALED BY A PROFESSIONAL ENGINEER EMPLOYED BY THE FIRM. OTHER CONSULTANTS' WORK SHOWN IN THESE PLANS IS THE RESPONSIBILITY OF THE CONSULTANT WHO PREPARED SUCH WORK, AND IS INCLUDED IN THIS PLAN SET FOR REVIEW REQUIREMENTS ONLY.

SITE PLAN COMPONENTS – ALL BUILDING AND STRUCTURAL IMPROVEMENTS SHOWN HEREON ARE SHOWN FOR CONCEPTUAL PURPOSES ONLY. CEC IS NOT RESPONSIBLE OR LIABLE FOR THE DESIGN OF BUILDING AND STRUCTURAL IMPROVEMENTS BY OTHERS.

STRUCTURAL COMPONENTS – ALL STRUCTURAL DESIGN IS THE RESPONSIBILITY OF THE OWNER'S STRUCTURAL ENGINEER. STRUCTURAL DESIGN SHOWN HEREON IS THE DESIGN OF THE OWNER'S STRUCTURAL ENGINEER.

PAVEMENT DESIGN – PAVEMENT DESIGN SHOWN HEREON IS THE DESIGN OF THE OWNER'S GEOTECHNICAL CONSULTANT. CEC MAKES NO WARRANTY OR GUARANTEE AS TO ITS SUITABILITY, AND ASSUMES NO LIABILITY THEREFOR.

NOTES IN LIEU OF BUILDING ELEVATIONS

1. PROJECT SHALL COMPLY WITH THE STANDARDS OF THE NEBRASKA FURNITURE MART PLANNED DEVELOPMENT (PD) GENERAL PROVISIONS AND DEVELOPMENT REGULATIONS (ORD 213.23.02.23.E1).
2. BUILDING DESIGN SHALL BE REVIEWED AND APPROVED WITH THE BUILDING PERMIT APPLICATION.
3. EACH BUILDING FACADE SHALL INCLUDE A MINIMUM OF FOUR (4) FACADE TREATMENTS IN ACCORDANCE WITH SECTION 11.03.154(B)(1)(J) OF THE CITY CODE OF ORDINANCES.
4. NO PORTION OF THE BUILDING SHALL EXCEED 35 FEET IN HEIGHT, MEASURED FROM EXISTING GRADE, WHEN LOCATED WITHIN 100 FEET OF A SINGLE-FAMILY RESIDENTIAL USE. BEYOND 100 FEET, BUILDING HEIGHT SHALL NOT EXCEED 100 FEET.
5. THE GROUND FLOOR ENTRANCE FACADE(S) OF THE BUILDING SHALL HAVE ARCADES, DISPLAY WINDOWS, ENTRY AREAS, AWNINGS, OR OTHER SUCH DESIGN FEATURES ALONG NO LESS THAN 60 PERCENT OF THE ENTRANCE FACADE.
6. MECHANICAL EQUIPMENT THAT IS MOUNTED ON A BUILDING WALL THAT IS WITHIN PUBLIC VIEW SHALL BE ENCLOSED, SCREENED BY OPAQUE FENCING, LANDSCAPING, OR PAINTED TO MATCH THE BUILDING FACADE.
7. EACH BUILDING FACADE THAT EXCEEDS 100 FEET IN LENGTH AND FACES A PUBLIC OR PRIVATE STREET, PUBLIC OR PRIVATE PARK, RESIDENTIAL USE OR DISTRICT, OR HAS A PUBLIC ENTRANCE OF A BUILDING LESS THAN 500,000 SQUARE FEET SHALL BE ARTICULATED IN ACCORDANCE WITH SECTION 11.03.154(B)(1)(b) of CITY CODE OF ORDINANCES

SITE PLAN NOTES

1. THIS PROJECT IS SUBJECT TO THE STANDARDS PURSUANT TO THE ADOPTED NEBRASKA FURNITURE MART PLANNED DEVELOPMENT (PD) DISTRICT ORDINANCE NO. Z13.23.02.23.E1.
2. ALL RESPONSIBILITY FOR THE ACCURACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF CEDAR PARK MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
3. NO SECTION OF THE SITE LIES WITHIN A FLOODPLAIN. REFERENCE FEMA MAP 48491C0462F DATED DECEMBER 20, 2019.
4. TCEQ EDWARDS AQUIFER PROTECTION PROGRAM ID. 11003766.
5. TABS REGISTRATION NO. 2024000802.
6. THIS PROJECT IS BEING REVIEWED UNDER THE 2021 IFC.
7. LOCATION AND DESIGN OF ALL TRASH COLLECTION, COMPACTION, OR OTHER SIMILAR USES AND ENCLOSURES SHALL BE REVIEWED AND APPROVED WITH AN SD PERMIT REVISION.
8. TRASH COLLECTION, COMPACTION OR OTHER SIMILAR USES AND ENCLOSURES LOCATED WITHIN 500 FEET OF A MAJOR CORRIDOR SHALL BE LOCATED NO CLOSER TO THE DESIGNATED ROADWAY THAN THE FRONT WALL OF THE PRINCIPAL STRUCTURE.
9. OUTDOOR CONDENSERS, UTILITY HUTS, AND OTHER BUILDING SERVICE EQUIPMENT SHALL BE COMPLETELY SCREENED FROM VIEW ON ALL SIDES USING VEGETATIVE SCREEN WITH AT LEAST TWO (2) VARIETIES OF PLANT MATERIAL FROM THE PREFERRED PLANT LIST THAT, AT MATURITY, IS AT LEAST THE HEIGHT OF THE EQUIPMENT TO BE SCREENED.
10. CITY EMERGENCY CONTACT: PUBLIC WORKS DEPARTMENT 24/7 BY CALLING 512-401-5550.
11. CONTRACTOR 24-HOUR CONTACT: TED FITZMAURICE (512)-538-4728.
12. NO PAVEMENT, CONCRETE, RETAINING WALLS, UTILITIES, OR OTHER IMPROVEMENTS WILL BE PERMITTED WITH THIS APPLICATION. THE ONLY ACTIVITIES APPROVED SHALL BE ROUGH SITE GRADING ACHIEVED BY EXCAVATION OR EMBANKMENT.

SITE INFORMATION:

OWNER: 121 ACQUISITION COMPANY, LLC ADDRESS: 700 S 72ND ST, OMAHA, NE 68114
PHONE: (402) 392-3270 ACREAGE: 117.869 TOTAL IMPERVIOUS COVER: 77 AC
LEGAL DESCRIPTION: LOT 1 AND 2, BLOCK A, NFM CEDARVIEW, A SUBDIVISION OF RECORD IN DOCUMENT NO. 2024003635.
ADDRESS: 750 E NEW HOPE DR, CEDAR PARK, TX 78613
LAND USE SUMMARY: 967,434 SF WAREHOUSE, 11,767 OFFICE, 188,000 SF HOTEL/CONVENTION CENTER, 676,097 SF RETAIL
ZONING: PLANNED DEVELOPMENT-GENERAL BUSINESS (PD-GB) DATE: 4/17/2023
PERSON PREPARING PLAN: MICHAEL THEONE COMPANY: CEC INC.
ADDRESS: 1221 S MOPAC EXPRESSWAY, SUITE 350, AUSTIN, TX 78746
PHONE: (512) 439-0400
ENGINEER: MICHAEL THEONE COMPANY: CEC INC.
ADDRESS: 1221 MOPAC EXPRESSWAY, SUITE 350, AUSTIN, TX 78746
PHONE: (512) 439-0400

APPROVED BY:
BLOCKHOUSE MUD,GRAY ENGINEERING

811 !!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISIONS

NO.	DESCRIPTION	REVISE (R) / ADD (A) SHEET NO.	PLAN SET SHEET TOTAL	NET IC CHANGE	SITE IC	% IC	APPROVED / DATE

IMPERVIOUS COVER

DRIVEWAYS IN RIGHT OF WAY, PUBLIC SIDEWALK, STREETS, CURB & GUTTER	0
PARKING, PRIVATE SIDEWALK, PRIVATE STREETS	1,692,826 SF
PROPOSED BUILDING FOOTPRINT	1,553,100 SF
TOTAL AREA OF DISTURBANCE	5,135,724 SF
TOTAL IMPERVIOUS COVER	3,245,926 SF

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

COVER SHEET

DATE:	4/29/2024	DRAWN BY:	QU
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MT

DRAWING NO.: 01
SHEET 01 OF 175

2023-23-SD

P:\330-001\331-715\-CAD\Dwg\CVD\331715-CVD1-C000-COVER SHEET.dwg[COVER SHEET] LS:(4/30/2024 - mtheone) - LP: 4/30/2024 12:02 PM

GENERAL NOTES: REVISED MARCH 23, 2023

1. GENERAL CONTRACTOR SHALL CALL FOR ALL UTILITY LOCATES PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL DELINEATE AREAS OF EXCAVATION USING WHITE PAINT (WHITE LINING) IN ACCORDANCE WITH 16 TAC 18.3. WATER & WASTEWATER OWNED BY THE CITY OF CEDAR PARK CAN BE LOCATED BY CALLING TEXAS 811 AT 1-800-344-8377. ALLOW THREE BUSINESS DAYS FOR UTILITY LOCATES BY THE CITY OF CEDAR PARK.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST CITY OF AUSTIN STANDARD SPECIFICATIONS. CITY OF AUSTIN STANDARDS SHALL BE USED UNLESS OTHERWISE NOTED.
3. DESIGN PROCEDURES SHALL BE IN GENERAL COMPLIANCE WITH THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL. ALL VARIANCES TO THE MANUAL ARE LISTED BELOW: N/A
4. BENCHMARKS SHOULD BE TIED TO THE CITY OF CEDAR PARK BENCHMARKS AND BE CORRECTLY "GEO REFERENCED" TO STATE PLANE COORDINATES. A LIST OF THE CITY'S BENCHMARKS CAN BE FOUND AT:HTTP://WWW.CEDARPARKTEXAS.GOV/INDEX.ASPX?PAGE=793.
5. PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR A SITE DEVELOPMENT PERMIT, THE RIGHT OF WAY BETWEEN THE PROPERTY LINE AND EDGE OF PAVEMENT / BACK OF CURB SHALL BE REVEGETATED ACCORDING TO COA SPECIFICATION 602S AND 606S. PRIOR TO CITY ACCEPTANCE OF SUBDIVISION IMPROVEMENTS ALL GRADED AND DISTURBED AREAS SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE CITY OF AUSTIN SPECIFICATION ITEM #604 NATIVE SEEDING UNLESS NON- NATIVE IS SPECIFICALLY APPROVED.
6. THE CONTRACTOR SHALL PROVIDE THE CITY OF CEDAR PARK COPIES OF ALL TEST RESULTS PRIOR TO ACCEPTANCE OF SUBDIVISION IMPROVEMENTS.
7. CITY, OWNER, ENGINEER, CONTRACTOR, REPRESENTATIVES OF ALL UTILITY COMPANIES, AND A REPRESENTATIVE FROM THE TESTING LAB SHALL ATTEND PRE-CONSTRUCTION CONFERENCE PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL SCHEDULE THE MEETING WITH THE CITY OF CEDAR PARK ENGINEERING DEPARTMENT A MINIMUM OF 48 HOURS PRIOR TO THIS PRE-CONSTRUCTION MEETING (512-401-5000). FINAL CONSTRUCTION PLANS SHALL BE DELIVERED TO ENGINEERING A MINIMUM OF SEVEN BUSINESS DAYS PRIOR TO REQUESTING A PRE-CONSTRUCTION MEETING.
8. EXCESS SOIL SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE. NOTIFY THE CITY OF CEDAR PARK IF THE DISPOSAL SITE IS INSIDE THE CITY'S JURISDICTIONAL BOUNDARIES.
9. BURNING IS PROHIBITED.
10. ANY CHANGES OR REVISIONS TO THESE PLANS MUST FIRST BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO CONSTRUCTION OF THE REVISION. ALL CHANGES AND REVISIONS MADE TO THE DESIGN OF UTILITIES OR IMPACTS UTILITIES SHALL USE REVISION CLOUDS TO HIGHLIGHT ALL REVISIONS OR CHANGES WITH EACH SUBMITTAL. REVISION TRIANGLES SHALL BE USED TO MARK REVISIONS. ALL CLOUDS AND TRIANGLE MARKERS FROM PREVIOUS REVISIONS MAY BE REMOVED. REVISION INFORMATION SHALL BE UPDATED IN THE APPROPRIATE AREAS OF THE TITLE BLOCK.
11. MINIMUM SETBACK REQUIREMENTS FOR EXISTING AND NEWLY PLANTED TREES FROM THE EDGE OF PAVEMENT TO CONFORM TO THE REQUIREMENTS AS SHOWN IN TABLE 6-1 OF THE CITY OF AUSTIN'S TRANSPORTATION CRITERIA MANUAL.
12. THE CONTRACTOR WILL REIMBURSE THE CITY FOR ALL COST INCURRED AS A RESULT OF ANY DAMAGE TO ANY CITY UTILITY OR ANY INFRASTRUCTURE WITHIN THE RIGHT-OF-WAY BY THE CONTRACTOR, REGARDLESS OF THESE PLANS.
13. AN ENGINEER'S CONCURRENCE LETTER AND ELECTRONIC 22"X34" RECORD DRAWINGS SHALL BE SUBMITTED TO THE ENGINEERING DEPARTMENT PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY OR SUBDIVISION ACCEPTANCE. THE ENGINEER AND CONTRACTOR SHALL VERIFY THAT ALL FINAL REVISIONS AND CHANGES HAVE BEEN MADE TO RECORD DRAWINGS PRIOR TO CITY SUBMITTAL. RECORD CONSTRUCTION DRAWINGS, INCLUDING ROADWAY AND ALL UTILITIES, SHALL BE PROVIDED TO THE CITY IN AUTOCAD ". DWG" FILES AND ".PDF" FORMAT ON A CD OR DVD. LINE WEIGHTS, LINE TYPES AND TEXT SIZE SHALL BE SUCH THAT IF HALF-SIZE PRINTS (11"X 17") WERE PRODUCED, THE PLANS WOULD STILL BE LEGIBLE. ALL REQUIRED DIGITAL FILES SHALL CONTAIN A MINIMUM OF TWO (2) CONTROL POINTS REFERENCED TO THE STATE PLANE GRID COORDINATE SYSTEM - TEXAS CENTRAL ZONE (4203), IN US FEET AND SHALL INCLUDE ROTATION INFORMATION AND SCALE FACTOR REQUIRED TO REDUCE SURFACE COORDINATES TO GRID COORDINATES IN US FEET.
14. THE CITY OF CEDAR PARK HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT. IT IS THE RESPONSIBILITY OF THE OWNER TO PROVIDE COMPLIANCE WITH ALL LEGISLATION RELATED TO ACCESSIBILITY WITHIN THE LIMITS OF CONSTRUCTION SHOWN IN THESE PLANS.
15. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF CEDAR PARK MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
16. NO BLASTING IS ALLOWED ON THIS PROJECT.
17. A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO ANY PARTIAL OR COMPLETE ROADWAY CLOSURES. TRAFFIC CONTROL PLANS SHALL BE SITE SPECIFIC AND SEAL BY A REGISTERED PROFESSIONAL ENGINEER.
18. THE CONTRACTOR SHALL KEEP THE SITE CLEAN AND MAINTAINED AT ALL TIMES, TO THE SATISFACTION OF THE CITY. THE SUBDIVISION WILL NOT BE ACCEPTED (OR CERTIFICATE OF OCCUPANCY ISSUED) UNTIL THE SITE HAS BEEN CLEANED TO THE SATISFACTION OF THE CITY.
19. SIGNS ARE NOT PERMITTED IN PUBLIC UTILITY EASEMENTS, SET BACKS OR DRAINAGE EASEMENTS.
20. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT TEMPORARY EROSION CONTROLS ON A DAILY ADJUST THE CONTROLS AND/OR REMOVE ANY SEDIMENT BUILDUP AS NECESSARY. A STOP WORK ORDER AND/OR FINE MAY BE IMPOSED IF THE EROSION CONTROLS ARE NOT MAINTAINED.
21. A FINAL CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED ON COMMERCIAL SITES UNTIL ALL DISTURBED AREAS HAVE BEEN RE-VEGETATED. SUBSTANTIAL GRASS COVER, AS DETERMINED BY ENGINEERING DEPARTMENT, MUST BE ACHIEVED PRIOR TO THE ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY. ALL EROSION CONTROLS MUST REMAIN IN PLACE AND MAINTAINED UNTIL ALL DISTURBED AREAS HAVE BEEN RE-VEGETATED TO THE ACCEPTANCE OF THE CITY OF CEDAR PARK ENGINEERING DEPARTMENT. PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR A SITE DEVELOPMENT PERMIT, THE RIGHT OF WAY BETWEEN THE PROPERTY LINE AND EDGE OF PAVEMENT / BACK OF CURB SHALL BE REVEGETATED ACCORDING TO COA SPECIFICATION 602S AND 606S.
22. CONTRACTOR WILL BE RESPONSIBLE FOR KEEPING ROADS AND DRIVES ADJACENT TO AND NEAR THE SITE FREE FROM SOIL, SEDIMENT AND DEBRIS. CONTRACTOR WILL NOT REMOVE SOIL, SEDIMENT OR DEBRIS FROM ANY AREA OR VEHICLE BY MEANS OF WATER, ONLY SHOVELING AND SWEEPING WILL BE ALLOWED. CONTRACTOR WILL BE RESPONSIBLE FOR DUST CONTROL FROM THE SITE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN A STOP WORK ORDER OR A FINE.
23. ALL WET UTILITIES SHALL BE INSTALLED AND ALL DENSITIES MUST HAVE PASSED INSPECTION(S) PRIOR TO THE INSTALLATION OF DRY UTILITIES.
24. A MINIMUM OFSEVEN DAYS OF CURE TIME IS REQUIRED FOR HMAC PRIOR TO THE INTRODUCTION OF VEHICULAR TRAFFIC TO ANY STREETS.
25. PRIOR TO PLAN APPROVAL, THE ENGINEER SHALL SUBMIT TO THE ENGINEERING DEPARTMENT DOCUMENTATION OF SUBDIVISION/SITE REGISTRATION WITH THE TEXAS DEPARTMENT OF LICENSING AND REGULATIONS (TDLR) AND PROVIDE DOCUMENTATION OF REVIEW AND COMPLIANCE OF THE SUBDIVISION/SITE CONSTRUCTION PLANS WITH TEXAS ARCHITECTURAL BARRIERS ACT (TABA).
26. PRIOR TO SUBDIVISION/SITE ACCEPTANCE, THE ENGINEER/DEVELOPER-OWNERSHALL SUBMIT TO THE ENGINEERING DEPARTMENT DOCUMENTATION THAT THE SUBDIVISION/SITE WAS INSPECTED BY TDLR OR A REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND THE SUBDIVISION/SITE IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE TABA.
27. ALL CONSTRUCTION AND CONSTRUCTION RELATED ACTIVITIES SHALL BE PERFORMED MONDAY THRU FRIDAY FROM 7:00 A.M. TO 6:00 P.M. HOWEVER, CONSTRUCTION ACTIVITIES WITHIN ONE HUNDRED FEET (100') OF A DWELLING OR DWELLING UNIT SHALL BE PERFORMED BETWEEN THE HOURS OF 8:00 A.M. AND 6:00 P.M. OTHERWISE ALL CONSTRUCTION AND CONSTRUCTION RELATED ACTIVITIES SHALL CONFORM TO CITY OF CEDAR PARK CODE OF ORDINANCES, SPECIFICALLY ARTICLE 8.08.
28. APPROVAL FOR CONSTRUCTION ACTIVITIES PERFORMED ON OWNER'S HOLIDAYS, AND/OR SATURDAYS, OUTSIDE OF MONDAY THROUGH FRIDAY 8 AM TO 5 PM, OR IN EXCESS OF 8 HOURS PER DAY SHALL BE OBTAINED IN WRITING 48 HOURS IN ADVANCE, AND INSPECTION FEES AT 1.5 TIMES THE HOURLY INSPECTION RATE SHALL BE BILLED DIRECTLY TO THE CONTRACTOR. THERE SHALL BE NO CONSTRUCTION OR CONSTRUCTION RELATED ACTIVITIES PERFORMED ON SUNDAY. THE CITY RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER ALL WORK PERFORMED WITHOUT CITY INSPECTION.
29. ALL POLES TO BE APPROVED BY CITY AND PEC, NO CONDUIT SHALL BE INSTALLED DOWN LOT LINES / BETWEEN HOMES. ALL CONDUIT SHALL BE LOCATED IN THE PUBLIC ROW OR IN AN EASEMENT ADJACENT TO AND PARALLEL TO THE PUBLIC ROW.
30. DRY UTILITIES SHALL BE INSTALLED AFTER SUBGRADE IS CUT AND BEFORE FIRST COURSE BASE. NO TRENCHING OF COMPACTED BASE. IF NECESSARY DRY UTILITIES INSTALLED AFTER FIRST COURSE BASE SHALL BE BORED ACROSS THE FULL WIDTH OF THE ROW.
31. NO PONDING OF WATER SHALL BE ALLOWED TO COLLECT ON OR NEAR THE INTERSECTION OF PRIVATE DRIVEWAY(S) AND A PUBLIC STREET. RECONSTRUCTION OF THE DRIVEWAY APPROACH SHALL BE AT THE CONTRACTOR'S EXPENSE.
32. ALL DRIVEWAY APPROACHES SHALL HAVE A UNIFORM TWO PERCENT SLOPE WITHIN THE ROW UNLESS APPROVED IN WRITING BY THE ENGINEERING DEPARTMENT.
33. CONTRACTORS ON SITE SHALL HAVE AN APPROVED SET OF PLANS AT ALL TIMES. FAILURE TO HAVE AN APPROVED SET MAY RESULT IN A STOP WORK ORDER.
34. CONTRACTOR TO CLEAR FIVE FEET BEYOND ALL RIGHT OF WAY TO PREVENT FUTURE VEGETATIVE GROWTH INTO THE SIDEWALK AREAS.
35. THERE SHALL BE NO WATER OR WASTEWATER APPURTENANCES, INCLUDING BUT NOT LIMITED TO, VALVES, FITTINGS, METERS, CLEAN-OUTS, MANHOLES, OR VAULTS IN ANY DRIVEWAY, SIDEWALK, TRAFFIC OR PEDESTRIAN AREA.
36. SIDEWALKS SHALL NOT USE CURB INLETS AS A PARTIAL WALKING SURFACE. SIDEWALKS SHALL NOT USE TRAFFIC CONTROL BOXES, METER OR CHECK VALVE VAULTS, COMMUNICATION VAULTS, OR OTHER BURIED OR PARTIALLY BURIED INFRASTRUCTURE AS A VEHICULAR OR PEDESTRIAN SURFACE.

STREET NOTES:

1. NO TRENCHING OF COMPACTED BASE WILL BE ALLOWED. A PENALTY AND/OR FINE MAY BE IMPOSED TO THE GENERAL CONTRACTOR IF TRENCHING OF COMPACTED BASE OCCURS WITHOUT CITY APPROVAL, REGARDLESS OF WHO PERFORMED THE TRENCHING.
2. ALL SIDEWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THE CITY OF CEDAR PARK HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, OR ANY OTHER ACCESSIBILITY LEGISLATION, AND DOES NOT WARRANTY OR APPROVE THESE PLANS FOR ANY ACCESSIBILITY STANDARDS.
3. STREET BARRICADES SHALL BE INSTALLED ON ALL DEAD END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB SAFETY.
4. ANY DAMAGE CAUSED TO EXISTING PAVEMENT, CURBS, SIDEWALKS, RAMPS, ETC., SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE SUBDIVISION.
5. AT INTERSECTIONS, WHICH HAVE VALLEY DRAINAGE, THE CROWN TO THE INTERSECTING STREET WILL BE CULMINATED AT A DISTANCE OF 40 FT. FROM THE INTERSECTING CURB LINE UNLESS OTHERWISE NOTED.
6. THE SUBGRADE MATERIAL WAS TESTED BY RABA KISTNER, 8100 CAMERON RD, SUITE B-150, AUSTIN, TX 78754, (512) 339-1745 ON MAY 18, 2023 THE PAVEMENT SECTIONS WERE DESIGNED ACCORDINGLY. THE PAVEMENT SECTIONS ARE TO BE CONSTRUCTED AS FOLLOWS:

Traffic Type	ACI 330 Traffic Spectrum*	Portland Cement Concrete	Flexible Base	Subgrade
Passenger Vehicles Only	A	5.0 in.	4 in.	12 in. Alternate Select, Lime Treated Soil or Stratum II/III
Up to 50 Heavy Trucks/Day	D	6.0 in.	4 in.	
Up to 500 Heavy Trucks/Day	D	7.0 in.	4 in.	
Up to 1,000 Heavy Trucks/Day	D	8.0 in.	4 in.	

* Spectrum A – Passenger cars only
Spectrum D – Tractor semitrailer trucks with gross weights of 80 kips

	Layer Description	Layer Thickness
Passenger Vehicles Only	HMAC Surface Course, Type "D" Flexible Base **Combined Total**	2.0 in. 8.0 in. **10.0 in.**
Up To 50 Trucks Per Day	HMAC Surface Course, Type "C" Flexible Base **Combined Total**	3.0 in. 9.0 in. **12.0 in.**

ANCILLARY STRUCTURE FOUNDATION RECOMMENDATIONS

7. DENSITY TESTING OF COMPACTED SUBGRADE MATERIAL, FIRST COURSE AND SECOND COURSE COMPACTED BASE, SHALL BE MADE AT 500 FOOT INTERVALS.
8. ALL DENSITY TESTING IS THE RESPONSIBILITY OF THE OWNER OR CONTRACTOR AND SHALL BE WITNESSED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE. THE CONTRACTOR IS TO NOTIFY THE CITY 48 HOURS PRIOR TO SCHEDULED DENSITY TESTING.
9. TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND INSTALLED AS DIRECTED BY THE CITY OF CEDAR PARK PRIOR TO CITY ACCEPTANCE OF THE SUBDIVISION.
10. SLOPE OF NATURAL GROUND ADJACENT TO THE RIGHT-OF-WAY SHALL NOT EXCEED 3:1. IF A 3:1 SLOPE IS NOT POSSIBLE, A RETAINING WALL ORSOME OTHER FORM OF SLOPE PROTECTION APPROVED BY THE CITY SHALL BE PLACED IN A LOCATION ACCEPTABLE TO THE CITY.
11. THE CITY, ENGINEER, CONTRACTOR, AND A REPRESENTATIVE FROM THE ASPHALT TESTING LAB SHALL ATTEND A PRE-PAVING CONFERENCE PRIOR TO THE START OF HMAC PAVING. THE CONTRACTOR SHALL GIVE THE CITY A MINIMUM OF 48 HOURS NOTICE PRIOR TO THIS MEETING (512-401-5000).
12. THE CONTRACTOR OR OWNER IS RESPONSIBLE FOR CONDUCTING TESTS ON ASPHALT PAVEMENT IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE CITY OF AUSTIN STANDARD SPECIFICATION NO. 340. ANY RE-TESTING OF THE ASPHALT PAVEMENT SHALL BE CONDUCTED UNDER THE SUPERVISION OF THE ENGINEER AND THE CITY OF CEDAR PARK. RE-TESTING OF THE ASPHALT PAVEMENT SHALL BE LIMITED TO ONE RETEST PER PROJECT.
13. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL COMPLY WITH MUTCD STANDARDS. STREET NAME LETTERSIZING SHALL BE IN ACCORDANCE WITH MUTCDTABLE2D-2.PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED.
14. ALL STREET NAME SIGNS SHALL BE HIGH INTENSITY RETRO GRADE.
15. NO FENCING OR WALL IS ALLOWED TO BE CONSTRUCTED SO THAT IT OBSTRUCTS THE SIGHT LINES OF DRIVERS FROM AN INTERSECTING PUBLIC ROADWAY OR FROM AN INTERSECTING PRIVATE DRIVEWAY. SIGHT LINES ARE TO BE MAINTAINED AS DESCRIBED IN CITY CODE SECTION 14.05.007. INSTALLING A FENCE OR WALL WHICH DOES NOT COMPLY WITH THE CITY'S SIGHT DISTANCE REQUIREMENTS OR FENCING REGULATIONS IS A VIOLATION OF THE CITY'S ORDINANCE AND MAY BE PUNISHABLE PURSUANT TO SECTION 1.01.009 OF CITY CODE.
16. TEMPORARY ROCK CRUSHING OPERATIONS ARE NOT ALLOWED. ALL SOURCES FOR FLEXIBLE BASE MATERIAL ARE REQUIRED TO BE APPROVED BY THE CITY. PRIOR TO BASE PLACEMENT ALL CURRENT TRIAXIAL TEST REPORTS FOR THE PROPOSED STOCKPILES ARE TO BE SUBMITTED TO THE CITY'S PROJECT REPRESENTATIVE FOR REVIEW AND APPROVAL.
17. UTILITY SERVICE BOXES OR OTHER UTILITY FACILITIES SHALL NOT BE INSTALLED WITHIN AREAS DETERMINED TO BE REQUIRED SIGHT LINES OF TWO INTERSECTING PUBLIC STREETS OR WITHIN SIGHT LINES OF A PRIVATE DRIVEWAY. SIGHT LINES ARE TO BE MAINTAINED COMPLIANT WITH TABLE 1-1 OF THE AUSTIN TRANSPORTATION CRITERIA MANUAL. UTILITIES DETERMINED BY THE DIRECTOR OF ENGINEERING TO BE PLACED WITHIN REQUIRED SIGHT LINES MAY BE REQUIRED TO BE RELOCATED AT THE EXPENSE OF THE CONTRACTOR PRIOR TO THE CITY ISSUING A CERTIFICATE OF OCCUPANCY OR PRIOR TO THE CITY'S ACCEPTANCE OF THE PROJECT IMPROVEMENTS.
18. ALL LANE CLOSURES SHALL OCCUR ONLY BETWEEN THE HOURS OF 9 AM AND 4 PM. ANY NIGHT TIME LANE CLOSURES REQUIRE APPROVAL BY THE DIRECTOR OF ENGINEERING AND SHALL OCCUR BETWEEN THE HOURS OF 8 PM AND 6 AM. LANE CLOSURES OBSERVED BY CITY DURING THE PEAK HOURS OF 6 AM TO 9 AM, OR 4 PM TO 8 PM WILL BE SUBJECT TO FINE PER CHAPTER 1 OF CITY ORDINANCE, AND/OR SUBSEQUENT ISSUANCE OF WORK STOPPAGE.
19. IMPROVEMENTS THAT INCLUDE RECONSTRUCTION OF AN EXISTING TYPE II DRIVEWAY SHALL BE DONE IN A MANNER WHICH RETAINS OPERATIONS OF NOT LESS THAN HALF OF THE DRIVEWAY AT ALL TIMES. FULL CLOSURE OF SUCH DRIVEWAY CAN BE CONSIDERED WITH WRITTEN AUTHORIZATION RETAINED BY THE CONTRACTOR FROM THE PROPERTY OWNER(S) OR ACCESS EASEMENT RIGHT HOLDER(S) OF THE DRIVEWAY ALLOWING FULL CLOSURE OF THE DRIVEWAY.
20. TREES MUST NOT OVERHANG WITHIN 10' VERTICALLY OF A SIDEWALK, OR 18' VERTICALLY OF A ROADWAY OR DRIVEWAY.

WASTEWATER NOTES:

1. REFER TO THE CITY OF CEDAR PARK PUBLIC WORKS UTILITY POLICY AND SPECIFICATIONS MANUAL.
2. MANHOLE FRAMES AND COVERS AND WATER VALVE BOXES SHALL BE RAISED TO FINISHED PAVEMENT GRADE AT THE OWNER'S EXPENSE BY THE CONTRACTOR WITH THE CITY APPROVAL. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION.
3. THE LOCATION OF ANY EXISTING UTILITY LINES SHOWN ON THESE PLANS MAY NOT BE ACCURATE. ANY DAMAGE TO EXISTING UTILITY LINES, BOTH KNOWN AND UNKNOWN, SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO BIDDING THE PROJECT.
4. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH AT LEAST 8 MIL. POLYETHYLENE WRAP.
5. ALL WATER MAINS, WASTEWATER MAINS AND SERVICE LINES SHALL MEET CITY OF AUSTIN MINIMUM COVER SPECIFICATIONS. ALL STREETS ARE TO BE CUT TO SUBGRADE PRIOR TO INSTALLATION OF WATER MAINS OR CUTS WILL BE ISSUED BY THE ENGINEER.
6. WHERE 48-INCHES OF COVER BELOW SUBGRADE CANNOT BE ACHIEVED FOR WASTEWATER SERVICE LINES ALTERNATE MATERIALS MAY BE USED. A MINIMUM OF 36-INCHES OF COVER BELOW SUBGRADE SHALL BE ACHIEVED. ANY WASTEWATER SERVICE LINE WITH COVER BETWEEN 36-INCH AND 48- INCHES SHALL BE SDR-26 PVC PRESSURE PIPE.
7. GASKETED PVC SEWER MAIN FITTINGS SHALL BE USED TO CONNECT SDR-35 PVC TO SDR-26 PVC PRESSURE PIPE OR C-900.
8. PIPE MATERIALS TO BE USED FOR CONSTRUCTION OF UTILITY LINES:
WASTEWATER- SDR-26
FORCE MAIN- N/A
(NOTE: IF USING PVC, SDR-26 IS REQUIRED, SDR-35 WW IS NOT ALLOWED. FORCEMAINS SHALL BE EPOXY LINED DUCTILE IRON)
9. ALL SANITARY SEWERS, EXCLUDING SERVICE LINES, SHALL BE MANDREL TESTED PER TCEQ (TEXAS COMMISSION ON ENVIRONMENTAL QUALITY) CRITERIA. A MANDREL TEST WILL NOT BE PERFORMED UNTIL BACKFILL HAS BEEN IN PLACE FOR A MINIMUM OF 30 DAYS.
10. ALL WASTEWATER LINES 10" AND LARGER SHALL BE VIDEO INSPECTED IN ACCORDANCE WITH CITY OF CEDAR PARK PUBLIC WORKS DEPARTMENT UTILITY POLICY AND STANDARD SPECIFICATIONS MANUAL APPENDIX E: REQUIREMENTS FOR VIDEO INSPECTION OF WASTEWATER LINES AT THE CONTRACTOR'S EXPENSE. NO SEPARATE PAY UNLESS NOTED ON THE BID FORM.
11. ALL SANITARY SEWERS, INCLUDING SERVICE LINES, SHALL BE AIR TESTED PER CITY OF AUSTIN STANDARD SPECIFICATIONS.
12. DENSITY TESTING OF COMPACTED BACKFILL SHALL BE MADE AT A RATE OF ONE TEST PER TWO FOOT LIFTS PER 500 FEET OF INSTALLED PIPE.
13. CITY SHALL BE GIVEN 48 HOURS NOTICE PRIOR TO ALL TESTING OF WATER AND WASTEWATER LINES. CITY INSPECTION IS REQUIRED FOR ALL TESTING OF WATER AND WASTEWATER LINES.
14. WHERE A WATER OR WASTEWATER LINE CROSSES ABOVE (OR BELOW) A STORM SEWER STRUCTURE AND THE BOTTOM (OR TOP) OF THE PIPE IS WITHIN 18 INCHES OF THE TOP (OR BOTTOM) OF THE UTILITY STRUCTURE, THE PIPE SHALL BE ENCASED WITH CONCRETE FOR A DISTANCE OF AT LEAST 1 FT. ON EITHER SIDE OF THE DITCH LINE OF THE UTILITY STRUCTURE OR THE STORM SEWER. CONCRETE ENCASEMENT WILL NOT BE REQUIRED FOR DUCTILE IRON (THICKNESS CLASS 50), AWWA C-900 (SDR- 18) 150 PSI RATED PVC IN SIZES TO 12 INCHES OR AWWA C-905 (SDR-25) 165 PSI RATED PVC IN SIZES LARGER THAN 12 INCHES. CONCRETE ENCASEMENT SHALL CONFORM TO C.O.A. STANDARD DETAIL 505-1.
15. THE ALLOWABLE (MAXIMUM) ADJUSTMENT FOR A MANHOLE SHALL BE 12" (INCHES) OR LESS.
16. WHERE A SEWER LINE CROSSES A WATER LINE, THE SEWER LINE SHALL BE ONE 20 FT. JOINT OF 150 PSI RATED PVC CENTERED ON CROSSING.
17. ALL MANHOLE AND INLET COVERS SHALL READ "CITY OF CEDAR PARK".
18. CONTRACTOR TO NOTIFY, AND OBTAIN APPROVAL FROM, THE CITY OF CEDAR PARK 48 HOURS PRIOR TO CONNECTING TO EXISTING CITY UTILITIES.
19. ALL PIPE BEDDING MATERIAL SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATIONS.
20. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER ALL CONCRETE IS TO BE CLASS "A" (5 SACK, 3000 PSI ~ 28-DAYS), AND ALL REINFORCING STEEL TO BE ASTM A615 60.
21. ALL WASTEWATER MANHOLES TO BE COATED WITH ORGANIC MATERIALS AND PROCEDURES LISTED IN CITY OF AUSTIN QUALIFIED PRODUCTS LIST NO. WW-511 (WW-511A AND WW-511B ARE NOT ALLOWED UNLESS MANHOLE IS BEING STRUCTURALLY REHABILITATED WITH APPROVAL BY PUBLIC WORKS). ALL MANHOLES WILL BE PRE-COATED OR COATED AFTER TESTING.
22. POLYBRID COATINGS ON WASTEWATER MANHOLES WILL NOT BE ALLOWED. ANY OTHER PRODUCT APPEARING ON THE COA SPL WW-511 IS ACCEPTABLE.
23. ALL PENETRATIONS OF EXISTING WASTEWATER MANHOLES ARE REQUIRED TO BE RE-COATED IN ACCORDANCE WITH THE SPECIFICATIONS LISTED IN NOTE 20.
24. ALL MANHOLES WILL BE VACUUM TESTED ONLY.
25. TRACER TAPE AND MARKING TAPE SHALL BE INSTALLED ON ALL WATER AND WASTEWATER MAINS IN ACCORDANCE WITH CITY OF AUSTIN STANDARDS, REGARDLESS OF THE TYPE OF PIPE.
26. ALL PRESSURE PIPE SHALL HAVE MECHANICAL RESTRAINT AND CONCRETE THRUST BLOCKING AT ALL VALVES, BENDS, TEES, PLUGS, AND OTHER FITTINGS.

WATER NOTES:

1. REFER TO THE CITY OF CEDAR PARK PUBLIC WORKS UTILITY POLICY AND SPECIFICATIONS MANUAL.
2. THE TOP OF VALVE STEMS SHALL BE AT LEAST 18", AND NO MORE THAN 36", BELOW FINISHED grade. VALVE STEM RISERS SHALL BE WELDED ON EACH END TO THE CITY'S SATISFACTION.
3. FIRE HYDRANT LEADS TO BE DUCTILE IRON, CLASS 350, AND INSTALLED PER CITY OF AUSTIN STANDARD SPECIFICATIONS AND DETAIL.
4. PRIOR TO INSTALLATION OF FIRE HYDRANTS, THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) CUT FROM A HUB PIN, ESTABLISHING THE ELEVATION OF THE BURY LINE.
5. THE ENGINEER SHALL PROVIDE CUTS FOR ALL WATER LINES AT ALL STORM SEWER CROSSINGS TO THE CITY OF CEDAR PARK.
6. PIPE MATERIALS TO BE USED FOR CONSTRUCTION OF UTILITY LINES:
- WATER – CLASS 350 D.I. OR C900 DR-14 PVC

COPPER PIPE AND FITTINGS ARE NOT PERMITTED WITHIN THE RIGHT-OF-WAY.
MINIMUM DR-14 12" DIA AND SMALLER. MINIMUM CLASS 250 DI LARGER THAN 12" DIA.
7. APPROVED 5 ¼" FIRE HYDRANTS:
- AMERICAN FLOW CONTROL, B84B
- MUELLER COMPANY, SUPER CENTURION 250
- CLOW MEDALLION HYDRANT
- REQUIREMENTS FOR PRIVATE FIRE HYDRANTS (BEHIND DOUBLE CHECK BACKFLOW PREVENTION ASSEMBLY): MUST BE IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATIONS.
- ALL FIRE HYDRANTS MUST MEET CITY OF CEDAR PARK THREAD SPECIFICATIONS (NATIONAL THREAD)
- BLUE REFLECTOR MARKERS SHALL BE LOCATED ON THE CENTERLINE OF THE PAVEMENT ACROSS FROM ALL FIRE HYDRANTS. PAVEMENT MARKERS AT INTERSECTIONS SHALL BE FOUR-SIDED.

8. SHOULD A TAPPING SADDLE BE APPROVED BY PUBLIC WORKS, THE SADDLE SHALL BE SMITH-BLAIR 662 STAINLESS STEEL TAPPING SLEEVES WITH ALL STAINLESS HARDWARE, OR APPROVED EQUAL. REQUESTS FOR ALTERNATE PROVIDERS SHALL BE MADE TO THE CITY OF CEDAR PARK PUBLIC WORKS. NO TAP EXCEEDING 2" IN DIAMETER WILL BE APPROVED.
9. ALL WATER LINES, INCLUDING SERVICE LINES, SHALL BE PRESSURE AND LEAK TESTED PER CITY OF AUSTIN STANDARD SPECIFICATIONS AND WITNESSED BY THE CITY OF CEDAR PARK REPRESENTATIVE. ALL TESTING IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR, AND THE CONTRACTOR MAY BE REQUIRED TO RE-TEST LINES IF THE TESTING IS NOT WITNESSED BY THE CITY. CONTRACTOR MUST NOTIFY THE CITY OF CEDAR PARK 48 HOURS PRIOR TO ANY TESTING.
10. ALL WATER LINES SHALL BE STERILIZED AND BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH CITY OF AUSTIN STANDARDS. THE CONTRACTOR IS RESPONSIBLE FOR STERILIZATION AND THE CITY OF CEDAR PARK IS RESPONSIBLE FOR SUBMITTING BACTERIOLOGICAL SAMPLES TO THE STATE. PUBLIC WORKS WILL REQUIRE A CONTRACTOR SPECIALIZED IN DISINFECTION FOR LARGE DIAMETER LINES OR CRITICAL INFRASTRUCTURE, SUBSIDIARY TO PIPE INSTALLATION.
11. DENSITY TESTING OF COMPACTED BACKFILL SHALL BE MADE AT A RATE OF ONE TEST PER TWO FOOT LIFTS PER 500 FEET OF INSTALLED PIPE.
12. CONTRACTOR TO OBTAIN A WATER METER FROM THE CITY OF CEDAR PARK FOR ANY WATER THAT MAY BE REQUIRED DURING CONSTRUCTION. (512-401-5000)
13. ALL WATER METER BOXES SHALL BE FORD GULF METER BOX WITH LOCKING LID.
- SINGLE G-148-233
- DUAL DG-148-243
- 1" METER YL111 - 444
- 1 ½" - 2" METER 1730-R (LID) & 1730-12 (BOX)/ACCEPTABLE BOXES FOR THIS SIZE OF METER

14. MANHOLE FRAMES AND COVERS AND WATER VALVE BOXES SHALL BE RAISED TO FINISHED PAVEMENT GRADE, WHEN IN PUBLIC STREETS, AT THE OWNER'S EXPENSE BY THE CONTRACTOR WITH CITY INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION.
15. THE LOCATION OF ANY EXISTING UTILITY LINES SHOWN ON THESE PLANS IS THE BEST AVAILABLE AND MAY NOT BE ACCURATE. ANY DAMAGE TO EXISTING UTILITY LINES, BOTH KNOWN AND UNKNOWN, SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
16. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH AT LEAST 8 MIL. POLYETHYLENE WRAP.
17. ALL WATER MAINS, WASTEWATER MAINS AND SERVICE LINES SHALL MEET CITY OF AUSTIN SPECIFICATIONS FOR MINIMUM COVER REQUIREMENTS. ALL STREETS ARE TO BE CUT TO SUBGRADE PRIOR TO INSTALLATION OF WATER MAINS OR CUTS WILL BE ISSUED BY THE ENGINEER.
18. CITY TO BE GIVEN 48 HOURS NOTICE PRIOR TO ALL TESTING OF WATER AND WASTEWATER LINES. CITY INSPECTION IS REQUIRED FOR ALL TESTING OF WATER AND WASTEWATER LINES.
19. WHERE A WATER OR WASTEWATER LINE CROSSES ABOVE (OR BELOW) A STORM SEWER STRUCTURE AND THE BOTTOM (OR TOP) OF THE PIPE IS WITHIN 18 INCHES OF THE TOP (OR BOTTOM) OF THE UTILITY STRUCTURE, THE PIPE SHALL BE ENCASED WITH CONCRETE FOR A DISTANCE OF AT LEAST 1 FT. ON EITHER SIDE OF THE DITCH LINE OF THE UTILITY STRUCTURE OR THE STORM SEWER. CONCRETE ENCASEMENT WILL NOT BE REQUIRED FOR DUCTILE IRON (THICKNESS CLASS 50), AWWA C-900 (SDR- 18) 150 PSIRATED PVC IN SIZESTO 12 INCHES OR AWWA C-905 (SDR-25) 165 PSI RATED PVC IN SIZESLARGER THAN 12 INCHES. CONCRETE ENCASEMENT SHALL CONFORM TO C.O.A. STANDARD DETAIL 505-1.
20. CONTRACTOR TO NOTIFY THE CITY OF CEDAR PARK 48 HOURS PRIOR TO CONNECTING TO EXISTING UTILITIES.
21. ALL PIPE BEDDING MATERIAL SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATIONS.
22. TRACER TAPE SHALL BE INSTALLED ON ALL WATER AND WASTEWATER MAINS REGARDLESS OF THE TYPE OF PIPE OR DEPTH OF PIPE INSTALLED.
23. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER ALL CONCRETE IS TO BE CLASS "A" (5 SACK, 3000 PSI ~ 28-DAYS), AND ALL REINFORCING STEEL TO BE ASTM A615 60.
24. THE CITY CONSIDERS PROTECTION OF ITS WATER SYSTEM PARAMOUNT TO CONSTRUCTION ACTIVITIES. CITY PERSONNEL WILL OPERATE, OR AUTHORIZE THE CONTRACTOR TO OPERATE, ALL WATER VALVES THAT WILL PASS THROUGH THE CITY'S POTABLE WATER. THE CONTRACTOR MAY NOT OPERATE ANY WATER VALVE, EXISTING OR PROPOSED, THAT WILL ALLOW WATER FROM THE CITY'S WATER SYSTEM TO FLOW TO A PROPOSED OR EXISTING WATER SYSTEM WITHOUT THE EXPRESS CONSENT OF THE CITY. NOTIFY THE CITY TWO BUSINESS DAYS IN ADVANCE OF ANY REQUEST TO OPERATE A WATER VALVE. THE GENERAL CONTRACTOR MAY BE FINED $500 OR MORE, INCLUDING ADDITIONAL THEFT OF WATER FINES, IF A WATER VALVE IS OPERATED IN AN UNAUTHORIZED MANNER, REGARDLESS OF WHO OPERATED THE VALVE.
25. ALL WATER VALVES OVER 24" IN SIZE SHALL HAVE A BY-PASS LINE AND VALVE INSTALLED. BY-PASS VALVES AND LINES ARE SUBSIDIARY TO THE COST OF THE VALVE UNLESS SPECIFICALLY IDENTIFIED ON THE BID FORM.
26. ALL WATER VALVES, INCLUDING THOSE OVER 12" IN SIZE, SHALL BE GATE VALVES.
27. A DOUBLE CHECK BACKFLOW DEVICE IN A VAULT SHALL BE INSTALLED AT THE PROPERTY LINE ON ALL PRIVATE FIRE LINES. A DETECTOR WATER METER WILL BE INSTALLED ON THIS BACKFLOW DEVICE, AND IT MUST BE A SENSUS SRII 3/4" METER WITH AMI RADIO READ CAPABILITY. THE CITY WILL PROVIDE THIS METER. PLEASE REFERENCE THE CITY OF CEDAR PARK DOUBLE CHECK BACKFLOW PREVENTION ASSEMBLY DETAIL.
28. ALL POTABLE WATER SYSTEM COMPONENTS INSTALLED AFTER JANUARY 4, 2014, SHALL BE "LEAD FREE" ACCORDING TO THE UNITED STATES SAFE DRINKING WATER ACT. THE ONLY COMPONENTS EXEMPT FROM THIS REQUIREMENT ARE FIRE HYDRANTS. COMPONENTS THAT ARE NOT CLEARLY IDENTIFIED BY THE MANUFACTURER AS MEETING THIS REQUIREMENT BY MARKING, OR ON THE PRODUCT PACKAGING, OR BY PRE-APPROVED SUBMITTAL, WILL BE REJECTED FOR USE. A NSF CERTIFICATION WILL BE ADEQUATE IF THE CERTIFICATION HAS NOT EXPIRED AS OF JANUARY 4, 2014 AND REMAINS UNEXPIRED AT THE TIME OF CONSTRUCTION.
29. ALL PRESSURE PIPE SHALL HAVE MECHANICAL RESTRAINT AND CONCRETE THRUST BLOCKING AT ALL VALVES, BENDS, TEES, PLUGS, AND OTHER FITTINGS.

STORM SEWER NOTES:

1. MANHOLE FRAMES AND COVERS AND WATER VALVE BOXES SHALL BE RAISED TO FINISHED PAVEMENT GRADE AT THE OWNER'S EXPENSE BY THE CONTRACTOR WITH CITY INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION. CONTRACTOR SHALL BACKFILL AROUND MANHOLES AND JUNCTION BOXES WITH CLASS A CONCRETE.
2. ALL MANHOLE LIDS SHALL BE 32" OR LARGER, UNLESS EXPRESSLY APPROVED IN WRITING BY THE ENGINEERING DEPARTMENT.
3. THE LOCATION OF ANY EXISTING UTILITY LINES SHOWN ON THESE PLANS IS THE BEST AVAILABLE AND MAY NOT BE ACCURATE. ANY DAMAGE TO EXISTING UTILITY LINES, BOTH KNOWN AND UNKNOWN, SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
4. PIPE MATERIALS TO BE USED FOR CONSTRUCTION OF UTILITY LINES: UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, ALL STORM SEWER RCP SHALL BE CLASS III. CORRUGATED METAL PIPE IS NOT PERMITTED.
5. ALL MANHOLE AND INLET COVERS SHALL READ "CITY OF CEDAR PARK".
6. CONTRACTOR TO NOTIFY THE CITY OF CEDAR PARK 48 HOURS PRIOR TO CONNECTING TO EXISTING UTILITIES.
7. ALL PIPE BEDDING MATERIAL SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATIONS.
8. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER ALL CONCRETE IS TO BE CLASS "A" (5 SACK, 3000 PSI ~ 28-DAYS), AND ALL REINFORCING STEEL TO BE ASTM A615 60.
9. CONTRACTOR TO INSTALL AND MAINTAIN GEO-TEXTILE FABRIC BARRIER (INLET PROTECTION) AROUND STORM SEWER LEADS AND INLETS TO PREVENT SILT AND OTHER MATERIAL FROM ENTERING THE STORM SEWER COLLECTION SYSTEM.
10. INSTALL CONCRETE SAFETY END TREATMENTS TO ALL CULVERTS AND ENDS OF DRAINAGE PIPE.
11. ALL CURB INLETS SHALL HAVE AN ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER.

SEQUENCE OF CONSTRUCTION NOTES:

THE FOLLOWING SEQUENCE OF CONSTRUCTION SHALL BE USED FOR ALL DEVELOPMENT. THE APPLICANT IS ENCOURAGED TO PROVIDE ANY ADDITIONAL DETAILS APPROPRIATE FOR THE PARTICULAR DEVELOPMENT.

1. TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED AS INDICATED ON THE APPROVED SITE PLAN OR SUBDIVISION CONSTRUCTION PLAN AND IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS REQUIRED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION AND INITIATE TREE MITIGATION MEASURES.
2. THE GENERAL CONTRACTOR MUST CONTACT THE CITY INSPECTOR AT 512-401-5000, 72 HOURS PRIOR TO THE SCHEDULED DATE OF THE REQUIRED ON-SITE PRECONSTRUCTION MEETING.
3. THE GENERAL CONTRACTOR WILL FOLLOW THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH CITY INSPECTORS' DIRECTIVES, AND REVISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND THE EROSION PLAN.
4. ROUGH GRADE THE POND(S) AT 100% PROPOSED CAPACITY. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM MUST CONSIST OF A SUMP PIT OUTLET AND AN EMERGENCY SPILLWAY MEETING THE REQUIREMENTS OF THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL, AS REQUIRED. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL INSTALLATION OF THE PERMANENT WATER QUALITY POND(S).
5. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE.
6. BEGIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION) ACTIVITIES.
7. UNDERGROUND UTILITIES WILL BE INSTALLED, INCLUDING FIRE HYDRANTS.
8. 8FIRE DEPARTMENT ACCESS WILL BE INSTALLED WHERE REQUIRED BY APPROVED SITE PLAN.
9. VERTICAL CONSTRUCTION MAY OCCUR AFTER THE PRE-VERTICAL INSPECTION HAS BEEN CLEARED BY THE FIRE MARSHAL.
10. PERMANENT WATER QUALITY PONDS OR CONTROLS WILL BE CLEANED OUT AND FILTER MEDIA WILL BE INSTALLED PRIOR TO/CONCURRENTLY WITH REVEGETATION OF SITE.
11. COMPLETE CONSTRUCTION AND START REVEGETATION OF THE SITE AND INSTALLATION OF LANDSCAPING.
12. UPON COMPLETION OF THE SITE CONSTRUCTION AND REVEGETATION OF A PROJECT SITE, THE DESIGN ENGINEER SHALL SUBMIT AN ENGINEER'S LETTER OF CONCURRENCE BEARING THE ENGINEER'S SEAL, SIGNATURE, AND DATE TO THE CITY INDICATING THAT CONSTRUCTION, INCLUDING REVEGETATION, IS COMPLETE AND IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE CITY INSPECTOR.
13. UPON COMPLETION OF LANDSCAPE INSTALLATION OF A PROJECT SITE, THE LANDSCAPE ARCHITECT SHALL SUBMIT A LETTER OF CONCURRENCE TO THE CITY INDICATING THAT THE REQUIRED LANDSCAPING IS COMPLETE AND IN SUBSTANTIAL CONFORMITY WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE CITY INSPECTOR.
14. AFTER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, REMOVE THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY NECESSARY FINAL REVEGETATION RESULTING FROM REMOVAL OF THE CONTROLS. CONDUCT ANY MAINTENANCE AND REHABILITATION OF THE WATER QUALITY PONDS OR CONTROLS

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Texas Registered Engineering Firm F-38
Civil & Environmental Consultants, Inc.
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

GENERAL NOTES

DATE:	1/15/2024	DRAWN BY:	JD
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:	MAT		

DRAWING NO.: 02
SHEET 02 OF 175

2023-23-SD

GEOTECHNICAL NOTES FOR THE CONTRACTOR:
METHODS FOR REDUCING EXPANSIVE SOIL–RELATED MOVEMENTS
- TO OBTAIN MAXIMUM ALLOWABLE POTENTIAL VERTICAL RISE (PVR) REQUIREMENT OF 1IN. IN PAVEMENT AND FLATWORK AREAS, 1FT OF THE STRATUM CLAY SHOULD BE REMOVED AND REPLACED WITH EITHER SELECT OR ALTERNATE SELECT FILL. HOWEVER, IN BUILDING AREAS, THE STRATUM I CLAYS MAY PROVIDE VARIABLE FOUNDATION SUPPORT FOR SLABS AND SHALLOW FOUNDATIONS; THEREFORE, WE RECOMMEND THE COMPLETE REMOVAL OF THE STRATUM I CLAYS IN THE BUILDING AREAS. COMPLETE REMOVAL OF THE STRATUM I CLAYS SHOULD RESULT IN A MAXIMUM PVR NOT EXCEEDING 1/2 INCH.

PAVEMENT AREAS
- ANY KNOWN NATURAL OR MAN–MADE SUBSURFACE SEEPAGE AT THE SITE WHICH MAY OCCUR AT SUFFICIENTLY SHALLOW DEPTHS AS TO INFLUENCE MOISTURE CONTENTS WITHIN THE SUBGRADE SHOULD BE INTERCEPTED BY DRAINAGE DITCHES OR BELOW GRADE FRENCH DRAINS.
- CURBS ADJACENT TO IRRIGATED ISLANDS AND LANDSCAPE AREAS SHOULD COMPLETELY PENETRATE THE FLEXIBLE BASE MATERIALS AND PENETRATE AT LEASE THREE (3) INCHES INTO THE SUBGRADE TO REDUCE INFILTRATION OF WATER BENEATH THE CURBS. SEE DETAIL SHEET 64
- THE CONSTRUCTION OF CURB JOINTS ADJACENT TO IRRIGATED AREAS SHOULD CONSIDER MEANS TO PREVENT WATER INTRUSION INTO THE ADJACENT PAVEMENT BASE MATERIAL SUCH AS THE USE OF JOINT/CRACK SEALANTS.
- FINAL SITE GRADING SHOULD ELIMINATE ISOLATED DEPRESSIONS ADJACENT TO CURBS WHICH MAY ALLOW SURFACE WATER TO POND AND INFILTRATE INTO THE UNDERLYING SOILS.

RIGID PAVEMENTS
- AS A MINIMUM, THE BAR MATS SHOULD BE NO.3 REINFORCING BARS SPACED 18IN. ON CENTER IN BOTH DIRECTIONS. THE CONCRETE REINFORCING SHOULD BE PLACE APPROXIMATELY 1/3 THE SLAB THICKNESS BELOW THE SURFACE OF THE SLAB, BUT NOT LESS THAN 2IN. THE REINFORCING SHOULD NOT EXTEND ACROSS EXPANSION JOINTS.
- JOINTS IN CONCRETE PAVEMENTS AID IN THE CONSTRUCTION AND CONTROL THE LOCATION AND MAGNITUDE OF CRACKS. WHERE PRACTICAL, LAY OUT THE CONSTRUCTION, EXPANSION, CONTROL AND SAWED JOINTS TO FORM SQUARE PANELS. THE RATIO OF SLAB LENGTH–TO–WIDTH SHOULD NOT EXCEED 1.25. THE RECOMMENDED JOINT SPACING IS 24 TIMES THE THICKNESS OF THE SLAB UP TO A MAXIMUM OF 15FT.
- ALL CONTROL JOINTS SHOULD BE FORMED OR SAWED TO A DEPTH OF AT LEAST 1/4 THE THICKNESS OF THE CONCRETE SLAB. SAWING OF CONTROL JOINTS SHOULD BEGIN AS SOON AS THE CONCRETE WILL NOT RAVEL, GENERALLY THE DAY AFTER PLACEMENT.
- EXPANSION AND ISOLATION JOINTS SHOULD BE HAND FORMED BY USING PRE–MOLDED FILLER. ISOLATION JOINTS ARE NEEDED TO SEPARATE THE CONCRETE SLAB FROM FIXED OBJECTS SUCH AS DROP INLETS, LIGHT STANDARDS, AND BUILDINGS. TO LIMIT WATER INTRUSION, JOINTS MAY BE SEALANTS MAY BE PLACED. THE SEALANTS SHOULD BE OF A FLEXIBLE MATERIAL THAT IS CAPABLE TO WITHSTAND SEASONAL EXPANSION AND CONTRACTION OF THE SLAB.

RETAINING WALL STRUCTURES
- IF DOWNSLOPES ARE PRESENT, THE EMBEDMENT SHOULD INCREASE SO THAT A MINIMUM HORIZONTAL DISTANCE OF 5FT IS PROVIDED BETWEEN THE BOTTOM OUTER EDGE OF THE FOOTING AND THE FACE OF THE ADJACENT DOWNSLOPE.
- THE USE OF DRAINAGE SYSTEMS IS A POSITIVE DESIGN STEP TOWARD REDUCING THE POSSIBILITY OF HYDROSTATIC PRESSURE ACTING AGAINST RETAINING WALL STRUCTURES. DRAINAGE MAY BE PROVIDED BY THE SUE OF DRAIN TRENCH AND PIPE.
- THE DRAIN TRENCH SHOULD BE FILLED WITH GRAVEL (MEETING THE REQUIREMENTS OF ASTM D 448 COARSE CONCRETE AGGREGATE SIZE NO.57 OR 67) AND EXTEND FROM THE BASE OF THE STRUCTURE TO WITHIN 2FT OF THE TOP OF THE STRUCTURE.

STORMWATER MANAGEMENT RECOMMENDATIONS
- UTILITY LINES ENCASED IN PIPE BEDDING MATERIAL ENTERING AND EXITING THE STORMWATER FACILITIES SHOULD CONSIDER WATER SLOPE/TRENCH DAMS TO REDUCE THE RISK OF WATER IN THE FACILITIES MIGRATING THROUGH THE PIPE BEDDING MATERIAL. THE MIGRATION OF WATER THROUGH THE BEDDING MATERIAL CAN POTENTIALLY RESULT IN SETTLEMENTS OF THE BACKFILL MATERIALS. THEREFORE, WATER STOPS/TRENCH DAMS SHOULD BE LOCATED AT OR BELOW THE 100–YEAR STORMWATER ELEVATION. THE WATER STOP SHOULD CONSIST OF A 18UN. SECTION OF CONCRETE, BENTONITE CLAY, OR FLOWABLE BACKFILL. WATER STOPS SHOULD EXTEND A MINIMUM OF 12IN. ABOVE THE PIPE BEDDING OR PENETRATE TRENCH WALLS A MINIMUM OF 6IN. ON ALL SIDES.

FOR ANY FURTHER DETAILS REGARDING GEOTECH, PLEASE REFERENCE THE GEOTECHNICAL REPORT AAA23–052–00 DATED NOVEMBER 7, 2023.

TCEQ CONTRIBUTING ZONE PLAN CONSTRUCTION NOTES:
1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY GROUND DISTURBANCE OR CONSTRUCTION ACTIVITIES. THIS NOTICE MUST INCLUDE:
   – THE NAME OF THE APPROVED PROJECT;
   – THE ACTIVITY START DATE; AND
   – THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN (CZP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ON SITE.
3. NO HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
4. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
5. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
6. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
7. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
8. ALL EXCAVATED MATERIAL THAT WILL BE STORED ON–SITE MUST HAVE PROPER E&S CONTROLS.
9. IF PORTIONS OF THE SITE WILL HAVE A CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL TCEQ–0592A (REV. JULY 15, 2015) PAGE 2 OF 2STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
10. THE FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
   – THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
   – THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
   – THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
11. THE HOLDER OF ANY APPROVED CZP MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
   A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES (BMPS) OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES;
   B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED;
   C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER; OR
   D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE APPROVED CONTRIBUTING ZONE PLAN.

AUSTIN REGIONAL OFFICE: 12100 PARK THIRTY FIVE CIRCLE, AUSTIN, TX 78753
(P) (512) 239–1000

TAC 290 SUBCHAPTER D: WATER/WASTEWATER CROSSING NOTES

(B) NEW WATERLINE INSTALLATION – CROSSING LINES.

(i) WHERE A NEW POTABLE WATERLINE CROSSES ABOVE A WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND MUST BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. WHEN CROSSING AN EXISTING WASTEWATER MAIN OR LATERAL AND IT IS DISTURBED OR SHOWS SIGNS OF LEAKING, THE WASTEWATER MAIN OR LATERAL SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE–RATED PIPE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

(I) THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE AN EXISTING, NON–PRESSURE RATED WASTEWATER MAIN OR LATERAL.

(II) THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE AN EXISTING, PRESSURE–RATED WASTEWATER MAIN OR LATERAL.

(ii) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON–PRESSURE RATED WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END. THE MATERIALS AND METHOD OF INSTALLATION SHALL CONFORM TO ONE OF THE FOLLOWING OPTIONS:

(I) WITHIN NINE FEET HORIZONTALLY OF EITHER SIDE OF THE WATERLINE, THE WASTEWATER PIPE AND JOINTS SHALL BE CONSTRUCTED WITH PIPE MATERIAL HAVING A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. AN ABSOLUTE MINIMUM VERTICAL SEPARATION DISTANCE OF TWO FEET SHALL BE PROVIDED. THE WASTEWATER MAIN OR LATERAL SHALL BE LOCATED BELOW THE WATERLINE.

(II) ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18–FOOT (OR LONGER) SECTION OF PIPE. FLEXIBLE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE ENCASING PIPE SHALL BE CENTERED ON THE WATERLINE AND SHALL BE AT LEAST TWO NOMINAL PIPE DIAMETERS LARGER THAN THE WASTEWATER MAIN OR LATERAL. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE–FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATERTIGHT NON–SHRINK CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF SIX INCHES BETWEEN THE ENCASEMENT PIPE AND THE WATERLINE SHALL BE PROVIDED. THE WASTEWATER LINE SHALL BE LOCATED BELOW THE WATERLINE.

(iii)WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN OR LATERAL, THE WATERLINE SHALL BE ENCASED AS DESCRIBED FOR WASTEWATER MAINS OR LATERALS IN CLAUSE (II) OF THIS SUBPARAGRAPH OR CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF ONE FOOT BETWEEN THE WATERLINE AND THE WASTEWATER MAIN OR LATERAL SHALL BE PROVIDED. WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN, THE PROCEDURES IN §217.53(D) OF THIS TITLE (RELATING TO PIPE DESIGN) MUST BE FOLLOWED.

(iv) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER LINE SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTER LINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

(v) WHERE CEMENT STABILIZED SAND BEDDING IS REQUIRED, THE CEMENT STABILIZED SAND SHALL HAVE A MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME (AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE). THE CEMENT STABILIZED SAND BEDDING SHALL BE A MINIMUM OF SIX INCHES ABOVE AND FOUR INCHES BELOW THE WASTEWATER MAIN OR LATERAL. THE USE OF BROWN COLORING IN CEMENT STABILIZED SAND FOR WASTEWATER MAIN OR LATERAL BEDDING IS RECOMMENDED FOR THE IDENTIFICATION OF PRESSURE RATED WASTEWATER MAINS DURING FUTURE CONSTRUCTION.

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

811
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REVISION RECORD

NO	DATE	DESCRIPTION

CEC
Texas Registered Engineering Firm F-38
Civil & Environmental Consultants, Inc.
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

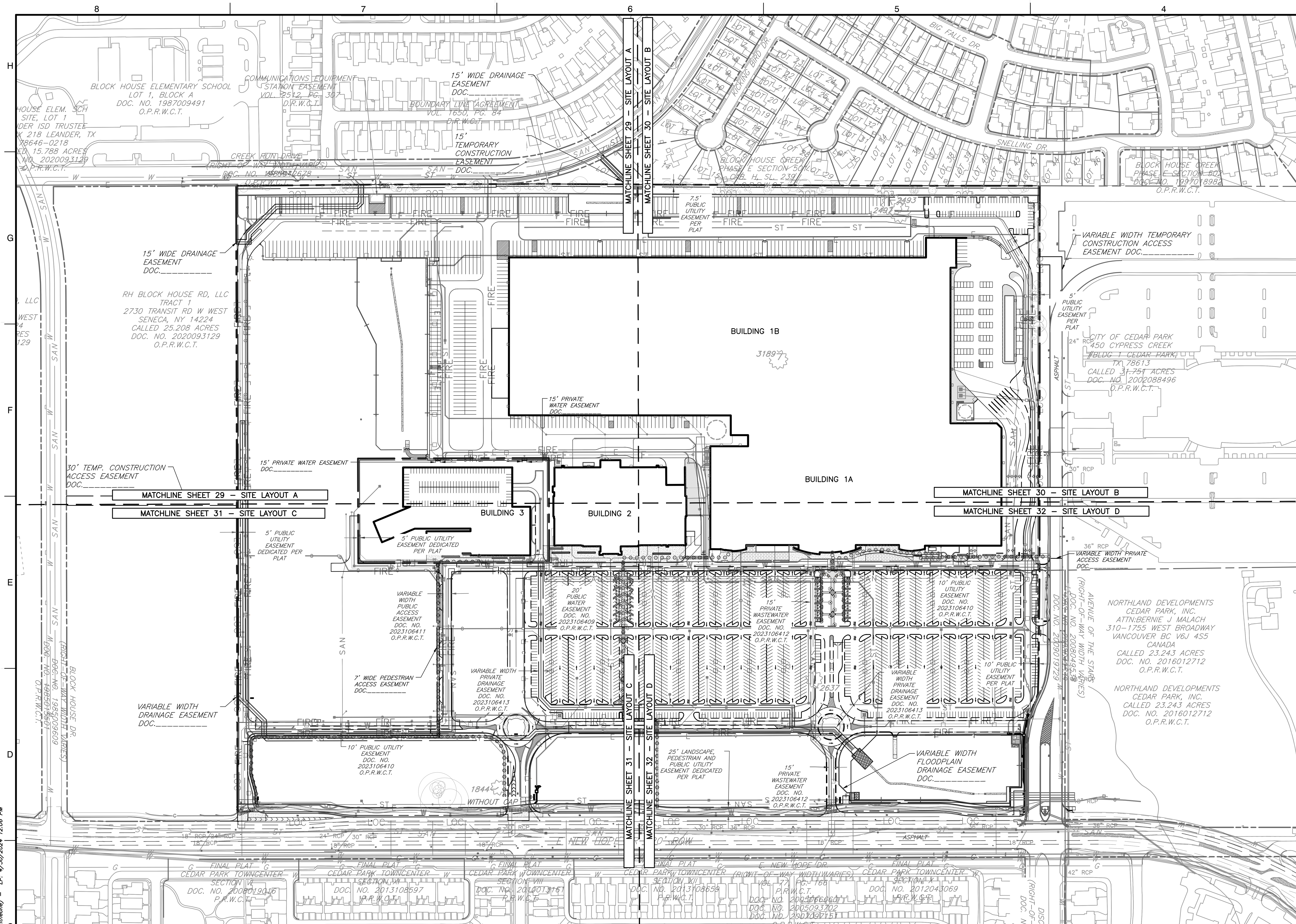
GENERAL NOTES 2

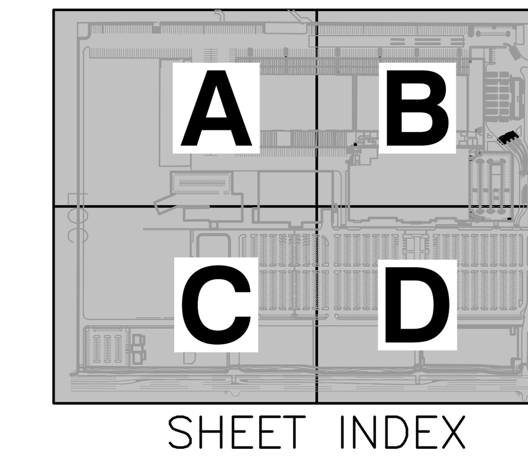
DATE:	1/15/2024
DWG SCALE:	NTS
PROJECT NO:	331-715
DRAWN BY:	JD
CHECKED BY:	SRB
APPROVED BY:	MAT

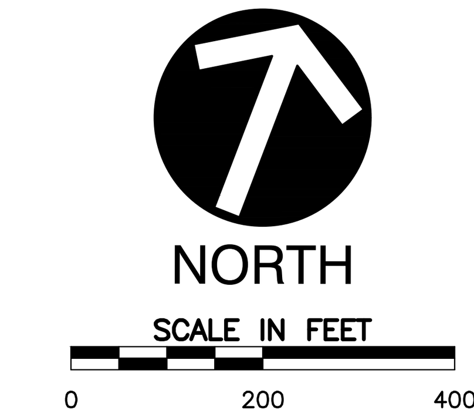
DRAWING NO.: 03
SHEET 03 OF 175

2023-23-SD

P:\330-000\331-715\-CAD\Dwg\CIVIL\331715-C001-GENERAL NOTES 2[LS:1/15/2024 - qunn] - LP: 4/30/2024 12:02 PM







BLOCK LEGEND

PROPOSED / EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED / EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- MAJOR CONTOUR (385)
- MINOR CONTOUR
- ELECTRIC LINE (E)
- OVERHEAD ELECTRIC WIRE (OE)
- UNDERGROUND ELECTRIC LINE (UE)
- TELEPHONE (T)
- COMMUNICATIONS LINE (C)
- CABLE TELEVISION (TV)
- FIBER OPTIC LINE (FO)
- GAS LINE (G)
- OVERHEAD UTILITY (OU)
- UNDERGROUND UTILITY (UG)
- SANITARY SEWER LINE (SAN)
- WATER LINE (W)
- FIRE LINE (F)
- ROAD CENTERLINE
- CURB & GUTTER
- DEEP CURB & GUTTER
- STRIPING
- FIRE LANE STRIPING (FIRE)
- H.C. ACCESSIBLE ROUTE
- LIMITS OF CONSTRUCTION (LOC)
- DRAINAGE AREA
- FLOODWAY
- CWQZ
- STORM SEWER (ST)
- DRAINAGE CHANNEL
- GUARDRAIL

LAYOUT NOTES

1. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES, INCLUDING IRRIGATION LINES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. RELOCATE EXISTING UTILITIES AS INDICATED, OR AS NECESSARY FOR CONSTRUCTION.
3. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES, INCLUDING IRRIGATION SLEEVING, PRIOR TO INSTALLATION OF PAVED SURFACES.
4. THE CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN IN ACCORDANCE WITH THE SPECIFICATIONS.
5. SITE WORK CONCRETE WALKS AND PADS SHALL HAVE A BROOM FINISH TO ALL SURFACES. SITE WORK CONCRETE SHALL BE CLASS "M15" (2175 PSI @ 28 DAYS) UNLESS OTHERWISE NOTED.
6. ALL DAMAGE TO EXISTING PAVEMENT TO REMAIN, WHICH RESULTS FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH LIKE MATERIALS AT THE CONTRACTOR'S EXPENSE.
7. SITE DIMENSIONS SHOWN ARE TO THE BACK OF CURB, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
8. COORDINATES ARE FOR BUILDING COLUMNS, EXTERIOR BUILDING WALL, CENTER OF DRIVEWAYS, CENTER OF SANITARY SEWER MANHOLES, AND CENTER OF STRUCTURE PLACED SIX INCHES INSIDE FACE OF CURB FOR DRAIN INLETS, UNLESS OTHERWISE NOTED.
9. CONTRACTOR SHALL MAINTAIN ONE SET OF AS-BUILT / RECORD DRAWINGS ON-SITE DURING CONSTRUCTION FOR DISTRIBUTION TO THE OWNER AND/OR OWNER'S REPRESENTATIVE UPON COMPLETION.
10. REFER TO THE ARCHITECTURAL, PLUMBING & ELECTRICAL DRAWINGS FOR EXACT DIMENSIONS AND LOCATIONS OF UTILITY SERVICE ENTRY LOCATIONS AND PRECISE BUILDING DIMENSIONS.
11. THIS SITE LAYOUT IS SPECIFIC TO THE APPROVALS NECESSARY FOR THE CONSTRUCTION IN ACCORDANCE WITH THE CITY OF CEDAR PARK. NO CHANGES TO THE SITE LAYOUT ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. CHANGES MADE TO THE SITE LAYOUT WITHOUT APPROVAL IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. CHANGES INCLUDE BUT ARE NOT LIMITED TO, INCREASED IMPERVIOUS PAVEMENT, ADDITION / DELETION OF PARKING SPACES, MOVEMENT OF CURB LINES, CHANGES TO DRAINAGE STRUCTURES AND PATTERNS, LANDSCAPING, ETC.
12. NO PERMANENT STRUCTURES HAVE BEEN LOCATED IN THE PUBLIC UTILITY EASEMENT.
13. LIGHT SOURCES SHALL BE COMPLETELY CONCEALED WITHIN OPAQUE HOUSINGS AND SHALL NOT BE VISIBLE FROM ADJACENT STREETS OR PROPERTIES. ALL EXTERIOR LIGHTING FIXTURES SHALL BE FULL CUT-OFF TYPE FIXTURES. LIGHTING FIXTURES SHALL BE NO MORE THAN TWENTY-FIVE (25) FEET IN HEIGHT AS MEASURED FROM ADJACENT, FINISHED GRADE.
14. BICYCLE REQUIREMENTS TO FOLLOW RATIOS ESTABLISHED BY ZONING CASE #2022-12-Z.
15. ALL STANDARD AT-GRADE PERPENDICULAR PARKING SPACES SHALL NOT BE LESS THAN 18.5' X 9'
16. THE CONTRACTOR IS TO PROVIDE AND MAINTAIN SUFFICIENT SITE CONTROL TO AVOID COSTLY CONSTRUCTION PROBLEMS
17. LOCATION AND DESIGN OF ALL EXTERIOR DUMPSTER ENCLOSURES SHALL BE REVIEWED AND APPROVED WITH AN SD PERMIT REVISION
18. DUMPSITES LOCATED WITHIN 500 FEET OF A MAJOR CORRIDOR SHALL BE LOCATED NO CLOSER THE THE DESIGNATED ROADWAY THAN THE FRONT WALL OF THE PRINCIPLE STRUCTURE. LOCATION AND DESIGN OF THE ENCLOSURE SHALL BE REVIEWED AND APPROVED WITH AN SD PERMIT REVISION.
19. LOCATION AND DESIGN OF ALL TRASH COLLECTION, COMPACTION OR OTHER SIMILAR USES SHALL BE REVIEWED AND APPROVED WITH AN SD PERMIT REVISION.
20. TRAFFIC CALMING DEVICES ARE NOT PERMITTED IN THE FIRE LANE UNLESS THEY MEET THE CoCP DETAIL.
21. EXTERIOR LIGHTING FIXTURES FOR BUILDINGS 2 AND 3, AND ANY NEW OUTDOOR LIGHTING FIXTURE WITHIN THE SITE SHALL BE REVIEWED AND APPROVED WITH AN SD PERMIT REVISION.
22. FOOT CANDLES AT THE PROPERTY LINE ARE PER THE APPROVED ALTERNATIVE LIGHTING PLAN DATED NOVEMBER 20, 2023.

BUILDING DATA TABLE

BUILDING	PROPOSED USE	SQUARE FOOTAGE	UNITS	STORIES	HEIGHT	FFE	FOUNDATION	PARKING RATIO	REQ PARKING	PR PARKING (GARAGE)	REQ ADA	PR ADA (GARAGE)
1A	RETAIL	522100	N/A	2	76'	961.00	SLAB ON GRADE	1SP/300SF	1741	1022 (1163)	32	19 (32)
1B	WAREHOUSE	761000	N/A	1	76'	961.00	SLAB ON GRADE	1SP/2,150SF	354			
2	RETAIL	153997	N/A	2	79'5"	962.10	SLAB ON GRADE	1SP/250SF	616	960	20	20
2	WAREHOUSE	203434	N/A	2	79'5"	962.10	SLAB ON GRADE	1SP/2000SF	102			
2	RETAIL OFFICE	11767	N/A	2	79'5"	962.10	SLAB ON GRADE	1SP/300SF	40			
3	HOTEL	N/A	250	8	96'	962.50	SLAB ON GRADE	1SP/1 UNIT	250	(411)	9	(9)
3	CONFERENCE CENTER	30000	N/A	1	96'	962.50	SLAB ON GRADE	1SP/400SF	75			

NOTES: ALL PARKING WILL BE STANDARD SPOTS OTHER THAN ADA
PARKING CALCULATIONS FOR BUILDINGS 1A AND 1B ARE PER THE APPROVED ALTERNATIVE PARKING PLAN DATED JANUARY 19, 2023. (RETAIL 1SP/300SF, WAREHOUSE 1SP/2,150SF)

SITE DATA TABLE

ZONING	PLANNED DEVELOPMENT–GENERAL BUSINESS (PD–GB)
LAND USE	COMMERCIAL, RETAIL, HOTEL/CONFERENCE CENTER
TOTAL SITE AREA (AC)	117.86
EXISTING IMPERVIOUS COVER AREA AC (SF)	0.05 (2178)
EXISTING IMPERVIOUS COVER PERCENT	5.50
PROPOSED IMPERVIOUS COVER AREA AC (SF)	74.51 (3,245,926)
PROPOSED IMPERVIOUS COVER PERCENT	63.20
MAXIMUM IMPERVIOUS COVER (AC)	94.31
MAXIMUM IMPERVIOUS COVER PERCENT	80.00
PROPOSED BUILDING COVERAGE AC (SF)	35.65 (1,553,100)
PROPOSED BUILDING COVERAGE (%)	30.2
PROPOSED FOUNDATION TYPE	SLAB ON GRADE
PROPOSED PARKING	3556
REQUIRED PARKING	3177
PROPOSED BICYCLE PARKING	76
REQUIRED BICYCLE PARKING	75

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REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

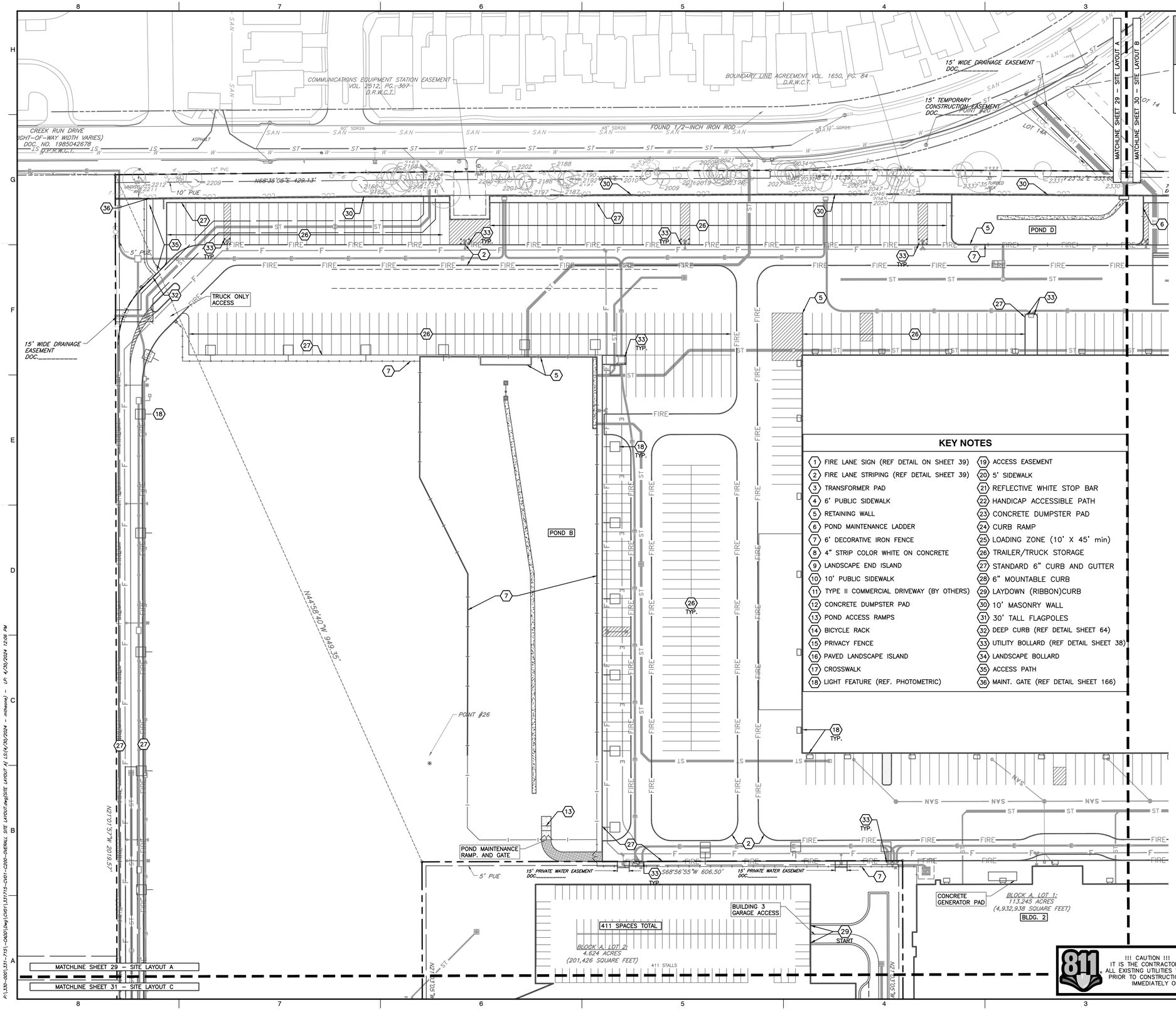
NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

OVERALL SITE LAYOUT

DATE:	4/29/2024	DRAWN BY:	QU
DWG SCALE:	1" = 200'	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:	MAT		

DRAWING NO.: **28**

2023-23-SD



KEY NOTES

1. FIRE LANE SIGN (REF DETAIL ON SHEET 39)
2. FIRE LANE STRIPING (REF DETAIL SHEET 39)
3. TRANSFORMER PAD
4. 6' PUBLIC SIDEWALK
5. RETAINING WALL
6. POND MAINTENANCE LADDER
7. 6' DECORATIVE IRON FENCE
8. 4" STRIP COLOR WHITE ON CONCRETE
9. LANDSCAPE END ISLAND
10. 10' PUBLIC SIDEWALK
11. TYPE II COMMERCIAL DRIVEWAY (BY OTHERS)
12. CONCRETE DUMPSTER PAD
13. POND ACCESS RAMPS
14. BICYCLE RACK
15. PRIVACY FENCE
16. PAVED LANDSCAPE ISLAND
17. CROSSWALK
18. LIGHT FEATURE (REF. PHOTOMETRIC)
19. ACCESS EASEMENT
20. 5' SIDEWALK
21. REFLECTIVE WHITE STOP BAR
22. HANDICAP ACCESSIBLE PATH
23. CONCRETE DUMPSTER PAD
24. CURB RAMP
25. LOADING ZONE (10' X 45' min)
26. TRAILER/TRUCK STORAGE
27. STANDARD 6" CURB AND GUTTER
28. 6" MOUNTABLE CURB
29. LAYDOWN (RIBBON)CURB
30. 10' MASONRY WALL
31. 30' TALL FLAGPOLES
32. DEEP CURB (REF DETAIL SHEET 64)
33. UTILITY BOLLARD (REF DETAIL SHEET 38)
34. LANDSCAPE BOLLARD
35. ACCESS PATH
36. MAINT. GATE (REF DETAIL SHEET 166)

SHEET INDEX

A B C D

NORTH

SCALE IN FEET
0 60 120

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
S	S	PIPE BREAK
]	]	PIPE CAP
>	>	PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
	HB	HOSE BIB
S	S	SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
D	D	DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
E	E	ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
M		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL
		GUARDRAIL

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REVISION RECORD

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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

SITE LAYOUT A

DATE:	4/29/2024
DWG SCALE:	1" = 60'
PROJECT NO:	331-715
DRAWN BY:	QU
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 29

SHEET 29 OF 175

2023-23-SD

MATCHLINE SHEET 29 – SITE LAYOUT A

MATCHLINE SHEET 30 – SITE LAYOUT B

LOT 13 LOT 18 LOT 27 LOT 31 LOT 14 LOT 17 LOT 28 LOT 30 LOT 16 LOT 15 LOT 29 LOT 34 LOT 35 LOT 36 LOT 37 LOT 38 LOT 39 LOT 40 LOT 41 LOT 42 LOT 43 LOT 44 LOT 45 LOT 46

BLOCK HOUSE CREEK PHASE E SECTION 501 CAB. H, SL. 239 O.P.R.W.C.T.

SNELLING DR.

7.5' PUBLIC UTILITY EASEMENT PER PLAT

TRANSPLANT TREE SEE LANDSCAPE PLANS FOR DETAILS

MAINTENANCE

UNDERGROUND POND C

TYPICAL 18.5" X 9"

GUARDRAIL

SECURE TRUCK ACCESS

CUSTOMER EXIT ONLY

VARIABLE CONSTRUCTION EASEMENT

5' PUBLIC UTILITY EASEMENT PER PLAT

WAREHOUSE

TRANSPLANT TREE SEE LANDSCAPE PLANS FOR DETAILS

MATCHLINE SHEET 30 – SITE LAYOUT B

MATCHLINE SHEET 32 – SITE LAYOUT D

KEY NOTES

1 FIRE LANE SIGN (REF DETAIL ON SHEET 39)	19 ACCESS EASEMENT
2 FIRE LANE STRIPING (REF DETAIL SHEET 39)	20 5' SIDEWALK
3 TRANSFORMER PAD	21 REFLECTIVE WHITE STOP BAR
4 6' PUBLIC SIDEWALK	22 HANDICAP ACCESSIBLE PATH
5 RETAINING WALL	23 CONCRETE DUMPSTER PAD
6 POND MAINTENANCE LADDER	24 CURB RAMP
7 6' DECORATIVE IRON FENCE	25 LOADING ZONE (10' X 45' min)
8 4" STRIP COLOR WHITE ON CONCRETE	26 TRAILER/TRUCK STORAGE
9 LANDSCAPE END ISLAND	27 STANDARD 6" CURB AND GUTTER
10 10' PUBLIC SIDEWALK	28 6" MOUNTABLE CURB
11 TYPE II COMMERCIAL DRIVEWAY (BY OTHERS)	29 LAYDOWN (RIBBON)CURB
12 CONCRETE DUMPSTER PAD	30 10' MASONRY WALL
13 POND ACCESS RAMPS	31 30' TALL FLAGPOLES
14 BICYCLE RACK	32 DEEP CURB (REF DETAIL SHEET 64)
15 PRIVACY FENCE	33 UTILITY BOLLARD (REF DETAIL SHEET 38)
16 PAVED LANDSCAPE ISLAND	34 LANDSCAPE BOLLARD
17 CROSSWALK	35 ACCESS PATH
18 LIGHT FEATURE (REF. PHOTOMETRIC)	36 MAINT. GATE (REF DETAIL SHEET 166)

SHEET INDEX

NORTH

SCALE IN FEET

0 60 120

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
S	S	PIPE BREAK
]	]	PIPE CAP
>	>	PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
	HB	HOSE BIB
S	S	SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
D	D	DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
E	E	ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
M	M	UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST	ST	STORM SEWER
		DRAINAGE CHANNEL
		GUARDRAIL

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

!!! CAUTION !!! !!! CAUTION !!!
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NO	DATE	REVISION RECORD DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

SITE LAYOUT B

DATE:	4/29/2024
DWG SCALE:	1" = 60'
PROJECT NO:	
DRAWN BY:	QU
CHECKED BY:	SRB
	331-715
APPROVED BY:	MAT

DRAWING NO.: 30

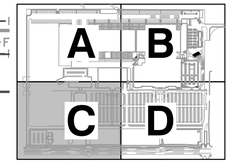
SHEET 30 OF 175

2023-23-SD

P:\330-000\331-715\--CAD\Dwg\CVD\331715-CVD1-C200-OVERALL SITE LAYOUT.dwg[SITE LAYOUT B] LS(4/30/2024 - mtheone) - LP: 4/30/2024 12:07 PM

KEY NOTES

(1) FIRE LANE SIGN (REF DETAIL ON SHEET 39)	(19) ACCESS EASEMENT
(2) FIRE LANE STRIPING (REF DETAIL SHEET 39)	(20) 5' SIDEWALK
(3) TRANSFORMER PAD	(21) REFLECTIVE WHITE STOP BAR
(4) 6' PUBLIC SIDEWALK	(22) HANDICAP ACCESSIBLE PATH
(5) RETAINING WALL	(23) CONCRETE DUMPSTER PAD
(6) POND MAINTENANCE LADDER	(24) CURB RAMP
(7) 6' DECORATIVE IRON FENCE	(25) LOADING ZONE (10' X 45' min)
(8) 4" STRIP COLOR WHITE ON CONCRETE	(26) TRAILER/TRUCK STORAGE
(9) LANDSCAPE END ISLAND	(27) STANDARD 6" CURB AND GUTTER
(10) 10' PUBLIC SIDEWALK	(28) 6" MOUNTABLE CURB
(11) TYPE II COMMERCIAL DRIVEWAY (BY OTHERS)	(29) LAYDOWN (RIBBON)CURB
(12) CONCRETE DUMPSTER PAD	(30) 10' MASONRY WALL
(13) POND ACCESS RAMPS	(31) 30' TALL FLAGPOLES
(14) BICYCLE RACK	(32) DEEP CURB (REF DETAIL SHEET 64)
(15) PRIVACY FENCE	(33) UTILITY BOLLARD (REF DETAIL SHEET 38)
(16) PAVED LANDSCAPE ISLAND	(34) LANDSCAPE BOLLARD
(17) CROSSWALK	(35) ACCESS PATH
(18) LIGHT FEATURE (REF. PHOTOMETRIC)	(36) MAINT. GATE (REF DETAIL SHEET 166)



SHEET INDEX

NORTH

SCALE IN FEET

0 60 120

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
FIRE	FIRE	STRIPING
		FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST	ST	STORM SEWER
		DRAINAGE CHANNEL
		GUARDRAIL

MICHAEL A. THEONE 142972 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

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REVISION RECORD

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Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

SITE LAYOUT C

DATE:	4/29/2024	DRAWN BY:	OU
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MAT

DRAWING NO.: 31

SHEET 31 OF 175

2023-23-SD

P:\330-2001\331-715\-CAD\Dwg\CIVIL\331715-CVD1-C200-OVERALL SITE LAYOUT.dwg|SITE LAYOUT C| LS:(4/30/2024 - mtheone) - LP: 4/30/2024 12:07 PM

KEY NOTES

1 FIRE LANE SIGN (REF DETAIL ON SHEET 39)	19 ACCESS EASEMENT
2 FIRE LANE STRIPING (REF DETAIL SHEET 39)	20 5' SIDEWALK
3 TRANSFORMER PAD	21 REFLECTIVE WHITE STOP BAR
4 6' PUBLIC SIDEWALK	22 HANDICAP ACCESSIBLE PATH
5 RETAINING WALL	23 CONCRETE DUMPSTER PAD
6 POND MAINTENANCE LADDER	24 CURB RAMP
7 6' DECORATIVE IRON FENCE	25 LOADING ZONE (10' X 45' min)
8 4" STRIP COLOR WHITE ON CONCRETE	26 TRAILER/TRUCK STORAGE
9 LANDSCAPE END ISLAND	27 STANDARD 6" CURB AND GUTTER
10 10' PUBLIC SIDEWALK	28 6" MOUNTABLE CURB
11 TYPE II COMMERCIAL DRIVEWAY (BY OTHERS)	29 LAYDOWN (RIBBON)CURB
12 CONCRETE DUMPSTER PAD	30 10' MASONRY WALL
13 POND ACCESS RAMPS	31 30' TALL FLAGPOLES
14 BICYCLE RACK	32 DEEP CURB (REF DETAIL SHEET 64)
15 PRIVACY FENCE	33 UTILITY BOLLARD (REF DETAIL SHEET 38)
16 PAVED LANDSCAPE ISLAND	34 LANDSCAPE BOLLARD
17 CROSSWALK	35 ACCESS PATH
18 LIGHT FEATURE (REF. PHOTOMETRIC)	36 MAINT. GATE (REF DETAIL SHEET 166)

BLDG. 1

MATCHLINE SHEET 30 – SITE LAYOUT B

MATCHLINE SHEET 32 – SITE LAYOUT D

MATCHLINE SHEET 31 – SITE LAYOUT C

MATCHLINE SHEET 32 – SITE LAYOUT D

CUSTOMER EXIT ONLY

CUSTOMER ENTRANCE

CUSTOMER ENTRANCE (NO TRUCKS)

CUSTOMER ENTRANCE (NO TRUCKS)

VARIABLE WIDTH PR ACCESS EASEMENT DOC.

10' PUBLIC UTILITY EASEMENT DOC. NO. 2023106410 O.P.R.W.C.T.

20' PUBLIC WATER EASEMENT DOC. NO. O.P.R.W.C.T.

10' PUBLIC UTILITY EASEMENT PER PLAT

15' PRIVATE WASTEWATER EASEMENT DOC. NO. 2023106412 O.P.R.W.C.T.

15' PRIVATE WASTEWATER EASEMENT DOC. NO. 2023106412 O.P.R.W.C.T.

VARIABLE WIDTH PRIVATE DRAINAGE EASEMENT DOC. NO. 2023106413 O.P.R.W.C.T.

VARIABLE WIDTH FLOODPLAIN DRAINAGE EASEMENT DOC._____

25' LANDSCAPE, PEDESTRIAN AND PUBLIC UTILITY EASEMENT DEDICATED PER PLAT

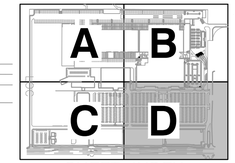
POND MAINTENANCE RAMP. AND GATE

WROUGHT IRON FENCING AROUND PONDS TYP.

POND A 54,684 SQ. FT.

TYPE II COMMERCIAL DRIVEWAY PER COA DETAIL 433S-2. ON SHEET 38

SHEET INDEX



NORTH

SCALE IN FEET

0 60 120

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
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		AIR RELEASE VALVE
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		UTILITY VALVE
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		BACKFLOW PREVENTER
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		FIRE HYDRANT
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		LIGHT FIXTURE
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LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
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FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
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STATE OF TEXAS
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LICENSED
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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

SITE LAYOUT D

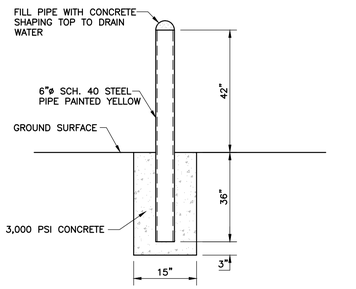
DATE:	4/29/2024
DWG SCALE:	1" = 60'
PROJECT NO:	331-715
DRAWN BY:	CU
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 32

SHEET 32 OF 175

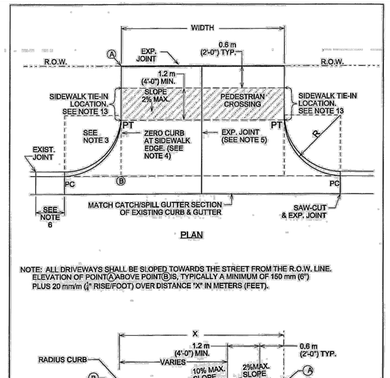
2023-23-SD

P:\330-2023\331-715\-CAD\dwg\CV01\331715-CV01-C200-OVERALL SITE LAYOUT.dwg[SITE LAYOUT D] LS(4/30/2024 - mtheone) - LP: 4/30/2024 12:07 PM



PIPE BOLLARD

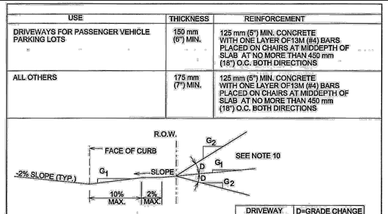
NOT TO SCALE



NOTE: ALL DRIVEWAYS SHALL BE SLOPED TOWARDS THE STREET FROM THE R.O.W. LINE. ELEVATION OF POINT (A) ABOVE POINT (B) IS, TYPICALLY A MINIMUM OF 150 mm (6") PLUS 20 mm/m (¼" RISE/FOOT) OVER DISTANCE "X" IN METERS (FEET).

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE II DRIVEWAY	
ADOPTED 2/04/16	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 1 OF 2

USE	THICKNESS	REINFORCEMENT
DRIVEWAYS FOR PASSENGER VEHICLE PARKING LOTS	150 mm (6") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS
ALL OTHERS	175 mm (7") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF 13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS

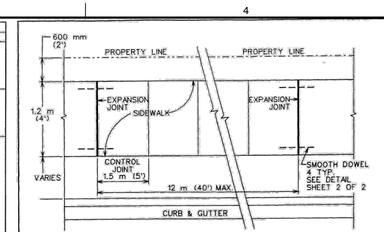


ALLOWABLE GRADES

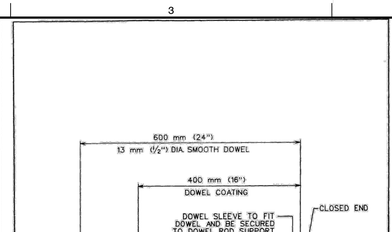
DRIVEWAY VOLUME (ADT)	D=GRADE CHANGE STD.	MAX
>1500	0%	3%
500-1500	3%	6%
<500	6%	15%

NOTES:
1. ALL TYPE II DRIVEWAYS SHALL HAVE RADIUS ENDS.
2. DRIVEWAY WIDTHS AND RADII DIMENSIONS, ONE/TWO WAY TRAVEL REQUIREMENTS, AND GEOMETRIC LAY-OUT ARE HIGHLY VARIABLE, SUBJECT TO SITE SPECIFIC CONDITIONS AND REQUIREMENTS. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 9 "DRIVEWAYS".
3. THE DRIVEWAY EDGE SHALL BE SMOOTHLY TRANSITIONED INTO THE SIDEWALK TIE-IN LOCATION BEGINNING AT THE RADIUS P.C.LINE.
4. "ZERO" CURB AT PT OR SIDEWALK EDGE, WHICHEVER IS ENCOUNTERED FIRST.
5. PLACE AN EXPANSION JOINT DOWN THE CENTER OF DRIVEWAY ALL DRIVEWAYS.
6. IF DIMENSION (E) LESS THAN 1.5 METERS (5 FEET), REMOVE CURB AND GUTTER TO EXISTING JOINT AND POUR MONOLITHICALLY WITH DRIVEWAY.
7. IF THE BASE IS OVER-EXCAVATED WHERE THE CURB AND GUTTER WERE REMOVED, BACKFILL WITH CONCRETE MONOLITHICALLY WITH THE DRIVEWAY.
8. TYPE I DRIVEWAYS ARE TO BE LOCATED NO CLOSER TO THE CORNER OF INTERSECTING RIGHT OF WAY THAN 60% OF PARCEL FRONTAGE AT 30 METERS (100 FEET); WHICHEVER IS LESS.
9. DRIVEWAY SHALL NOT BE CONSTRUCTED WITHIN THE CURB RETURN OF A STREET INTERSECTION.
10. WHILE THE PROPERTY OWNER REMAINS RESPONSIBLE FOR GRADE BREAKS WITHIN PRIVATE PROPERTY, THE PUBLIC DEPARTMENT SHALL BE CONSULTED WHERE THE DRIVEWAY IS ESSENTIAL TO EMERGENCY VEHICLE ACCESS AND "G2" IS GREATER THAN 15%.
11. USE 12 MM (1/2") ASPHALTIC BOARD OR OTHER APPROVED EXPANSION MATERIAL FOR CURB AND GUTTER EXPANSION JOINTS. SIDEWALK, AT THE R.O.W. LINE AND AT MIDWIDTH, SEE NOTE 5.
12. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 9 FOR OTHER DRIVEWAY REQUIREMENTS.
13. THE SIDEWALK RUNNING OUT IN TO CONFORM WITH RESPECT TO THE CURB OR PROPERTY LINE, SHALL BE CONNECTED TO THE DRIVEWAY AT THESE LOCATIONS.
14. WATER METER BOXES AND WASTEWATER CLEAN OUTS ARE PROHIBITED FROM BEING LOCATED IN DRIVEWAY AREAS.

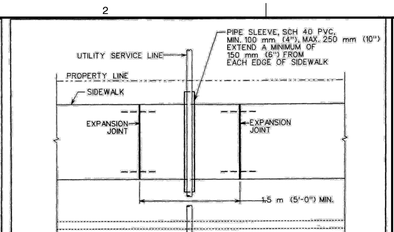
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE II DRIVEWAY	
ADOPTED 2/04/16	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 2 OF 2



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
ADOPTED 2/04/16	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 1 OF 3

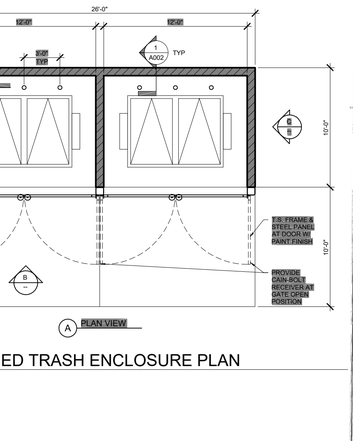


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
ADOPTED 2/04/16	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 2 OF 3



NOTES:
1. THIS STANDARD APPLIES TO THE INSTALLATION OF NEW UTILITIES OR UTILITIES BEING REPLACED BY A NEW LINE.
2. NO JOINTS IN UTILITY SERVICE PIPE TO BE LOCATED INSIDE PVC PIPE SLEEVE.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	SIDEWALK	
ADOPTED 3/24/08	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 3 OF 3



MOUNTABLE/ROLLOVER CURB DETAIL

GENERAL NOTES:
1. THIS STANDARD IS APPLICABLE FOR RAMP CONSTRUCTION ON CITY PROPERTY AND EASEMENT AREAS ONLY.
2. PAVERS ARE REQUIRED FOR ALL CURB RAMP INSTALLATIONS.
3. PAVERS WILL HAVE DETECTABLE WARNING THAT CONSISTS OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9" (23 mm), A NOMINAL HEIGHT OF 0.2" (5 mm) AND A NOMINAL CENTER TO CENTER SPACING OF 2.35" (60 mm) AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT (REF. ADAAG SECTION 4.29.2). MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. PAVER PATTERN SHALL BE BASKET WEAVE UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
4. TYPICAL SIDEWALK WIDTHS AND CURB RAMP ARE SHOWN FOR ILLUSTRATION ONLY. REFER TO THE TRANSPORTATION CRITERIA MANUAL FOR SIDEWALK WIDTHS, CURB RADII AND CURB BASIS.
5. THE PERMISSIBLE CONSTRUCTION JOINT BETWEEN THE PAVERS AND THE ADJOINING SURFACE SHALL BE LIMITED TO ¼" (6 mm) JOINT SIZE. GAPS LARGER THAN ¼" (6 mm) MUST BE APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. ALL JOINTS BETWEEN BRICKS AND ADJOINING SURFACE SHALL BE MORTAR FILLED UNLESS DIRECTED OTHERWISE BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
6. MORTAR SHALL CONFORM TO STD. SPECIFICATION ITEM 4035.3.5, MORTAR AND GROUT; ALL OTHER CONCRETE SHALL CONFORM TO STD. SPECIFICATION ITEM 4035, CONCRETE FOR STRUCTURES, UNLESS OTHERWISE NOTED.
7. CURB RAMPS WITH RETURNED CURB MAY ONLY BE USED WHERE PEDESTRIANS WOULD NOT NORMALLY WALK DIAGONALLY ACROSS THE RAMP.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	DETECTABLE WARNING-PAVER (CITY PROPERTY/EASEMENTS)	
ADOPTED 4/21/17	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-2A 2 OF 2

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 CURB RAMPS-FULL INTERSECTION	
ADOPTED 3/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3 1 OF 3

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 CURB RAMPS-FULL INTERSECTION	
ADOPTED 3/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3 2 OF 3

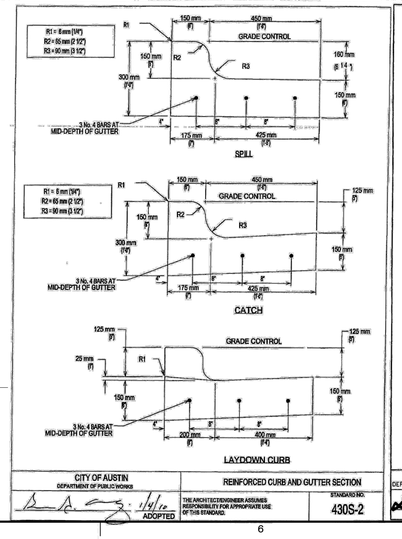
GENERAL NOTES:
1. THIS STANDARD IS APPICABLE FOR RAMP CONSTRUCTION WITHIN RIGHT-OF-WAY OR EASEMENT ONLY.
2. THIS STANDARD REPRESENTS A TYPICAL CURB RAMP DESIGN FOR A NEWLY CONSTRUCTED INTERSECTION WITH A 6 m (20') RADIUS, LARGER RADII, STREET GRADES, LIMITED SIGHT DISTANCES, STREET CLASSIFICATION, SIGNALIZATION AND OTHER FACTORS MAY REQUIRE THE ENGINEER OR DESIGNATED REPRESENTATIVE TO MODIFY THIS STANDARD. SUFFICIENT RIGHT-OF-WAY SHALL BE DEDICATED SUCH THAT THE ENTIRE CURB RAMP, INCLUDING LANDING, AND THE INTER-CONNECTING SIDEWALK ARE CONTAINED WITHIN THE RIGHT-OF-WAY.
3. THE CURB, GUTTER AND RAMP SYSTEM SHALL BE CONFIGURED TO MAINTAIN ALL RUNOFF FROM A 25-YEAR FREQUENCY STORM WITHIN THE RIGHT-OF-WAY (DRAINAGE CRITERIA MANUAL SECTION 1.2.2.B). WHEN THERE IS AN ELEVATION DIFFERENCE BETWEEN THE BOTTOM OF RAMPS (E) ELEVATION AT THE GUTTER) WITHIN A QUADRANT OF AN INTERSECTION, THE LOWER ELEVATION RAMP SHALL BE CONSTRUCTED WITH A POSITIVE RAMP SLOPE OF 1:12 IN ACCORDANCE WITH STANDARDS 432S-5, 432S-5A AND 432S-5B.
4. STANDARD ASSIGNMENT OF SIDEWALKS IS 600 mm (2') OFF PROPERTY LINE, EXCEPT AS INDICATED ON THE DRAWINGS.
5. ALTHOUGH CURB RAMPS MAY BE PLACED WITHIN THE RADIUS, PLACING THE RAMP OUTSIDE OF THE RADIUS WILL ALLOW FOR THE GREATEST DIFFERENCE IN ELEVATION BETWEEN THE RAMPS.
6. WINGS ARE REQUIRED ONLY IF PEDESTRIANS WOULD NORMALLY CROSS THE RAMP.
7. LANDINGS SHALL BE FLAT AND MATCH PT, PC OR TOP OF CURB ELEVATION.
8. CURB RAMPS WILL BE PERPENDICULAR TO ROADWAY CENTERLINES AND SHALL ALIGN WITH EACH OTHER.
9. GRADES ON SIDEWALKS LEADING TO OR FROM THE RAMPS SHALL FOLLOW CURB GRADES.
10. THE SLOPE OF THE SIDEWALK WHICH IS LOCATED WITHIN THE RADIUS AND CONNECTS TWO CURB RAMPS SHALL NOT EXCEED 1:20. THE DEVELOPER, AS PART OF THE CURB RAMP INSTALLATION, SHALL CONSTRUCT THIS CONNECTING SIDEWALK.
11. STRIPING AND SIGNAGE NOT REQUIRED IN ALL INSTANCES. STOP BARS, IF REQUIRED, SHALL BE LOCATED 1.2 m (4') FROM CROSSWALK.
12. IF A MEDIAN EXTENDS INTO THE CROSSWALK AREA, AN OPENING SHALL BE PROVIDED IN THE MEDIAN THE SAME WIDTH AS THE CURB RAMP.
13. CURB INLETS SHALL NOT BE LOCATED WITHIN 3.0 m (10') OF A CURB RAMP.
14. GUTTER SHALL PROVIDE SMOOTH TRANSITION TO RAMPS.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 CURB RAMPS-FULL INTERSECTION	
ADOPTED 3/13/06	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-3 3 OF 3

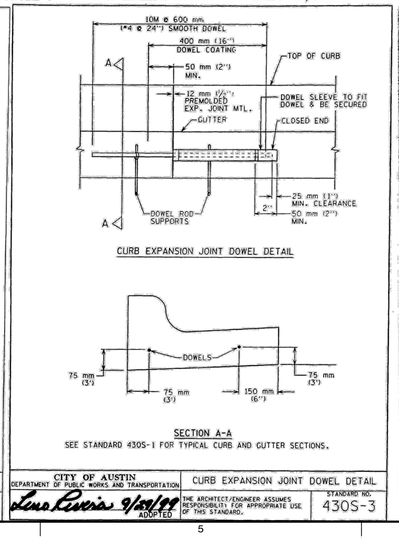
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	CURB AND GUTTER SECTION	
ADOPTED 9/29/22	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-1

7 ENLARGED TRASH ENCLOSURE PLAN

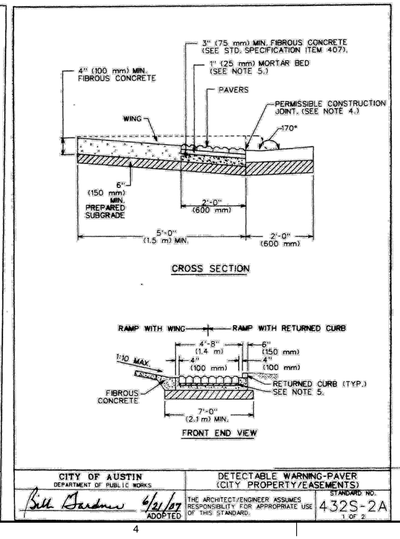
1/4" = 1'-0"



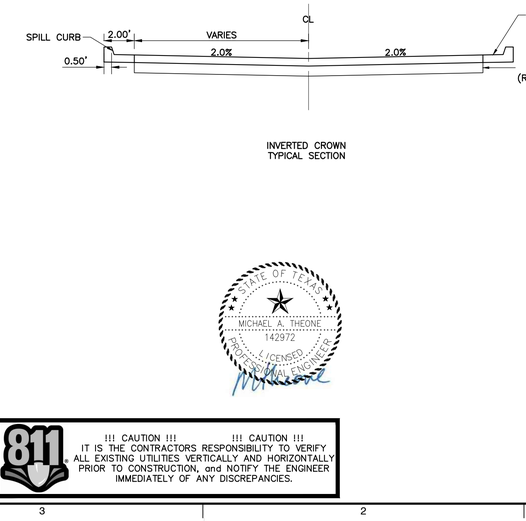
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	REINFORCED CURB AND GUTTER SECTION	
ADOPTED 1/1/10	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-2



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION	CURB EXPANSION JOINT DOWEL DETAIL	
ADOPTED 9/29/22	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-3



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	DETECTABLE WARNING-PAVER (CITY PROPERTY/EASEMENTS)	
ADOPTED 4/21/17	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-2A 1 OF 2



STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

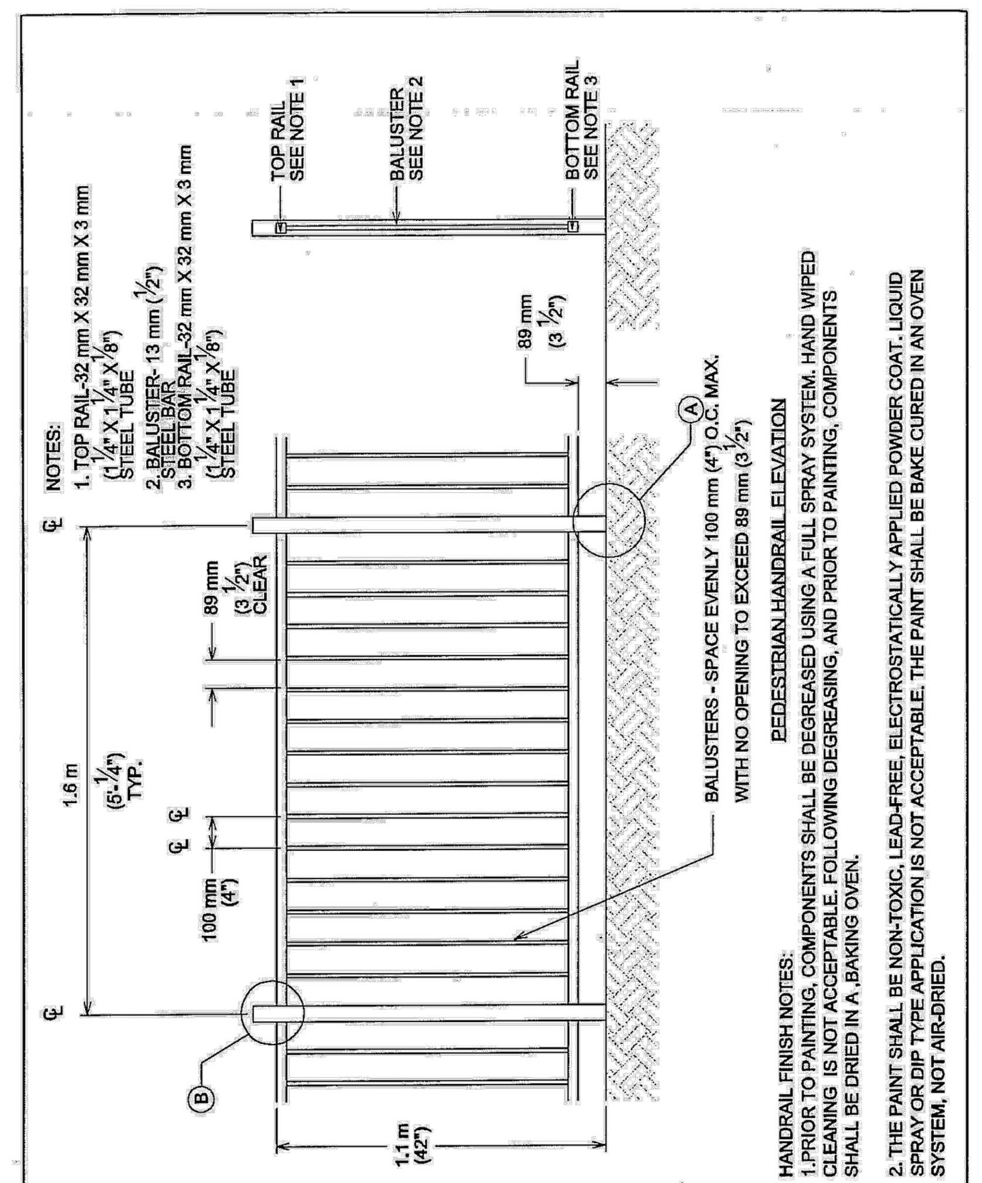
SITE DETAILS 1

DATE:	3/7/2024	DRAWN BY:	OAT
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MAT

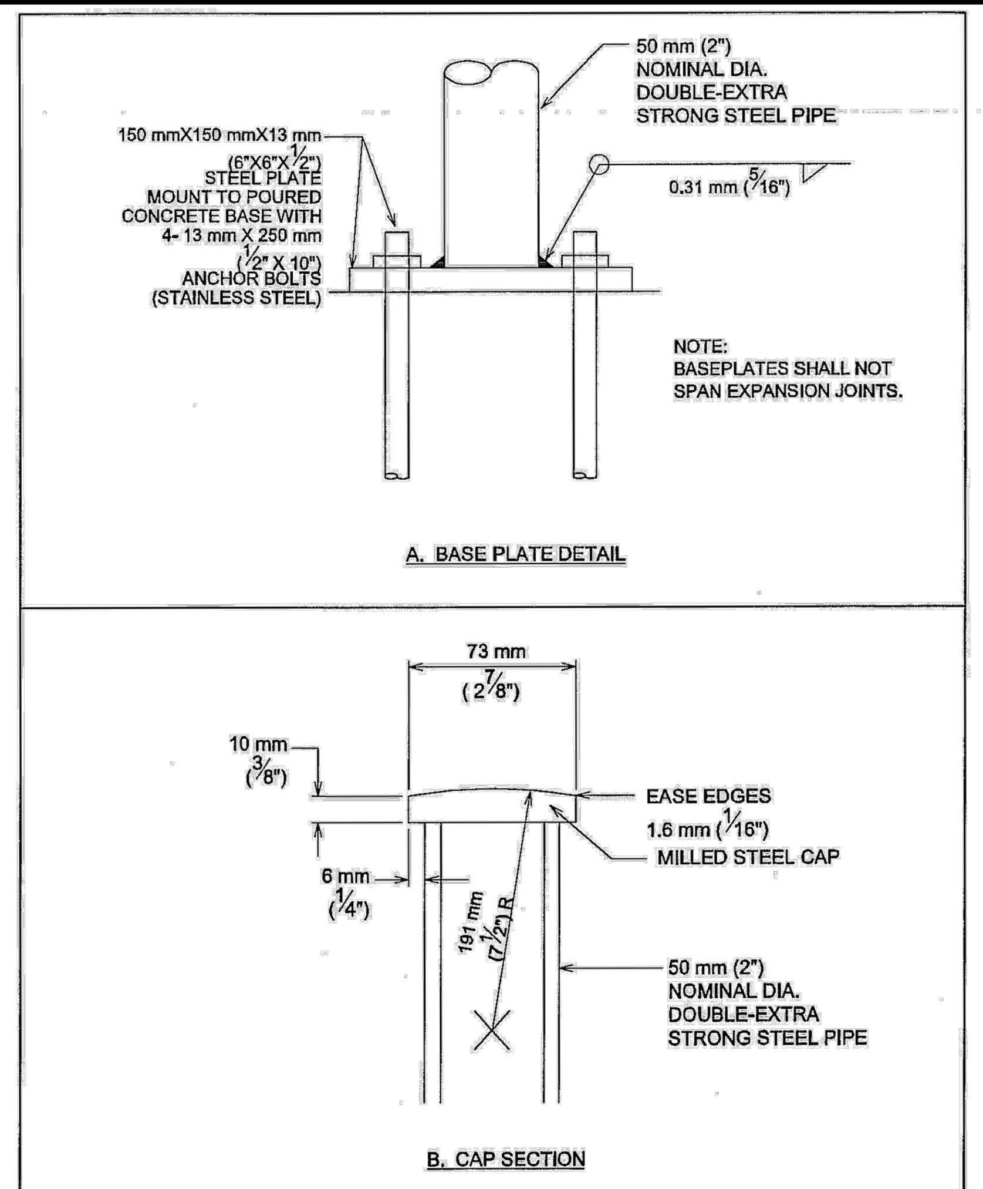
DRAWING NO.: 38
SHEET 38 OF 175

2023-23-SD

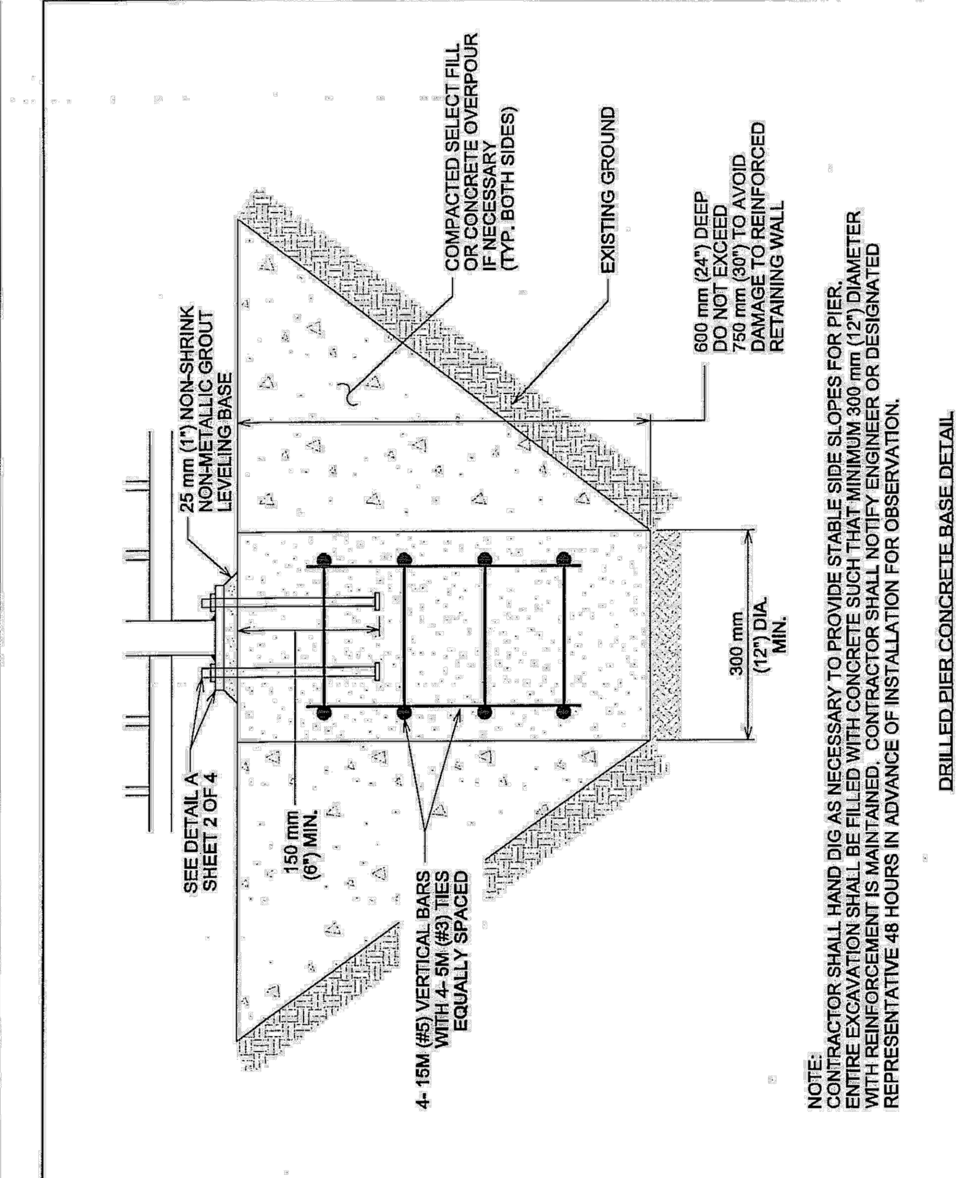
P:\330-000\331-715\-CADD\Dwg\CVD1\331715-CVD1-C200-SITE DETAILS.dwg[SITE DETAILS 1] LS:(4/29/2024 - olivo) - LP: 4/30/2024 12:09 PM



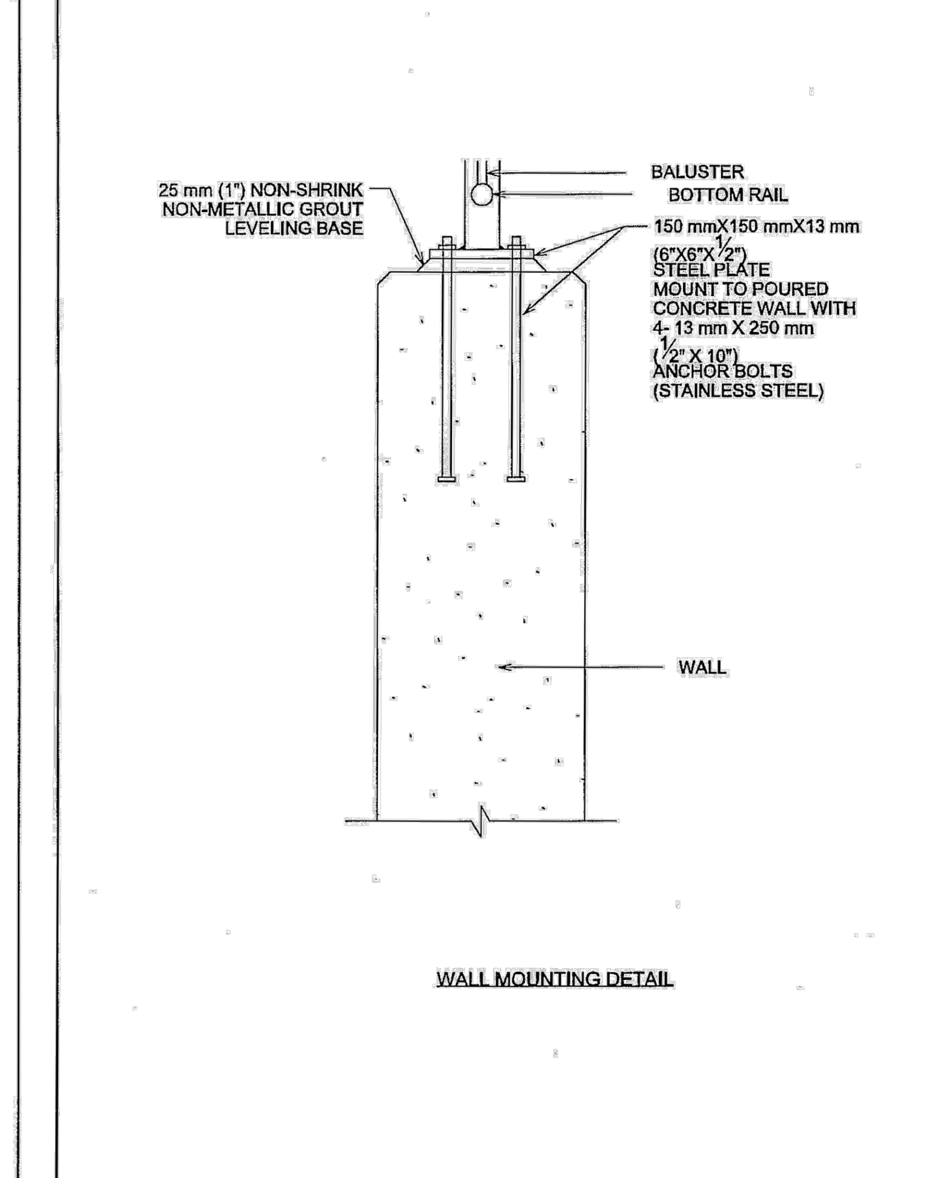
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	PEDESTRIAN HANDRAIL	
1/4/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 707S-1 1 OF 4



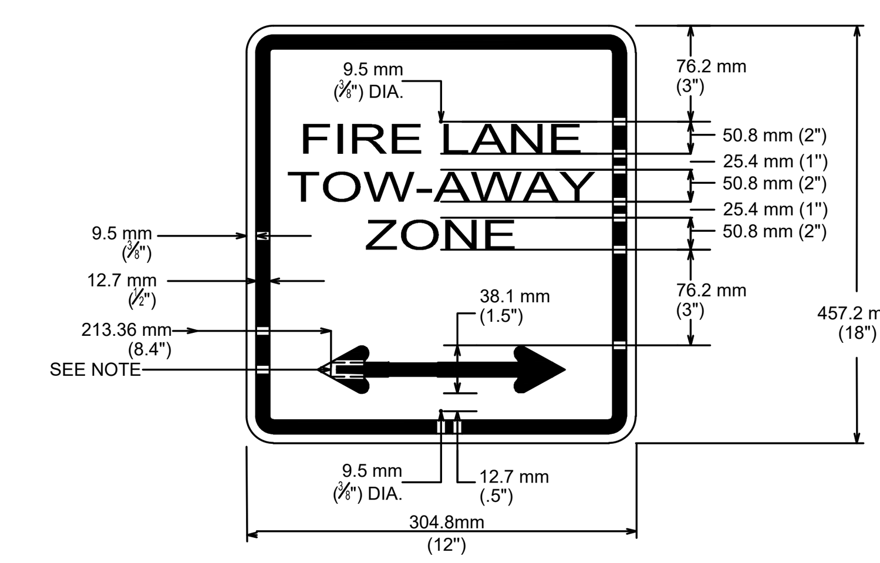
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	PEDESTRIAN HANDRAIL	
1/4/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 707S-1 2 OF 4



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	PEDESTRIAN HANDRAIL	
1/4/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 707S-1 3 OF 4



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	PEDESTRIAN HANDRAIL	
1/4/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 707S-1 4 OF 4



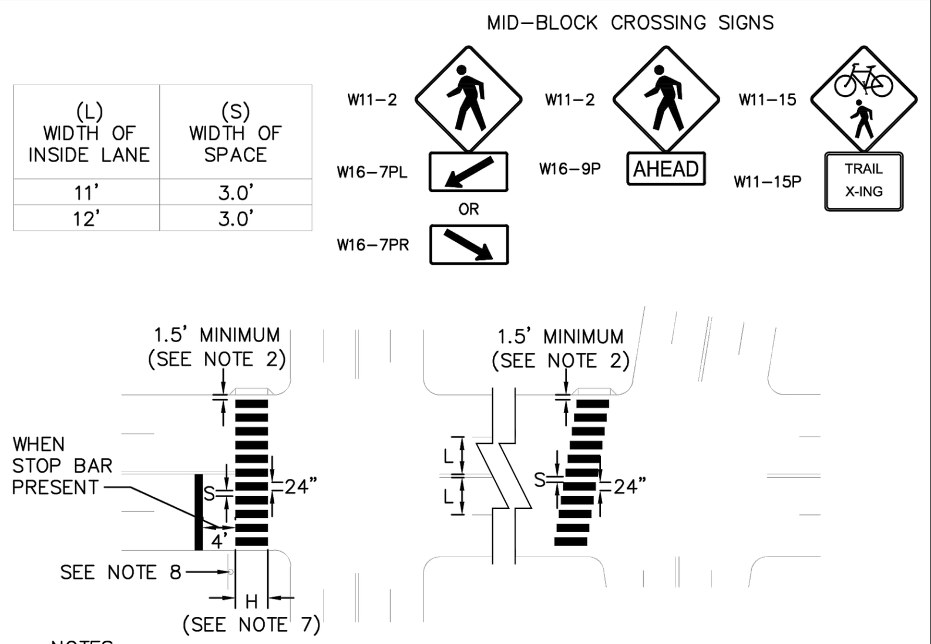
LETTERING, ARROW AND BORDER: RED TRANSPARENT
BACKGROUND - SILVER REFLECTIVE SHEETING

NOTE - ARROW MAY BE LEFT, RIGHT, OR DOUBLE

NOTE - SIGNS SHALL BE PERMANENTLY AFFIXED TO A STATIONARY POST AND THE BOTTOM OF THE SIGN SHALL BE 6'6" ABOVE FINISHED GRADE. SIGNS SHALL BE SPACED NOT MORE THAN 50 FEET APART

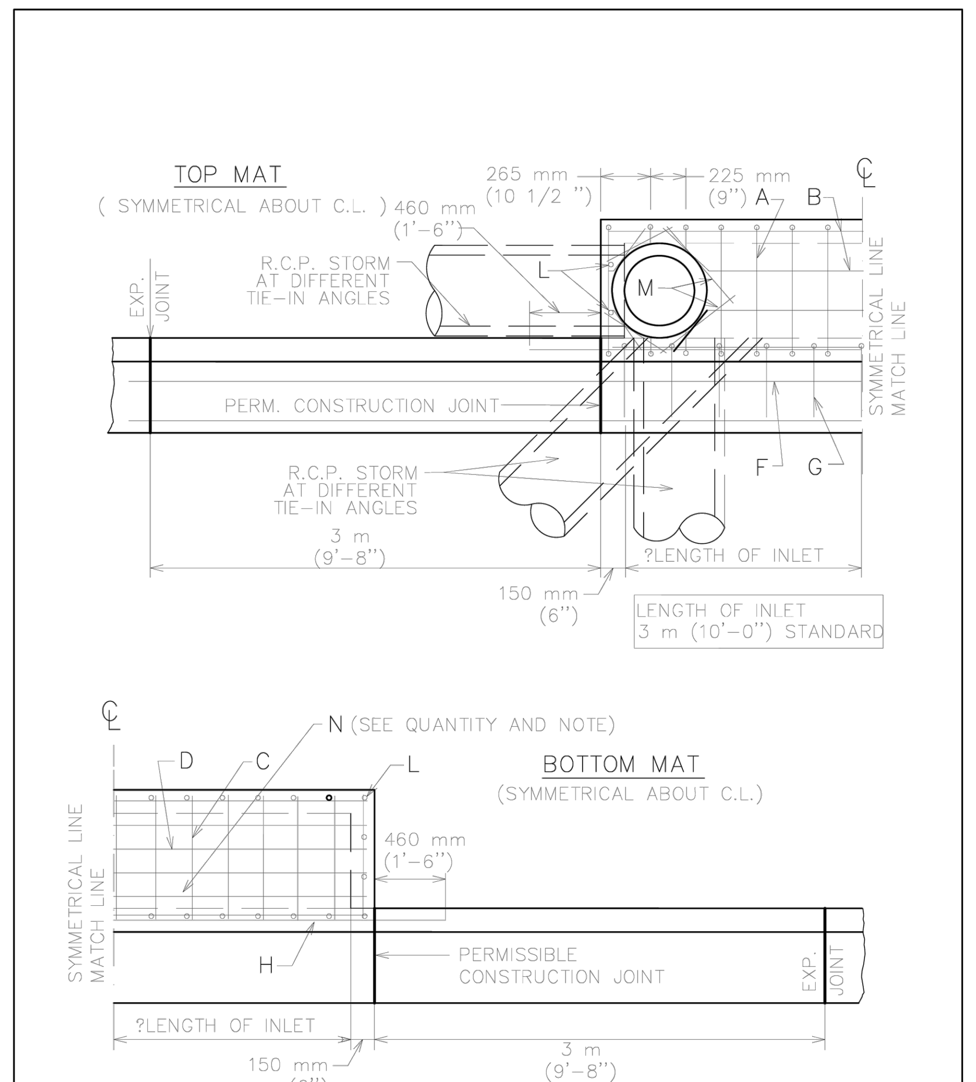
MID-BLOCK CROSSING SIGNS

(L) WIDTH OF INSIDE LANE	(S) WIDTH OF SPACE
11'	3.0'
12'	3.0'



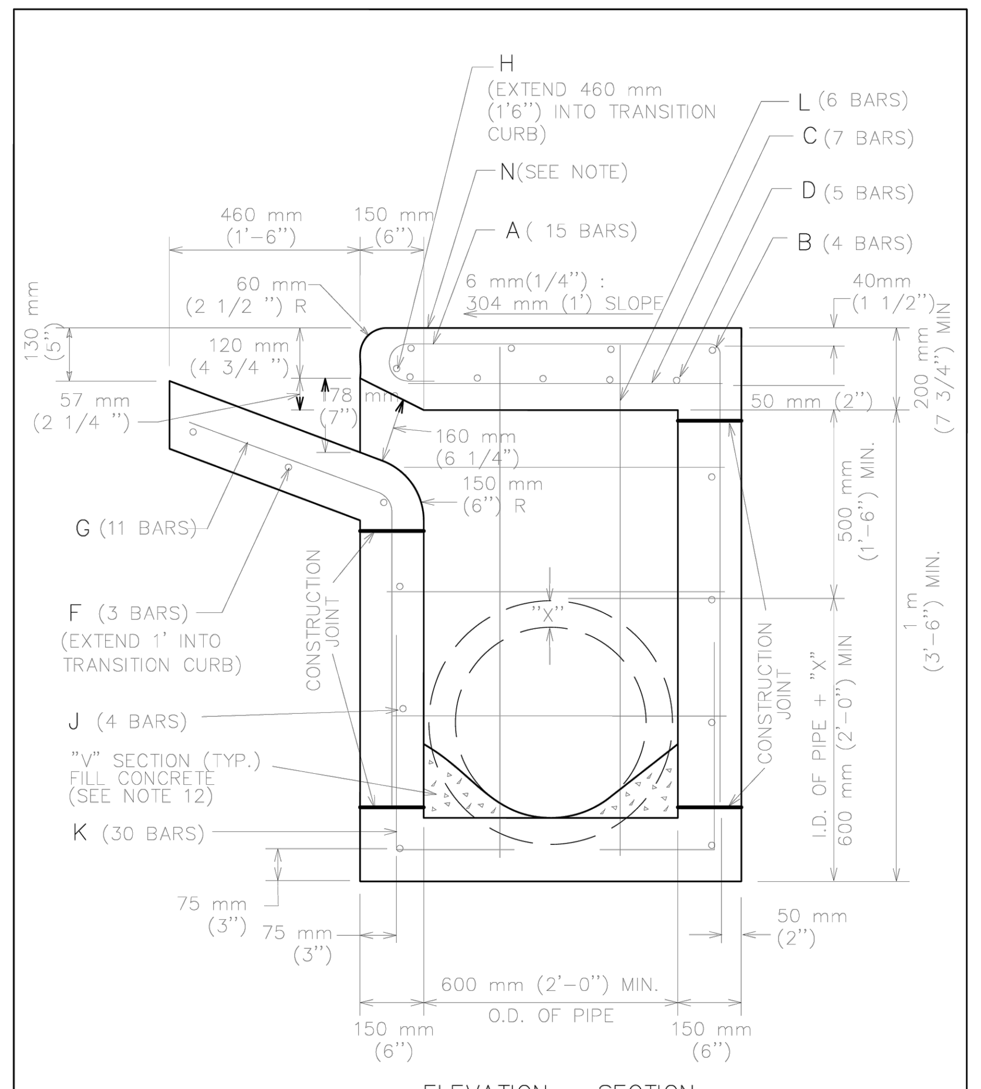
NOTES:
1. THERMOPLASTIC STRIPES TO BE CENTERED ON CENTERLINE AND LANE LINES.
2. A MINIMUM OF 1.5 FT. CLEAR DISTANCE SHALL BE LEFT ADJACENT TO THE CURB FACE. IF LAST PAINTED AREA FALLS INTO THIS DISTANCE IT MUST BE OMITTED.
3. FOR DIVIDED ROADWAYS, ADJUSTMENTS IN SPACING OF THE BLOCKS SHOULD BE MADE IN THE MEDIAN SO THAT THE BLOCKS ARE MAINTAINED IN THEIR PROPER LOCATION ACROSS THE TRAVELED PORTION OF THE ROADWAY.
4. AT SKEWED CROSSWALKS, THE BLOCKS ARE TO REMAIN PARALLEL TO THE LANE LINES AS SHOWN.
5. THE BLOCKS SHALL BE PLACED SO THAT THEY ARE NOT LOCATED IN THE WHEEL PATH OF THE VEHICLES.
6. THE BLOCKS SHALL BE A MINIMUM OF 10' LONG.
7. MAXIMUM WIDTH OF SPACE (S) SHALL BE 5'.
8. FOR MID-BLOCK CROSSINGS W11-2 WITH W16-7P OR W16-9P OR W11-15 WITH W11-15P SIGNS TO BE INSTALLED AT AND ON APPROACH EXCEPT WHERE STOP SIGNS ARE PROVIDED.

CEDAR PARK Construction Standards	CONTINENTAL CROSSWALK	REVISED MAY 2023 RD-01



NOTE: INSTALL ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER

CITY OF CEDAR PARK DEPARTMENT OF PUBLIC WORKS	TYPICAL DETAILS FOR CURB INLET	
12/03/09 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1 OF 4

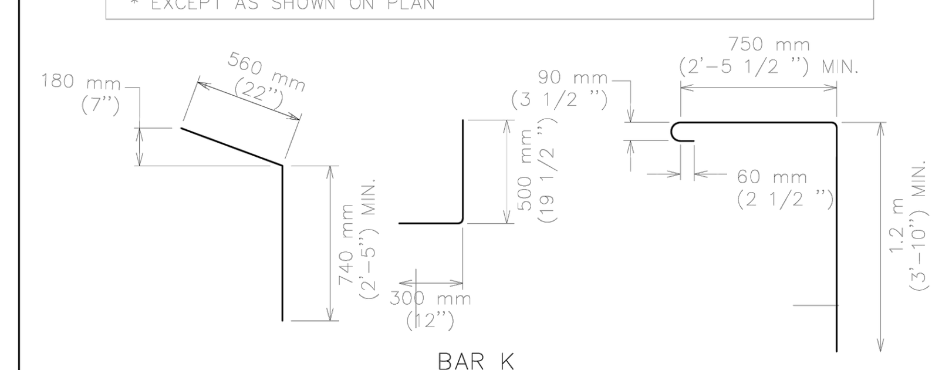


NOTE: INSTALL ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER

CITY OF CEDAR PARK DEPARTMENT OF PUBLIC WORKS	TYPICAL DETAILS FOR CURB INLET	
12/03/09 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 2 OF 4

TABLE OF QUANTITIES
FOR 18" OUTLET PIPE
REINFORCING STEEL QUANTITIES

BARS	SIZE	SPACING	NUMBER	LENGTH	WEIGHT
A	4	230mm (9")*	15	2 m (7'-0")	73
B	4	250 mm (10")	4	3.25 m (10'-8")	29
C	4	460 mm (18")	7	760 mm (2'-6")	12
D	6	150 mm (6")	5	3.25 m (10'-8")	80
E	4	300 mm (12")	6	760 mm (2'-6")	10
F	4	250 mm (10")	3	4 m (13'-0")	35
G	4	300 mm (12")	11	1.25 m (4'-3")	31
H	6	–	1	4.25 m (14'-0")	20
J	4	300 mm (12")	7	3.25 m (10'-8")	50
K	4	230 mm (9")*	30	800 mm (2'-7 1/2")	52
L	4	300 mm (12")*	6	1.3 m (4'-4")	17
M	4	–	4	500 mm (1'-8") AVG	4
N	ALMETEK 4" DISC "NO DUMPING DRAINS TO WATERWAY" MARKER MODEL SD-SP, SQUARE HOLE OPTION, SYMBOL: FISH, COLOR: BLUE. USE ALMETEK SPECS FOR THEFT RESISTANT RIVET SURFACE MOUNT W/ ADHESIVE FOR DRY CONCRETE INSTALLATION.				
TOTAL STEEL, LB.					413
TOTAL CONCRETE, C.Y.					4.06
* EXCEPT AS SHOWN ON PLAN					



CITY OF CEDAR PARK DEPARTMENT OF PUBLIC WORKS	TYPICAL DETAILS FOR CURB INLET	
12/03/09 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 3 OF 4

NOTES:
1. ALL CONCRETE SHALL BE CLASS "A"
2. ALL REINFORCING STEEL SHALL BE GRADE 60
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. VERTICAL STEEL MAY BE SPLICED (380 mm or 15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
6. QUANTITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S INFORMATION ONLY. PAYMENT WILL BE MADE FOR EACH INLET OF THE TYPE SPECIFIED, COMPLETE IN PLACE INCLUDING MANHOLE FRAME AND OVER.
7. CHAMFER ALL EXPOSED EDGES 20 mm (3/4 ").
8. MANHOLE FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 503S-1.
9. THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR THE CONSTRUCTION OF INLETS, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION.
10. ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE. WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES THE WALL THICKNESS SHALL NOT EXCEED 10 INCHES.
11. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
12. INVERT OF INLET SHALL BE SLOPED 1:20 WITH FILL CONCRETE, SHAPED AS "V" SECTION
13. NO SPLICING OF REINFORCING STEEL SHALL BE PERMITTED UNLESS OTHERWISE NOTED ON THE PLANS OR PERMITTED IN WRITING BY THE ENGINEER.
14. INSTALL ALMETEK 4" DISC "NO DUMPING DRAINS TO WATER" MARKER, MODEL SD-SP, SQUARE OPTION, SYMBOL: FISH, COLOR: BLUE. USE ALMETEK INSTALL SPECIFICATIONS FOR THEFT RESISTANT RIVET SURFACE MOUNT W/ADHESIVE FOR DRY CONCRETE INSTALL.

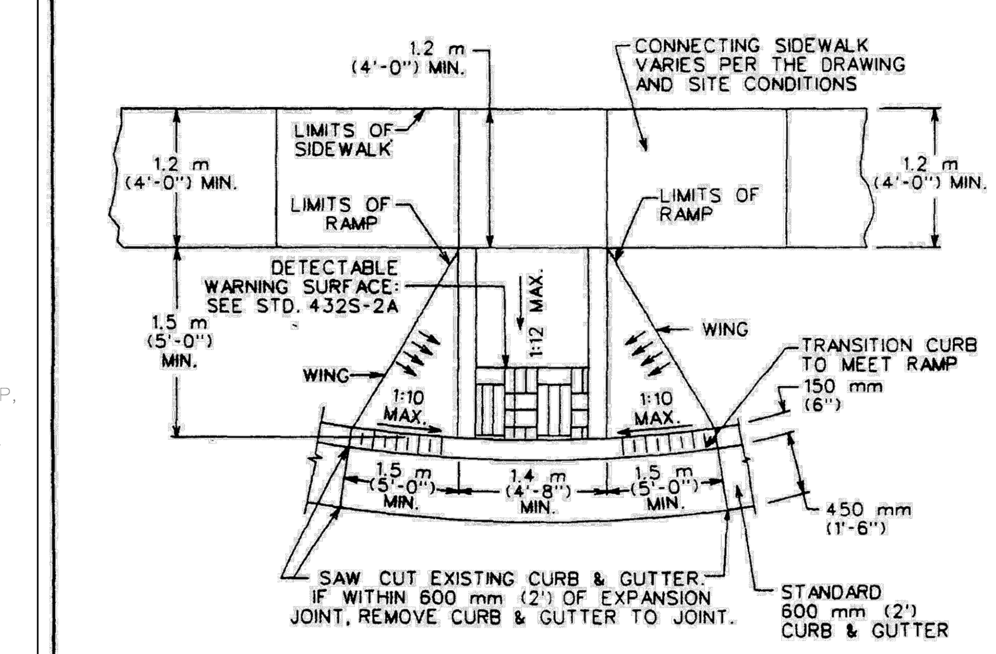
REFERENCES:

FOR EXPANSION JOINT DOWEL AND DOWEL LOCATION DETAILS SEE STD. 430S-3, "CURB EXPANSION JOINT DOWEL DETAIL".

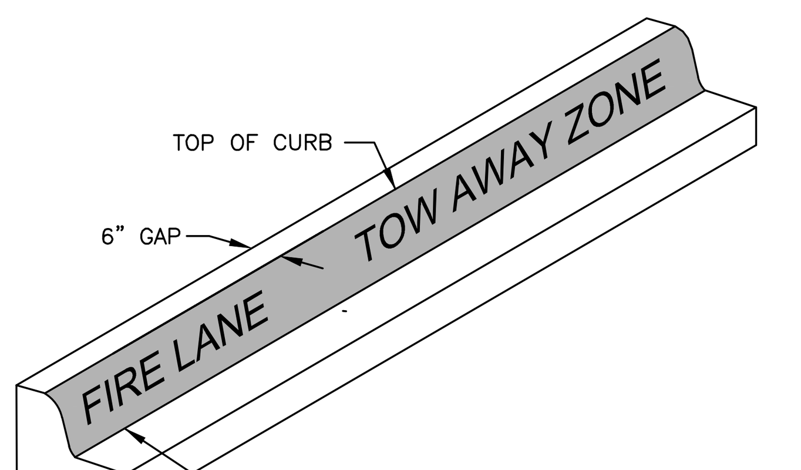
FOR 18" MANHOLE FRAME AND COVER DETAILS SEE STD. 503S-1, "18" COVER AND FRAME".

ALMETEK "NO DUMPING DRAINS TO WATERWAY" MARKERS
WWW.ALMETEK.COM

CITY OF CEDAR PARK DEPARTMENT OF PUBLIC WORKS	TYPICAL DETAILS FOR CURB INLET	
12/03/09 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 4 OF 4



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE 1 SIDEWALK CURB RAMP	
9/14/05 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-5



FIRE LANE STRIPING TO BE 6" WIDE RED STRIP WITH WHITE PAINT WITH "FIRE LANE TOW AWAY ZONE" IN 4" TALL WHITE LETTERS. WORDING MAY NOT BE SPACED GREATER THAN 35' APART. STRIPING TO BE PAINTED ON THE FACE OF CURB WHEN PRESENT AND PAINTED FLAT ON THE PARKING SURFACE WHEN IT IS NOT.

1 OF 1

FIRE LANE STRIPING

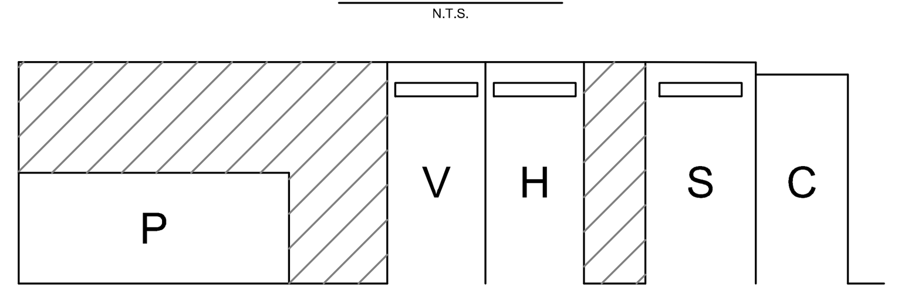
TABLE 9-1 PARKING LOT CRITERIA

A Angle of Parking (degrees)	B Width of Stall	C Depth of Stall 90° to Aisle	D Width of Aisle One Way	Two Way	E Width of Stall Parallel to Aisle One Way	Two Way	F Module Width
Standard Parking Spaces							
30	8'6"	16'	13'	—	17'	45'	—
30	9'	16'	12'	—	18'	44'	—
45	8'6"	17'	16'	—	12'	50'	—
45	9'	17'	14'	—	12'9"	48'	—
60	8'6"	18'6"	17'	—	9'10"	54'	—
60	9'	18'6"	16'	—	10'5"	53'	—
75	8'6"	18'6"	21'	—	8'10"	58'	—
75	9'	18'6"	18'	—	9'4"	55'	—
90	8'6"	17'6"	—	27'	8'6"	—	62'
90	9'	17'6"	—	25'	9'	—	60'
Compact Parking Spaces							
45	7'6"	15'11"	13'	18'	10'7"	45'	50'
60	7'6"	16'8"	18'	—	8'8"	52'	—
75	7'6"	16'5"	18'	—	7'10"	51'	—
90	7'6"	15'	—	18'	7'6"	—	48'
Parallel Parking Spaces							
0	8'6"	8'6"					
(Width)	12'6"	25'	22'				
(Length)	30'	42'					

TABLE 9-2 ALTERNATIVE PARKING LOT AND GARAGE CRITERIA

A Angle of Parking (degrees)	B Width of Stall	C Depth of Stall 90° to Aisle	D Width of Aisle One Way	Two Way	E Width of Stall Parallel to Aisle One Way	Two Way	F Module Width
Standard Parking Spaces							
30	8'6"	15'6"	11'	—	17'	42'	—
30	9'	15'6"	10'	—	18'	41'	—
45	8'6"	16'6"	13'	—	12'	46'	—
45	9'	16'6"	12'	—	12'9"	45'	—
60	8'6"	18'	14'6"	—	9'10"	50'6"	—
60	9'	18'	13'	—	10'5"	49'	—
75	8'6"	18'	18'	—	8'10"	54'	—
75	9'	18'	17'	—	9'4"	53'	—
90	8'6"	17'	—	24'	8'6"	—	58'
90	9'	17'	—	23'	9'	—	57'

PARKING TABLES
N.T.S.

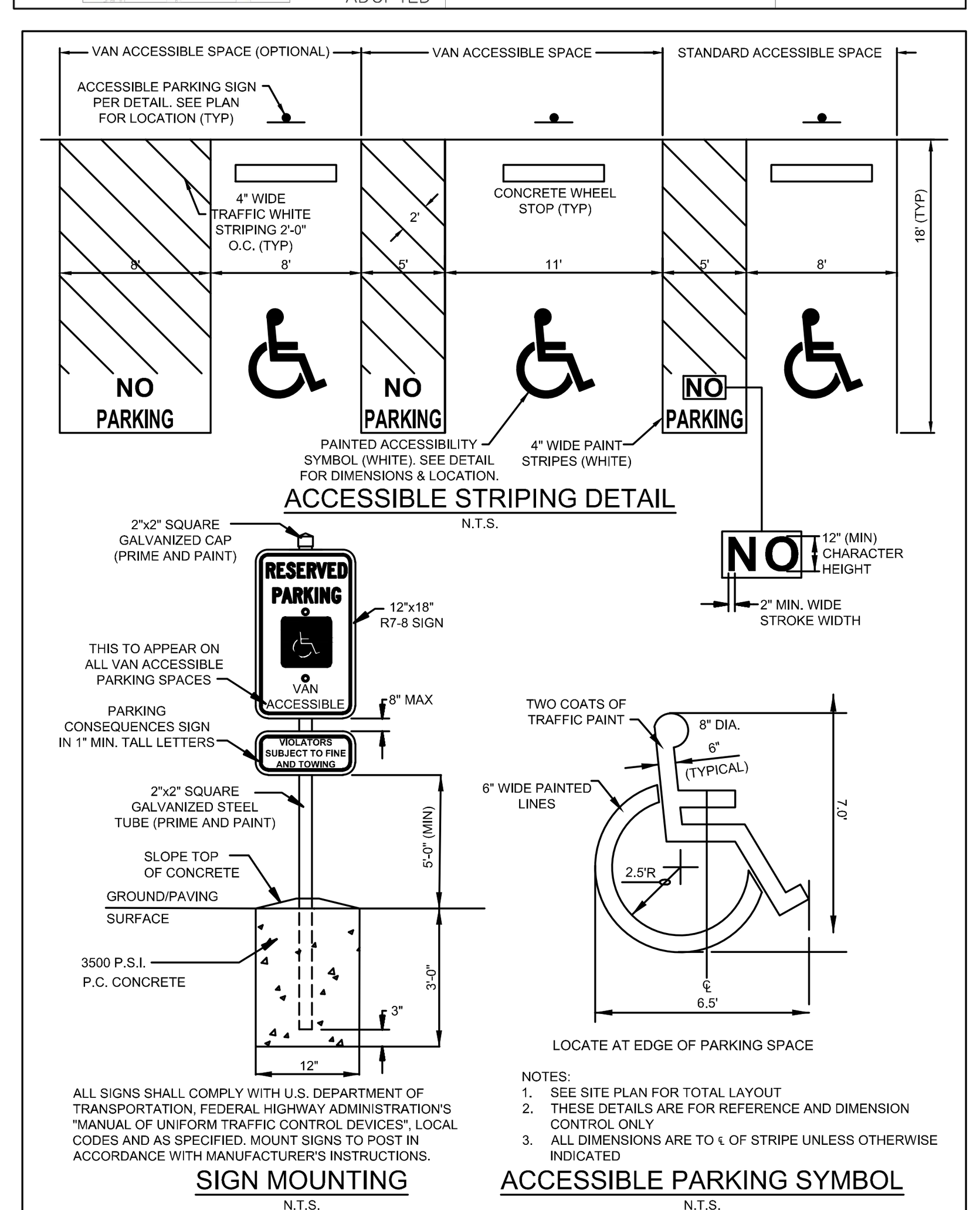


P - PARALLEL SPACE PER TCM TABLE 9.1
C - COMPACT SPACE PER TCM TABLE 9.1
S - STANDARD SPACE PER TCM TABLE 9.2
HC - HANDICAP SPACE PER TEXAS ACCESSIBILITY STANDARDS
V - VAN ACCESSIBLE SPACE PER TEXAS ACCESSIBILITY STANDARDS

PARKING DESIGNATION
N.T.S.

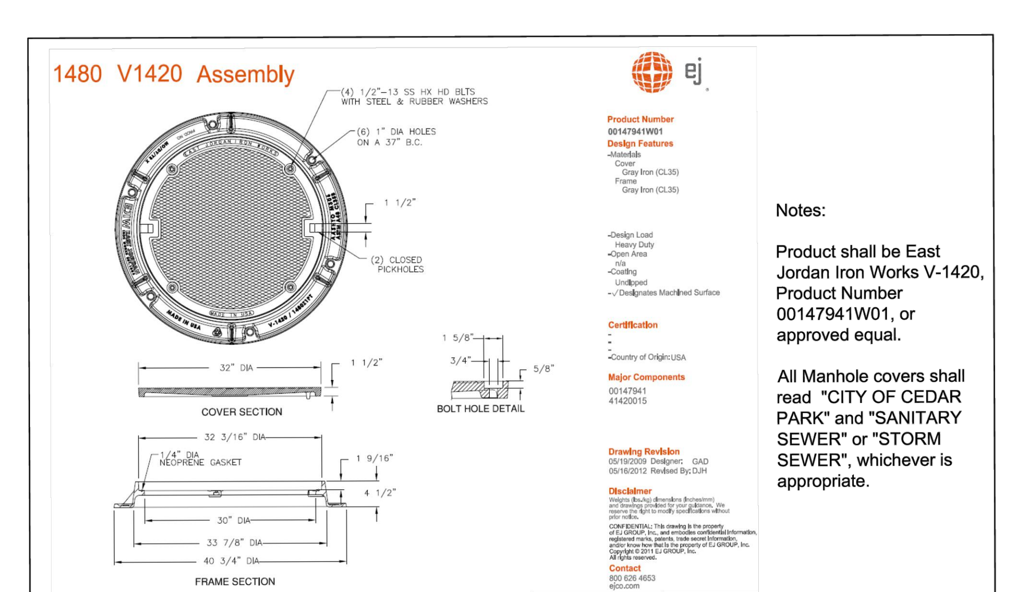
1 OF 1

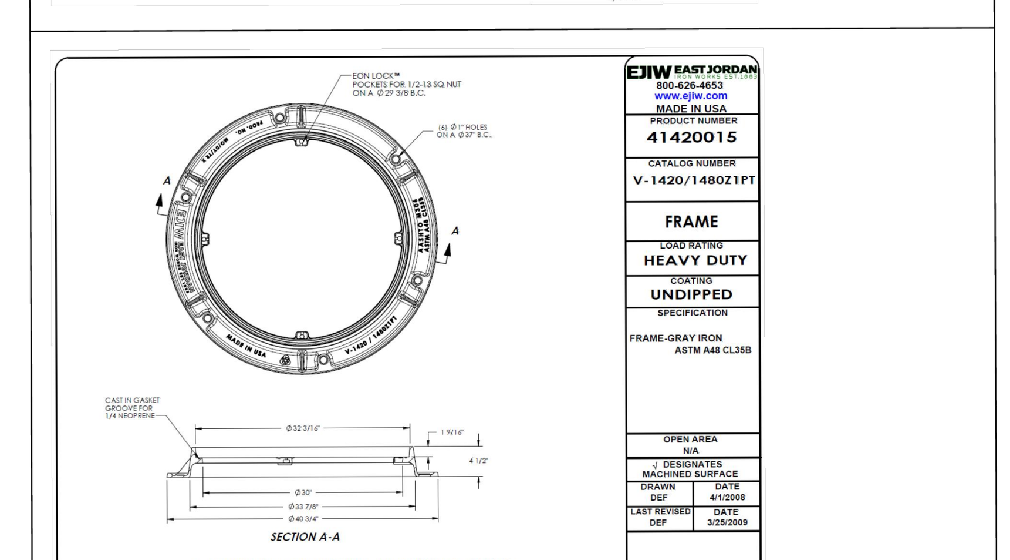
PARKING DETAIL



1 OF 1

HANDICAP STRIPING & SIGNAGE DETAIL





CITY OF CEDAR PARK ENGINEERING DEPARTMENT	MANHOLE RING AND COVER OUTSIDE OF PAVED AREAS	
DARWIN MARCHELL 09/02/16 APPROVED DATE	ADOPTED: 09/02/2016 SCALE: N.T.S. INITIAL:	1 OF 1

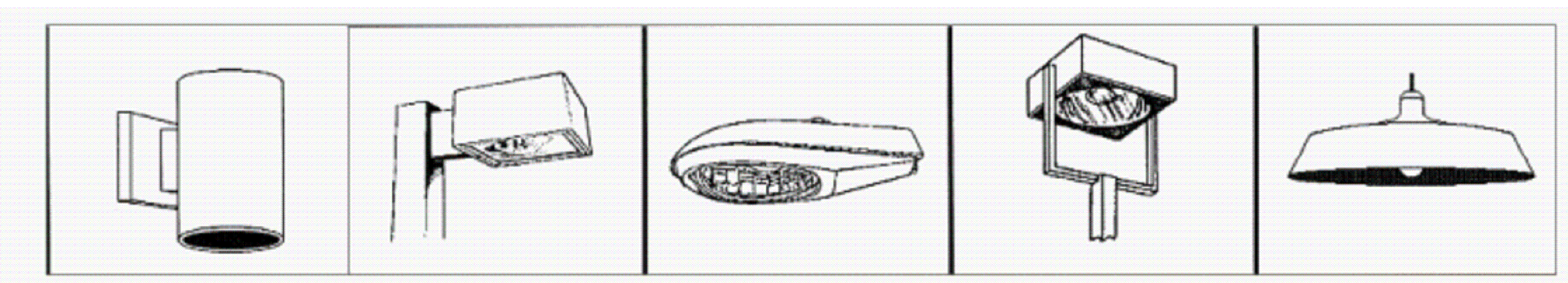


Figure 34:
Examples of fully-shielded light fixtures.

!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

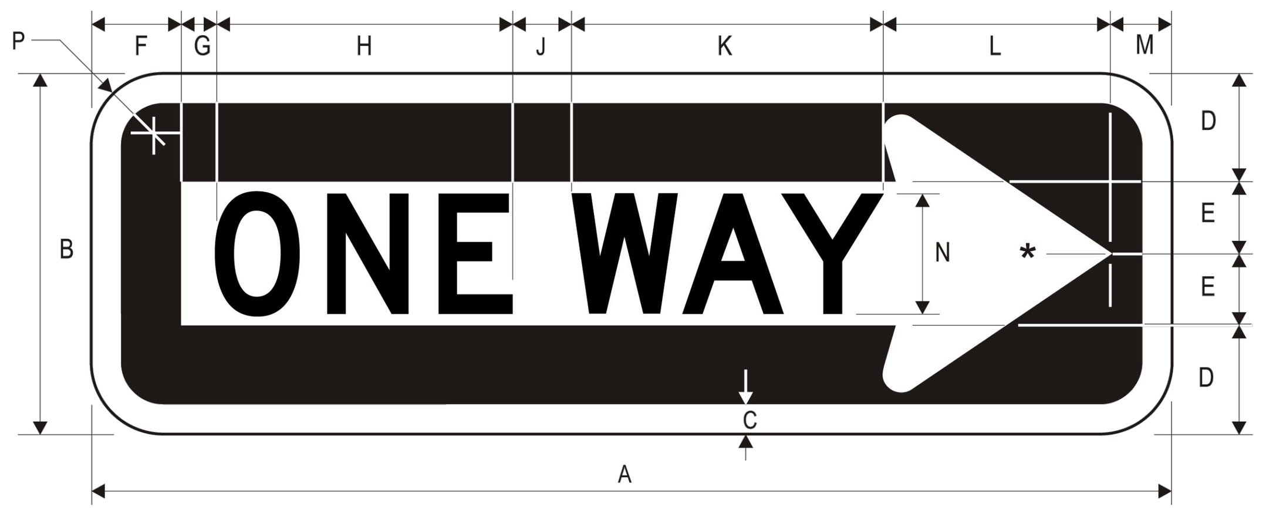
SITE DETAILS 2

DATE: 3/7/2024	DRAWN BY: OAT
DWG SCALE: NTS	CHECKED BY: SRB
PROJECT NO: 331-715	
APPROVED BY: MAT	

DRAWING NO.: 39
SHEET 39 OF 175

2023-23-SD

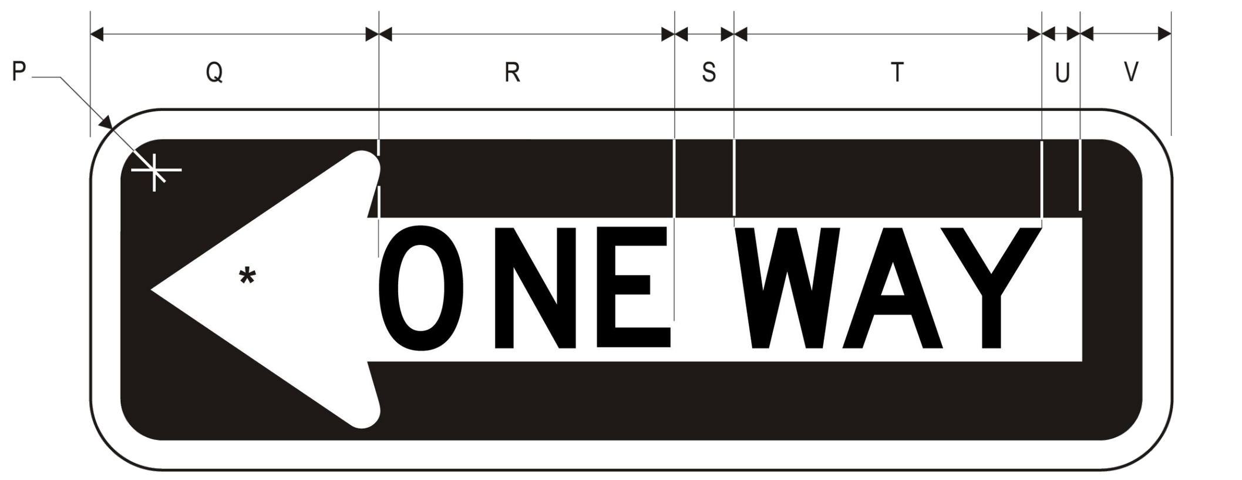
LP: 4/30/2024 12:09 PM



R6-1R
ONE WAY (Right)

A	B	C	D	E	F	G	H	J	K	L	M
36	12	.5	3.375	2.625	3	1.25	9.125	2	9.625	9	2
54	18	1	5.5	3.5	5	4	12.309	2.929	12.762	13	4

N	P	Q	R	S	T	U	V
4 D	1.5	11	9.125	2	9.625	1.25	3
5 D	1.875	17	12.309	2.929	12.762	4	5

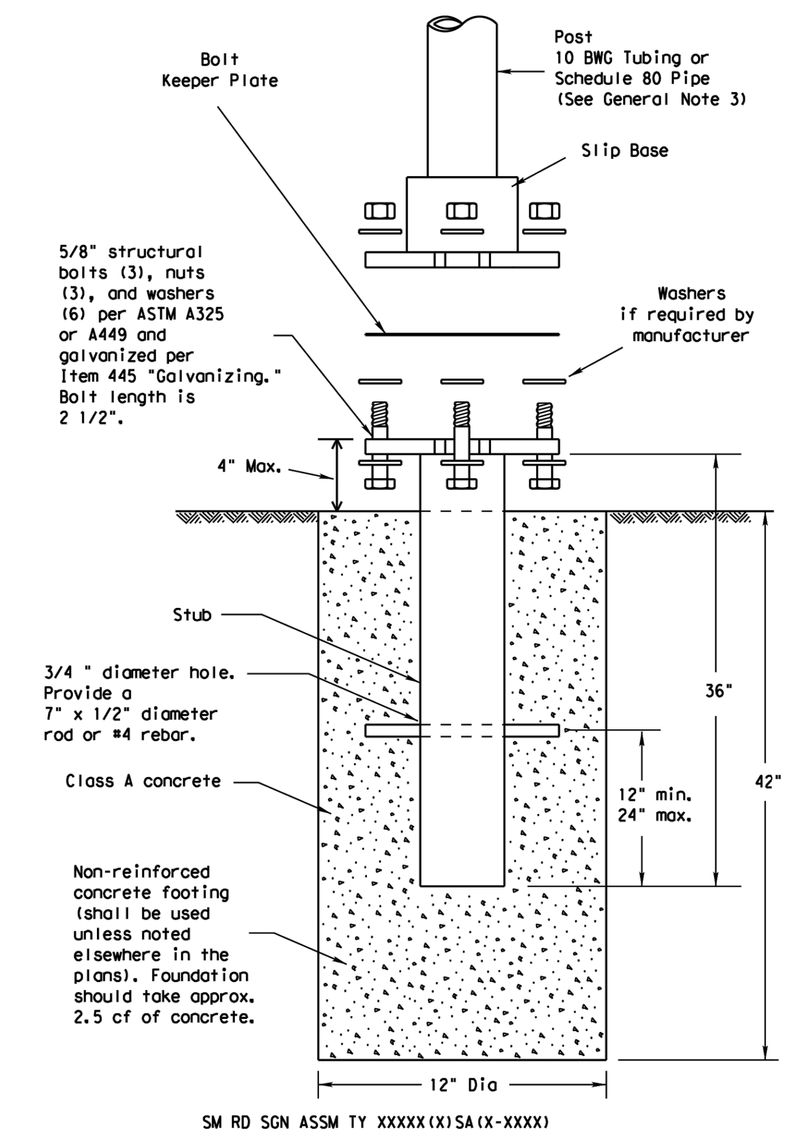


R6-1L
ONE WAY (Left)

* See Symbol section
for arrow design

COLORS: ARROW - WHITE
LEGEND & BACKGROUND - BLACK

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)

NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. http://www.txdot.gov/business/producer_list.htm The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

1. Slip base shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
2. Material used as post with this system shall conform to the following specifications:
   10 BWG Tubing (2.875" outside diameter)
   - 0.134" nominal wall thickness
   - Seamless or electric-resistance welded steel tubing or pipe
   - Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
   - Other steels may be used if they meet the following:
     - 55,000 PSI minimum yield strength
     - 70,000 PSI minimum tensile strength
     - 20% minimum elongation in 2"
   - Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
   - Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
   - Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.

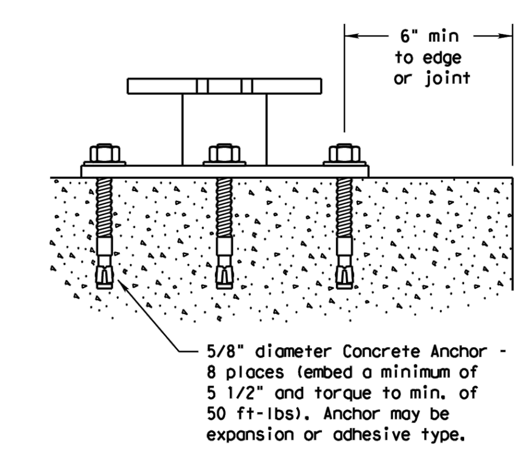
   Schedule 80 Pipe (2.875" outside diameter)
   - 0.276" nominal wall thickness
   - Steel tubing per ASTM A500 Gr C
   - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
     - 46,000 PSI minimum yield strength
     - 62,000 PSI minimum tensile strength
     - 21% minimum elongation in 2"
   - Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
   - Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
   - Galvanization per ASTM A123
3. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: http://www.txdot.gov/publications/traffic.htm
4. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

Foundation
1. Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
3. Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground.
4. Plumb the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
5. The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support
1. Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the travelway. The cut shall be plumb and straight.
2. Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.

CONCRETE ANCHOR



SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-1)-08

© TxDOT July 2002	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
9-08 REVISIONS	CONT	SECT	JOB	HIGHWAY
	DIST	COUNTY		SHEET NO.

26B

!!! CAUTION !!! !!! CAUTION !!!
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REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

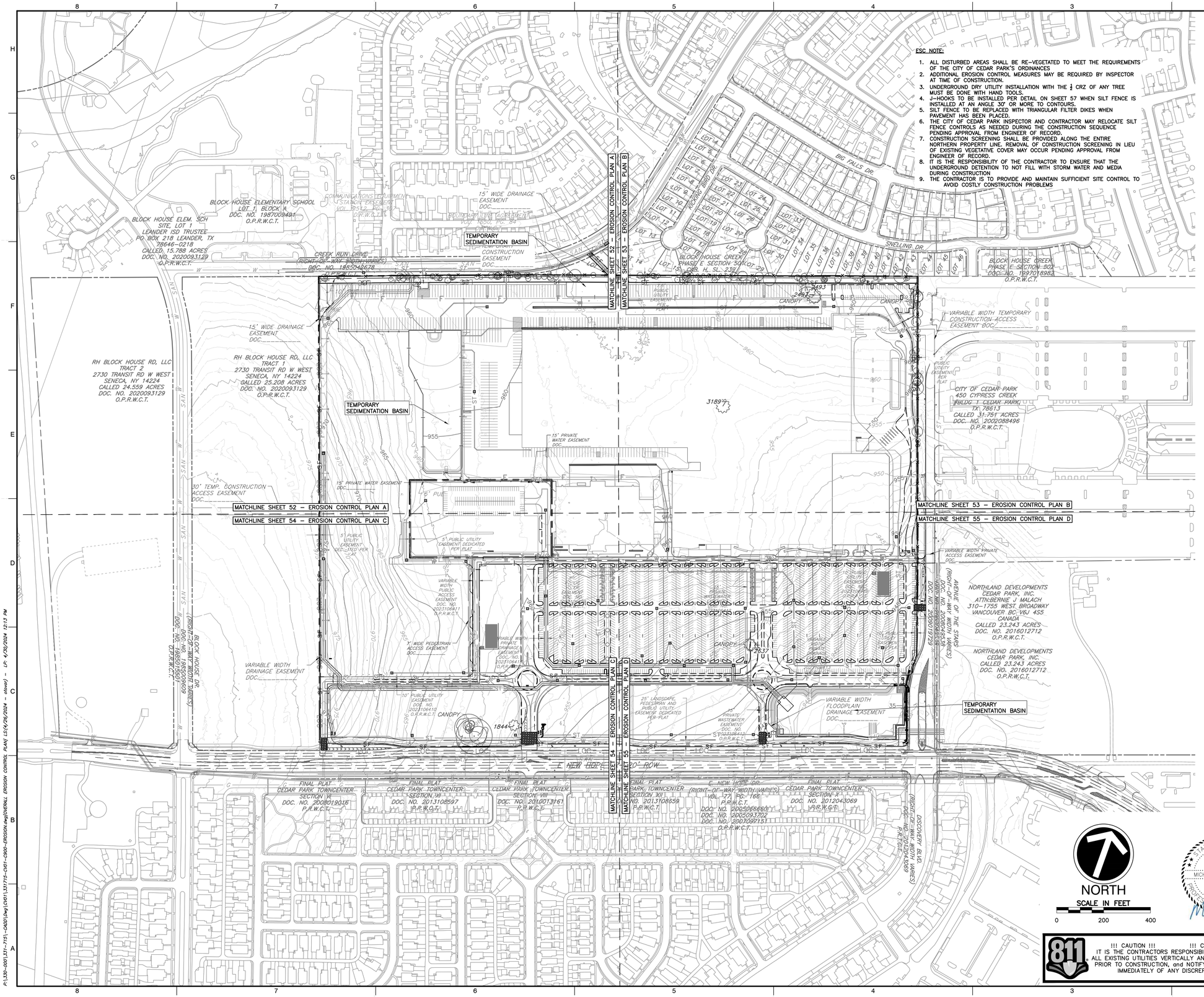
SITE DETAILS 3

DATE:	3/7/2024	DRAWN BY:	OAT
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: **40**
SHEET 40 OF 175

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

2023-23-SD



A B
C D

SHEET INDEX

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
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- PROPOSED TREE PROTECTION

REVISION RECORD		
NO	DATE	DESCRIPTION

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Texas Registered Engineering Firm F-08
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

OVERALL EROSION CONTROL PLAN

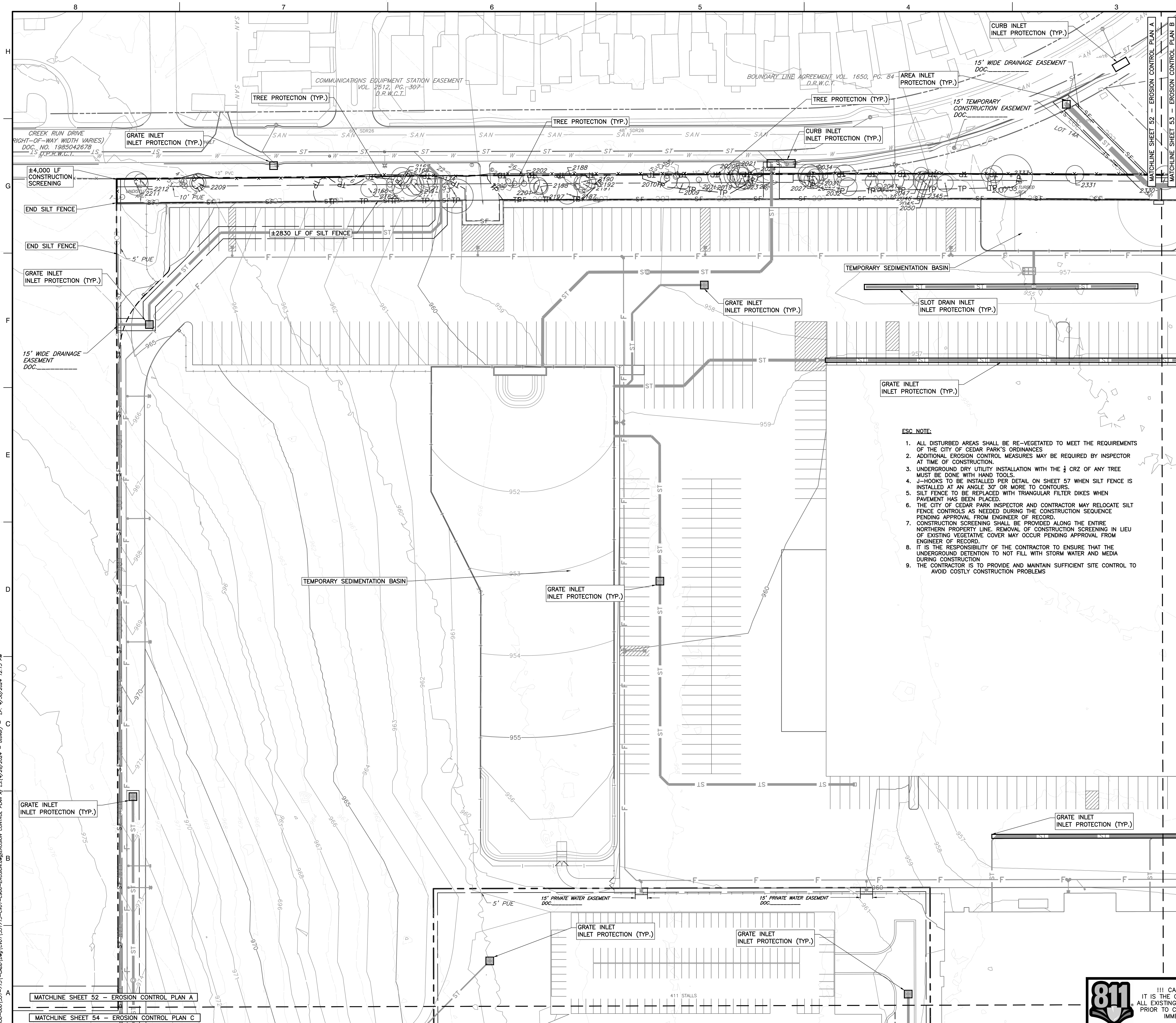
DRAWN BY:	QU
CHECKED BY:	SRB
DATE:	4/25/2024
DWG SCALE:	1" = 200'
PROJECT NO:	331-715
APPROVED BY:	MAT

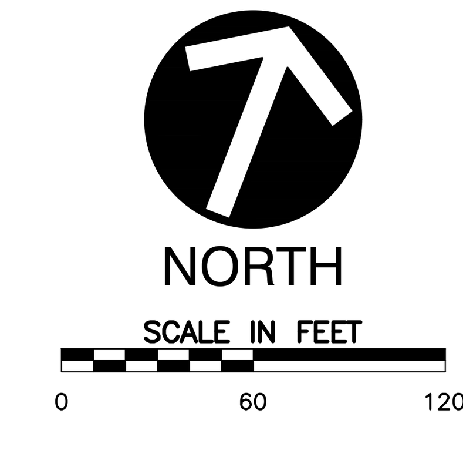
DRAWING NO.: 51

SHEET 51 OF 175

2023-23-SD

P:\330-2001\331-715\-0401\Dwg\CVD\331715-CVD1-C900-EROSION.dwg[OVERALL EROSION CONTROL PLAN] LS\4/26/2024 - elowe() - LP\ 4/30/2024 12:13 PM





ESC NOTE:

1. ALL DISTURBED AREAS SHALL BE RE–VEGETATED TO MEET THE REQUIREMENTS OF THE CITY OF CEDAR PARK'S ORDINANCES
2. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY INSPECTOR AT TIME OF CONSTRUCTION.
3. UNDERGROUND DRY UTILITY INSTALLATION WITH THE ½ CRZ OF ANY TREE MUST BE DONE WITH HAND TOOLS.
4. J–HOOKS TO BE INSTALLED PER DETAIL ON SHEET 57 WHEN SILT FENCE IS INSTALLED AT AN ANGLE 30° OR MORE TO CONTOURS.
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6. THE CITY OF CEDAR PARK INSPECTOR AND CONTRACTOR MAY RELOCATE SILT FENCE CONTROLS AS NEEDED DURING THE CONSTRUCTION SEQUENCE PENDING APPROVAL FROM ENGINEER OF RECORD.
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LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- EXISTING INDEX (MAJOR) CONTOUR
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811

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

REVISION RECORD	
NO	DATE	DESCRIPTION

Texas Registered Engineering Firm F-38
Civil & Environmental Consultants, Inc.
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
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www.cecinc.com

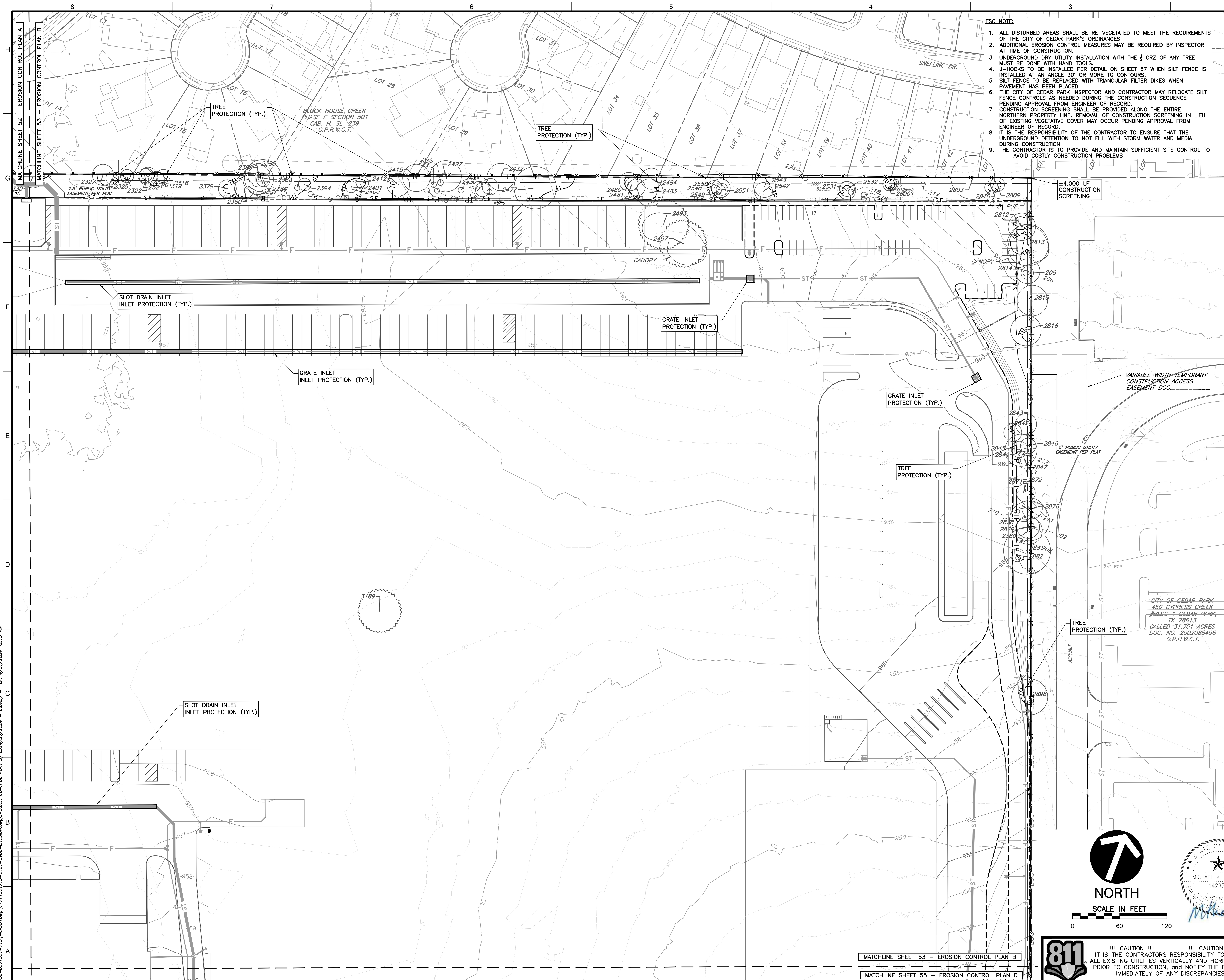
NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

EROSION CONTROL PLAN A

DATE:	4/25/2024	DRAWN BY:	QU
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:			MAT

DRAWING NO.: 52
SHEET 52 OF 175

2023-23-SD



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7. CONSTRUCTION SCREENING SHALL BE PROVIDED ALONG THE ENTIRE NORTHERN PROPERTY LINE. REMOVAL OF CONSTRUCTION SCREENING IN LIEU OF EXISTING VEGETATIVE COVER MAY OCCUR PENDING APPROVAL FROM ENGINEER OF RECORD.
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STATE OF TEXAS — MICHAEL A. THEONE — 142972 — LICENSED PROFESSIONAL ENGINEER

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

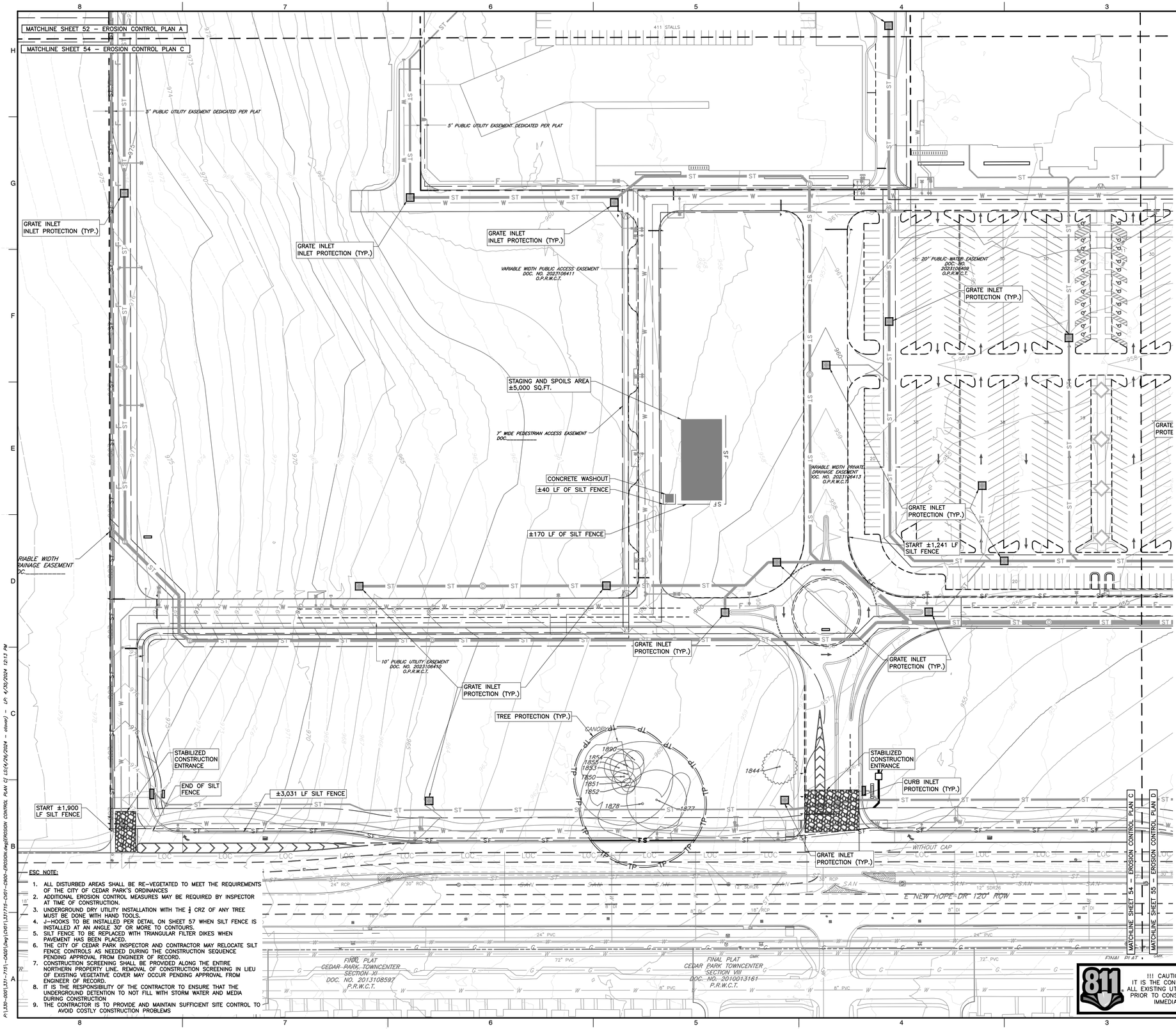
EROSION CONTROL PLAN B

DATE:	4/25/2024	DRAWN BY:	QU
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:			MAT

DRAWING NO.: 53

SHEET 53 OF 175

2023-23-SD



NORTH

SCALE IN FEET

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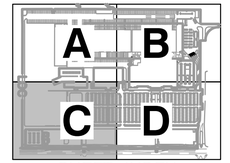

SHEET INDEX

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- ST EXISTING STORM PIPE
- W EXISTING WATER LINE
- SAN EXISTING SANITARY SEWER LINE
- G EXISTING GAS LINE
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- E EXISTING ELECTRIC LINE
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ESC NOTE:

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STATE OF TEXAS
MICHAEL A. THEONE
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LICENSED
PROFESSIONAL ENGINEER

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750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

EROSION CONTROL PLAN C

DATE:	4/25/2024
DWG SCALE:	1" = 60'
PROJECT NO:	331-715
DRAWN BY:	QU
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 54

SHEET 54 OF 175

2023-23-SD

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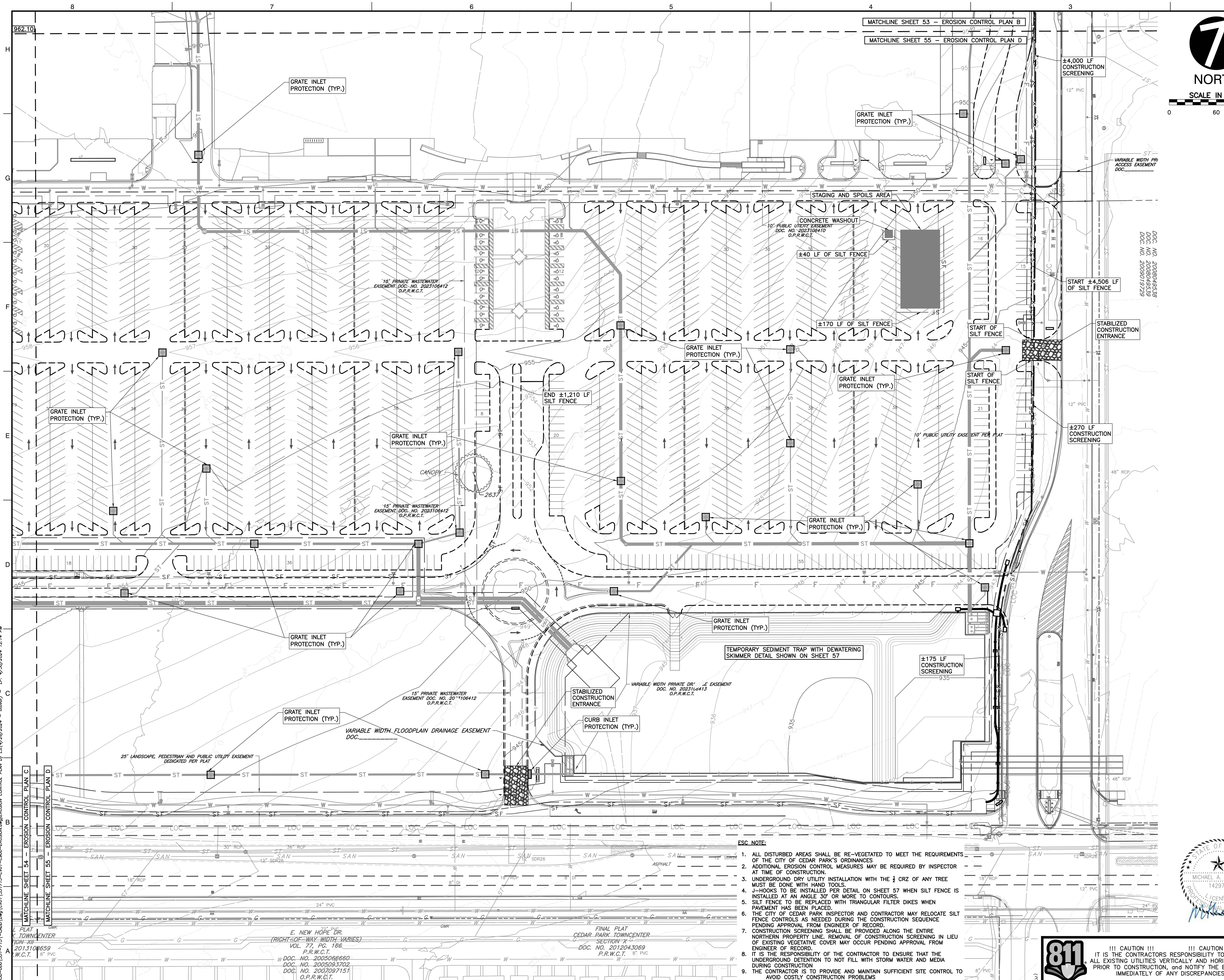

MATCHLINE SHEET 53 – EROSION CONTROL PLAN B
MATCHLINE SHEET 55 – EROSION CONTROL PLAN D
MATCHLINE SHEET 54 – EROSION CONTROL PLAN C
MATCHLINE SHEET 55 – EROSION CONTROL PLAN D
GRATE INLET PROTECTION (TYP.)
±4,000 LF CONSTRUCTION SCREENING
STAGING AND SPOILS AREA
CONCRETE WASHOUT
±40 LF OF SILT FENCE
±170 LF OF SILT FENCE
START ±4,506 LF OF SILT FENCE
STABILIZED CONSTRUCTION ENTRANCE
START OF SILT FENCE
END ±1,210 LF SILT FENCE
±270 LF CONSTRUCTION SCREENING
TEMPORARY SEDIMENT TRAP WITH DEWATERING SKIMMER DETAIL SHOWN ON SHEET 57
±175 LF CONSTRUCTION SCREENING
CURB INLET PROTECTION (TYP.)
VARIABLE WIDTH FLOODPLAIN DRAINAGE EASEMENT
25' LANDSCAPE, PEDESTRIAN AND PUBLIC UTILITY EASEMENT DEDICATED PER PLAT
15' PRIVATE WASTEWATER EASEMENT DOC. NO. 2023106412 O.P.R.W.C.T.
10' PUBLIC UTILITY EASEMENT PER PLAT
E. NEW HOPE DR. (RIGHT-OF-WAY WIDTH VARIES) VOL. 77, PG. 166 P.R.W.C.T.
FINAL PLAT CEDAR PARK TOWNCENTER SECTION X DOC. NO. 2012043069 P.R.W.C.T.
NORTH
SCALE IN FEET
0 60 120
SHEET INDEX
A B C D

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- EXISTING INDEX (MAJOR) CONTOUR
- EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING DRAINAGE DITCH
- EXISTING FENCE LINE
- EXISTING ROADWAY CENTERLINE
- EXISTING CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING ASPHALT PAVEMENT
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRE
- EXISTING ELECTRIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FIBER OPTIC LINE
- EXISTING STREAM
- EXISTING WETLAND
- EXISTING FLOODWAY
- EXISTING GUIDE RAIL
- PROPOSED ROADWAY CENTERLINE
- PROPOSED CURB & GUTTER
- PROPOSED EDGE OF PAVED DRIVE
- PROPOSED EDGE OF UNPAVED DRIVE
- PROPOSED GRAVEL DRIVE
- PROPOSED CONCRETE
- PROPOSED STRIPING
- PROPOSED PAVEMENT SHOULDER
- PROPOSED SIDEWALK
- PROPOSED EASEMENT
- PROPOSED MUNICIPAL BOUNDARY
- PROPOSED PARCEL LINE
- PROPOSED SUBJECT PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- PROPOSED BUILDING
- PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED TREELINE
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED FILTER SOCK
- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED CONSTRUCTION EXIT
- PROPOSED CHECK DAM
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED EROSION CONTROL MATTING
- PROPOSED STORM INLET PROTECTION
- PROPOSED CURB STORM INLET PROTECTION
- PROPOSED TREE PROTECTION

ESC NOTE:

1. ALL DISTURBED AREAS SHALL BE RE–VEGETATED TO MEET THE REQUIREMENTS OF THE CITY OF CEDAR PARK'S ORDINANCES
2. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY INSPECTOR AT TIME OF CONSTRUCTION.
3. UNDERGROUND DRY UTILITY INSTALLATION WITH THE ½ CRZ OF ANY TREE MUST BE DONE WITH HAND TOOLS.
4. J–HOOKS TO BE INSTALLED PER DETAIL ON SHEET 57 WHEN SILT FENCE IS INSTALLED AT AN ANGLE 30° OR MORE TO CONTOURS.
5. SILT FENCE TO BE REPLACED WITH TRIANGULAR FILTER DIKES WHEN PAVEMENT HAS BEEN PLACED.
6. THE CITY OF CEDAR PARK INSPECTOR AND CONTRACTOR MAY RELOCATE SILT FENCE CONTROLS AS NEEDED DURING THE CONSTRUCTION SEQUENCE PENDING APPROVAL FROM ENGINEER OF RECORD.
7. CONSTRUCTION SCREENING SHALL BE PROVIDED ALONG THE ENTIRE NORTHERN PROPERTY LINE. REMOVAL OF CONSTRUCTION SCREENING IN LIEU OF EXISTING VEGETATIVE COVER MAY OCCUR PENDING APPROVAL FROM ENGINEER OF RECORD.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE UNDERGROUND DETENTION TO NOT FILL WITH STORM WATER AND MEDIA DURING CONSTRUCTION
9. THE CONTRACTOR IS TO PROVIDE AND MAINTAIN SUFFICIENT SITE CONTROL TO AVOID COSTLY CONSTRUCTION PROBLEMS

811

!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

Texas Registered Engineering Firm F-38
Civil & Environmental Consultants, Inc.
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

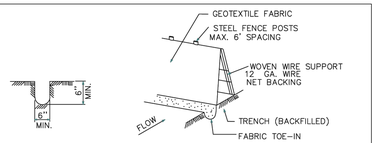
EROSION CONTROL PLAN D

DATE:	4/25/2024	DRAWN BY:	QU
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:			MAT

DRAWING NO.: 55

SHEET 55 OF 175

2023-23-SD



TRENCH CROSS SECTION — SILT FENCE

GENERAL NOTES:

1. SILT FENCE LOCATED ADJACENT TO PLAYGROUNDS, PARKS, SIDEWALKS, AND OTHER LOCATIONS AS DETERMINED BY CITY OF CEDAR PARK REPRESENTATIVES SHALL HAVE CITY APPROVED SAFETY CAPS ON ALL STEEL POSTS.

2. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.

3. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

4. WHERE FENCE CAN NOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE. 6 INCHES DEEP AND 6 INCHES WIDE TO THE TRENCH MUST BE A MINIMUM OF ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.

6. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

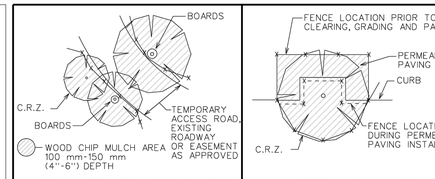
7. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES.

8. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

STANDARD SYMBOL SF / L=

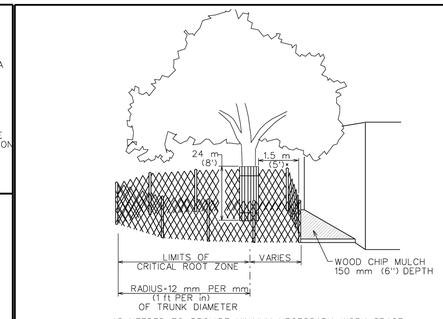
REV. DATE: 09/13/01

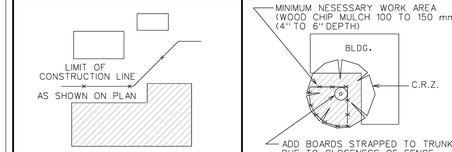
CITY OF CEDAR PARK ENGINEERING DEPARTMENT		SILT FENCE
DARWIN MARCHELL 09/13/2001	ADOPTED: 09/13/2001	
APPROVED DATE	SCALE: N.T.S.	
	INITIAL:	



LINEAR CONSTRUCTION THROUGH TREES

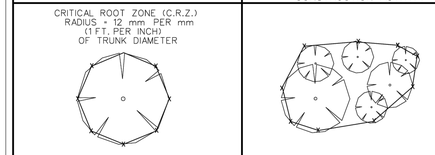
TREES IN PAVING AREA





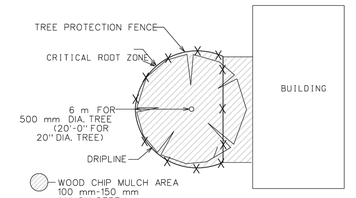
NATURAL AREAS

TREES NEAR CONSTRUCTION ACTIVITY



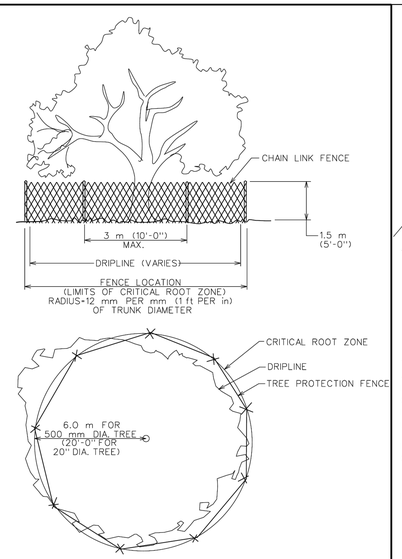
INDIVIDUAL TREE

GROUP OF TREES

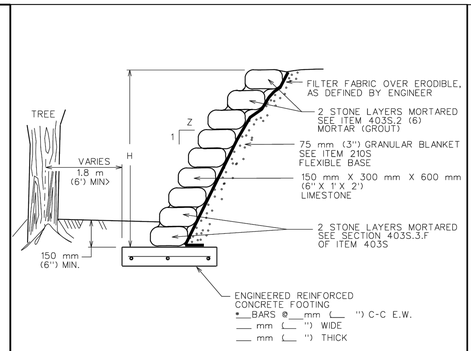


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE LOCATIONS
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-1

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE MODIFIED TYPE A - CHAIN LINK
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-4



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROPTECTION FENCE TYPE A - CHAIN LINK
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-2



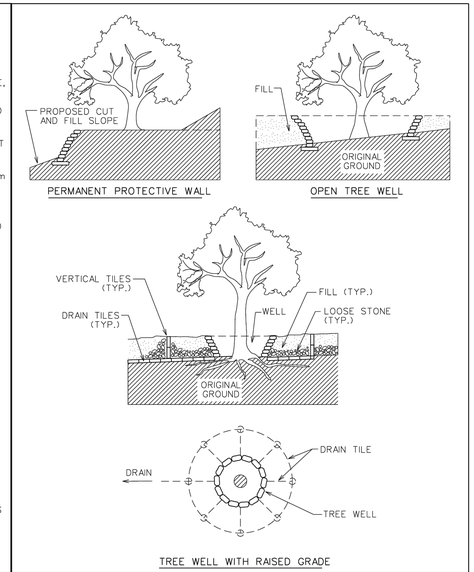
THIS STANDARD APPLIES ONLY UNDER THE FOLLOWING CONDITIONS:

A. H AND Z ARE SPECIFIED ON THE DRAWING.
B. GROUNDWATER IS NO HIGHER THAN THE BOTTOM OF THE FOOTING.
C. THE MATERIAL BELOW THE FOOTING IS FIRM AND STABLE.
D. THE MATERIAL BEHIND THE WALL HAS A LEVEL SURFACE.
E. THE MATERIAL IN FRONT OF THE WALL HAS A SLOPE NO STEEPER THAN 4 HORIZONTAL TO 1 VERTICAL.
F. THE FACE OF THE WALL IS NO STEEPER THAN 1 HORIZONTAL TO 2 VERTICAL.
G. SURCHARGE LOADS BEHIND THE WALL ARE NO CLOSER THAN DISTANCE H FROM THE TOP OF WALL.

NOTES:

1. DESIGN AND CONSTRUCTION OF ROCK WALL SHALL CONFORM TO THE REQUIREMENTS OF CITY CODE 16-7-2, PLACEMENT OF FENCES IN STREET CORNER AREAS, AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL FOR MINIMIM SIGHT DISTANCE.
2. CONCRETE SHALL CONFORM TO ITEM 403S, "CONCRETE FOR STRUCTURES".

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		SLOPE PROTECTION AND TREE WELLS
RECORD COPY SIGNED BY J. PATRICK MURPHY	03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-6 1 OF 2



PERMANENT PROTECTIVE WALL — OPEN TREE WELL

TREE WELL WITH RAISED GRADE

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		SLOPE PROTECTION AND TREE WELLS
RECORD COPY SIGNED BY J. PATRICK MURPHY	03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 610S-6 2 OF 2

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

EROSION AND SEDIMENTATION CONTROL DETAILS

DATE:	11/15/2023	DRAWN BY:	CS
DWG SCALE:		CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MAT

DRAWING NO.: 56

SHEET 56 OF 89

2023-23-SD

F:\330-000\331-715\-CADD\dwg\CIVD\331715-CIVD-GN00-EROSION DETAILS.dwg(EROSION CONTROL DETAILS 1) LS(4/29/2024 - etowe) - LP: 4/30/2024 12:14 PM

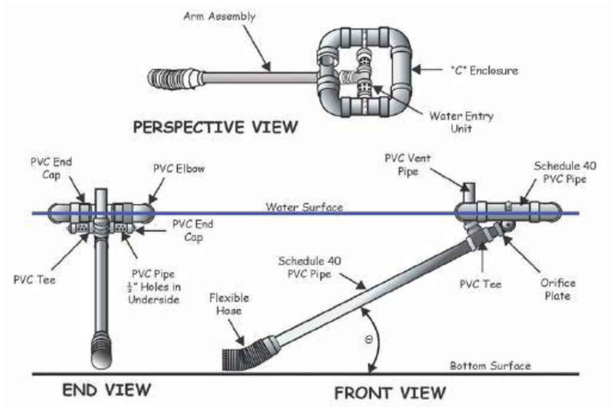
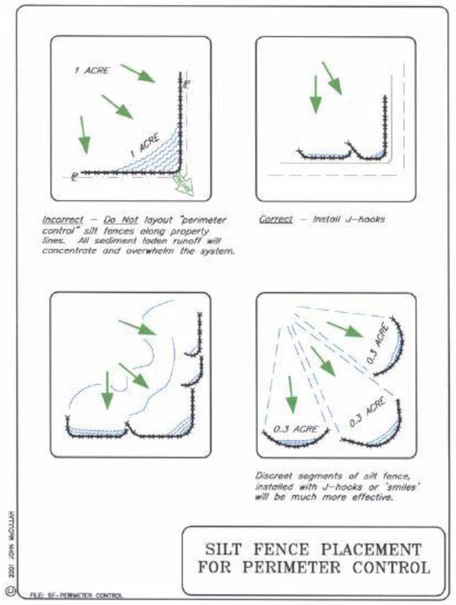
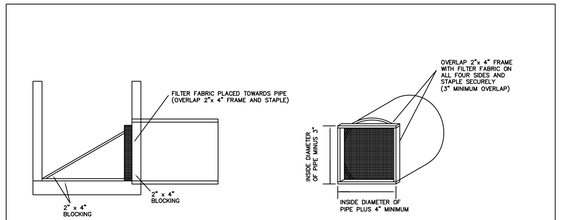


Figure 6.64a Schematic of a skimmer, from Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.





NOTES:
STORM INLET SEDIMENT TRAPS SHALL BE PLACED IN ALL PROPOSED CURB INLETS AND AREA INLETS AS DIRECTED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

THE LATERAL BRACING SHALL BE PLACED IN A MANNER AS TO ADEQUATELY SECURE THE FILTER FRAME TO THE SIDE OF THE INLET, INSURING THE PROPER FUNCTION OF THE SEDIMENT TRAP.

FILTER FABRIC MAY BE IDENTICAL TO THAT SPECIFIED AS "TEMPORARY SEDIMENT CONTROL FENCE". OTHER MATERIAL MAY BE USED UPON APPROVAL OF THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

THE "STORM INLET SEDIMENT TRAPS" SHALL BE INSTALLED UPON COMPLETION OF THE PROPOSED INLET WALLS OR AS DIRECTED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

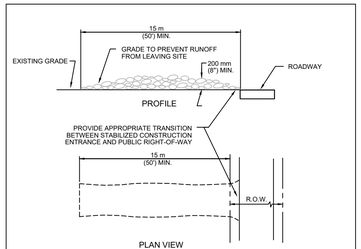
THE CONTRACTOR WILL BE REQUIRED TO PERFORM PERIODIC MAINTENANCE OF THE SEDIMENT TRAP AND REMOVE ACCUMULATED SILT AS DIRECTED BY THE CITY OF CEDAR PARK'S PROJECT REPRESENTATIVE.

"STORM INLET SEDIMENT TRAPS" SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OF THE PROPOSED INLET DECK BEGINS.

ALL WOOD SHALL BE PRESSURE TREATED.

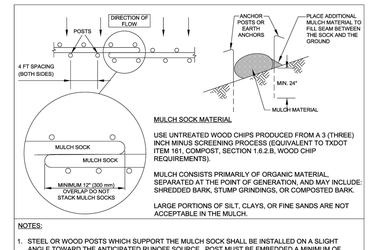
STORM INLET SEDIMENT TRAP

CITY OF CEDAR PARK PUBLIC WORKS ENGINEERING	STANDARD DETAIL STORM INLET SEDIMENT TRAP	
DARWIN MARCHELL, P.E.	ADOPTED: 01/02/01 SCALE: NTS INITIAL:	



NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STABILIZED CONSTRUCTION ENTRANCE	
RECORD COPY SIGNED BY J. PATRICK MURPHY 5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1



MULCH SOCK MATERIAL

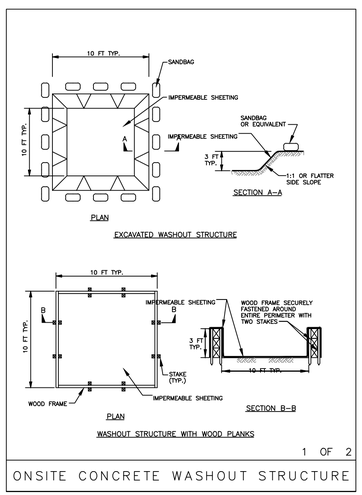
USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP REQUIREMENTS).

MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

NOTES:
1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

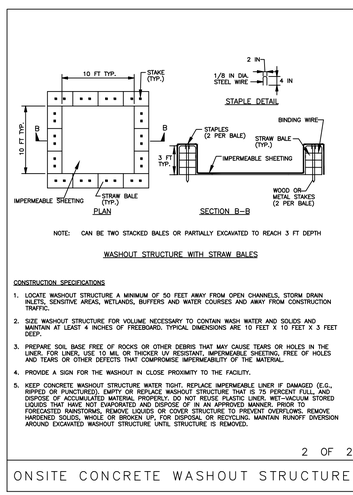
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	MULCH SOCK	
RECORD COPY SIGNED BY MORGAN BYARS 08/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 648S-1



NOTE:
J-HOOKS SHALL ALSO BE USED WHEN THE SILT FENCE IS INSTALLED AT AN ANGLE OF 30 DEGREES OR GREATER FROM PARALLEL TO THE CONTOURS.

1 OF 2

ONSITE CONCRETE WASHOUT STRUCTURE



NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

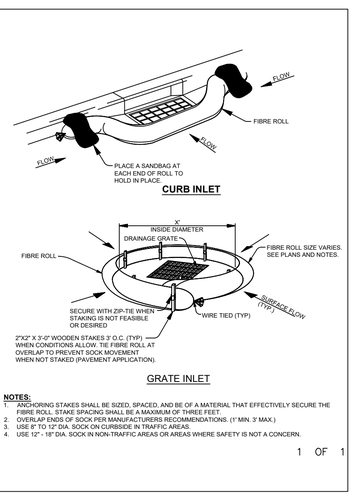
WASHOUT STRUCTURE WITH STRAW BALES

CONSTRUCTION SPECIFICATIONS

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

2 OF 2

ONSITE CONCRETE WASHOUT STRUCTURE



NOTES:
1. ANCHORING STAKES SHALL BE SIZED, SPACED, AND BE OF A MATERIAL THAT EFFECTIVELY SECURE THE FIBRE ROLL. STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET.
2. OVERLAP ENDS OF SOCK PER MANUFACTURERS RECOMMENDATIONS. (1" MIN. 3' MAX.)
3. USE 8" TO 12" DIA. SOCK ON CURBSIDE IN TRAFFIC AREAS.
4. USE 12" - 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

1 OF 1

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REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

EROSION AND SEDIMENTATION CONTROL DETAILS

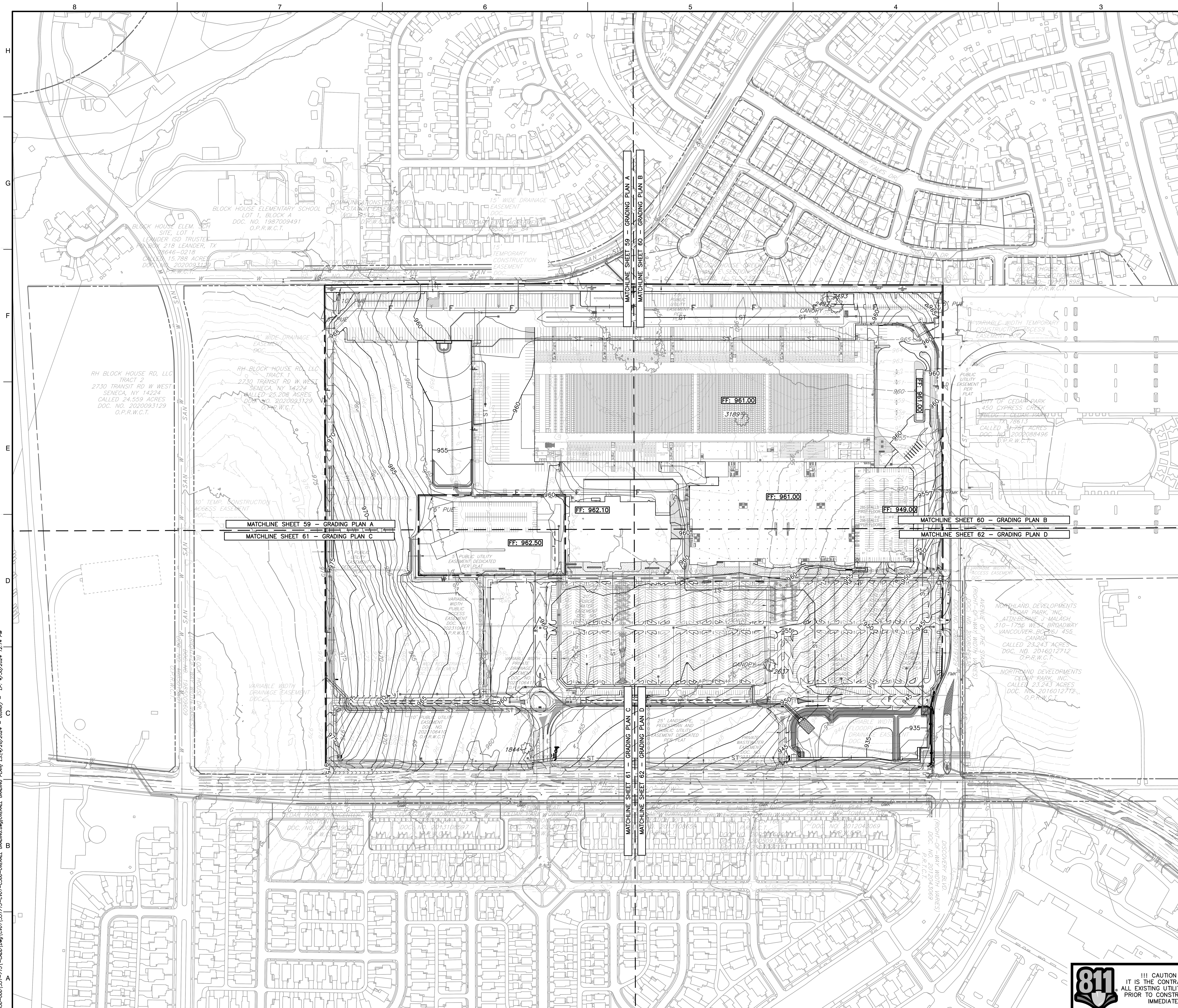
DATE:	11/15/2023	DRAWN BY:	CS
DWG SCALE:		CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MAT

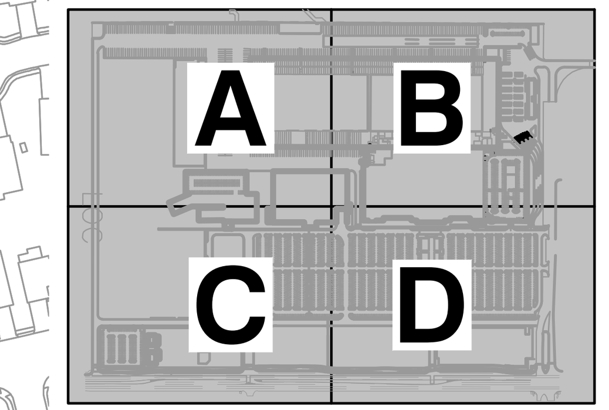
DRAWING NO.: 57

SHEET 57 OF 89

2023-23-SD

P:\330-001\331-715\-CAD\Dwg\C401\331715-C401-CBDD-EROSION CONTROL DETAILS.dwg|EROSION CONTROL DETAILS 3] LS:(4/29/2024 - elevy) - LP: 4/30/2024 12:14 PM





SHEET INDEX

NORTH

SCALE IN FEET
0 200 400

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
HB	HB	HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

OVERALL GRADING PLAN

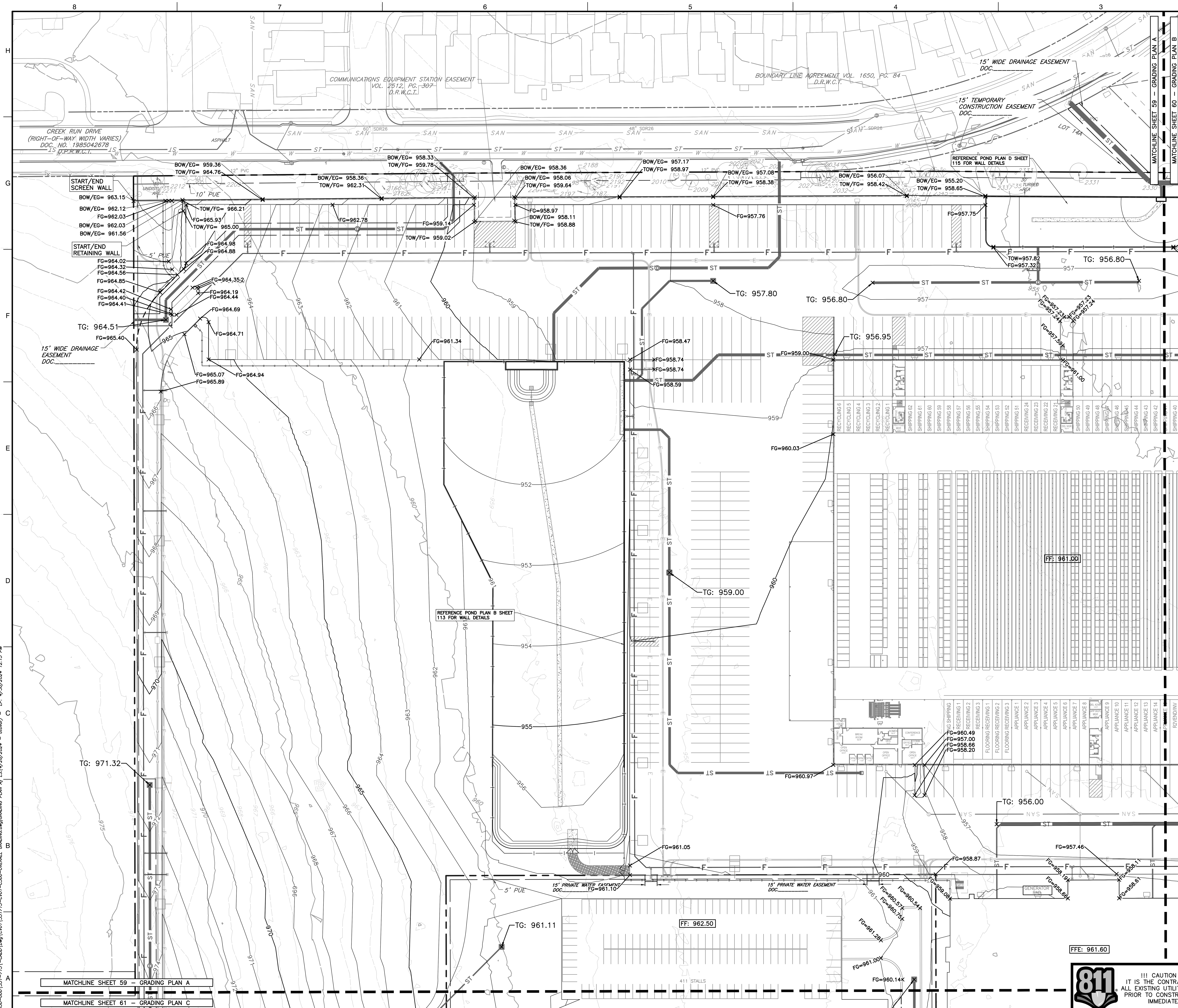
DATE:	4/25/2024	DRAWN BY:	OAT
DWG SCALE:	1" = 200'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 58

SHEET 58 OF 175

2023-23-SD

P:\330-000\331-715\-CADD\Dwg\CV01\331715-CV01-C300-OVERALL GRADING.dwg{OVERALL GRADING PLAN} LS:(4/26/2024 - otovar) - LP: 4/30/2024 12:14 PM



SHEET INDEX

A B
C D

NORTH

SCALE IN FEET

0 60 120

TG	= TOP OF GRATE
FL	= FLOW LINE
TOW	= TOP OF WALL
BOW	= BOTTOM OF WALL(GRADE AT WALL)
EG	= EXISTING GRADE
FG	= FINISH GRADE

BLOCK LEGEND

PROPOSED / EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED / EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- MAJOR CONTOUR (385)
- MINOR CONTOUR
- ELECTRIC LINE (E)
- OVERHEAD ELECTRIC WIRE (OE)
- UNDERGROUND ELECTRIC LINE (UE)
- TELEPHONE (T)
- COMMUNICATIONS LINE (C)
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- DRAINAGE AREA
- FLOODWAY
- CWQZ
- STORM SEWER (ST)
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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
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WILLIAMSON COUNTY

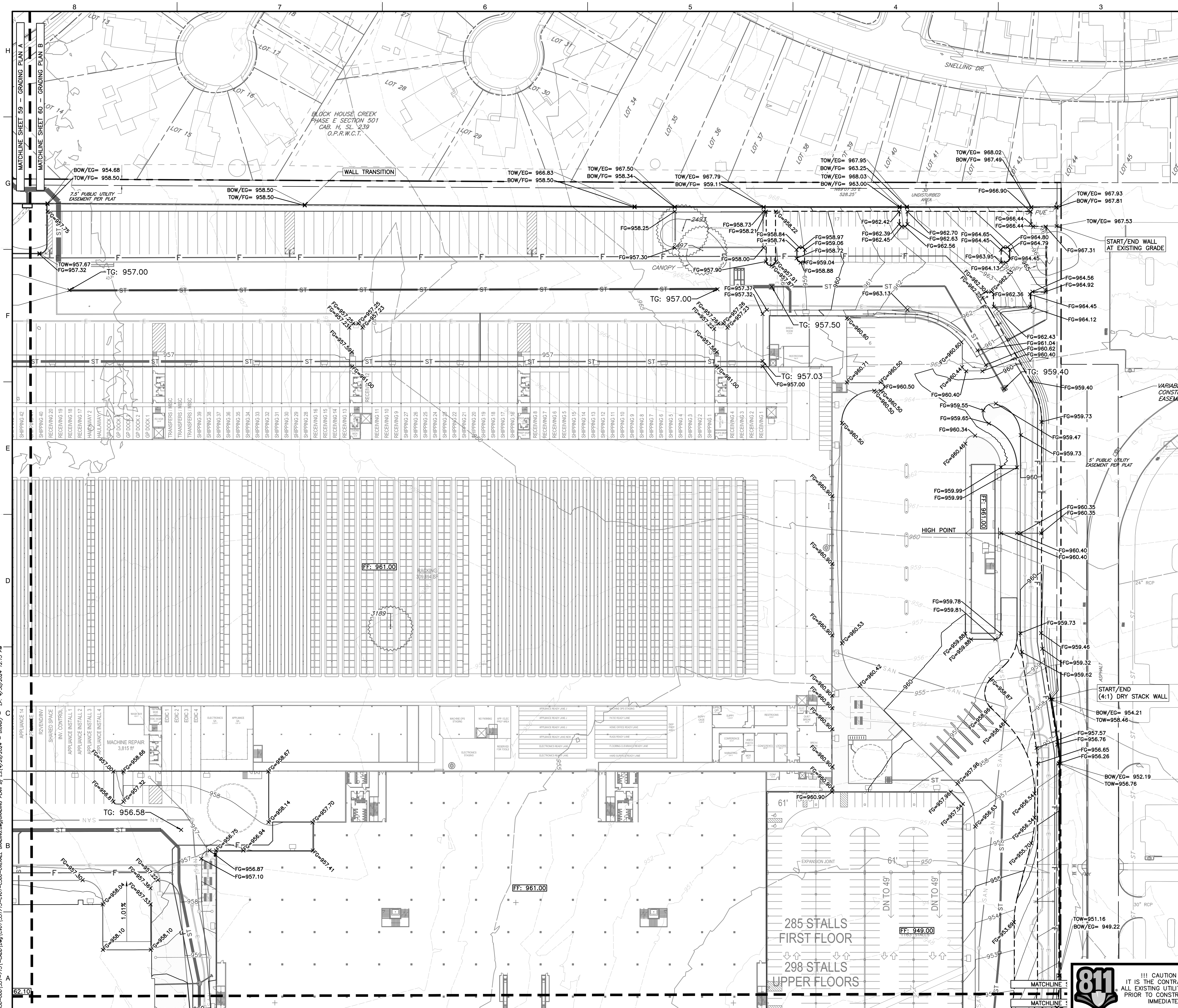
GRADING PLAN A

DATE:	4/25/2024	DRAWN BY:	OAT
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 59

SHEET 59 OF 175

2023-23-SD



SHEET INDEX

A B
C D

NORTH

SCALE IN FEET

0 60 120

TG	= TOP OF GRATE
FL	= FLOW LINE
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BLOCK LEGEND

PROPOSED / EXISTING

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NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

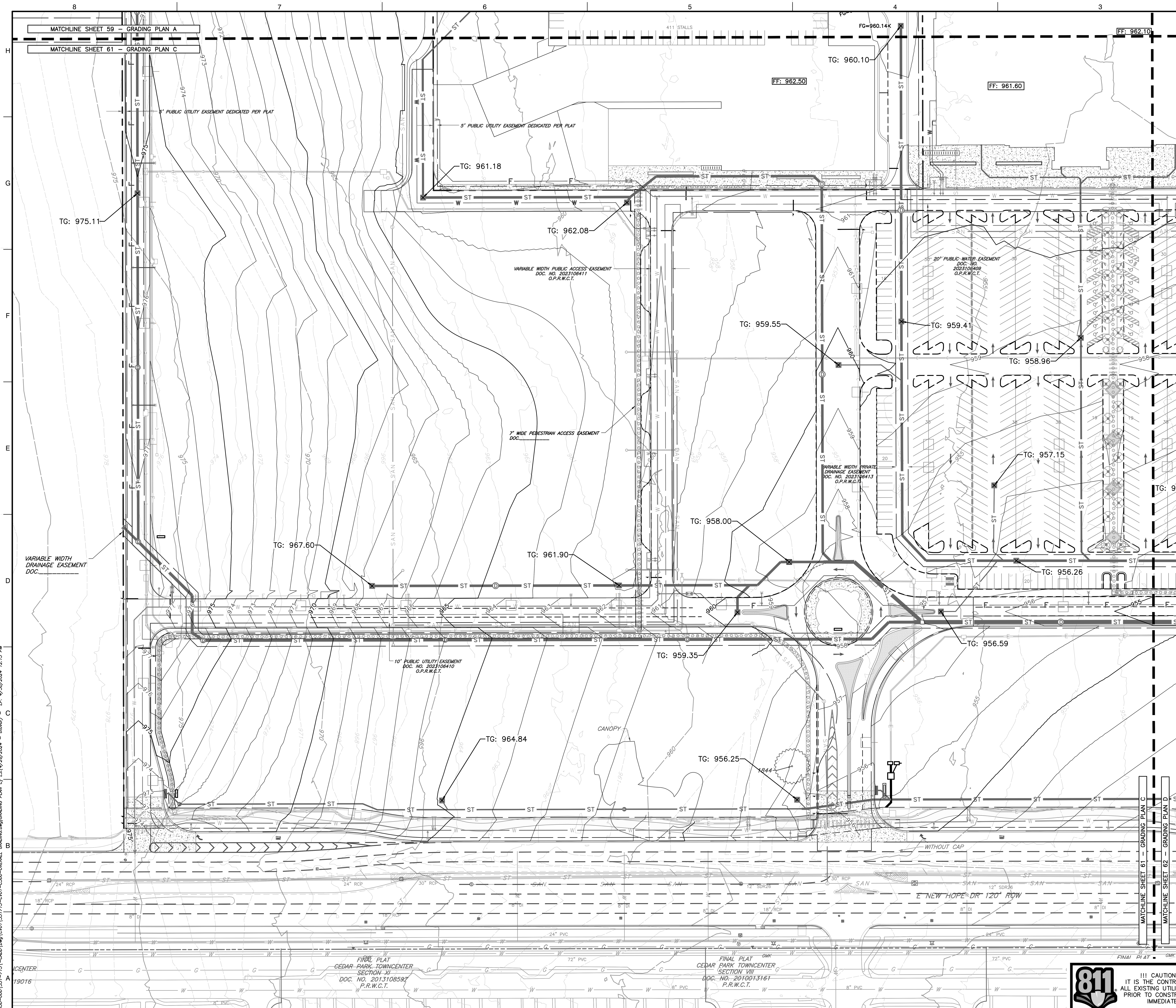
GRADING PLAN B

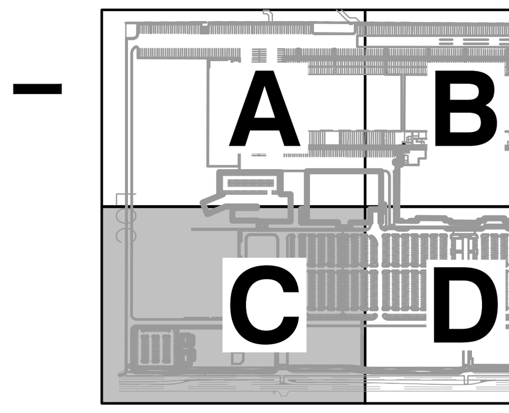
DATE:	4/25/2024	DRAWN BY:	OAT
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 60

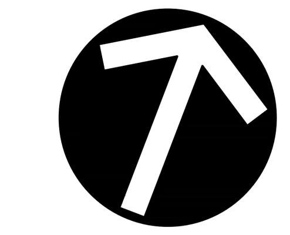
SHEET 60 OF 175

2023-23-SD





SHEET INDEX



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0 60 120

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WILLIAMSON COUNTY

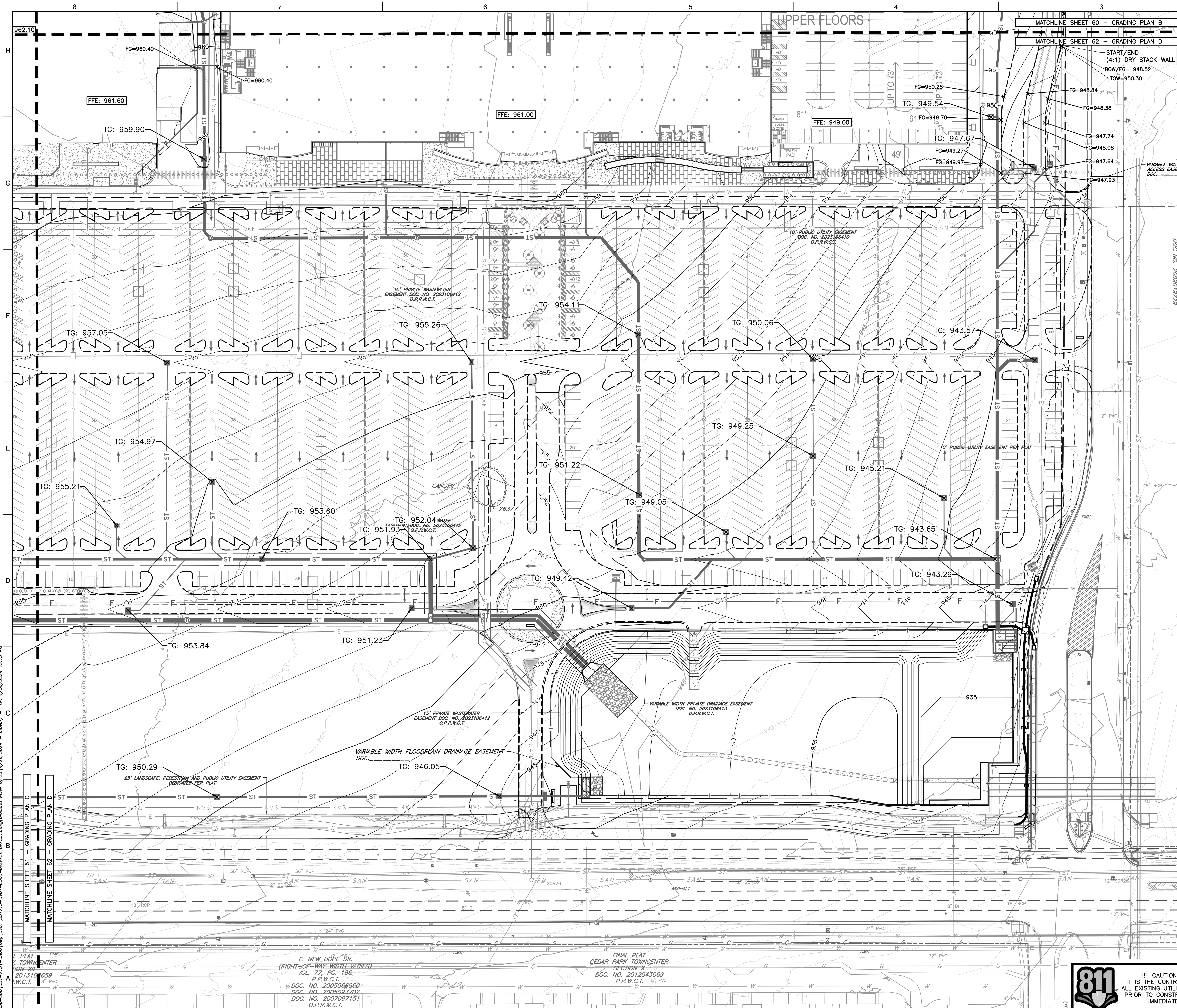
GRADING PLAN C

DATE:	4/25/2024	DRAWN BY:	OAT
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:			MAT

DRAWING NO.: 61

SHEET 61 OF 175

2023-23-SD



SHEET INDEX

A B C D

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NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
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WILLIAMSON COUNTY

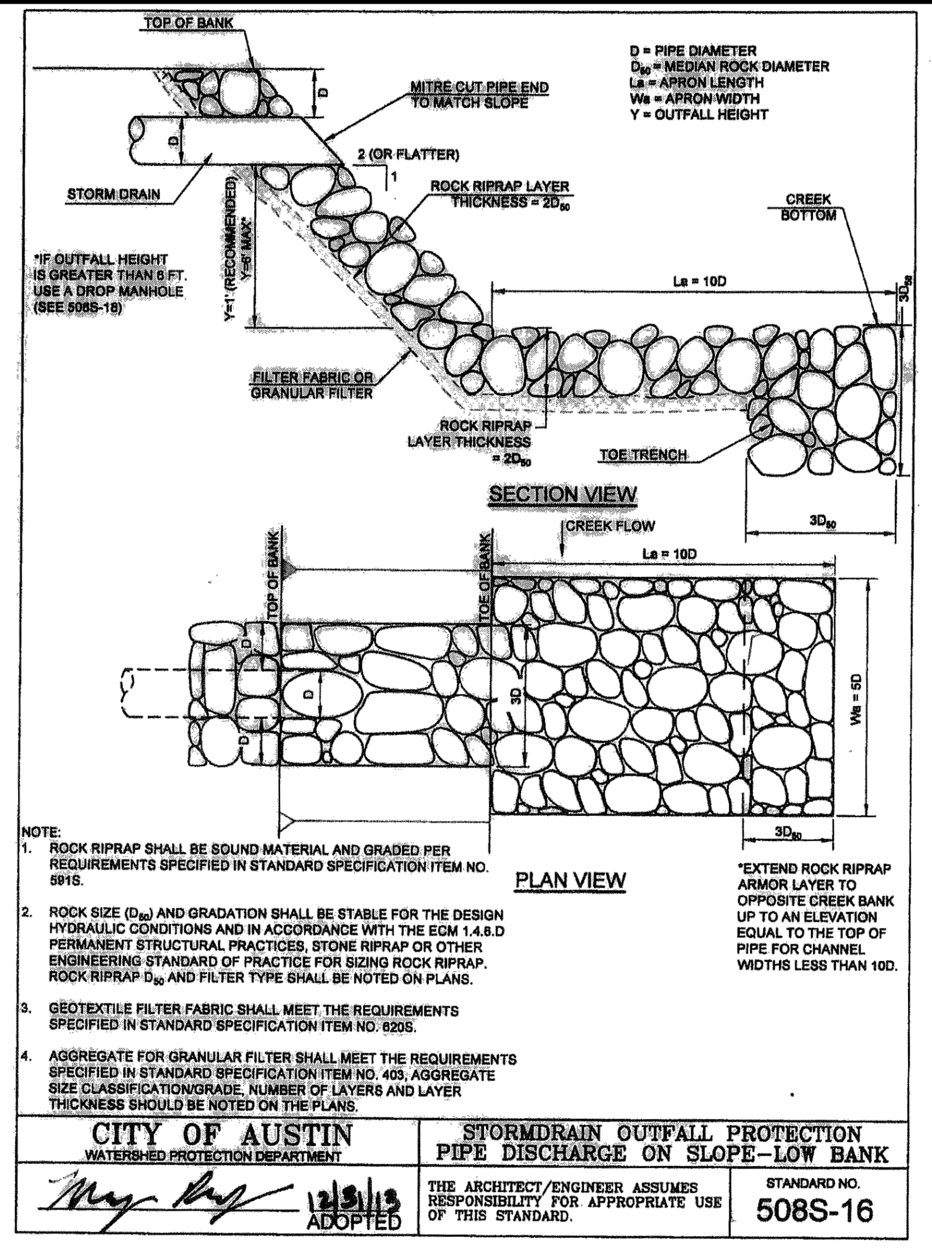
GRADING PLAN D

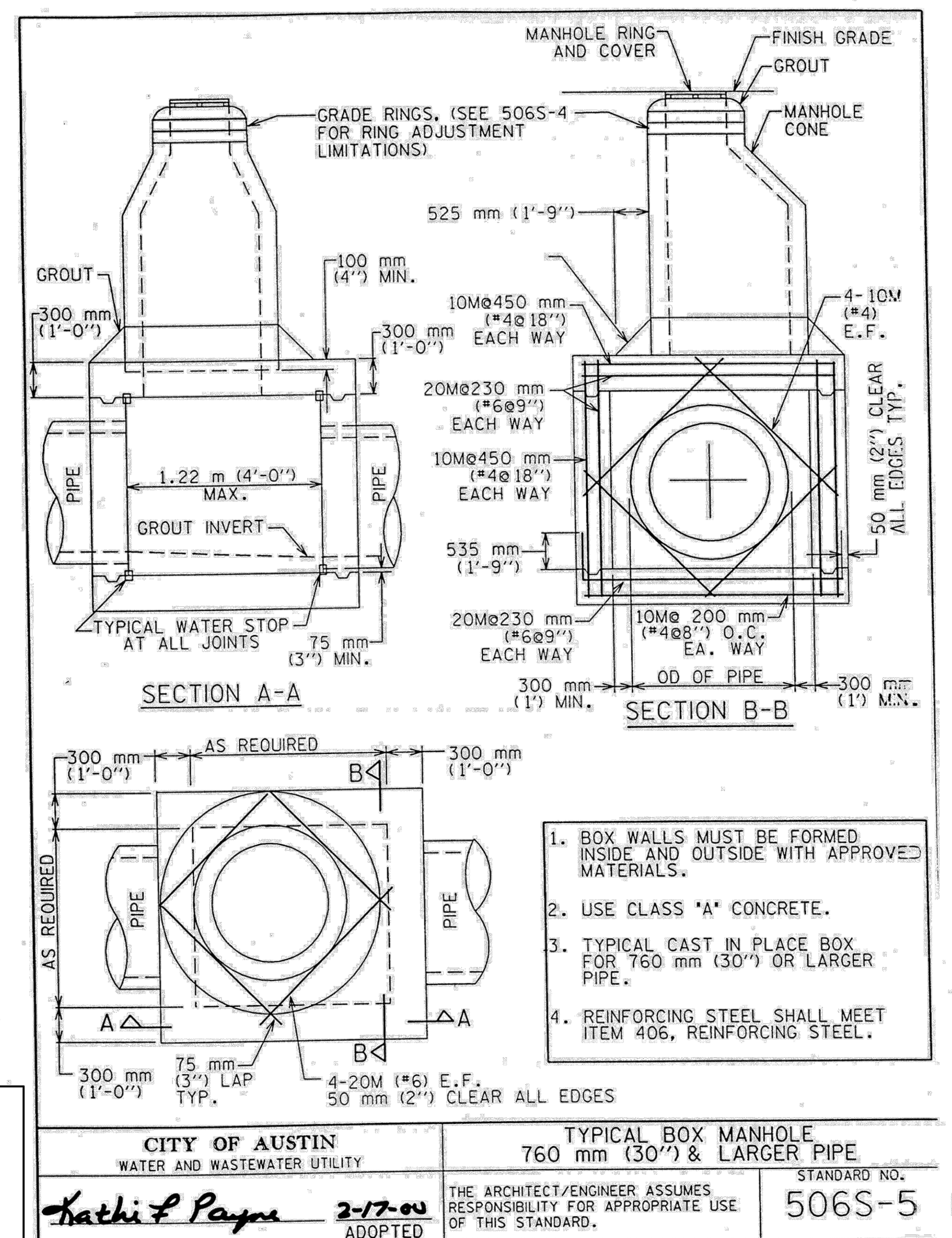
DATE:	4/25/2024	DRAWN BY:	OAT
DWG SCALE:	1" = 60'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

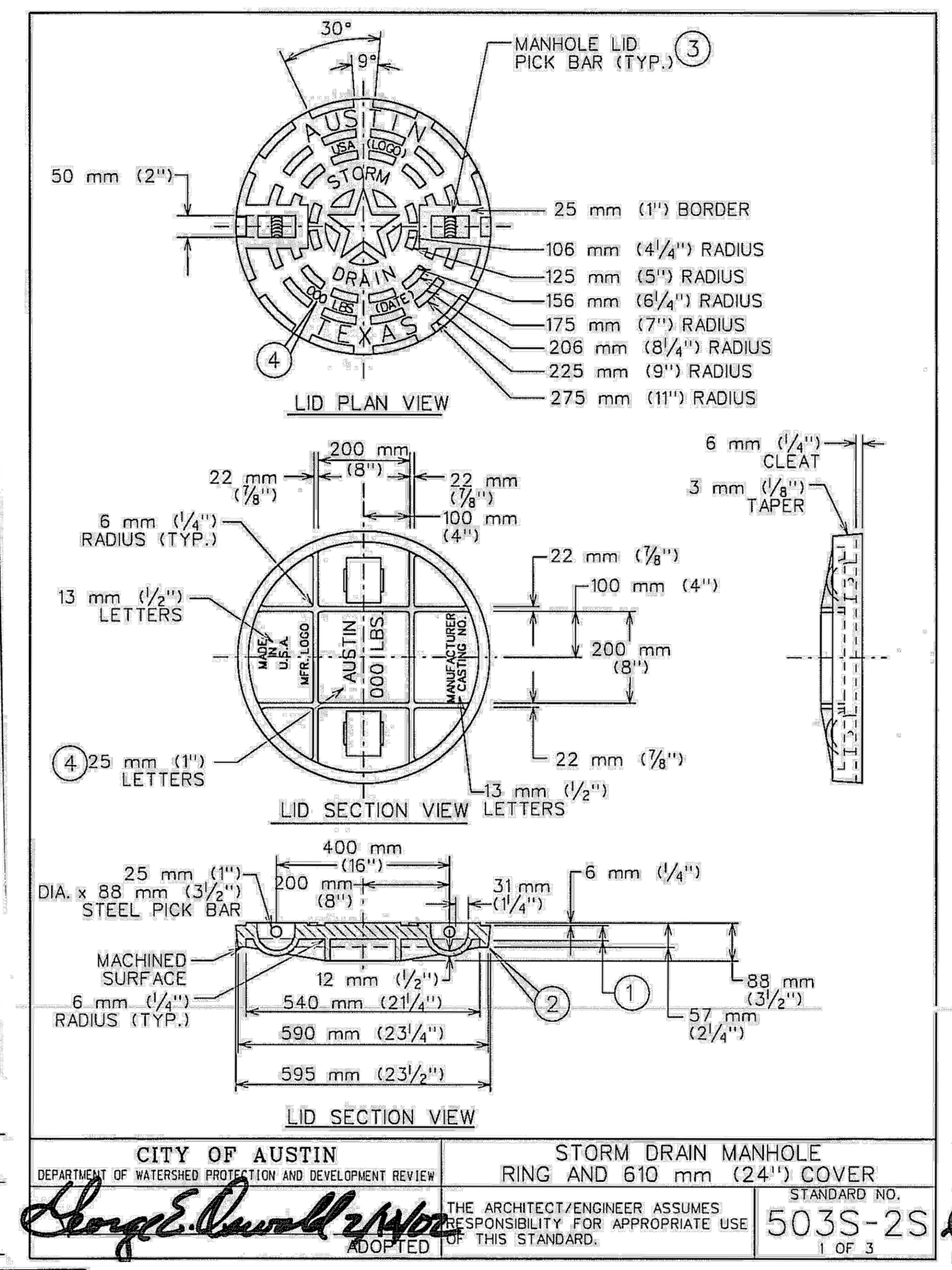
DRAWING NO.: 62

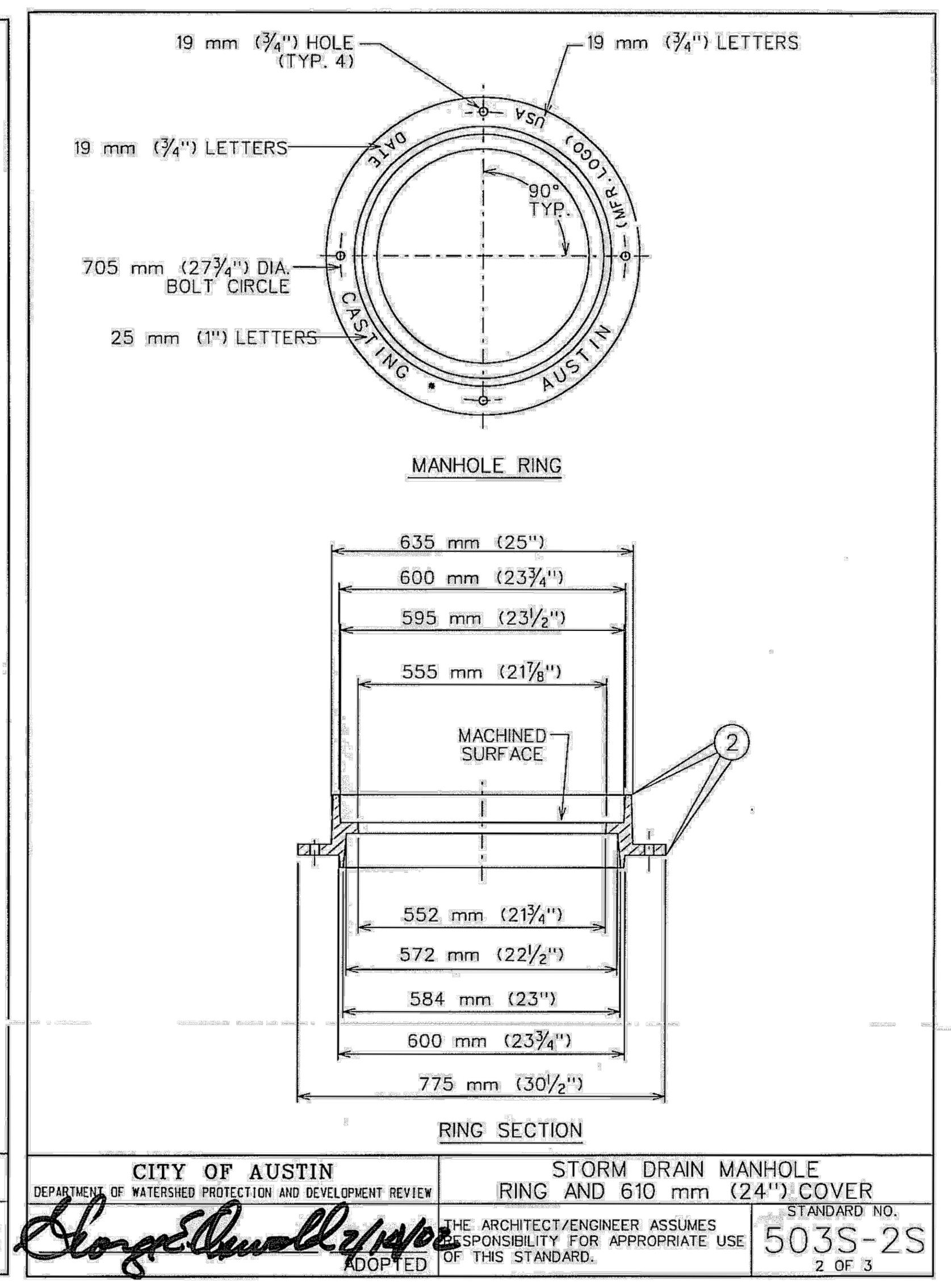
SHEET 62 OF 175

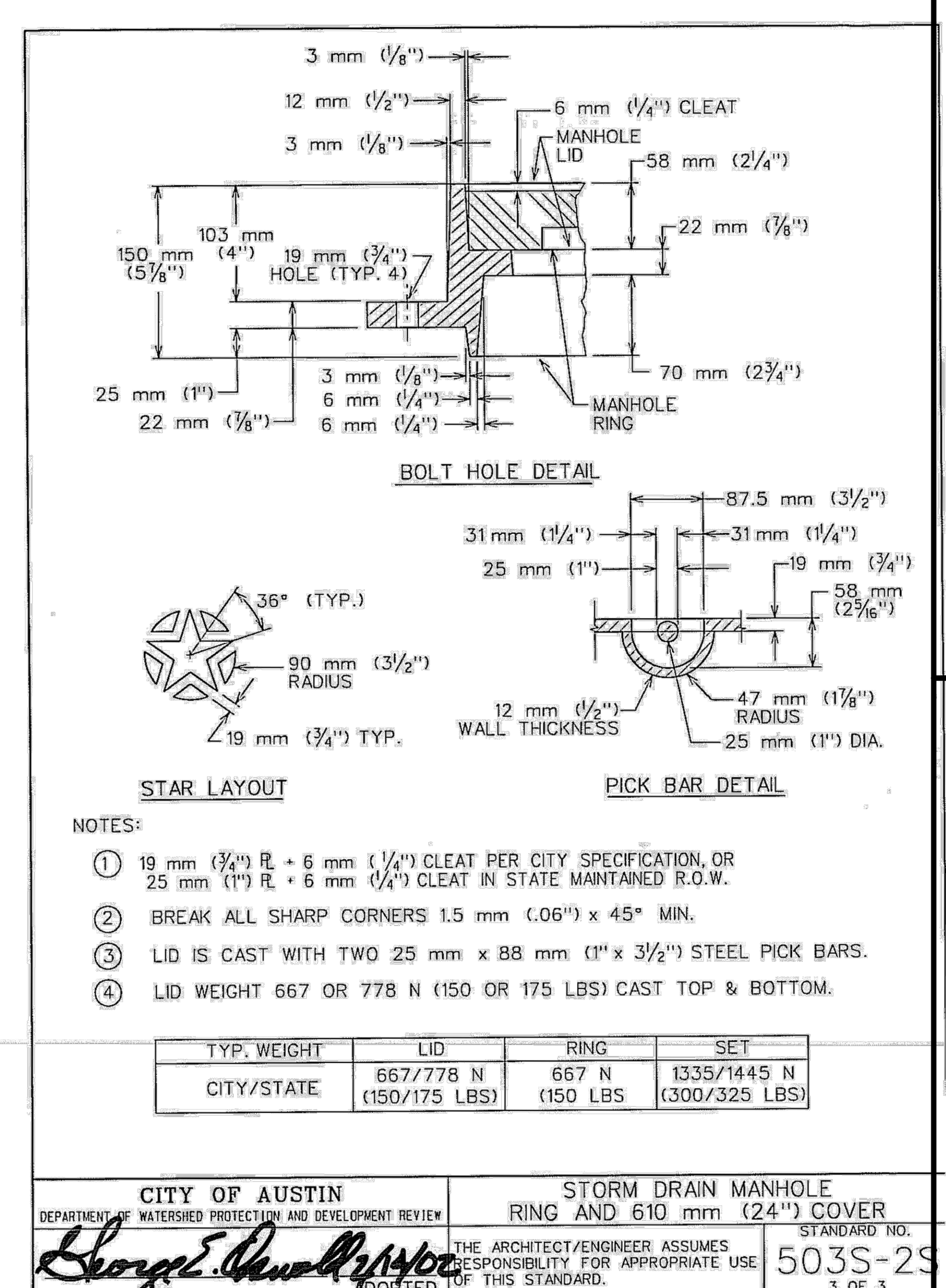
2023-23-SD

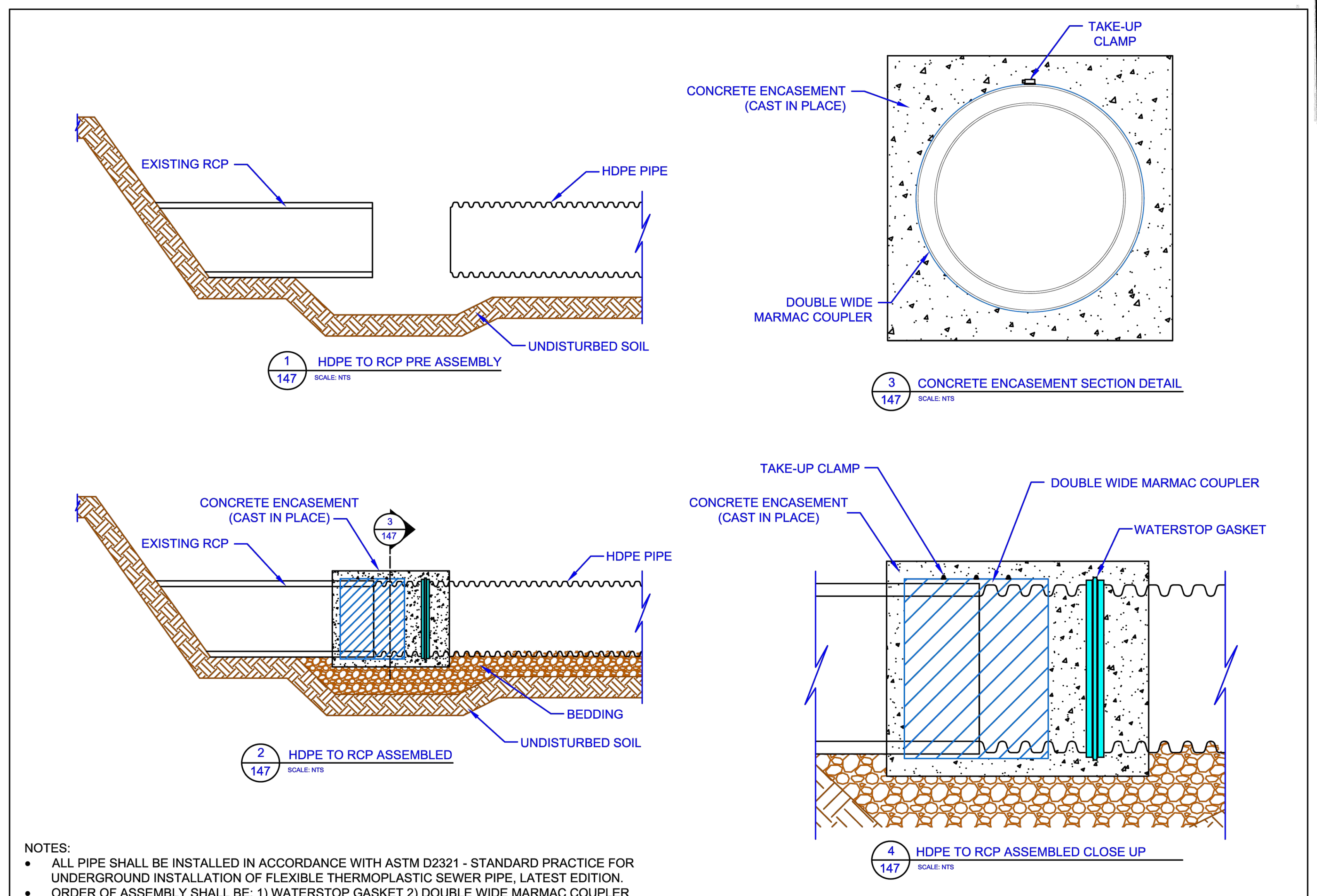








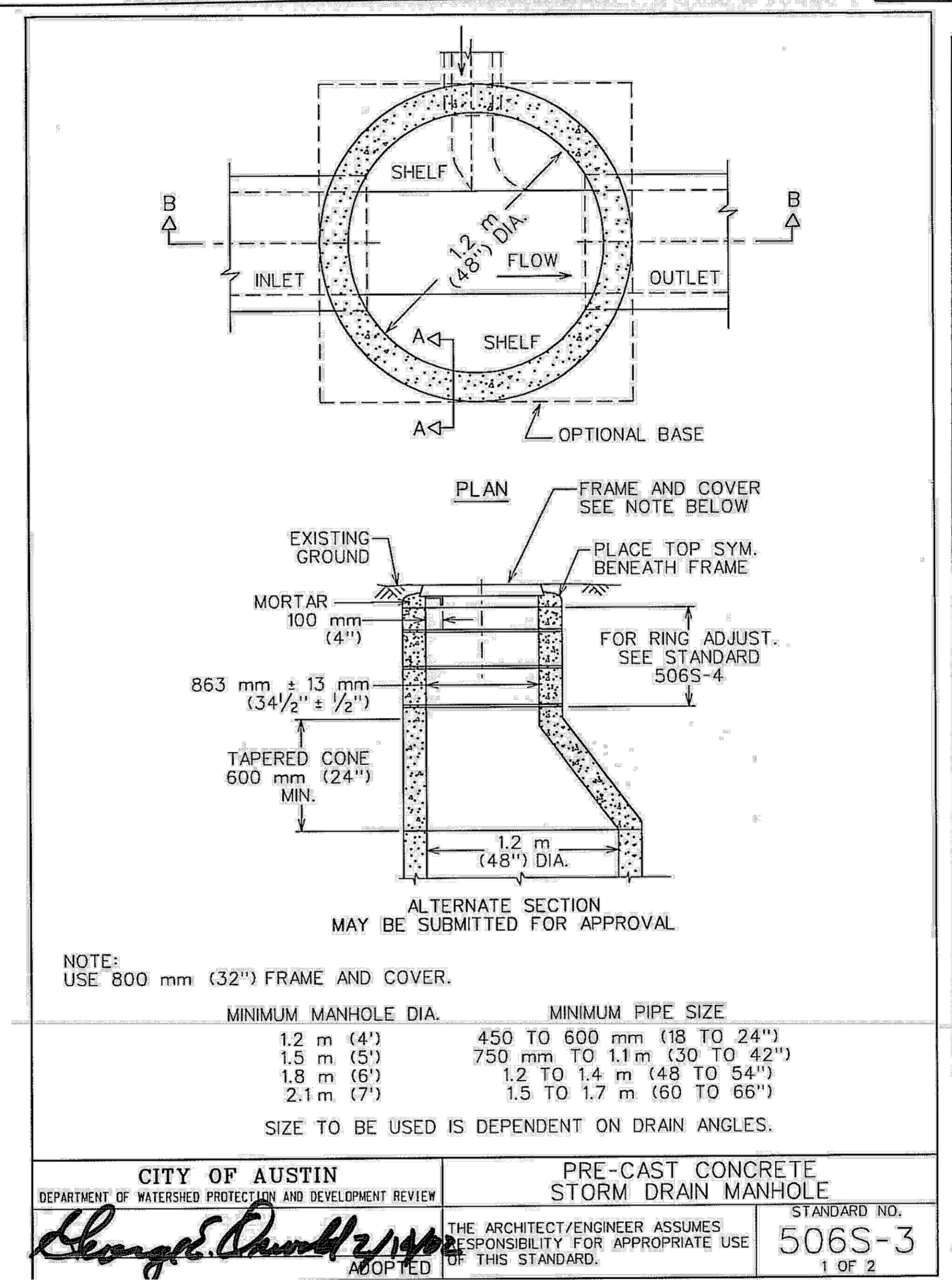


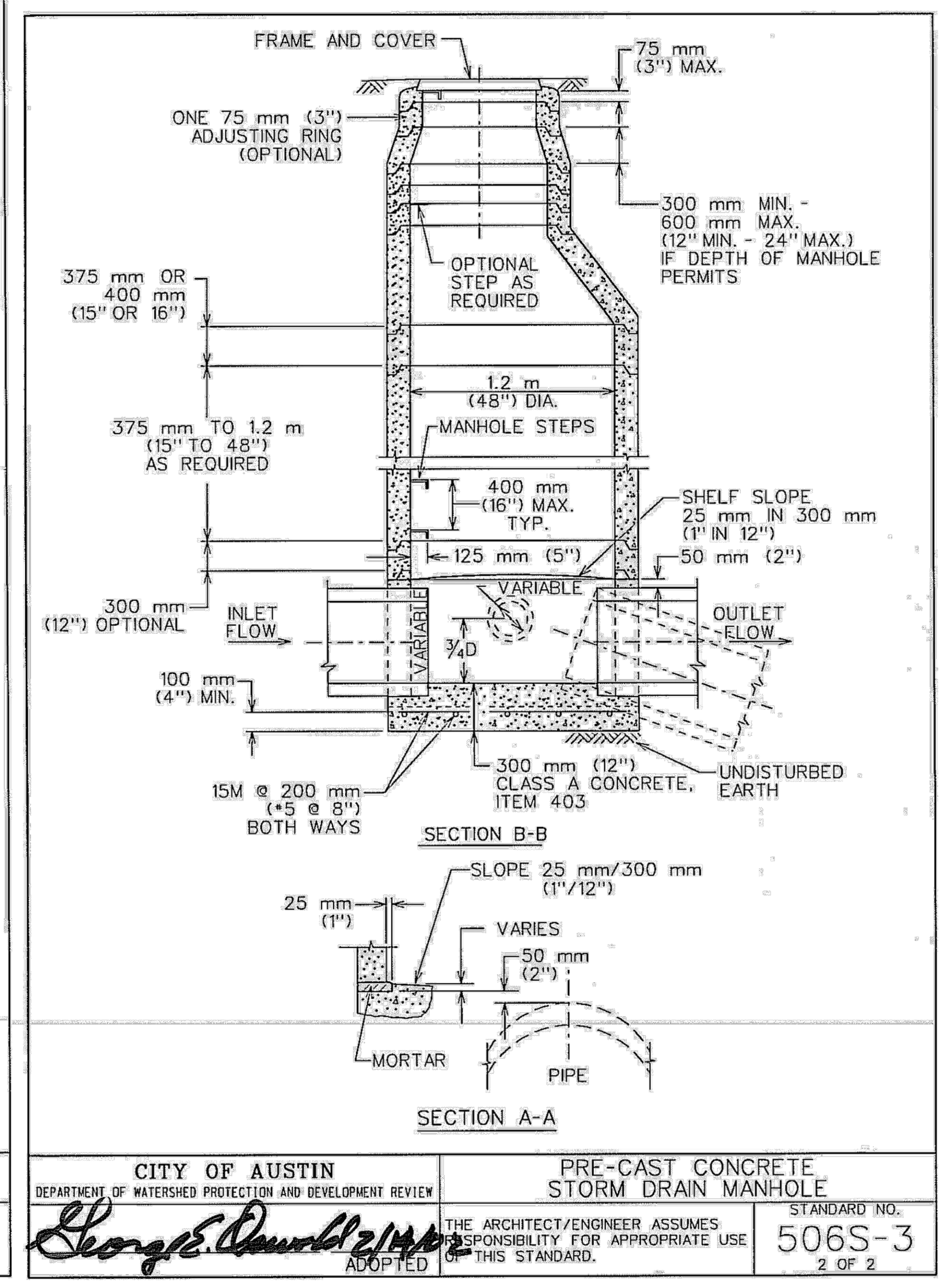


NOTES:
- ALL PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321 - STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF FLEXIBLE THERMOPLASTIC SEWER PIPE, LATEST EDITION.
- ORDER OF ASSEMBLY SHALL BE: 1) WATERSTOP GASKET 2) DOUBLE WIDE MARMAC COUPLER 3) CONCRETE ENCASEMENT
- POLYSEAL IS A REGISTERED TRADEMARK OF MAR MAC PRODUCTS INC. (WWW.MARMAC.COM)

PRINSCO — ENGINEERED WITH INTEGRITY — 1717 16TH ST. NE, WILLMAR, MN 56201, www.prinsco.com

TITLE: HDPE PIPE - DISSIMLAR CONNECTION HDPE TO RCP WATER-TIGHT CONNECTION			REV: B
DRAWN BY: TRA	DATE: 03-Jul-17	DRAWING NUMBER: D-1-147	
SCALE: NTS	SHEET: 1 OF 1		





811

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REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

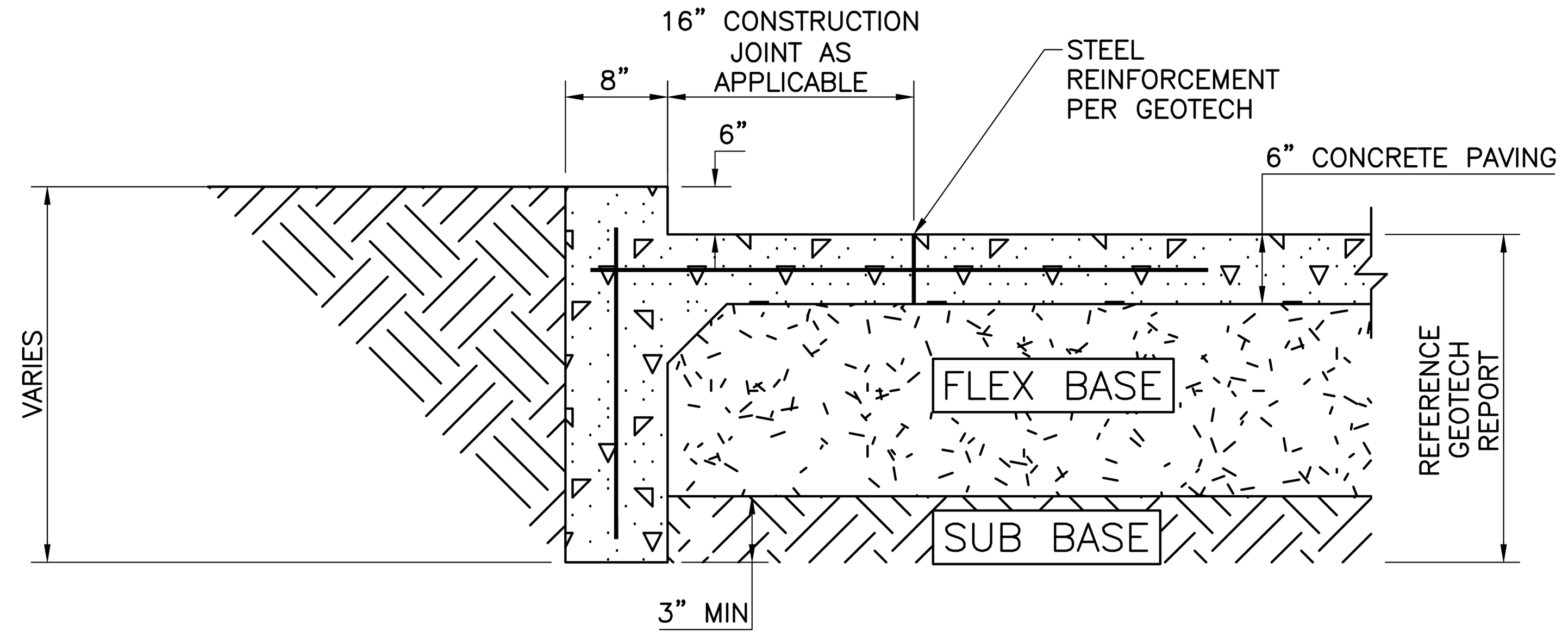
NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

DRAINAGE DETAILS 1

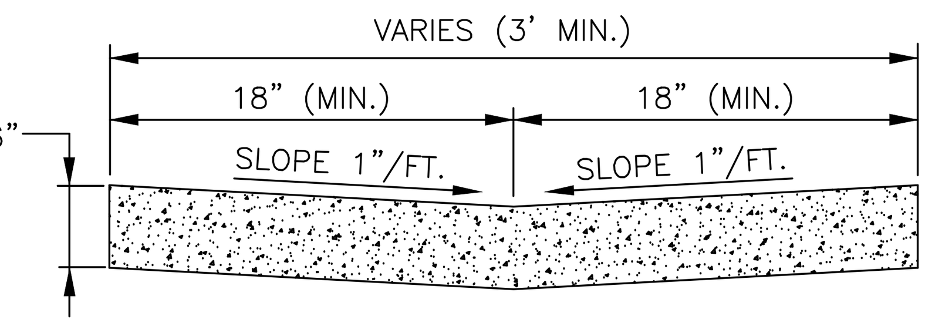
DATE:	1/15/2024
DRAWN BY:	CS
DWG SCALE:	
CHECKED BY:	SRB
PROJECT NO:	331-715
APPROVED BY:	MAT

DRAWING NO.: 63
SHEET 63 OF 47

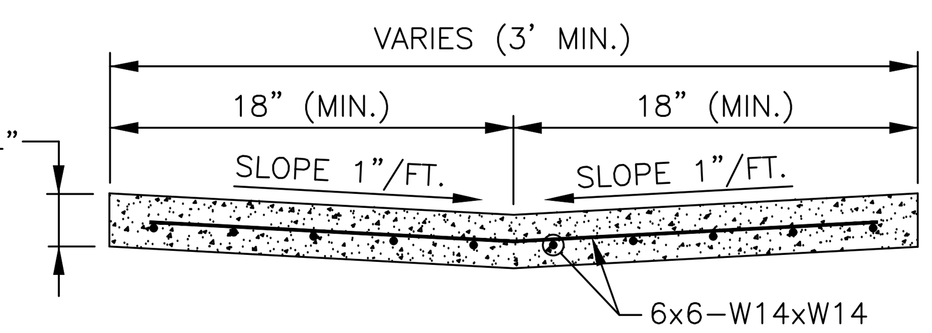
2023-23-SD



DEEP CURB DETAIL
N.T.S.



CONCRETE TRICKLE CHANNEL

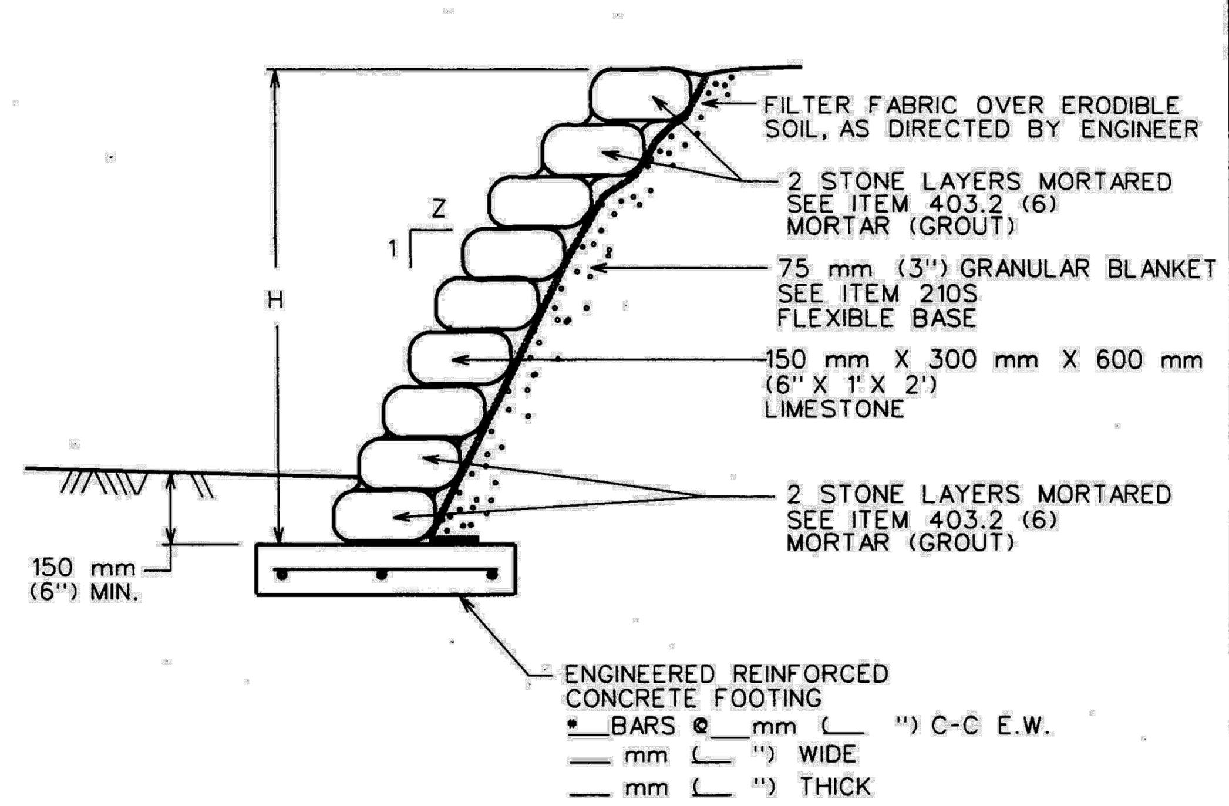


CONCRETE TRICKLE CHANNEL
(REINFORCED)

NOTE:
PROVIDE CONTROL JOINTS AT 10' INTERVALS.

1 OF 1

CONCRETE TRICKLE CHANNEL



FILTER FABRIC OVER ERODIBLE SOIL, AS DIRECTED BY ENGINEER
2 STONE LAYERS MORTARED SEE ITEM 403.2 (6) MORTAR (GROUT)
75 mm (3") GRANULAR BLANKET SEE ITEM 210S FLEXIBLE BASE
150 mm X 300 mm X 600 mm (6" X 1' X 2') LIMESTONE
2 STONE LAYERS MORTARED SEE ITEM 403.2 (6) MORTAR (GROUT)
Z
1
H
150 mm (6") MIN.
ENGINEERED REINFORCED CONCRETE FOOTING
__BARS @__mm (__ ") C-C E.W.
__ mm (__ ") WIDE
__ mm (__ ") THICK

THIS STANDARD APPLIES ONLY UNDER THE FOLLOWING CONDITIONS:

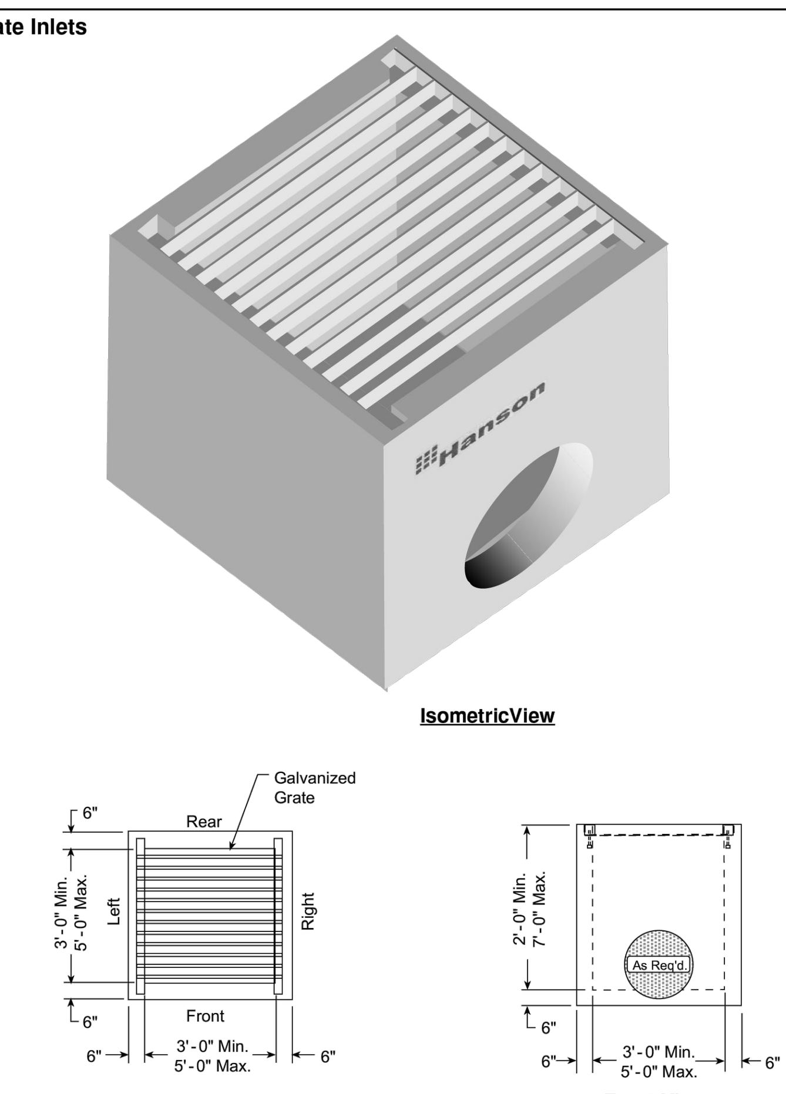
A. H AND Z ARE SPECIFIED ON THE DRAWING.
B. GROUNDWATER IS NO HIGHER THAN THE BOTTOM OF THE FOOTING.
C. THE MATERIAL BELOW THE FOOTING IS FIRM AND STABLE.
D. THE MATERIAL BEHIND THE WALL HAS A LEVEL SURFACE.
E. THE MATERIAL IN FRONT OF THE WALL HAS A SLOPE NO STEEPER THAN 4 HORIZONTAL TO 1 VERTICAL.
F. THE FACE OF THE WALL IS NO STEEPER THAN 1 HORIZONTAL TO 2 VERTICAL.
G. SURCHARGE LOADS BEHIND THE WALL ARE NO CLOSER THAN DISTANCE H FROM THE TOP OF WALL.

NOTES:

1. DESIGN AND CONSTRUCTION OF ROCK WALL SHALL CONFORM TO THE REQUIREMENTS OF CITY CODE 16-7-2, PLACEMENT OF FENCES IN STREET CORNER AREAS, AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL FOR MINIMIM SIGHT DISTANCE.
2. CONCRETE SHALL CONFORM TO ITEM 403S, "CONCRETE FOR STRUCTURES".

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	DRY STACK ROCK WALL FOR SLOPE PROTECTION	
Bill Gardner 3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 623S-1

TXDOT Grate Inlets

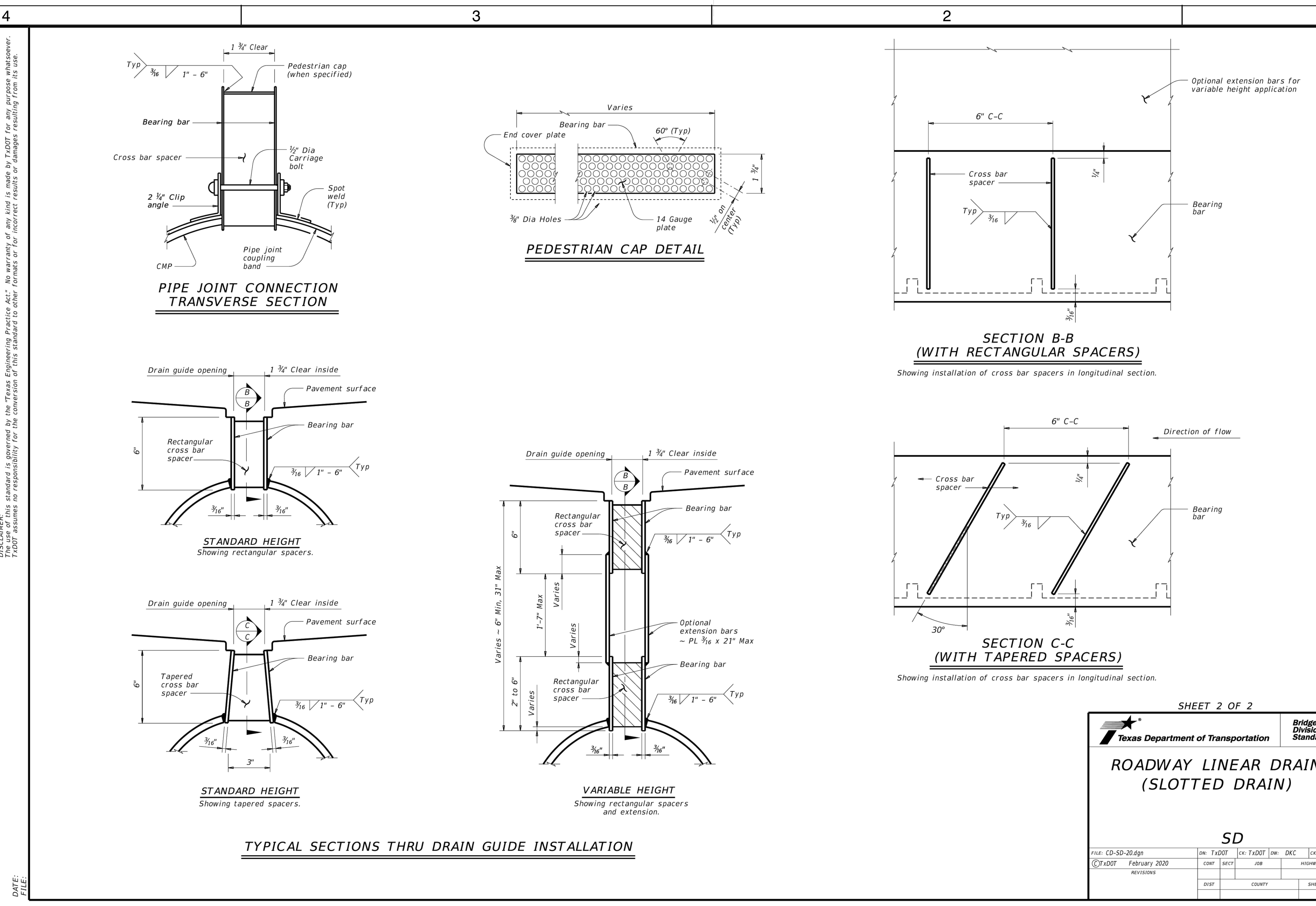


Materials & Features
CONCRETE: 5,000 PSI
REINFORCING: per ASTM A-615 or A-185
H-20 LOADING

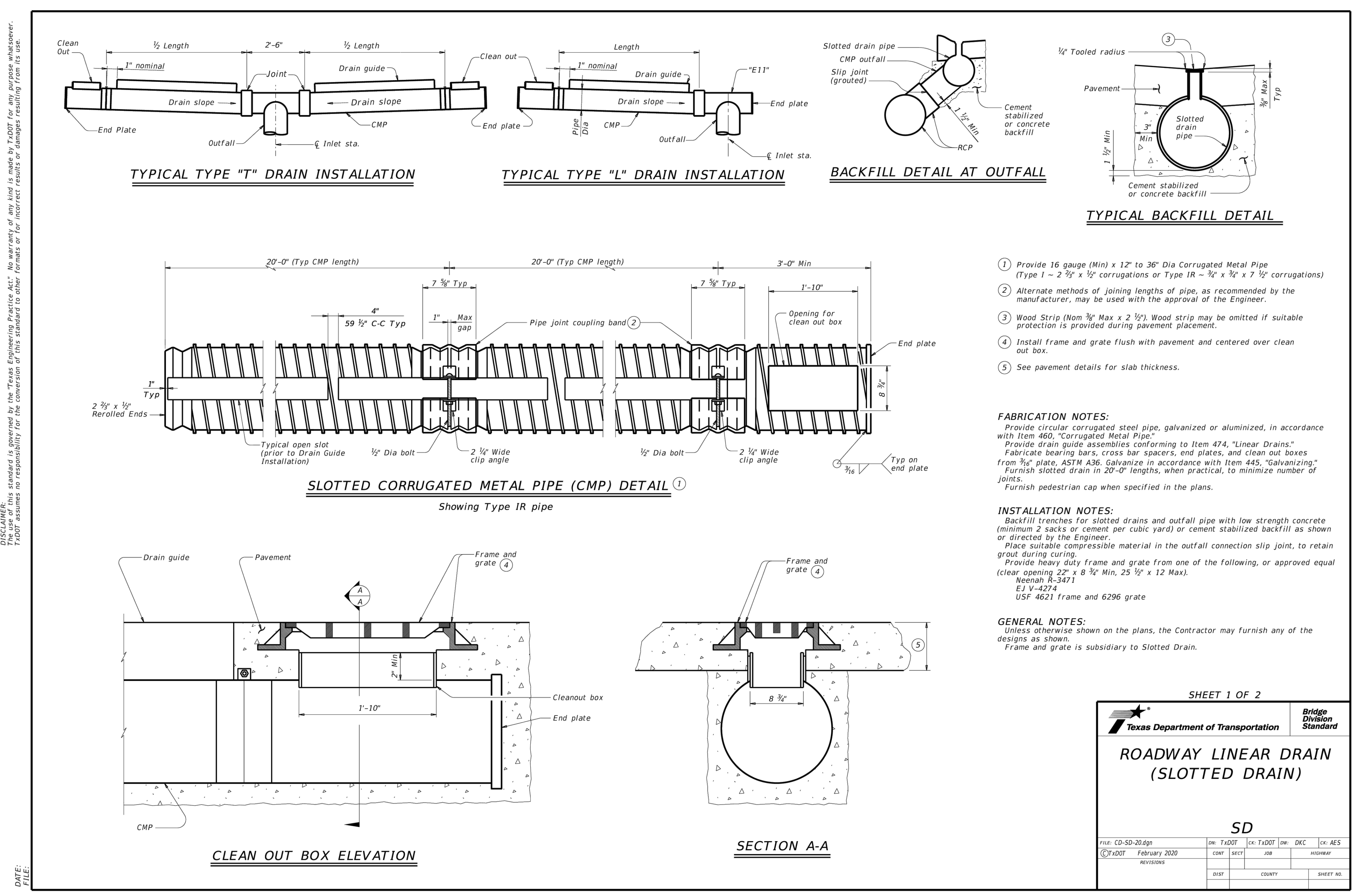
SIZES USED:
3X3
4X4
5X5

-No Scale-
All dimensions subject to allowable specification tolerances.

TITLE	PLANT	STATE	SECTION.PAGE	DATE	
Type "H" Grate Inlet	Grand Prairie Houston	TX	15.32	01-25-10	Hanson HEIDELBERGCEMENT Group



PIPE JOINT CONNECTION TRANSVERSE SECTION
PEDESTRIAN CAP DETAIL
SECTION B-B (WITH RECTANGULAR SPACERS)
Showing installation of cross bar spacers in longitudinal section.
STANDARD HEIGHT
Showing rectangular spacers.
STANDARD HEIGHT
Showing tapered spacers.
VARIABLE HEIGHT
Showing rectangular spacers and extension.
SECTION C-C (WITH TAPERED SPACERS)
Showing installation of cross bar spacers in longitudinal section.
TYPICAL SECTIONS THRU DRAIN GUIDE INSTALLATION
SHEET 2 OF 2
Texas Department of Transportation
Bridge Division Standard
ROADWAY LINEAR DRAIN (SLOTTED DRAIN)
SD



TYPICAL TYPE "T" DRAIN INSTALLATION
TYPICAL TYPE "L" DRAIN INSTALLATION
BACKFILL DETAIL AT OUTFALL
TYPICAL BACKFILL DETAIL
SLOTTED CORRUGATED METAL PIPE (CMP) DETAIL
Showing Type IR pipe
FABRICATION NOTES:
INSTALLATION NOTES:
GENERAL NOTES:
CLEAN OUT BOX ELEVATION
SECTION A-A
SHEET 1 OF 2
Texas Department of Transportation
Bridge Division Standard
ROADWAY LINEAR DRAIN (SLOTTED DRAIN)
SD

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SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
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WILLIAMSON COUNTY

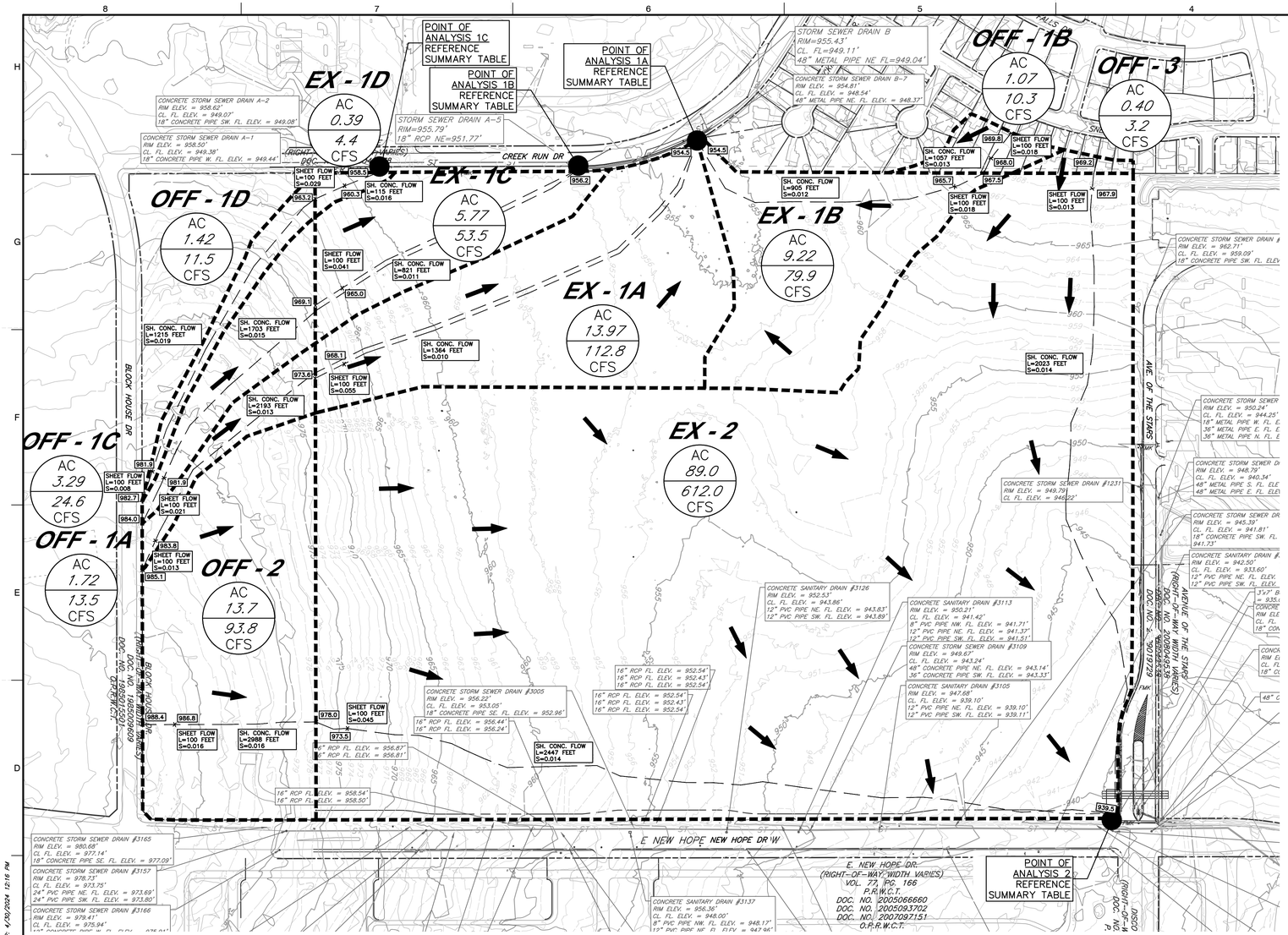
DRAINAGE DETAILS 2

DATE:	1/15/2024
DRAWN BY:	CS
DWG SCALE:	
CHECKED BY:	SRB
PROJECT NO:	331-715
APPROVED BY:	MAT

DRAWING NO.: 64

SHEET 64 OF 47

2023-23-SD



DRAINAGE AREA BOUNDARY

TIME OF CONCENTRATION LINE

BYP-1
AC X.XX
X.X CFS
DRAINAGE AREA LABEL

EXISTING DRAINAGE CONDITIONS:

1. ALL OFFSITE DRAINAGE AREAS HAVE BEEN CONSIDERED AT FULLY DEVELOPED AND UNDETAINED CONDITIONS.
2. ATLAS 14 RAINFALL DATA WAS USED FROM THE COCP MEMORANDUM ISSUED ON FEBRUARY 28, 2020.

BLOCK LEGEND

EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

LINETYPE LEGEND

EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- 385 MAJOR CONTOUR
- MINOR CONTOUR
- E ELECTRIC LINE
- OE OVERHEAD ELECTRIC WIRE
- UE UNDERGROUND ELECTRIC LINE
- T TELEPHONE
- C COMMUNICATIONS LINE
- TV CABLE TELEVISION
- FO FIBER OPTIC LINE
- G GAS LINE
- OU OVERHEAD UTILITY
- UG UNDERGROUND UTILITY
- SAN SANITARY SEWER LINE
- W WATER LINE
- F FIRE LINE
- ROAD CENTERLINE
- CURB & GUTTER
- DEEP CURB & GUTTER
- STRIPING
- FIRE FIRE LANE STRIPING
- H.C. ACCESSIBLE ROUTE
- LIMITS OF CONSTRUCTION
- DRAINAGE AREA
- FLOODWAY
- CWQZ
- ST STORM SEWER
- DRAINAGE CHANNEL

Time of Concentration (TR-55 method) - Existing Site Conditions

Subbasin		EX-1A	EX-1B	EX-1C	EX-1D	EX-2	OFF-1A	OFF-1B	OFF-1C	OFF-1D	OFF-2	OFF-3
Area	sf	608688	401421	251473	17068	3876927	74899	46498	143121	61917	596903	17292
	ac	13.97	9.22	5.77	0.39	89.00	1.72	1.07	3.29	1.42	13.70	0.40
	sq mi	0.0218337	0.0143990	0.0090204	0.0006122	0.13906562	0.00268663	0.00166789	0.00513376	0.00222097	0.02141095	0.00062027
Impervious	%	0.00%	0.00%	0.00%	0.00%	0.15%	80.00%	40.00%	80.00%	80.00%	80.00%	40.00%
Pervious	C'n	82	82	82	82	82	82	82	82	82	82	82
Composite	C'n	82	82	82	82	82	95	88	95	95	95	88
Sheet Flow												
Slope	in/in	0.055	0.018	0.041	0.029	0.045	0.013	0.018	0.021	0.008	0.016	0.013
Length	ft.	100	100	100	100	100	100	100	100	100	100	100
Roughness	n	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Time	hr.	0.10	0.15	0.11	0.12	0.10	0.17	0.15	0.14	0.21	0.16	0.17
Shallow Concentrated												
Slope	in/in	0.0100	0.0120	0.0110	0.0160	0.0140	0.0130	0.0130	0.0150	0.0190	0.0160	0.0140
Length	ft.	1364	905	821	115	2447	2193	1059	1703	1215	2988	2023
Paved?	p/u	u	u	u	u	u	p	p	p	p	p	p
Time	hr.	0.23	0.14	0.14	0.02	0.36	0.26	0.13	0.19	0.12	0.32	0.23
Channel Flow-OPEN CHANNEL												
Slope	in/in											
Length	ft.											
Velocity	fps											
Time	hr.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Summary												
Travel Time	hr.	0.33	0.29	0.24	0.14	0.46	0.43	0.28	0.33	0.33	0.48	0.40
Tc	min.	**19.87**	**17.56**	**14.60**	**8.40**	**27.62**	**26.05**	**16.64**	**19.89**	**19.71**	**28.83**	**24.28**
Lag Time	min.	**11.92**	**10.54**	**8.76**	**5.04**	**16.57**	**15.63**	**9.99**	**11.93**	**11.83**	**17.30**	**14.57**
Existing Run-off Values from HEC-HMS												
2 Year	cfs	32.70	22.80	15.40	1.30	177.60	5.10	3.30	11.10	4.80	38.80	1.00
10 Year	cfs	60.60	42.30	28.70	2.40	329.70	7.90	5.50	17.20	7.50	60.00	1.70
25 Year	cfs	80.10	55.80	37.80	3.10	436.00	9.90	7.10	21.40	9.30	74.70	2.20
100 Year	cfs	113.70	79.10	53.60	4.40	619.70	13.30	9.70	28.80	12.50	100.60	3.10

SUMMARY OF DRAINAGE FLOWS (BY SYSTEM SECTION)

Point of Analysis	Existing Contributing Drainage Areas	Proposed Contributing Drainage Areas	Existing Runoff Values	Proposed Runoff Values (Detained)	Proposed Runoff Values (Undetained)	Δ(Proposed-Existing)
1A	OFF-1A, OFF-1B, EX-1A, EX-1B	PR-2, PR-3, BYPASS-1, BYPASS-2	Q_{10yr} (cfs) = 63.4 Q_{25yr} (cfs) = 115.5 Q_{50yr} (cfs) = 151.6 Q_{100yr} (cfs) = 214.0	Q_{10yr} (cfs) = 27.6 Q_{25yr} (cfs) = 46.1 Q_{50yr} (cfs) = 62.0 Q_{100yr} (cfs) = 97.2	Q_{10yr} (cfs) = 75.6 Q_{25yr} (cfs) = 118.7 Q_{50yr} (cfs) = 148.4 Q_{100yr} (cfs) = 200.2	ΔQ_{10yr} (cfs) = -35.8 [REDUCTION IN FLOW] ΔQ_{25yr} (cfs) = -69.4 [REDUCTION IN FLOW] ΔQ_{50yr} (cfs) = -89.6 [REDUCTION IN FLOW] ΔQ_{100yr} (cfs) = -116.8 [REDUCTION IN FLOW]
1B	OFF-1C, EX-1C	PR-1, BYPASS-3	Q_{10yr} (cfs) = 26.2 Q_{25yr} (cfs) = 45.2 Q_{50yr} (cfs) = 58.3 Q_{100yr} (cfs) = 81.0	Q_{10yr} (cfs) = 24.4 Q_{25yr} (cfs) = 35.0 Q_{50yr} (cfs) = 45.1 Q_{100yr} (cfs) = 72.9	Q_{10yr} (cfs) = 103.9 Q_{25yr} (cfs) = 161.5 Q_{50yr} (cfs) = 201.3 Q_{100yr} (cfs) = 270.5	ΔQ_{10yr} (cfs) = -1.8 [REDUCTION IN FLOW] ΔQ_{25yr} (cfs) = -10.2 [REDUCTION IN FLOW] ΔQ_{50yr} (cfs) = -13.2 [REDUCTION IN FLOW] ΔQ_{100yr} (cfs) = -8.1 [REDUCTION IN FLOW]
1C	OFF-1D, EX-1D	OFF-1, BYPASS-4, PR-5	Q_{10yr} (cfs) = 5.7 Q_{25yr} (cfs) = 9.0 Q_{50yr} (cfs) = 11.3 Q_{100yr} (cfs) = 15.4	Q_{10yr} (cfs) = 21.4 Q_{25yr} (cfs) = 33.1 Q_{50yr} (cfs) = 41.2 Q_{100yr} (cfs) = 55.5	Q_{10yr} (cfs) = 21.4 Q_{25yr} (cfs) = 33.1 Q_{50yr} (cfs) = 41.2 Q_{100yr} (cfs) = 55.5	ΔQ_{10yr} (cfs) = 15.7 [NO REDUCTION IN FLOW] ΔQ_{25yr} (cfs) = 24.1 [NO REDUCTION IN FLOW] ΔQ_{50yr} (cfs) = 29.9 [NO REDUCTION IN FLOW] ΔQ_{100yr} (cfs) = 40.1 [NO REDUCTION IN FLOW]
2	OFF-2, OFF-3, EX-2	OFF-2, PR-4	Q_{10yr} (cfs) = 217.4 Q_{25yr} (cfs) = 391.3 Q_{50yr} (cfs) = 512.9 Q_{100yr} (cfs) = 723.3	Q_{10yr} (cfs) = 215.9 Q_{25yr} (cfs) = 367.2 Q_{50yr} (cfs) = 490.5 Q_{100yr} (cfs) = 718.2	Q_{10yr} (cfs) = 405.8 Q_{25yr} (cfs) = 629.8 Q_{50yr} (cfs) = 784.6 Q_{100yr} (cfs) = 1053.8	ΔQ_{10yr} (cfs) = -1.5 [REDUCTION IN FLOW] ΔQ_{25yr} (cfs) = -24.1 [REDUCTION IN FLOW] ΔQ_{50yr} (cfs) = -22.4 [REDUCTION IN FLOW] ΔQ_{100yr} (cfs) = -5.1 [REDUCTION IN FLOW]

SUMMARY OF DRAINAGE FLOWS (OVERALL)

Point of Analysis	Existing Contributing Drainage Areas	Proposed Contributing Drainage Areas	Existing Runoff Values	Proposed Runoff Values (Detained)	Proposed Runoff Values (Undetained)	Δ(Proposed-Existing)
1*	OFF-1A, OFF-1B, OFF-1C, OFF-1D, EX-1A, EX-1B, EX-1C, EX-1D	OFF-1, BYP-1, BYP-2, BYP-3, BYP-4, PR-1, PR-2, PR-3, PR-5	Q_{10yr} (cfs) = 95.3 Q_{25yr} (cfs) = 169.7 Q_{50yr} (cfs) = 221.2 Q_{100yr} (cfs) = 310.4	Q_{10yr} (cfs) = 73.4 Q_{25yr} (cfs) = 114.2 Q_{50yr} (cfs) = 148.3 Q_{100yr} (cfs) = 225.6	Q_{10yr} (cfs) = 199.8 Q_{25yr} (cfs) = 311.7 Q_{50yr} (cfs) = 389.0 Q_{100yr} (cfs) = 523.6	ΔQ_{10yr} (cfs) = -21.9 [REDUCTION IN FLOW] ΔQ_{25yr} (cfs) = -55.5 [REDUCTION IN FLOW] ΔQ_{50yr} (cfs) = -72.9 [REDUCTION IN FLOW] ΔQ_{100yr} (cfs) = -84.8 [REDUCTION IN FLOW]
2	OFF-2, OFF-3, EX-2	OFF-2, PR-4	Q_{10yr} (cfs) = 217.4 Q_{25yr} (cfs) = 391.3 Q_{50yr} (cfs) = 512.9 Q_{100yr} (cfs) = 723.3	Q_{10yr} (cfs) = 215.9 Q_{25yr} (cfs) = 367.2 Q_{50yr} (cfs) = 490.5 Q_{100yr} (cfs) = 718.2	Q_{10yr} (cfs) = 405.8 Q_{25yr} (cfs) = 629.8 Q_{50yr} (cfs) = 784.6 Q_{100yr} (cfs) = 1053.8	ΔQ_{10yr} (cfs) = -1.5 [REDUCTION IN FLOW] ΔQ_{25yr} (cfs) = -24.1 [REDUCTION IN FLOW] ΔQ_{50yr} (cfs) = -22.4 [REDUCTION IN FLOW] ΔQ_{100yr} (cfs) = -5.1 [REDUCTION IN FLOW]

* POA 1 is the overall drainage to the Block House MUD system that includes all drainage areas draining to the north

NORTH
SCALE IN FEET
0 200 400

STATE OF TEXAS
MICHAEL A. THEONE
142972
PROFESSIONAL ENGINEER

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SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

EXISTING DMAP

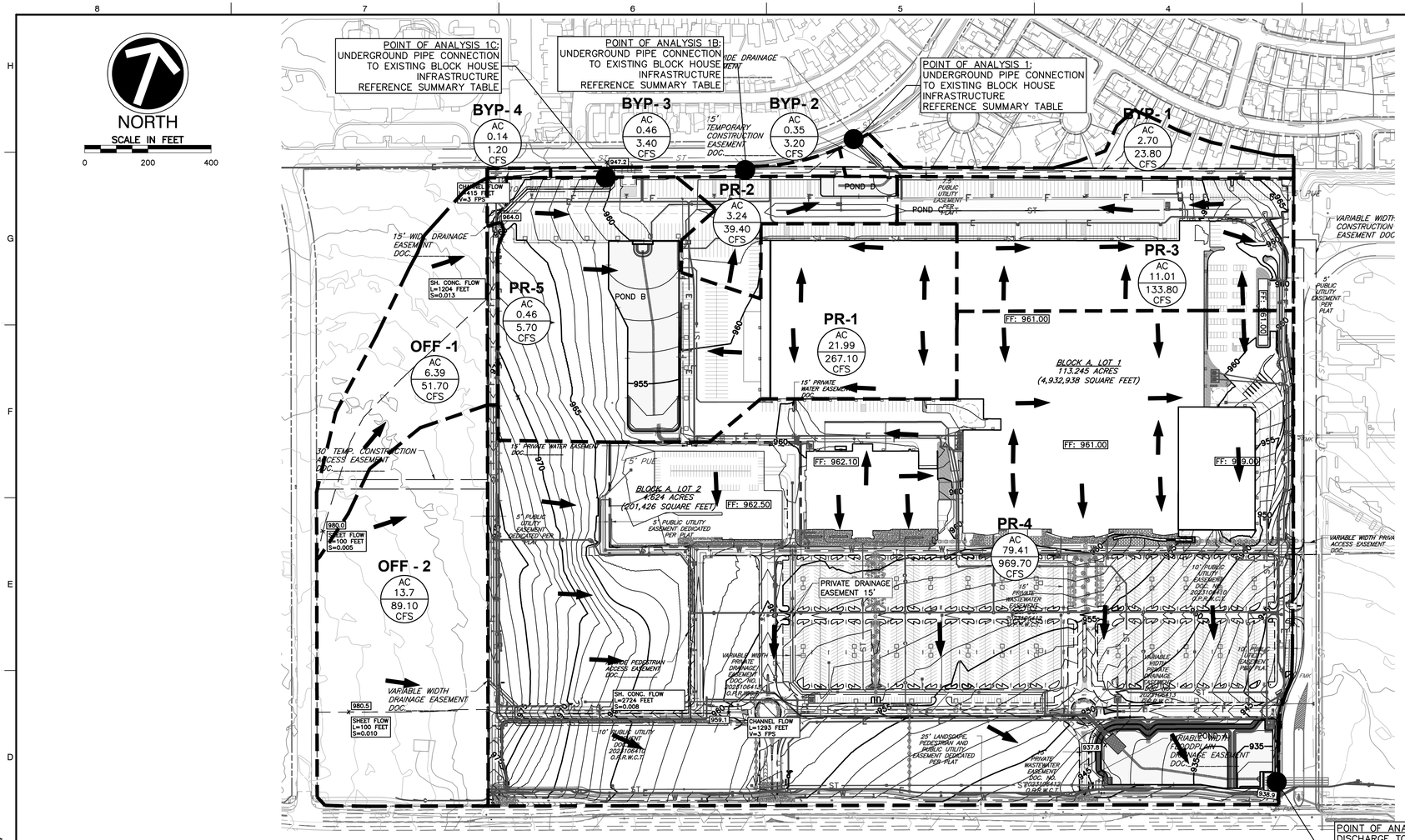
DRAWN BY:	OU
CHECKED BY:	SRB
DATE:	12/20/2023
DWG SCALE:	1" = 200'
PROJECT NO:	331-7151
APPROVED BY:	MAT

DRAWING NO.: **65**

SHEET **65** OF **175**

2023-23-SD

P:\330-2001\331-7151-CAD\Dwg\CIVIL\331715-CIVIL-C300-EXISTING DMAP.dwg[EXISTING DMAP] LS:(4/26/2024 - mtheone) - LP: 4/30/2024 12:16 PM



BYP-1
AC X.XX
X.X CFS

PROPOSED DRAINAGE CONDITIONS:

1. ALL OFFSITE DRAINAGE AREAS HAVE BEEN CONSIDERED AT FULLY DEVELOPED AND UNDETAINED CONDITIONS.
2. ATLAS 14 RAINFALL DATA WAS USED FROM THE COCP MEMORANDUM ISSUED ON FEBRUARY 28, 2020.
3. THE FLOW OFF THE SITE HAS NOT BEEN INCREASED FROM THE EXISITNG CONDITION.

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
S	S	PIPE BREAK
]	]	PIPE CAP
>	>	PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
	HB	HOSE BIB
S	S	SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
D	D	DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
E	E	ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
M	M	UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST	ST	STORM SEWER
		DRAINAGE CHANNEL

Time of Concentration (TR-55 method) - Proposed Site Conditions

Subbasin		PR-1	PR-2	PR-3	PR-4	PR-5	OFF-1	OFF-2	BYP-1	BYP-2	BYP-3	BYP-4
	sf	957767	141148	523406	3414978	20046	278329	597094	117801	15337	19892	6098
Area	ac	21.99	3.24	11.01	79.41	0.46	6.39	13.71	2.70	0.35	0.46	0.14
	sq mi	0.0343552	0.0050630	0.0172031	0.1240781	0.0007191	0.0099837	0.0214178	0.0042255	0.0005501	0.0007135	0.0002187
Impervious	%	80%	80%	80%	80%	100%	80%	80%	40%	0%	0%	0%
Pervious	Cn	82	82	82	82	82	82	82	82	82	82	82
Composite	Cn	95	95	95	95	98	95	95	88	82	82	82
Sheet Flow												
Slope	m/m						0.0050	0.0100	0.0100	0.0075	0.0060	0.0050
Length	ft.						100	100	100	100	100	100
Roughness	n						0.15	0.15	0.15	0.15	0.15	0.15
Time	hr.	0.00	0.00	0.00	0.00	0.00	0.25	0.19	0.21	0.23	0.25	0.25
Shallow Concentrated												
Slope	m/m						0.0133	0.0079	0.0132	0.0047	0.0019	0.0048
Length	ft.						1204	2724	946	215	521	104
Paved?	p/u						p	p	p	p	p	p
Time	hr.	0.00	0.00	0.00	0.00	0.00	0.14	0.42	0.11	0.04	0.16	0.02
Channel Flow - STORM PIPE												
Slope	m/m						0.0405	0.0165				
Length	ft.						415	1293				
Velocity	fps						3.00	3.00				
Time	hr.	0.000	0.000	0.000	0.000	0.000	0.038	0.120	0.000	0.000	0.000	0.000
Summary												
Travel Time	hr.	0.00	0.00	0.00	0.00	0.00	0.39	0.61	0.30	0.26	0.40	0.27
Tc	min.	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**23.63**	**36.62**	**18.17**	**15.40**	**23.76**	**16.30**
Lag Time	min.	**5.00**	**5.00**	**5.00**	**5.00**	**5.00**	**14.18**	**21.97**	**10.90**	**9.24**	**14.26**	**9.78**
Proposed Run-off Values from HEC-HMS (undetained)												
2 Year	cfs	102.90	15.20	51.50	371.60	2.30	19.90	34.20	8.00	0.90	1.00	0.40
10 Year	cfs	159.70	23.50	80.00	576.80	3.50	30.80	53.00	13.50	1.70	1.80	0.70
25 Year	cfs	198.90	29.30	99.60	718.50	4.30	38.40	66.10	17.20	2.30	2.40	0.90
100 Year	cfs	267.10	39.40	133.80	964.70	5.70	51.70	89.10	23.80	3.20	3.40	1.20

SUMMARY OF DRAINAGE FLOWS (BY SYSTEM SECTION)

Point of Analysis	Existing Contributing Drainage Areas	Proposed Contributing Drainage Areas	Existing Runoff Values	Proposed Runoff Values (Detained)	Proposed Runoff Values (Undetained)	Δ(Proposed-Existing)	
1A	OFF-1A, OFF-1B, EX-1A, EX-1B	PR-2, PR-3, BYPASS-1, BYPASS-2	Q_{2Yr} (cfs) = 63.4	Q_{2Yr} (cfs) = 27.6	Q_{2Yr} (cfs) = 75.6	ΔQ_{2Yr} (cfs) = -35.8	[REDUCTION IN FLOW]
			Q_{10Yr} (cfs) = 115.5	Q_{10Yr} (cfs) = 46.1	Q_{10Yr} (cfs) = 118.7	ΔQ_{10Yr} (cfs) = -69.4	[REDUCTION IN FLOW]
			Q_{25Yr} (cfs) = 151.6	Q_{25Yr} (cfs) = 62.0	Q_{25Yr} (cfs) = 148.4	ΔQ_{25Yr} (cfs) = -89.6	[REDUCTION IN FLOW]
			Q_{100Yr} (cfs) = 214.0	Q_{100Yr} (cfs) = 97.2	Q_{100Yr} (cfs) = 200.2	ΔQ_{100Yr} (cfs) = -116.8	[REDUCTION IN FLOW]
1B	OFF-1C, EX-1C	PR-1, BYPASS-3	Q_{2Yr} (cfs) = 26.2	Q_{2Yr} (cfs) = 24.4	Q_{2Yr} (cfs) = 103.9	ΔQ_{2Yr} (cfs) = -1.8	[REDUCTION IN FLOW]
			Q_{10Yr} (cfs) = 45.2	Q_{10Yr} (cfs) = 35.0	Q_{10Yr} (cfs) = 161.5	ΔQ_{10Yr} (cfs) = -10.2	[REDUCTION IN FLOW]
			Q_{25Yr} (cfs) = 58.3	Q_{25Yr} (cfs) = 45.1	Q_{25Yr} (cfs) = 201.3	ΔQ_{25Yr} (cfs) = -13.2	[REDUCTION IN FLOW]
			Q_{100Yr} (cfs) = 81.0	Q_{100Yr} (cfs) = 72.9	Q_{100Yr} (cfs) = 270.5	ΔQ_{100Yr} (cfs) = -8.1	[REDUCTION IN FLOW]
1C	OFF-1D, EX-1D	OFF-1, BYPASS-4, PR-5	Q_{2Yr} (cfs) = 5.7	Q_{2Yr} (cfs) = 21.4	Q_{2Yr} (cfs) = 21.4	ΔQ_{2Yr} (cfs) = 15.7	[NO REDUCTION IN FLOW]
			Q_{10Yr} (cfs) = 9.0	Q_{10Yr} (cfs) = 33.1	Q_{10Yr} (cfs) = 33.1	ΔQ_{10Yr} (cfs) = 24.1	[NO REDUCTION IN FLOW]
			Q_{25Yr} (cfs) = 11.3	Q_{25Yr} (cfs) = 41.2	Q_{25Yr} (cfs) = 41.2	ΔQ_{25Yr} (cfs) = 29.9	[NO REDUCTION IN FLOW]
			Q_{100Yr} (cfs) = 15.4	Q_{100Yr} (cfs) = 55.5	Q_{100Yr} (cfs) = 55.5	ΔQ_{100Yr} (cfs) = 40.1	[NO REDUCTION IN FLOW]
2	OFF-2, OFF-3, EX-2	OFF-2, PR-4	Q_{2Yr} (cfs) = 217.4	Q_{2Yr} (cfs) = 215.9	Q_{2Yr} (cfs) = 405.8	ΔQ_{2Yr} (cfs) = -1.5	[REDUCTION IN FLOW]
			Q_{10Yr} (cfs) = 391.3	Q_{10Yr} (cfs) = 367.2	Q_{10Yr} (cfs) = 629.8	ΔQ_{10Yr} (cfs) = -24.1	[REDUCTION IN FLOW]
			Q_{25Yr} (cfs) = 512.9	Q_{25Yr} (cfs) = 490.5	Q_{25Yr} (cfs) = 784.6	ΔQ_{25Yr} (cfs) = -22.4	[REDUCTION IN FLOW]
			Q_{100Yr} (cfs) = 723.3	Q_{100Yr} (cfs) = 718.2	Q_{100Yr} (cfs) = 1053.8	ΔQ_{100Yr} (cfs) = -5.1	[REDUCTION IN FLOW]

SUMMARY OF DRAINAGE FLOWS (OVERALL)

Point of Analysis	Existing Contributing Drainage Areas	Proposed Contributing Drainage Areas	Existing Runoff Values	Proposed Runoff Values (Detained)	Proposed Runoff Values (Undetained)	Δ(Proposed-Existing)	
1*	OFF-1A, OFF-1B, OFF-1C, OFF-1D, EX-1A, EX-1B, EX-1C, EX-1D	OFF-1, BYP-1, BYP-2, BYP-3, BYP-4, PR-1, PR-2, PR-3, PR-5	Q_{2Yr} (cfs) = 95.3	Q_{2Yr} (cfs) = 73.4	Q_{2Yr} (cfs) = 199.8	ΔQ_{2Yr} (cfs) = -21.9	[REDUCTION IN FLOW]
			Q_{10Yr} (cfs) = 169.7	Q_{10Yr} (cfs) = 114.2	Q_{10Yr} (cfs) = 311.7	ΔQ_{10Yr} (cfs) = -55.5	[REDUCTION IN FLOW]
			Q_{25Yr} (cfs) = 221.2	Q_{25Yr} (cfs) = 148.3	Q_{25Yr} (cfs) = 389.0	ΔQ_{25Yr} (cfs) = -72.9	[REDUCTION IN FLOW]
			Q_{100Yr} (cfs) = 310.4	Q_{100Yr} (cfs) = 225.6	Q_{100Yr} (cfs) = 523.6	ΔQ_{100Yr} (cfs) = -84.8	[REDUCTION IN FLOW]
2	OFF-2, OFF-3, EX-2	OFF-2, PR-4	Q_{2Yr} (cfs) = 217.4	Q_{2Yr} (cfs) = 215.9	Q_{2Yr} (cfs) = 405.8	ΔQ_{2Yr} (cfs) = -1.5	[REDUCTION IN FLOW]
			Q_{10Yr} (cfs) = 391.3	Q_{10Yr} (cfs) = 367.2	Q_{10Yr} (cfs) = 629.8	ΔQ_{10Yr} (cfs) = -24.1	[REDUCTION IN FLOW]
			Q_{25Yr} (cfs) = 512.9	Q_{25Yr} (cfs) = 490.5	Q_{25Yr} (cfs) = 784.6	ΔQ_{25Yr} (cfs) = -22.4	[REDUCTION IN FLOW]
			Q_{100Yr} (cfs) = 723.3	Q_{100Yr} (cfs) = 718.2	Q_{100Yr} (cfs) = 1053.8	ΔQ_{100Yr} (cfs) = -5.1	[REDUCTION IN FLOW]

* POA 1 is the overall drainage to the Block House MUD system that includes all drainage areas draining to the north

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REVISION RECORD

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Texas Registered Engineering Firm F-98
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

PROPOSED DMAP

DATE:	4/24/2024
DWG SCALE:	1" = 200'
PROJECT NO:	
DRAWN BY:	CEC
CHECKED BY:	SRB
	331-715
APPROVED BY:	MAT

DRAWING NO.: 66
SHEET 66 OF 175

2023-23-SD

P:\330-2001\331-715\-0400\Dwg\CVD\331715-CVD1-C300-PROPOSED DMAP.dwg[PROPOSED DMAP] LS(4/26/2024 - mtheone) - LP: 4/30/2024 12:17 PM

B-U1 AC 2.72 40.4 CFS

D-N1 AC 2.89 42.1 CFS

C-2 AC 3.00 43.2 CFS

C-O2 AC 1.33 26.3 CFS

B-M2 AC 0.75 11.1 CFS

C-5 AC 0.86 12.8 CFS

C-O1 AC 1.48 20.4 CFS

BY-T1 AC 0.45 6.7 CFS

B-M1 AC 7.59 112.8 CFS

C-S1 AC 4.93 73.3 CFS

B-L1 AC 2.61 38.8 CFS

A-H1 AC 5.04 74.9 CFS

A-H3 AC 2.10 26.4 CFS

A-K1 AC 2.81 40.5 CFS

A-E1 AC 2.36 30.7 CFS

A-E6 AC 0.73 4.0 CFS

A-E2 AC 2.38 35.4 CFS

A-C1 AC 0.86 5.4 CFS

A-K3 AC 2.74 40.7 CFS

A-J1 AC 5.28 78.0 CFS

A-H2 AC 2.17 32.2 CFS

A-H4 AC 0.76 8.3 CFS

A-V1 AC 0.32 4.8 CFS

A-K2 AC 0.13 1.9 CFS

A-E4 AC 0.76 9.5 CFS

A-E5 AC 1.39 18.1 CFS

A-E3 AC 1.93 25.1 CFS

A-C2 AC 0.68 8.1 CFS

A-G1 AC 1.08 11.3 CFS

A-F3 AC 3.99 52.0 CFS

A-V2 AC 0.43 6.4 CFS

A-C3 AC 0.89 10.6 CFS

A-F2 AC 1.90 24.7 CFS

A-F1 AC 0.63 8.1 CFS

A-C4 AC 0.41 5.3 CFS

A-C5 AC 0.35 4.7 CFS

A-G5 AC 0.53 6.8 CFS

A-A8 AC 0.83 10.8 CFS

A-A4 AC 2.08 27.1 CFS

A-A6 AC 1.27 16.5 CFS

A-A5 AC 1.38 18.0 CFS

A-A7 AC 1.93 25.1 CFS

A-A1 AC 0.19 2.6 CFS

A-A2 AC 0.94 12.2 CFS

A-A3 AC 1.81 23.6 CFS

POND A

POND B

POND C

POND D

COMMUNICATIONS EQUIPMENT STATION EASEMENT VOL. 2512, PG. 307 D.R.W.C.T.

BOUNDARY LINE AGREEMENT VOL. 1650, PG. 4 D.R.W.C.T.

20' PUBLIC WATER EASEMENT DOC. NO. 2023106409 O.P.R.W.C.T.

SEE MAP ON SHEET 68 BELOW FOR DRAINAGE A-31-41

SEE MAP ON SHEET 68 BELOW FOR DRAINAGE A-42-51

24" RCP

30" RCP

36" RCP

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
	HB	HOSE BIB
	S	SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
	D	DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
E	E	ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
M	M	UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LI
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST		STORM SEWER
		DRAINAGE CHANNEL

NORTH

SCALE IN FEET

0 200 400

STATE OF TEXAS MICHAEL A. THEONE 142972 LICENSED PROFESSIONAL ENGINEER

STATE OF TEXAS MICHAEL A. THEONE 142972 LICENSED PROFESSIONAL ENGINEER

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811

REVISION RECORD

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Texas Registered Engineering Firm F-98
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

OVERALL INLET MAP

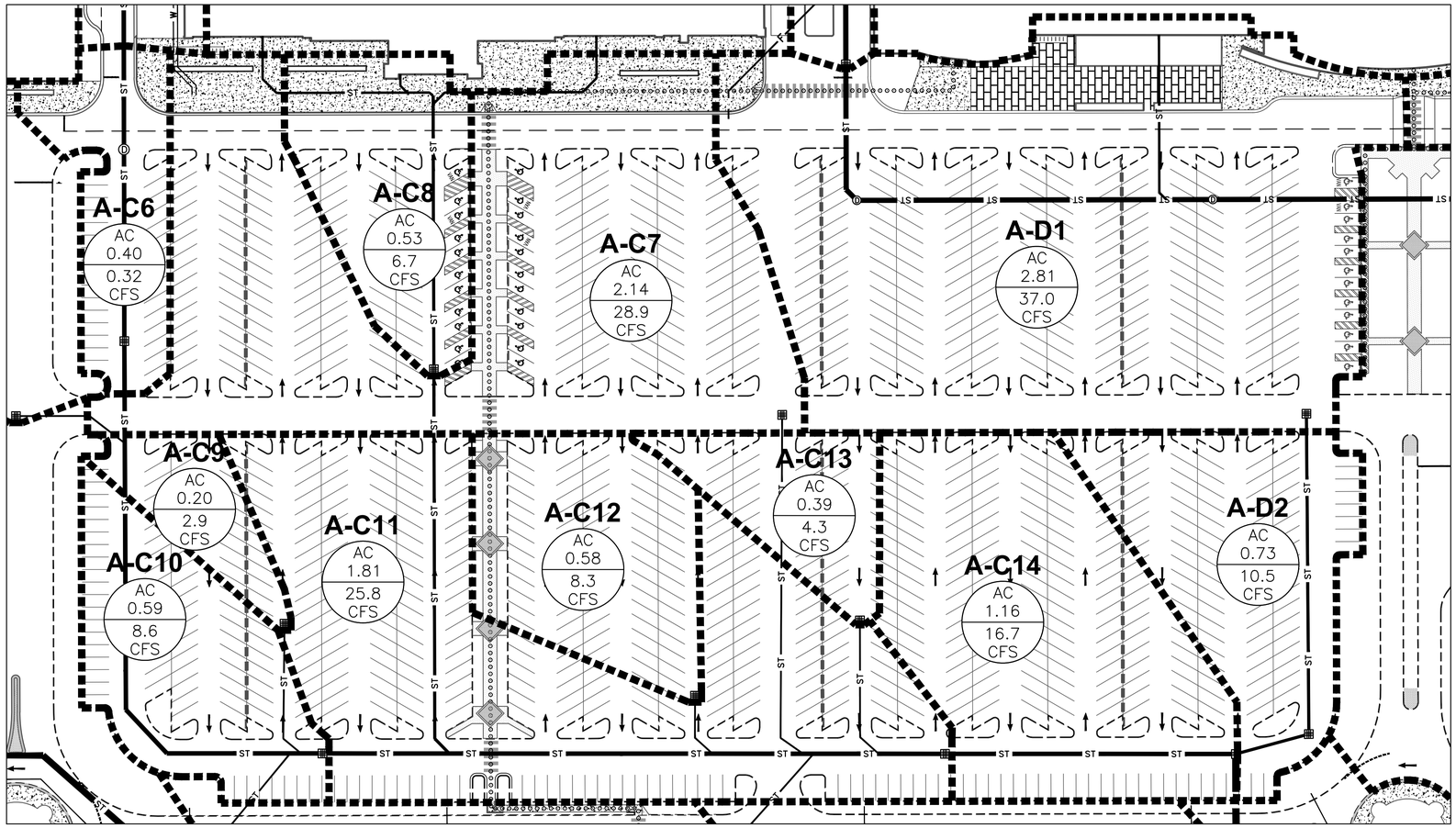
DATE:	4/24/2024
DWG SCALE:	1" = 100'
PROJECT NO:	331-7115
DRAWN BY:	CEC
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 67

SHEET 67 OF 175

2023-23-SD

P:\331-0001\331-7115-CAD\Dwg\CVD\331715-CVD1-CAD0-OVERALL INLET MAP.dwg[OVERALL INLET MAP] LS(4/26/2024 - mlheond) - LP(4/30/2024 12:17 PM



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
	HB	HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LI
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

NORTH

SCALE IN FEET
0 50 100

STATE OF TEXAS
MICHAEL A. THEONE
142972
PROFESSIONAL LICENSED ENGINEER

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www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

PARKING INLET MAP

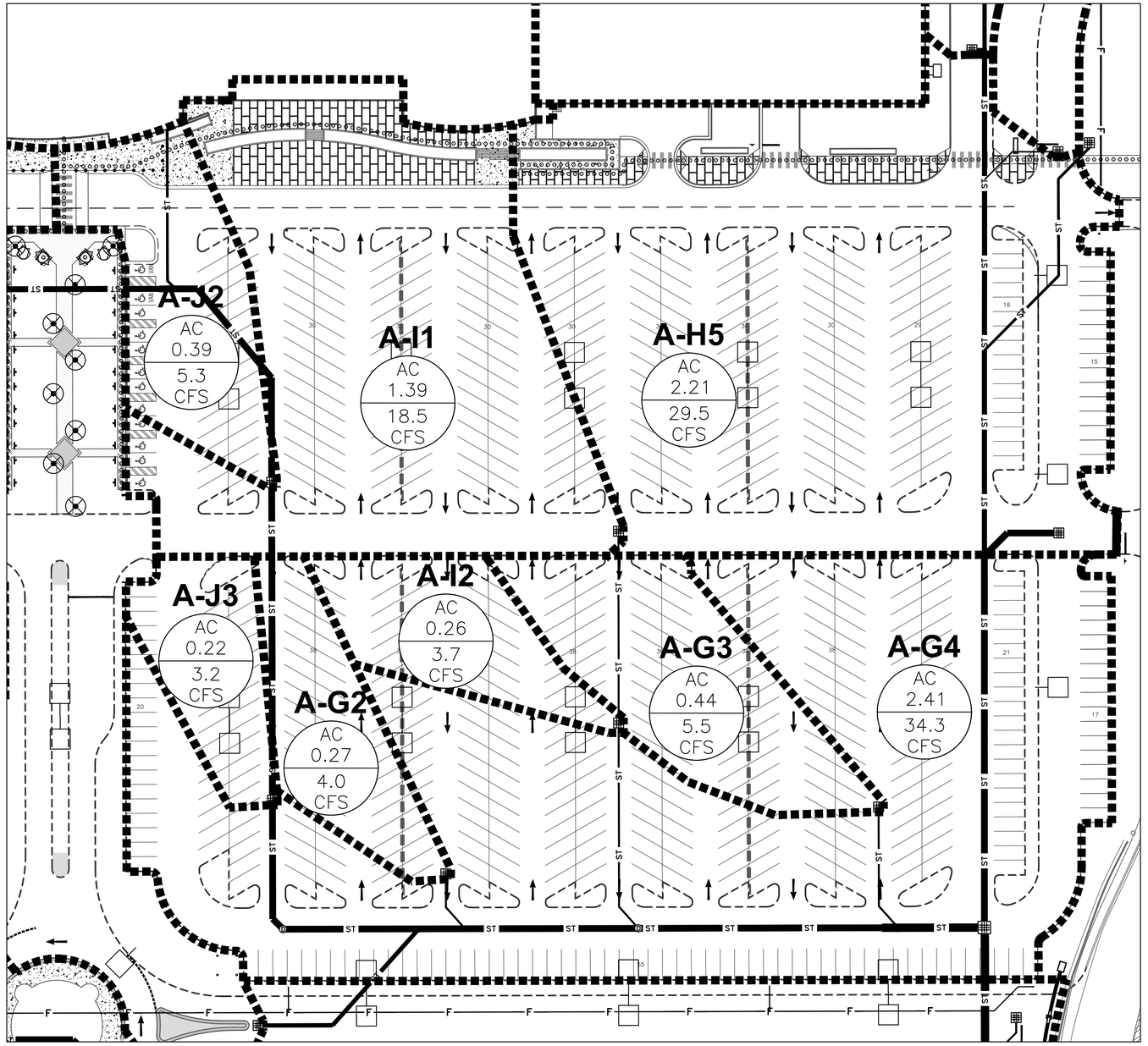
DATE:	1/9/2024
DWG SCALE:	1" = 50'
PROJECT NO:	331-715
DRAWN BY:	CU
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 68

SHEET 68 OF 175

2023-23-SD

P:\330-2001\331-715\-CAD\Dwg\CVD\1331715-CVD1-CADD-PARKING INLET MAP.dwg[PARKING INLET MAP] LS\4/26/2024 - jhenry - LP: 4/30/2024 12:18 PM



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
S	S	PIPE BREAK
]	]	PIPE CAP
>	>	PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
	HB	HOSE BIB
S	S	SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
D	D	DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
E	E	ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
M	M	UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
X	X	FENCE: BARBED
//	//	FENCE: WOOD (PICKET)
□	□	FENCE: GUARDRAIL
○	○	FENCE: CHAIN LINK
I	I	FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LI
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

NORTH

SCALE IN FEET

0 40 80

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

REVISION RECORD		
NO	DATE	DESCRIPTION

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1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

PARKING INLET MAP 2

DATE:	1/9/2024	DRAWN BY:	QU
DWG SCALE:	1"=40'	CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MAT

DRAWING NO.: 69

SHEET 69 OF 175

2023-23-SD

P:\330-000\331-715\-CADD\Dwg\CIVIL\331715-CIV01-C400-PARKING INLET MAP.dwg|PARKING INLET MAP 2| LS(4/26/2024 - jdeane) - LP: 4/30/2024 12:18 PM

A-E1

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	2.36	2.36	2.36	2.36
C	0.64	0.71	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	9.5	15.8	20.8	30.7

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.47	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.89	80%	Concrete	0.75	0.83	0.88	0.97
2.36	100%					

A-E2

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	2.38	2.38	2.38	2.38
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	11.2	18.6	24.3	35.4

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.00	0%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
2.38	100%	Concrete	0.75	0.83	0.88	0.97
2.38	100%					

A-K3

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	2.74	2.74	2.74	2.74
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	12.9	21.4	28.0	40.7

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.00	0%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
2.74	100%	Concrete	0.75	0.83	0.88	0.97
2.74	100%					

A-F1

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.63	0.63	0.63	0.63
C	0.64	0.71	0.76	0.84
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	2.5	4.2	5.6	8.1

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.13	21%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.50	79%	Concrete	0.75	0.83	0.88	0.97
0.63	100%					

A-E3

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	1.93	1.93	1.93	1.93
C	0.64	0.71	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	7.7	12.9	17.0	25.1

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.39	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.54	80%	Concrete	0.75	0.83	0.88	0.97
1.93	100%					

A-A1

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.19	0.19	0.19	0.19
C	0.69	0.77	0.82	0.91
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	0.8	1.4	1.8	2.6

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.02	11%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.17	89%	Concrete	0.75	0.83	0.88	0.97
0.19	100%					

A-F3

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	3.99	3.99	3.99	3.99
C	0.64	0.71	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	16.0	26.7	35.2	52.0

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.80	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
3.19	80%	Concrete	0.75	0.83	0.88	0.97
3.99	100%					

A-A2

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.94	0.94	0.94	0.94
C	0.65	0.72	0.77	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	3.8	6.4	8.4	12.2

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.18	19%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.76	81%	Concrete	0.75	0.83	0.88	0.97
0.94	100%					

A-A3

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	1.81	1.81	1.81	1.81
C	0.64	0.71	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	7.3	12.1	16.0	23.6

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.36	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.45	80%	Concrete	0.75	0.83	0.88	0.97
1.81	100%					

A-A4

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	2.08	2.08	2.08	2.08
C	0.64	0.72	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	8.3	14.1	18.4	27.1

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.41	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.67	80%	Concrete	0.75	0.83	0.88	0.97
2.08	100%					

A-A5

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	1.38	1.38	1.38	1.38
C	0.64	0.72	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	5.5	9.4	12.2	18.0

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.27	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.11	80%	Concrete	0.75	0.83	0.88	0.97
1.38	100%					

A-A6

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	1.26	1.26	1.26	1.26
C	0.64	0.71	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	5.1	8.4	11.1	16.4

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.25	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.01	80%	Concrete	0.75	0.83	0.88	0.97
1.26	100%					

A-A7

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	1.93	1.93	1.93	1.93
C	0.64	0.72	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	7.7	13.1	17.0	25.1

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.38	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.55	80%	Concrete	0.75	0.83	0.88	0.97
1.93	100%					

A-A8

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.83	0.83	0.83	0.83
C	0.64	0.71	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	3.3	5.6	7.3	10.8

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.17	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.66	80%	Concrete	0.75	0.83	0.88	0.97
0.83	100%					

A-G5

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.53	0.53	0.53	0.53
C	0.64	0.71	0.76	0.84
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	2.1	3.5	4.7	6.8

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.11	21%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.42	79%	Concrete	0.75	0.83	0.88	0.97
0.53	100%					

A-G1

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	1.08	1.08	1.08	1.08
C	0.50	0.56	0.60	0.68
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	3.4	5.7	7.5	11.3

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.51	47%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.57	53%	Concrete	0.75	0.83	0.88	0.97
1.08	100%					

A-C5

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.35	0.35	0.35	0.35
C	0.67	0.75	0.80	0.88
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	1.5	2.5	3.3	4.7

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.05	14%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.30	86%	Concrete	0.75	0.83	0.88	0.97
0.35	100%					

A-J1

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	5.25	5.25	5.25	5.25
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	24.7	41.1	53.7	78.0

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.00	0%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
5.25	100%	Concrete	0.75	0.83	0.88	0.97
5.25	100%					

A-F2

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	1.90	1.90	1.90	1.90
C	0.64	0.71	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	7.6	12.7	16.8	24.7

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.38	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.52	80%	Concrete	0.75	0.83	0.88	0.97
1.90	100%					

A-H1

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	5.04	5.04	5.04	5.04
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	23.7	39.4	51.5	74.9

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.00	0%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
5.04	100%	Concrete	0.75	0.83	0.88	0.97
5.04	100%					

A-H2

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	2.17	2.17	2.17	2.17
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	10.2	17.0	22.2	32.2

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.00	0%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
2.17	100%	Concrete	0.75	0.83	0.88	0.97
2.17	100%					

A-H3

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	2.10	2.10	2.10	2.10
C	0.62	0.69	0.74	0.82
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	8.2	13.7	18.1	26.4

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.51	24%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.59	76%	Concrete	0.75	0.83	0.88	0.97
2.10	100%					

A-C3

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.89	0.89	0.89	0.89
C	0.59	0.65	0.70	0.78
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	3.3	5.5	7.2	10.6

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.27	30%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.62	70%	Concrete	0.75	0.83	0.88	0.97
0.89	100%					

A-C4

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.41	0.41	0.41	0.41
C	0.63	0.70	0.75	0.84
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	1.6	2.7	3.6	5.3

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.09	22%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.32	78%	Concrete	0.75	0.83	0.88	0.97
0.41	100%					

A-C1

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.86	0.86	0.86	0.86
C	0.25	0.30	0.34	0.41
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	1.3	2.4	3.4	5.4

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.50	58%	Grass	0.21	0.25	0.29	0.36
0.36	42%	Forest/Wood	0.31	0.36	0.40	0.47
0.00	0%	Concrete	0.75	0.83	0.88	0.97
0.86	100%					

A-K1

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	2.81	2.81	2.81	2.81
C	0.73	0.80	0.85	0.94
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	12.9	21.2	27.8	40.5

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.13	5%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
2.68	95%	Concrete	0.75	0.83	0.88	0.97
2.81	100%					

A-E4

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.76	0.76	0.76	0.76
C	0.62	0.69	0.73	0.82
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	3.0	4.9	6.4	9.5

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.19	25%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.57	75%	Concrete	0.75	0.83	0.88	0.97
0.76	100%					

A-E5

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	1.39	1.39	1.39	1.39
C	0.64	0.71	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	5.6	9.3	12.3	18.1

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.28	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.11	80%	Concrete	0.75	0.83	0.88	0.97
1.39	100%					

A-E6

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.73	0.73	0.73	0.73
C	0.21	0.25	0.29	0.36
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	1.0	1.7	2.5	4.0

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.73	100%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.00	0%	Concrete	0.75	0.83	0.88	0.97
0.73	100%					

A-K2

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.13	0.13	0.13	0.13
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	0.6	1.0	1.3	1.9

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.00	0%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.13	100%	Concrete	0.75	0.83	0.88	0.97
0.13	100%					

A-C6

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.40	0.40	0.40	0.40
C	0.64	0.71	0.76	0.85
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	1.6	2.7	3.5	5.2

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.08	20%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.32	80%	Concrete	0.75	0.83	0.88	0.97
0.40	100%					

A-C7

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	2.14	2.14	2.14	2.14
C	0.67	0.74	0.79	0.88
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	9.0	14.9	19.6	28.9

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.32	15%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.82	85%	Concrete	0.75	0.83	0.88	0.97
2.14	100%					

A-C8

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.53	0.53	0.53	0.53
C	0.63	0.70	0.75	0.83
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	2.1	3.5	4.6	6.7

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.12	23%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.41	77%	Concrete	0.75	0.83	0.88	0.97
0.53	100%					

A-D1

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	2.81	2.81	2.81	2.81
C	0.66	0.73	0.78	0.86
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	11.6	19.3	25.5	37.0

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.49	17%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
2.32	83%	Concrete	0.75	0.83	0.88	0.97
2.81	100%					

A-C9

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.20	0.20	0.20	0.20
C	0.72	0.80	0.85	0.94
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	0.9	1.5	2.0	2.9

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.01	5%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.19	95%	Concrete	0.75	0.83	0.88	0.97
0.20	100%					

A-C10

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.59	0.59	0.59	0.59
C	0.73	0.81	0.86	0.95
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	2.7	4.5	5.9	8.6

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.02	3%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.57	97%	Concrete	0.75	0.83	0.88	0.97
0.59	100%					

A-C11

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	1.81	1.81	1.81	1.81
C	0.71	0.79	0.84	0.93
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	8.1	13.5	17.7	25.8

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.12	7%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
1.69	93%	Concrete	0.75	0.83	0.88	0.97
1.81	100%					

A-C12

Runoff Calculations (Eq 2-1)				
Event	2-yr	10-yr	25-yr	100-yr
A (ac)	0.58	0.58	0.58	0.58
C	0.71	0.79	0.84	0.93
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	2.6	4.3	5.7	8.3

"C" Value Calculations (Table 2-1)						
Area (ac)	% of Area		2-yr	10-yr	25-yr	100-yr
0.00	0%	Pasture	0.33	0.38	0.42	0.49
0.04	7%	Grass	0.21	0.25	0.29	0.36
0.00	0%	Forest/Wood	0.31	0.36	0.40	0.47
0.54	93%	Concrete	0.75	0.83	0.88	0.97
0.58	100%					

811 !!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

INLET DETAILS 1

DATE: 4/24/2024
DRAWN BY: QU
DWG SCALE: NTS
CHECKED BY: SRB
PROJECT NO: 331-715
APPROVED BY: MAT

DRAWING NO.: 70
SHEET 70 OF 175

2023-23-SD

P:\330-000\331-715\-CADD\Dwg\CV01\331715-CV01-C400-INLET DETAILS.dwg{INLET DETAILS 1} LS:(4/26/2024 - mtheone) - LP: 4/30/2024 12:18 PM

A-C13

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.31	0.31	0.31	0.31
C	0.70	0.77	0.82	0.91
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	1.4	2.3	3.0	4.3

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.03	10%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.28	90%	**Concrete**	0.75	0.83	0.88	0.97
0.31	100%					

A-C14

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	1.16	1.16	1.16	1.16
C	0.73	0.81	0.85	0.94
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	5.3	8.9	11.5	16.7

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.05	4%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
1.11	96%	**Concrete**	0.75	0.83	0.88	0.97
1.16	100%					

A-D2

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.73	0.73	0.73	0.73
C	0.72	0.80	0.85	0.94
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	3.3	5.5	7.2	10.5

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.04	5%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.69	95%	**Concrete**	0.75	0.83	0.88	0.97
0.73	100%					

A-J2

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.39	0.39	0.39	0.39
C	0.67	0.74	0.79	0.88
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	1.6	2.7	3.6	5.3

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.06	15%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.33	85%	**Concrete**	0.75	0.83	0.88	0.97
0.39	100%					

A-I1

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	1.39	1.39	1.39	1.39
C	0.66	0.73	0.78	0.87
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	5.8	9.6	12.6	18.5

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.23	17%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
1.16	83%	**Concrete**	0.75	0.83	0.88	0.97
1.39	100%					

A-H5

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	2.21	2.21	2.21	2.21
C	0.66	0.74	0.79	0.87
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	9.1	15.4	20.3	29.5

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.35	16%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
1.86	84%	**Concrete**	0.75	0.83	0.88	0.97
2.21	100%					

A-J3

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.22	0.22	0.22	0.22
C	0.73	0.80	0.85	0.94
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	1.0	1.7	2.2	3.2

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.01	5%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.21	95%	**Concrete**	0.75	0.83	0.88	0.97
0.22	100%					

A-G2

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.27	0.27	0.27	0.27
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	1.3	2.1	2.8	4.0

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.00	0%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.27	100%	**Concrete**	0.75	0.83	0.88	0.97
0.27	100%					

A-I2

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.26	0.26	0.26	0.26
C	0.71	0.79	0.83	0.92
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	1.2	1.9	2.5	3.7

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.02	8%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.24	92%	**Concrete**	0.75	0.83	0.88	0.97
0.26	100%					

A-G3

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.44	0.44	0.44	0.44
C	0.73	0.80	0.85	0.94
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	2.0	3.3	4.3	6.3

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.02	5%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.42	95%	**Concrete**	0.75	0.83	0.88	0.97
0.44	100%					

A-G4

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	2.41	2.41	2.41	2.41
C	0.71	0.79	0.84	0.93
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	10.7	18.0	23.5	34.3

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.16	7%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
2.25	93%	**Concrete**	0.75	0.83	0.88	0.97
2.41	100%					

A-C2

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.68	0.68	0.68	0.68
C	0.58	0.65	0.70	0.78
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	2.5	4.2	5.5	8.1

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.21	31%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.47	69%	**Concrete**	0.75	0.83	0.88	0.97
0.68	100%					

A-H4

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.76	0.76	0.76	0.76
C	0.52	0.59	0.63	0.71
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	2.5	4.2	5.6	8.3

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.32	42%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.44	58%	**Concrete**	0.75	0.83	0.88	0.97
0.76	100%					

A-V1

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.32	0.32	0.32	0.32
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	1.5	2.5	3.3	4.8

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.00	0%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.32	100%	**Concrete**	0.75	0.83	0.88	0.97
0.32	100%					

A-V2

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.43	0.43	0.43	0.43
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	2.0	3.4	4.4	6.4

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.00	0%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.43	100%	**Concrete**	0.75	0.83	0.88	0.97
0.43	100%					

B-U1

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	2.72	2.72	2.72	2.72
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	12.8	21.3	27.8	40.4

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.01	0%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
2.71	100%	**Concrete**	0.75	0.83	0.88	0.97
2.72	100%					

C-S5

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.86	0.86	0.86	0.86
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	4.0	6.7	8.8	12.8

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.00	0%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.86	100%	**Concrete**	0.75	0.83	0.88	0.97
0.86	100%					

B-M1

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	7.59	7.59	7.59	7.59
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	35.7	59.4	77.6	112.8

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.00	0%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
7.59	100%	**Concrete**	0.75	0.83	0.88	0.97
7.59	100%					

B-M2

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.75	0.75	0.75	0.75
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	3.5	5.9	7.7	11.1

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.00	0%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.75	100%	**Concrete**	0.75	0.83	0.88	0.97
0.75	100%					

B-L1

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	2.61	2.61	2.61	2.61
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	12.3	20.4	26.7	38.8

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.00	0%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
2.61	100%	**Concrete**	0.75	0.83	0.88	0.97
2.61	100%					

C-S1

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	4.93	4.93	4.93	4.93
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	23.2	38.6	50.4	73.3

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.00	0%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
4.93	100%	**Concrete**	0.75	0.83	0.88	0.97
4.93	100%					

C-2

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	3.00	3.00	3.00	3.00
C	0.72	0.80	0.85	0.94
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	13.5	22.6	29.6	43.2

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.14	5%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
2.86	95%	**Concrete**	0.75	0.83	0.88	0.97
3.00	100%					

C-O1

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	1.48	1.48	1.48	1.48
C	0.69	0.76	0.81	0.90
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	6.4	10.6	13.9	20.4

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.17	11%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
1.31	89%	**Concrete**	0.75	0.83	0.88	0.97
1.48	100%					

C-O2

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	1.33	1.33	1.33	1.33
C	1.09	1.19	1.25	1.36
Tc (min)	6.0	6.0	6.0	6.0
i (in/hr)	5.97	8.96	11.02	14.52
Q (cfs)	8.7	14.2	18.3	26.3

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.74	0.82	0.87	0.96
0.30	23%	**Grass**	0.88	0.97	1.02	1.12
0.00	0%	**Forest/Wood**	1.01	1.11	1.17	1.27
1.03	77%	**Concrete**	1.15	1.26	1.32	1.43
1.33	100%					

D-N1

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	2.89	2.89	2.89	2.89
C	0.73	0.81	0.86	0.95
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	13.2	22.1	28.9	42.1

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.09	3%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
2.80	97%	**Concrete**	0.75	0.83	0.88	0.97
2.89	100%					

Bypass-T1

Runoff Calculations (Eq 2-1)				
Event	**2-yr**	**10-yr**	**25-yr**	**100-yr**
A (ac)	0.45	0.45	0.45	0.45
C	0.75	0.83	0.88	0.97
Tc (min)	5.0	5.0	5.0	5.0
i (in/hr)	6.27	9.43	11.62	15.32
Q (cfs)	2.1	3.5	4.6	6.7

"C" Value Calculations (Table 2-1)							
Area (ac)	**% of Area**		**2-yr**	**10-yr**	**25-yr**	**100-yr**
0.00	0%	**Pasture**	0.33	0.38	0.42	0.49
0.00	0%	**Grass**	0.21	0.25	0.29	0.36
0.00	0%	**Forest/Wood**	0.31	0.36	0.40	0.47
0.45	100%	**Concrete**	0.75	0.83	0.88	0.97
0.45	100%					

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

REVISION RECORD

NO	DATE	DESCRIPTION

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

INLET DETAILS 2

DRAWN BY:	QU
CHECKED BY:	SRB
DATE:	4/24/2024
DWG SCALE:	NTS
PROJECT NO.:	331-715
APPROVED BY:	MAT

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

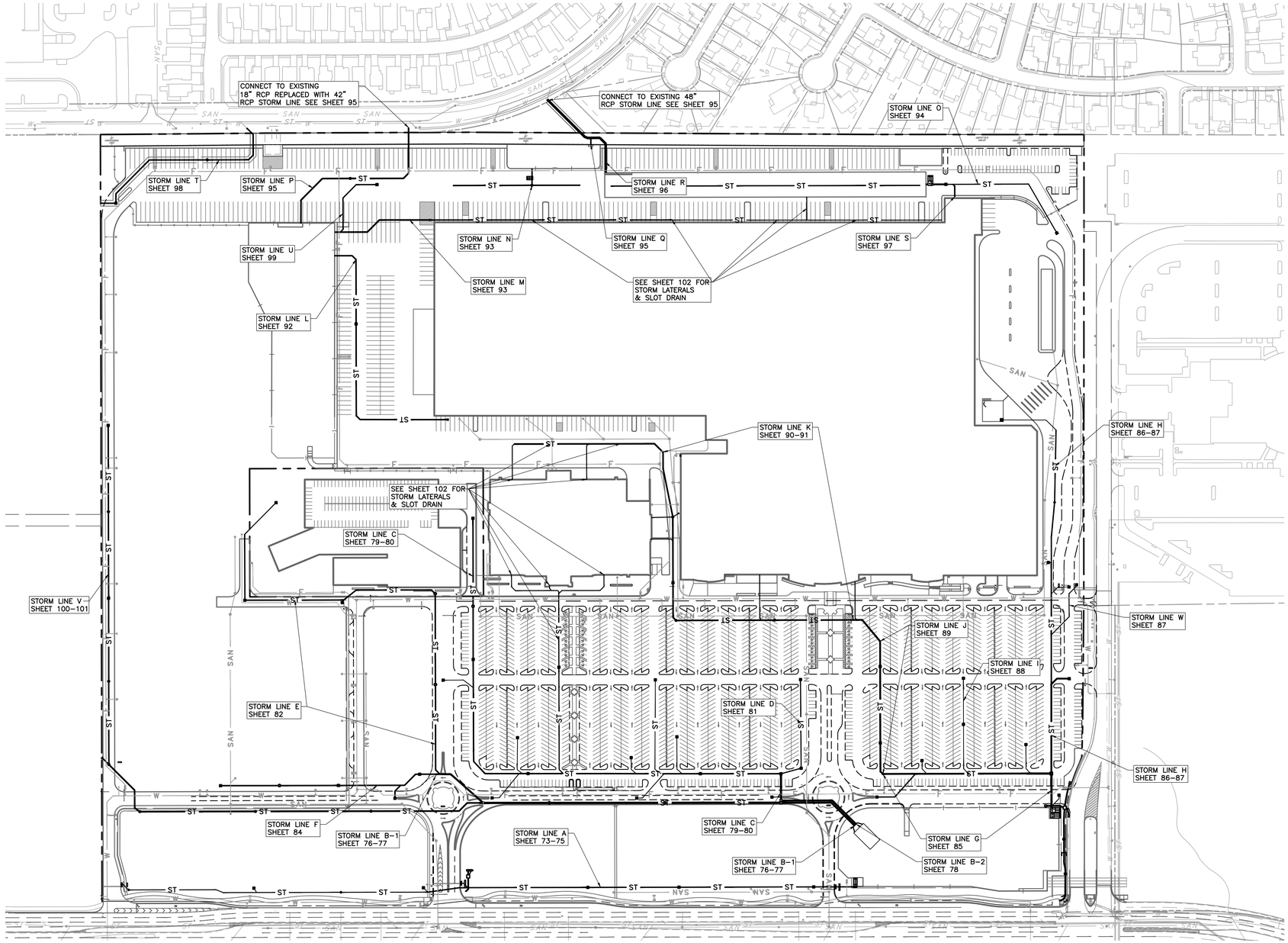
!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

DRAWING NO.: 71

SHEET 71 OF 175

2023-23-SD

P:\330-001\331-715\~CAD\Dwg\CV01\331715-CV01-C400-INLET DETAILS.dwg[INLET DETAILS 2] LS(4/26/2024 - mlheone) - LP: 4/30/2024 12:18 PM



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
	HB	HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

NORTH

SCALE IN FEET

0 150 300

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

NO	DATE	REVISION RECORD DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-98
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Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

OVERALL STORM LAYOUT

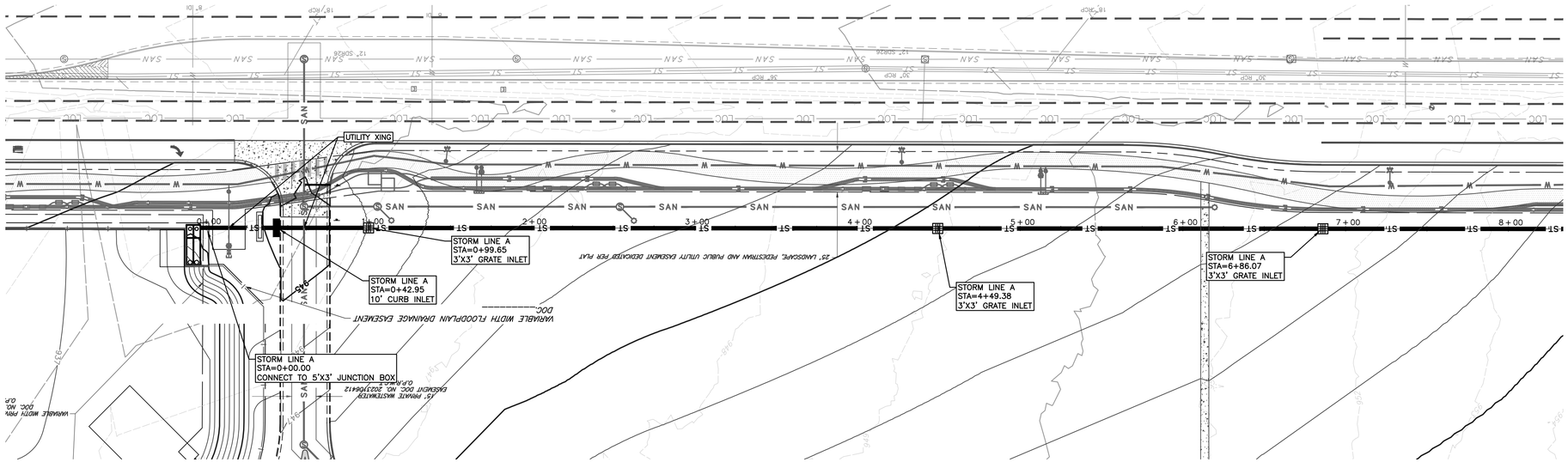
DATE:	1/5/2024
DWG SCALE:	1" = 150'
PROJECT NO:	331-715
DRAWN BY:	QU
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: **72**

SHEET **72** OF **175**

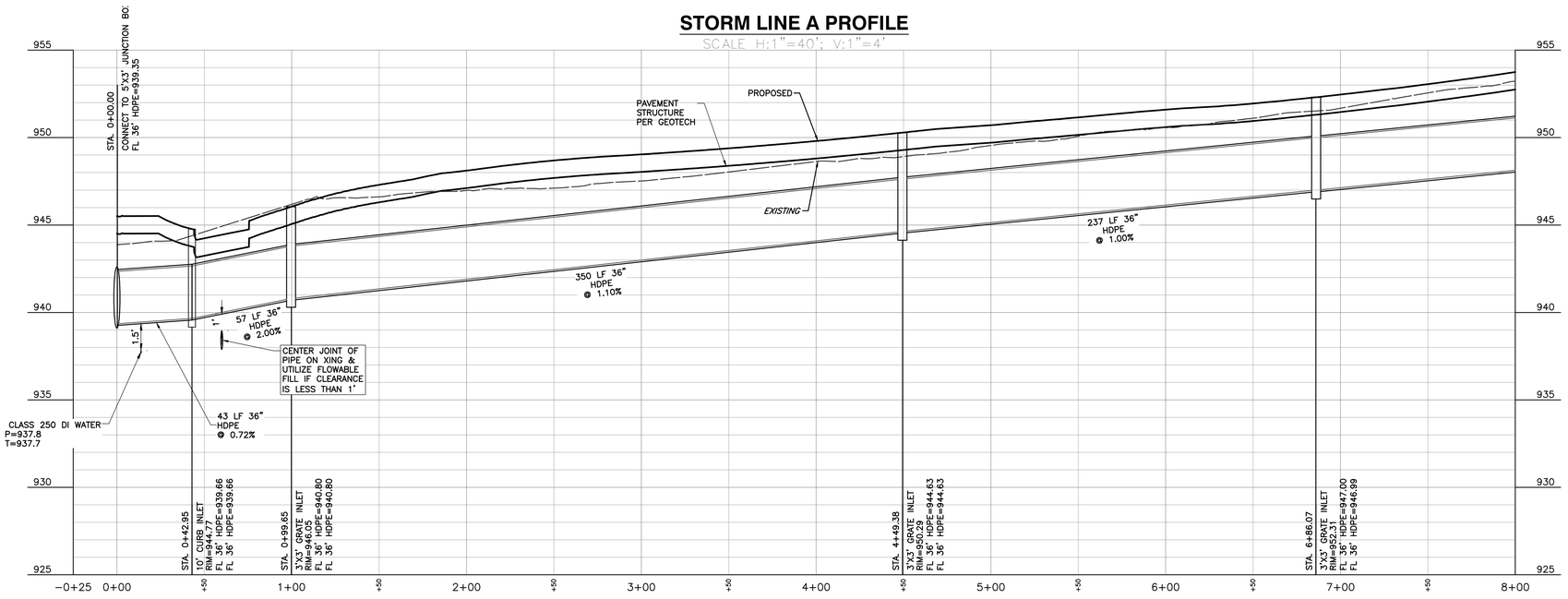
2023-23-SD

P:\330-0001\331-715\--CAD\Dwg\CVD\331715-CVD1-C400- OVERALL STORM.dwg[OVERALL STORM LAYOUT LS(4/29/2024 - etovar)] - LP: 4/30/2024 12:19 PM



STORM LINE A PROFILE

SCALE H:1"=40', V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST		STORM SEWER
		DRAINAGE CHANNEL

NOTES:
1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.

NORTH
SCALE IN FEET
0 40 80

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE A START-8+00

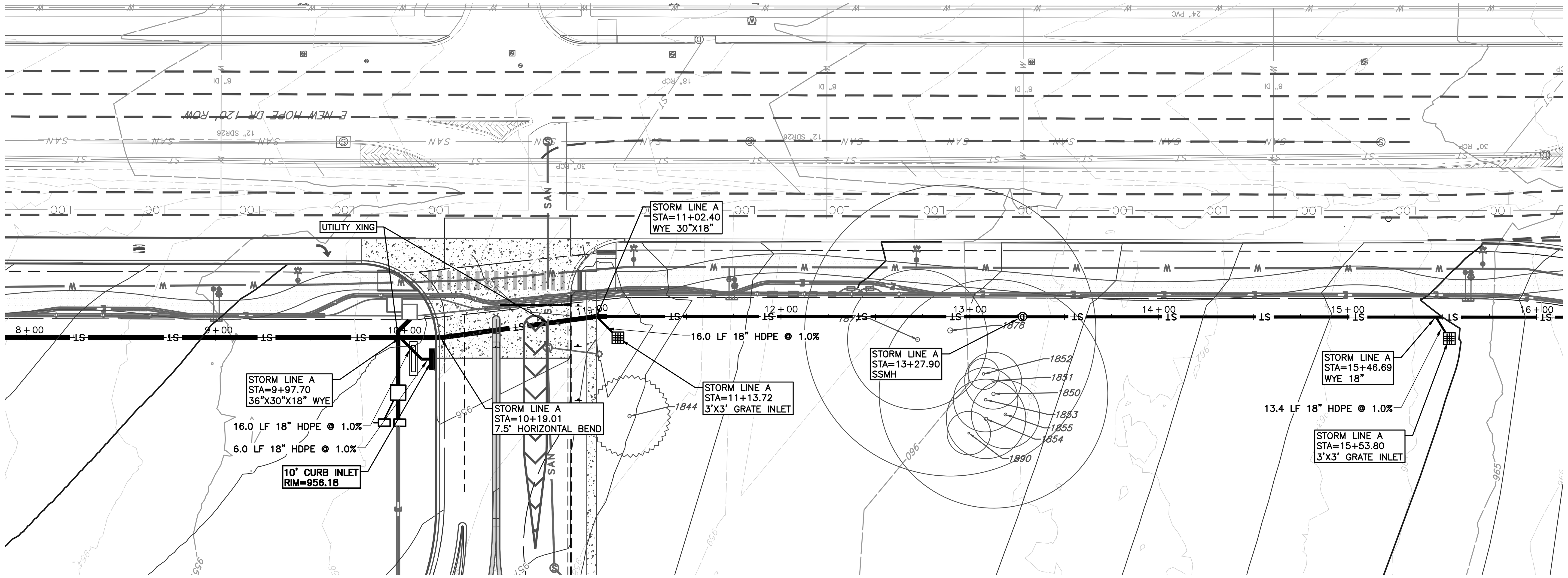
DRAWN BY:	TK
CHECKED BY:	SRB
DATE:	12/20/2023
DWG SCALE:	1"=40'
PROJECT NO:	331-715
APPROVED BY:	MAT

DRAWING NO.: 73

SHEET 73 OF 175

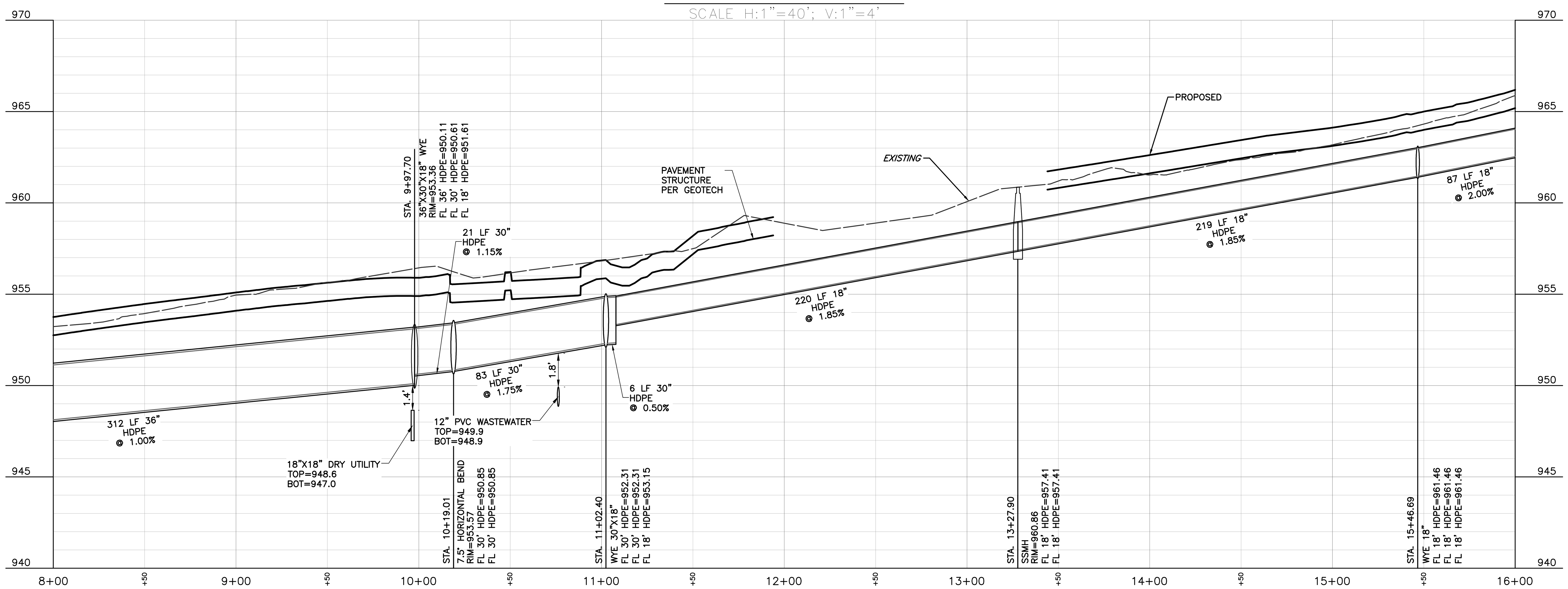
2023-23-SD

P:\330-2001\331-715\-CAD\dwg\CIVIL\331715-CIV01-C400-STORM.dwg[STORM LINE A START-8+00] LS(1/29/2024 - Unlocked) - LP: 4/30/2024 12:21 PM



STORM LINE A PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED | EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HB HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED | EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- 385 MAJOR CONTOUR
- MINOR CONTOUR
- E ELECTRIC LINE
- OE OVERHEAD ELECTRIC WIRE
- UE UNDERGROUND ELECTRIC LINE
- T TELEPHONE
- C COMMUNICATIONS LINE
- TV CABLE TELEVISION
- FO FIBER OPTIC LINE
- G GAS LINE
- OU OVERHEAD UTILITY
- UG UNDERGROUND UTILITY
- SAN SANITARY SEWER LINE
- W WATER LINE
- F FIRE LINE
- ROAD CENTERLINE
- CURB & GUTTER
- DEEP CURB & GUTTER
- STRIPING
- FIRE FIRE LANE STRIPING
- H.C. ACCESSIBLE ROUTE
- LOC LIMITS OF CONSTRUCTION
- DRAINAGE AREA
- FLOODWAY
- CWQZ
- ST STORM SEWER
- DRAINAGE CHANNEL

NOTES:

1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.

NORTH

SCALE IN FEET

0 40 80

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

[illegible]

811

!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Texas Registered Engineering Firm F-38
Civil & Environmental Consultants, Inc.
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE A STA 8+00-16+00

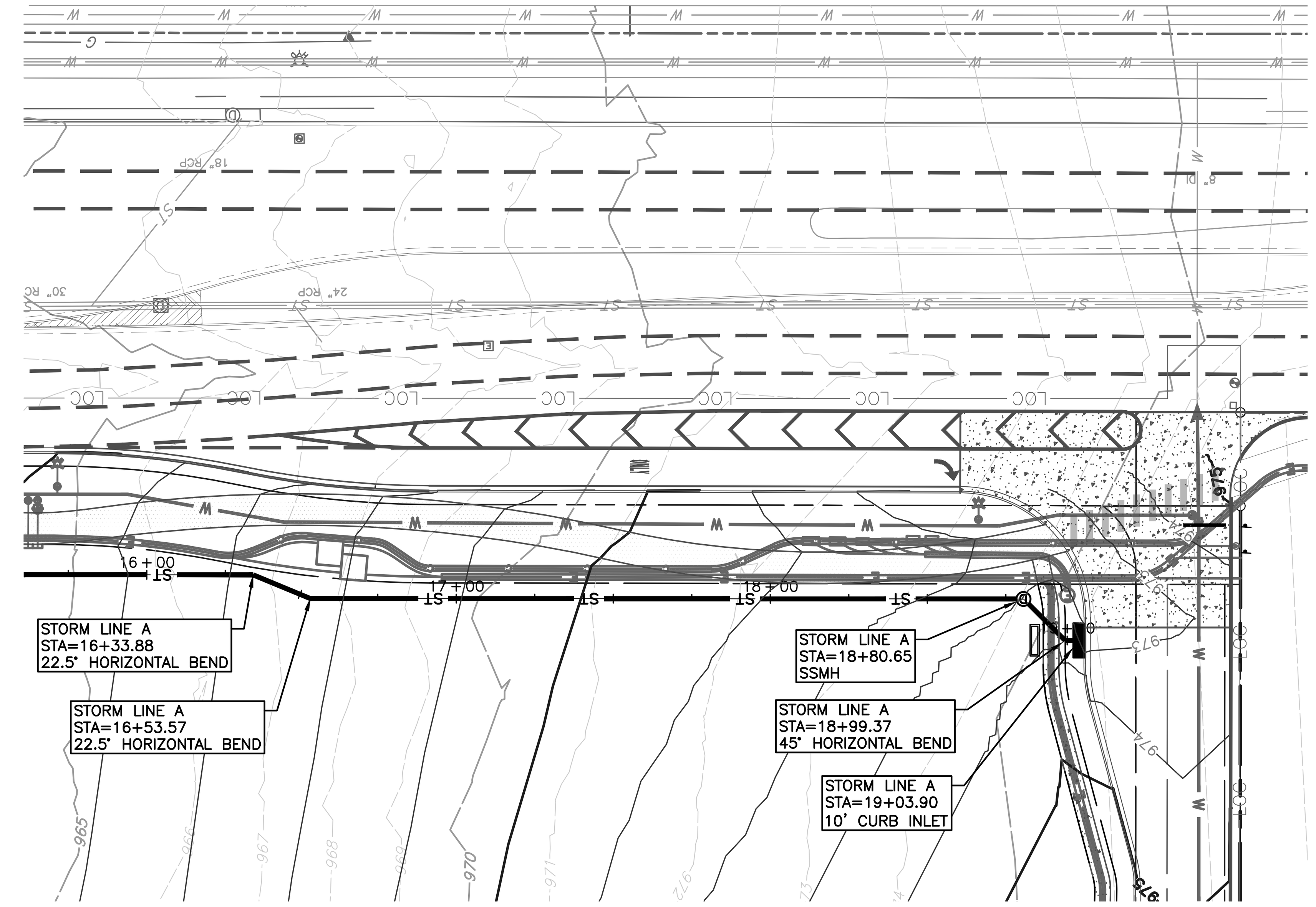
DATE:	12/20/2023	DRAWN BY:	TK
DWG SCALE:	1"=40'	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:	MAT		

DRAWING NO.: 74

SHEET 74 OF 175

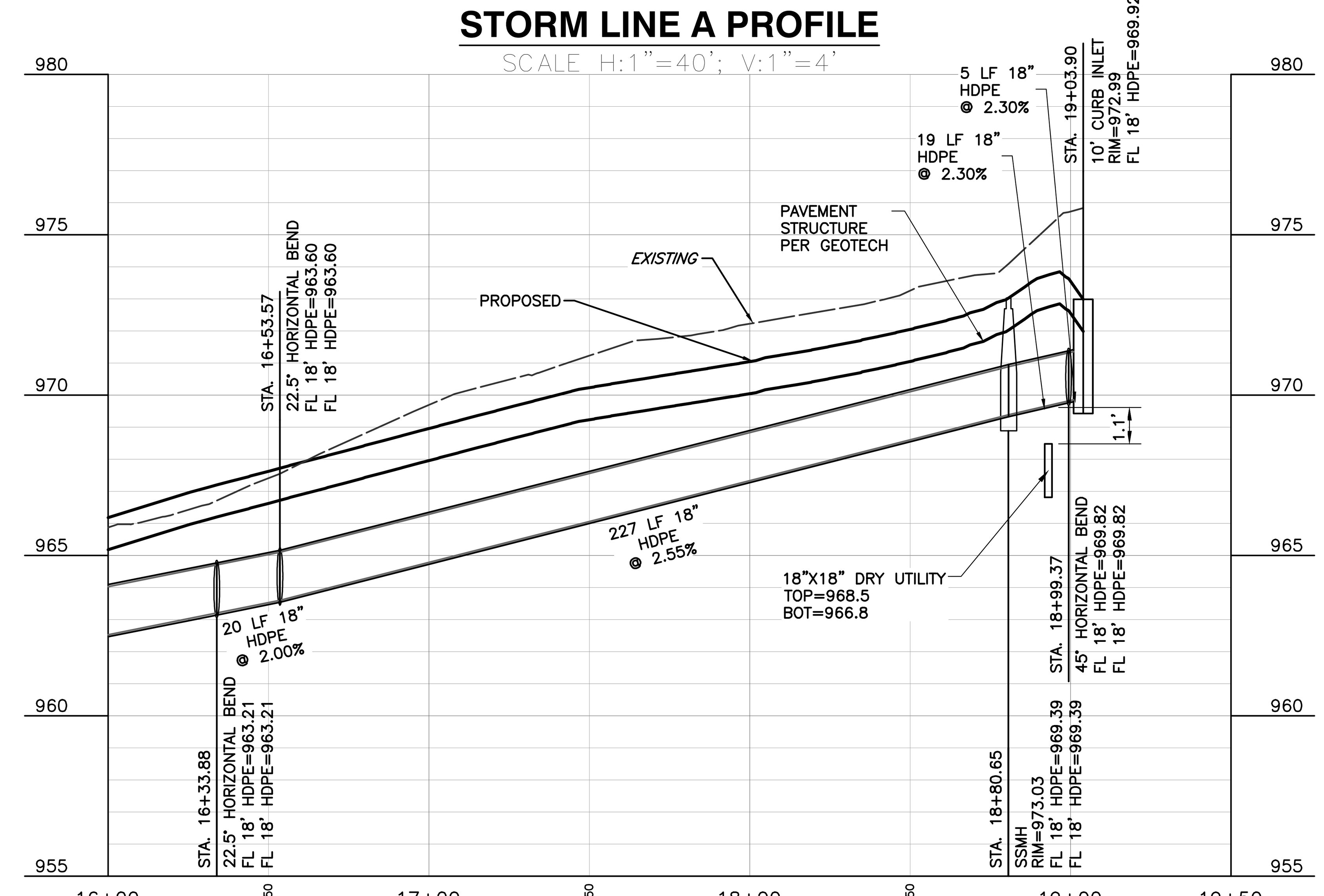
2023-23-SD

P:\330-000\331-715\-CADD\Dwg\CV01\331715-CV01-C400-STORM.dwg{STORM LINE A STA 8+00-16+00} LS:(4/29/2024 - tkincade) - LP: 4/30/2024 12:22 PM



STORM LINE A PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED | EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

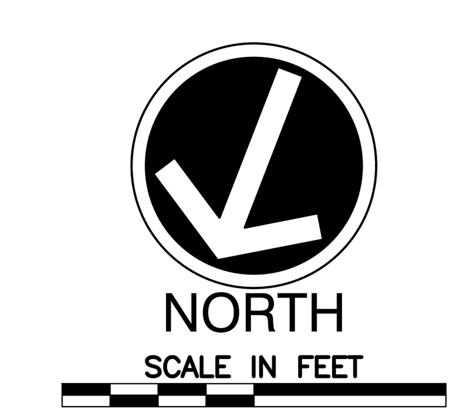
LINETYPE LEGEND

PROPOSED | EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- MAJOR CONTOUR (385)
- MINOR CONTOUR
- ELECTRIC LINE (E)
- OVERHEAD ELECTRIC WIRE (OE)
- UNDERGROUND ELECTRIC LINE (UE)
- TELEPHONE (T)
- COMMUNICATIONS LINE (C)
- CABLE TELEVISION (TV)
- FIBER OPTIC LINE (FO)
- GAS LINE (G)
- OVERHEAD UTILITY (OU)
- UNDERGROUND UTILITY (UG)
- SANITARY SEWER LINE (SAN)
- WATER LINE (W)
- FIRE LINE (F)
- ROAD CENTERLINE
- CURB & GUTTER
- DEEP CURB & GUTTER
- STRIPING
- FIRE LANE STRIPING (FIRE)
- H.C. ACCESSIBLE ROUTE
- LIMITS OF CONSTRUCTION (LOC)
- DRAINAGE AREA
- FLOODWAY
- CWQZ
- STORM SEWER (ST)
- DRAINAGE CHANNEL

NOTES:

1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.



STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER
[illegible]

811
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REVISION RECORD

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www.cecinc.com

NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE A STA 16+00-END

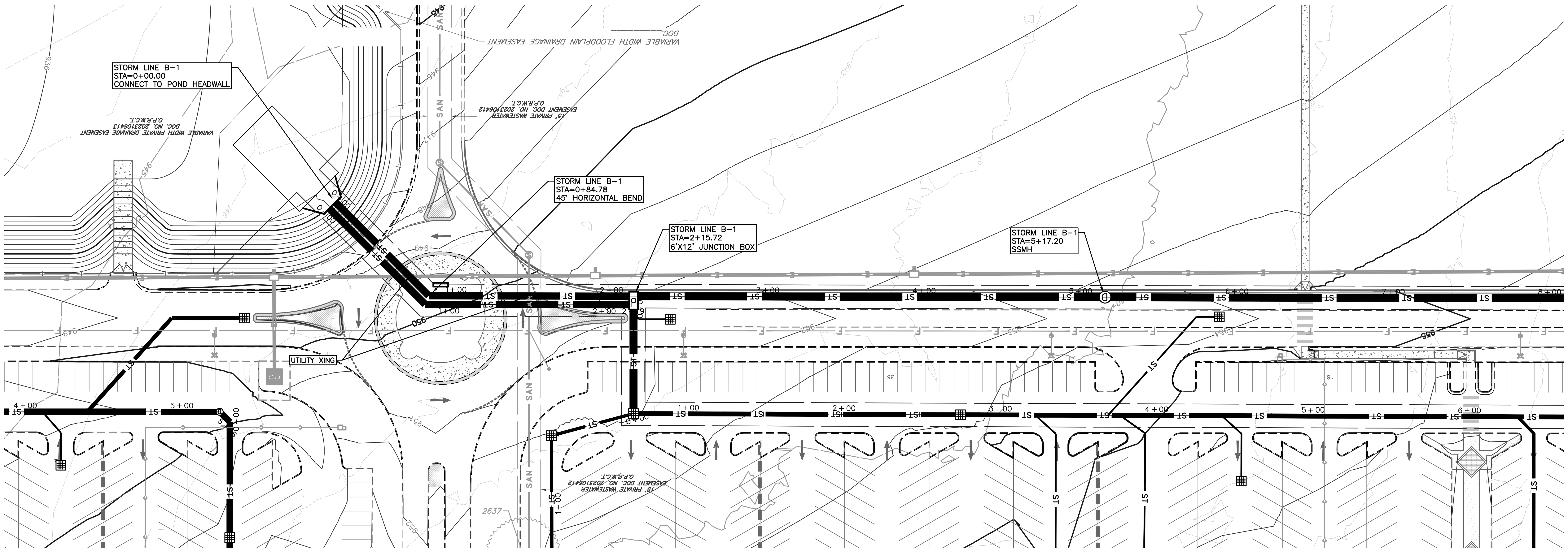
DATE:	12/20/2023	DRAWN BY:	TK
DWG SCALE:	1"=40'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 75

SHEET 75 OF 175

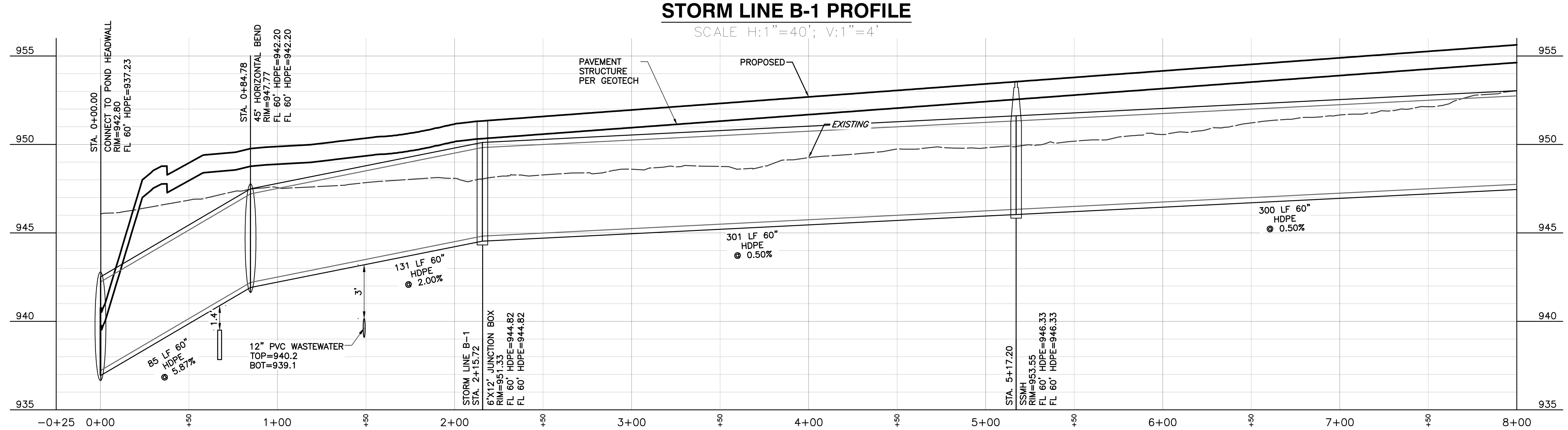
2023-23-SD

P:\330-000\331-715\-CADD\Dwg\CV01\331715-CV01-C400-STORM.dwg{STORM LINE A STA 16+00-END} LS:(4/29/2024 - tkincade) - LP: 4/30/2024 12:23 PM



STORM LINE B-1 PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED / EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED / EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- 385 MAJOR CONTOUR
- MINOR CONTOUR
- E ELECTRIC LINE
- OE OVERHEAD ELECTRIC WIRE
- UE UNDERGROUND ELECTRIC LINE
- T TELEPHONE
- C COMMUNICATIONS LINE
- TV CABLE TELEVISION
- FO FIBER OPTIC LINE
- G GAS LINE
- OU OVERHEAD UTILITY
- UG UNDERGROUND UTILITY
- SAN SANITARY SEWER LINE
- W WATER LINE
- F FIRE LINE
- ROAD CENTERLINE
- CURB & GUTTER
- DEEP CURB & GUTTER
- STRIPING
- FIRE FIRE LANE STRIPING
- H.C. ACCESSIBLE ROUTE
- LOC LIMITS OF CONSTRUCTION
- DRAINAGE AREA
- FLOODWAY
- CWQZ
- ST STORM SEWER
- DRAINAGE CHANNEL

NOTES:

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NORTH

SCALE IN FEET

0 40 80

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

[illegible]

811

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www.cecinc.com

NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE B-1 START-8+00

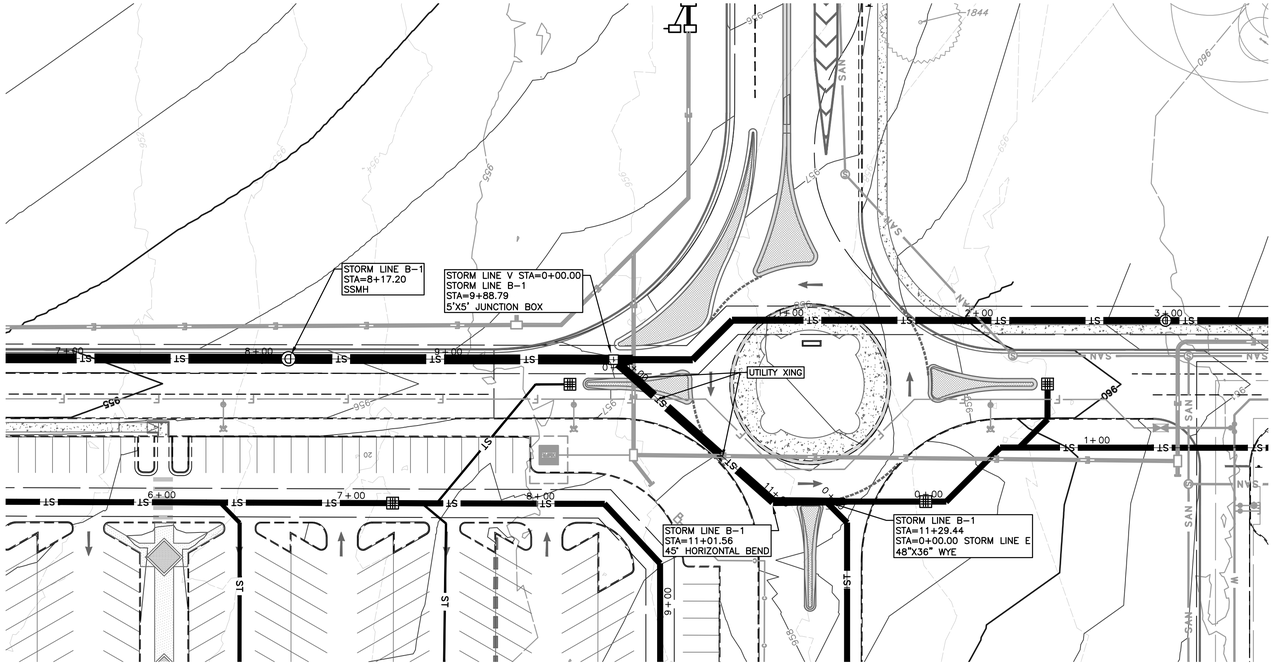
DATE:	12/20/2023	DRAWN BY:	QU
DWG SCALE:	1'=40'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 76

SHEET 76 OF 175

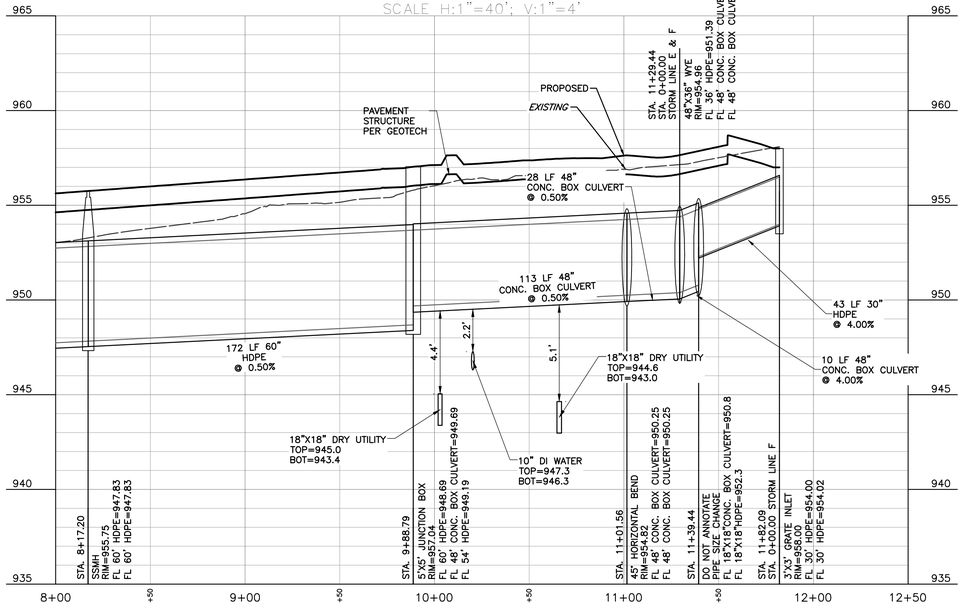
2023-23-SD

P:\330-000\331-715\-CADD\Dwg\CV01\331715-CV01-C400-STORM B.dwg{STORM LINE B-1 START-8+00} LS:(4/29/2024 - tkincade) - LP: 4/30/2024 12:25 PM



STORM LINE B-1 PROFILE

SCALE H:1"=40', V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	*385*	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	*G*	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	*SAN*	SANITARY SEWER LINE
W	*W*	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

NOTES:
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NORTH
SCALE IN FEET
0 40 80

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE B-1 8+00-END

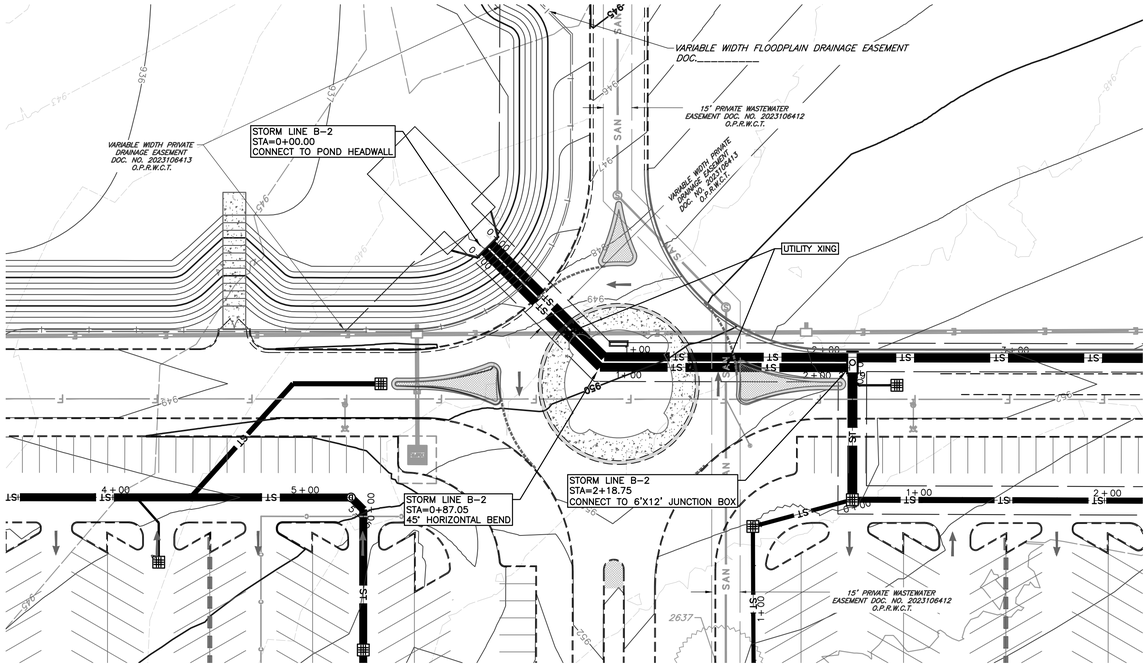
DATE:	12/20/2023
DWG SCALE:	1"=40'
PROJECT NO:	331-715
DRAWN BY:	OU
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 77

SHEET 77 OF 175

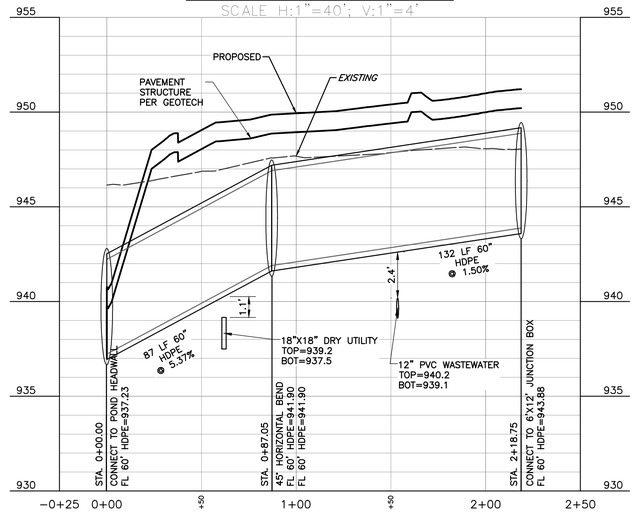
2023-23-SD

P:\330-2001\331-715\-CAD\[dwg\CIVIL\331715-CV01-CAD0-STORM B.dwg]STORM LINE B 8+00-END] LS(4/29/2024 - Wednesday) - LP: 4/30/2024 12:26 PM



STORM LINE B-2 PROFILE

SCALE H:1"=40', V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST		STORM SEWER
		DRAINAGE CHANNEL

NOTES:
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NORTH
SCALE IN FEET
0 40 80

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STATE OF TEXAS
MICHAEL A. THEONE
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LICENSED PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

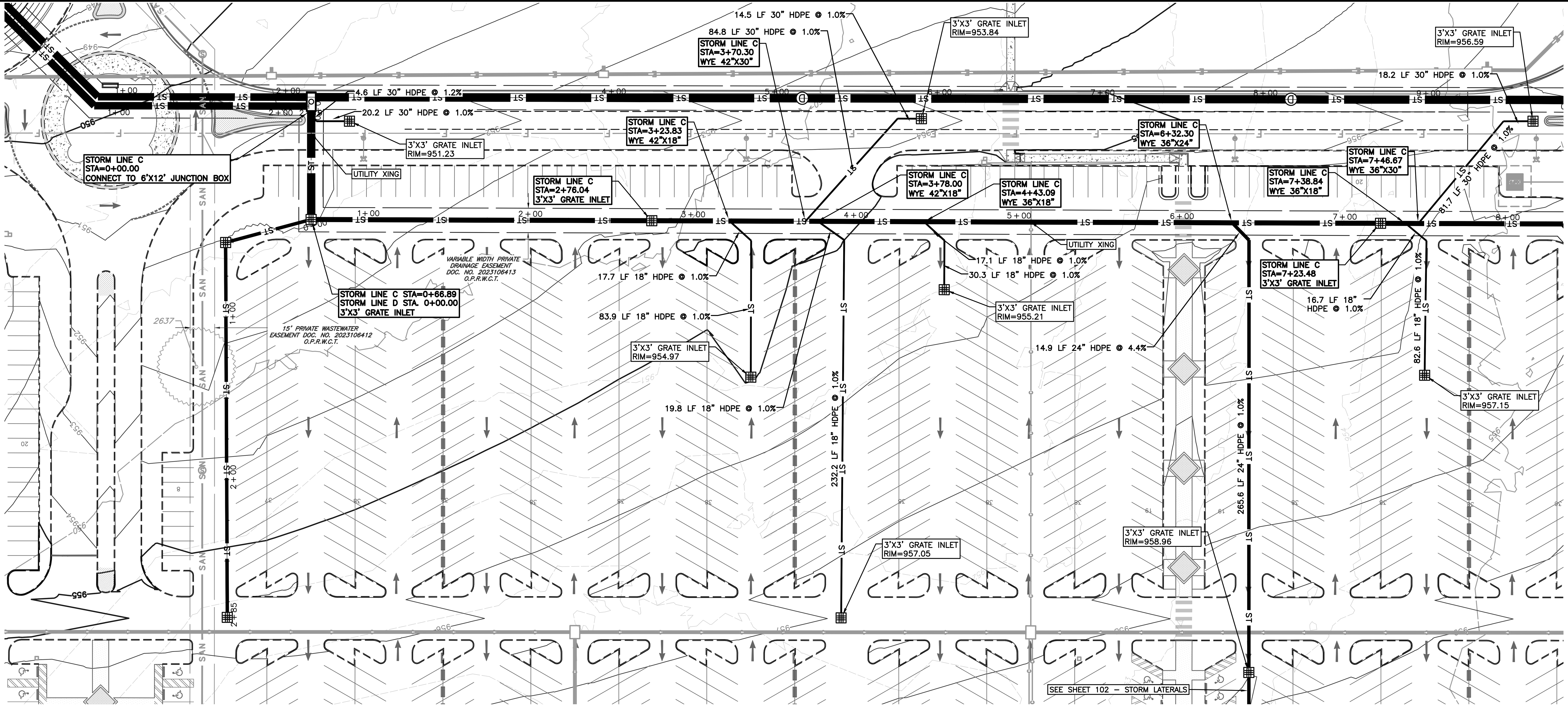
STORM LINE B-2

DRAWN BY:	TK
CHECKED BY:	SRB
DATE:	4/29/2024
DWG SCALE:	1"=40'
PROJECT NO:	331-715
APPROVED BY:	MAT

DRAWING NO.: 78
SHEET 78 OF 175

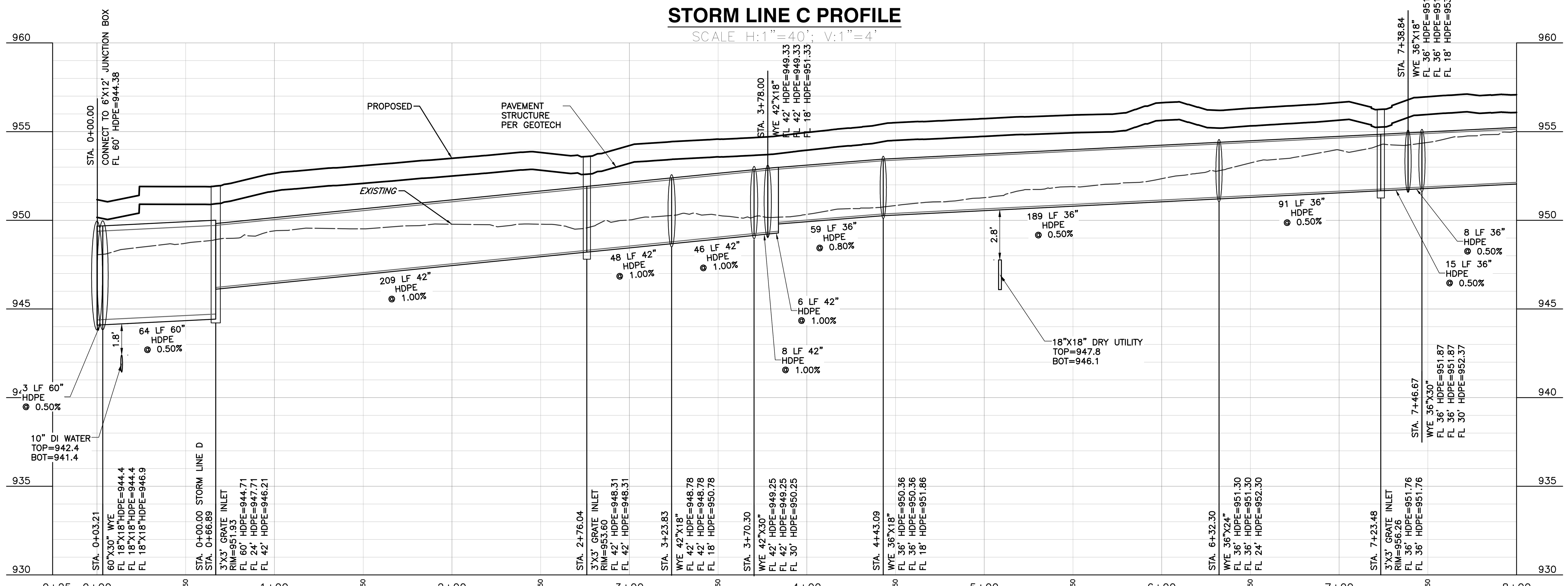
2023-23-SD

P:\330-0001\331-715\-0400\Dwg\CVD1\331715-CVD1-0400-STORM B-2.dwg[STORM LINE B-2] LS(4/29/2024 - (Wilcock)) - LP: 4/30/2024 12:28 PM



STORM LINE C PROFILE

SCALE H:1"=40'; V:1"=4'



NORTH

SCALE IN FEET: 0 40 80

BLOCK LEGEND

PROPOSED | EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
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- BACKFLOW PREVENTER
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- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED | EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- MAJOR CONTOUR (385)
- MINOR CONTOUR
- ELECTRIC LINE (E)
- OVERHEAD ELECTRIC WIRE (OE)
- UNDERGROUND ELECTRIC LINE (UE)
- TELEPHONE (T)
- COMMUNICATIONS LINE (C)
- CABLE TELEVISION (TV)
- FIBER OPTIC LINE (FO)
- GAS LINE (G)
- OVERHEAD UTILITY (OU)
- UNDERGROUND UTILITY (UG)
- SANITARY SEWER LINE (SAN)
- WATER LINE (W)
- FIRE LINE (F)
- ROAD CENTERLINE
- CURB & GUTTER
- DEEP CURB & GUTTER
- STRIPING
- FIRE LANE STRIPING (FIRE)
- H.C. ACCESSIBLE ROUTE
- LIMITS OF CONSTRUCTION (LOC)
- DRAINAGE AREA
- FLOODWAY
- CWQZ
- STORM SEWER (ST)
- DRAINAGE CHANNEL

NOTES:

1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.

811 — !!! CAUTION !!! !!! CAUTION !!! IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

STATE OF TEXAS — MICHAEL A. THEONE — 142972 — LICENSED PROFESSIONAL ENGINEER

REVISION RECORD		
NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

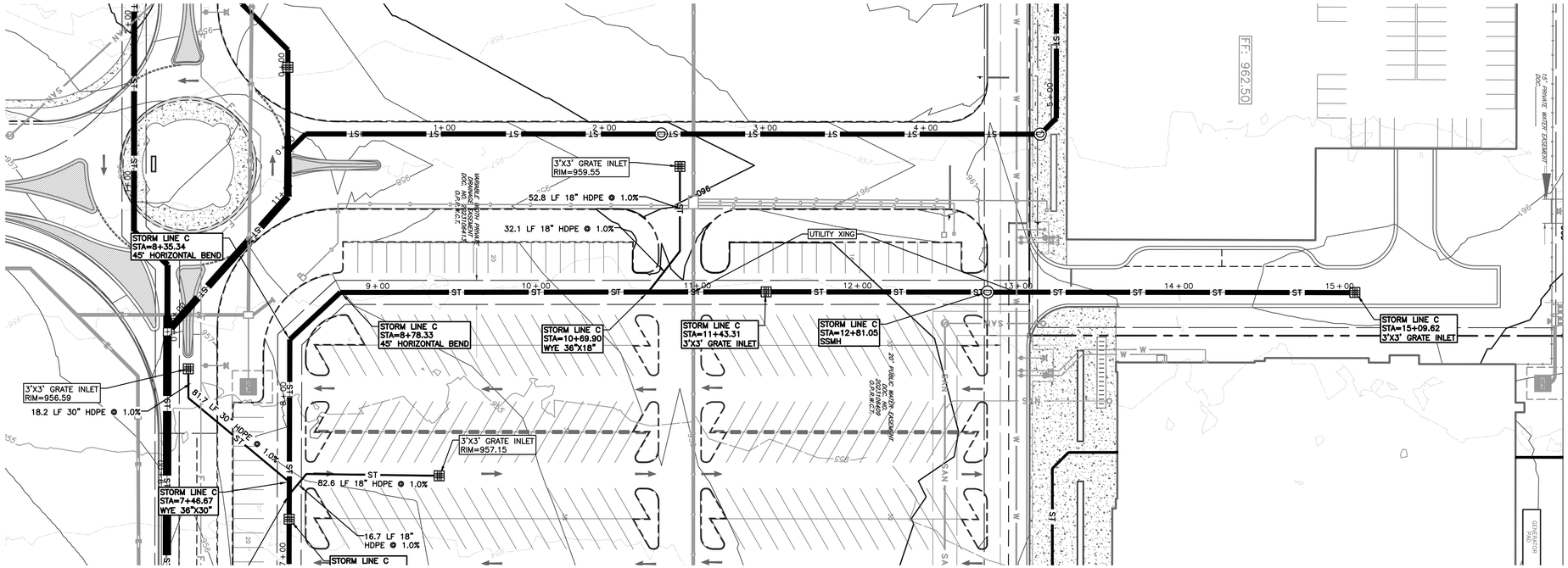
NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE C START-8+00

DATE: 4/29/2024	DRAWN BY: CEC
DWG SCALE: 1"=40'	CHECKED BY: SRB
PROJECT NO: 331-715	APPROVED BY: MT

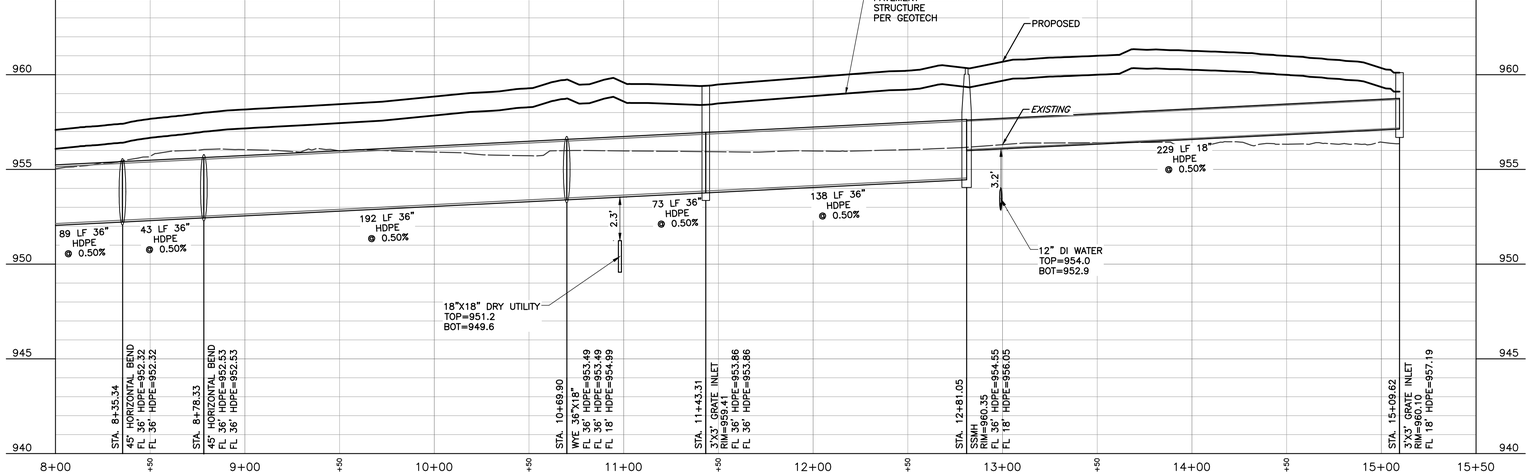
DRAWING NO.: 79

2023-23-SD



STORM LINE C PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

NOTES:
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NORTH
SCALE IN FEET
0 40 80

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

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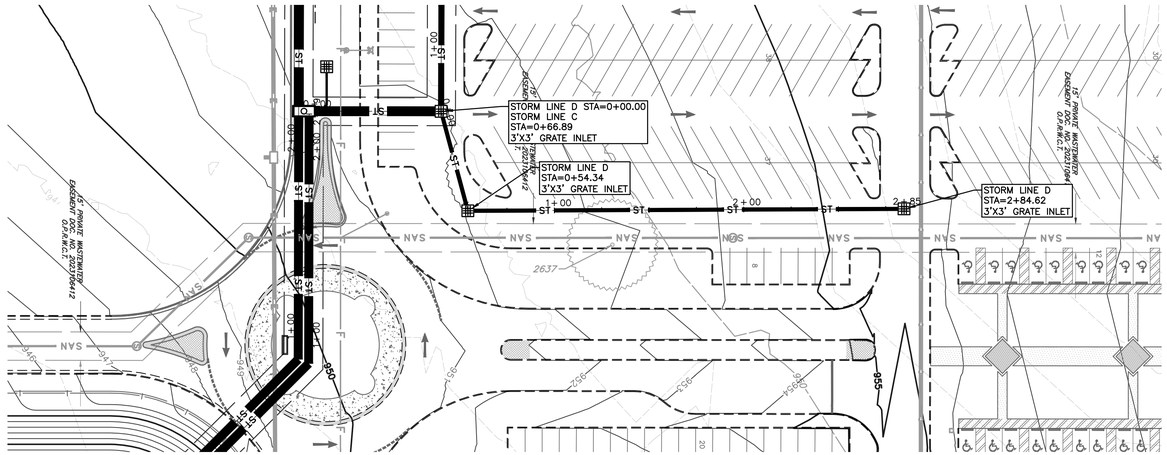
NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE C STA 8+00-END

DRAWN BY:	CEC
CHECKED BY:	SRB
DATE:	4/29/2024
DWG SCALE:	1"=40'
PROJECT NO:	331-715
APPROVED BY:	MT

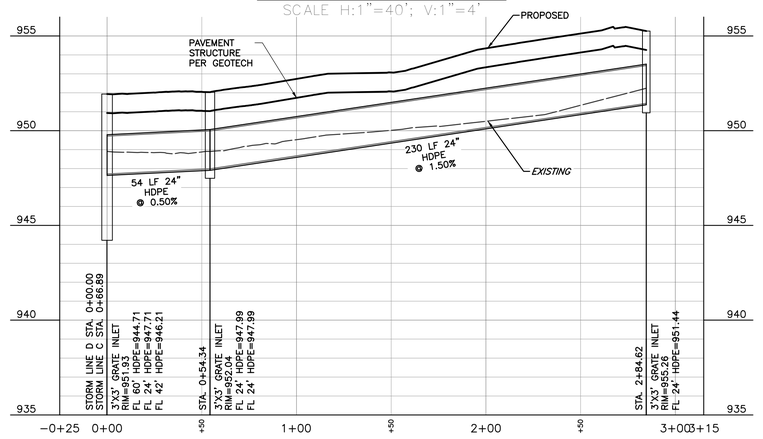
DRAWING NO.: 80
SHEET 80 OF 175

2023-23-SD



STORM LINE D PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

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NORTH
SCALE IN FEET
0 40 80

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

811
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REVISION RECORD

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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

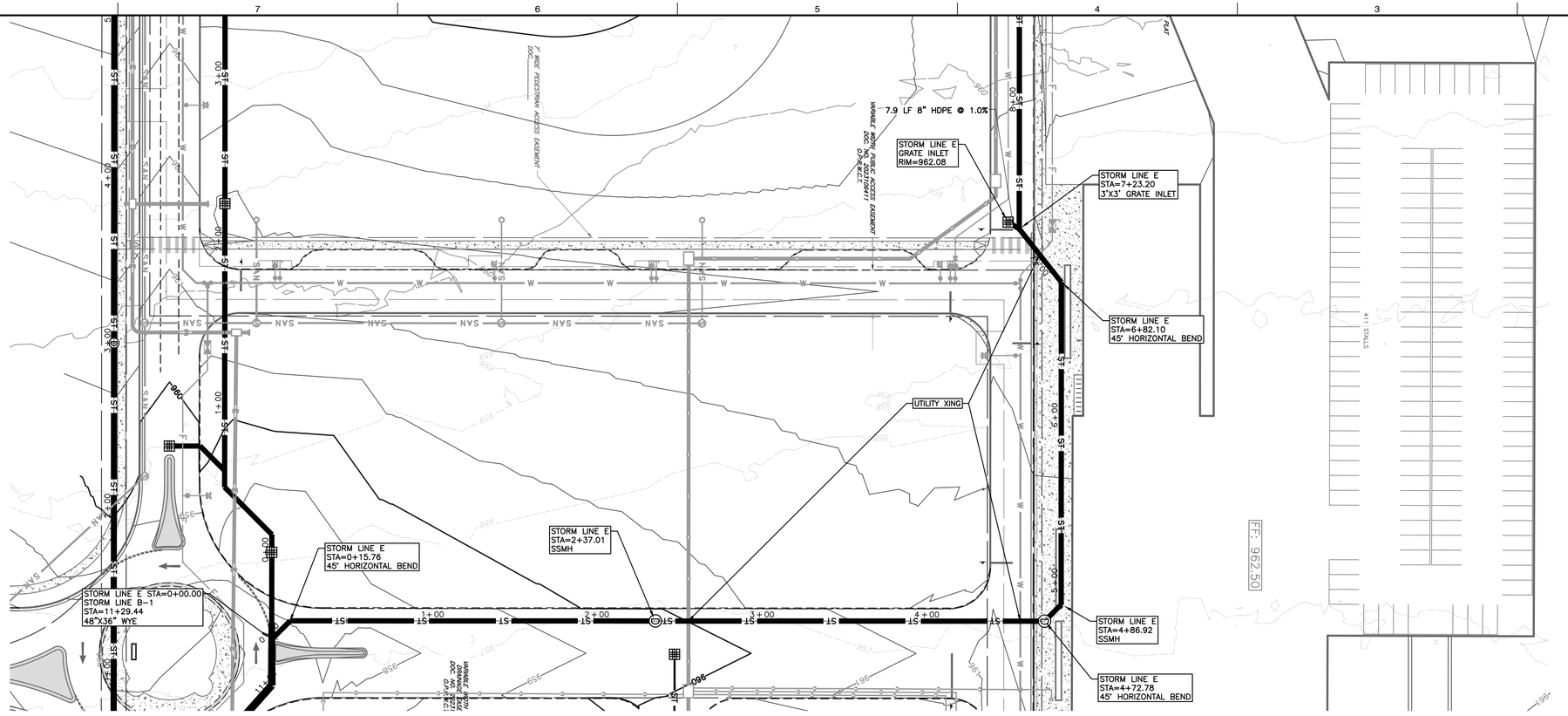
STORM LINE D

DRAWN BY:	TK
CHECKED BY:	SRB
DWG SCALE:	1"=40'
PROJECT NO:	331-715
APPROVED BY:	MAT
DATE:	9/9/2023

DRAWING NO.: 81

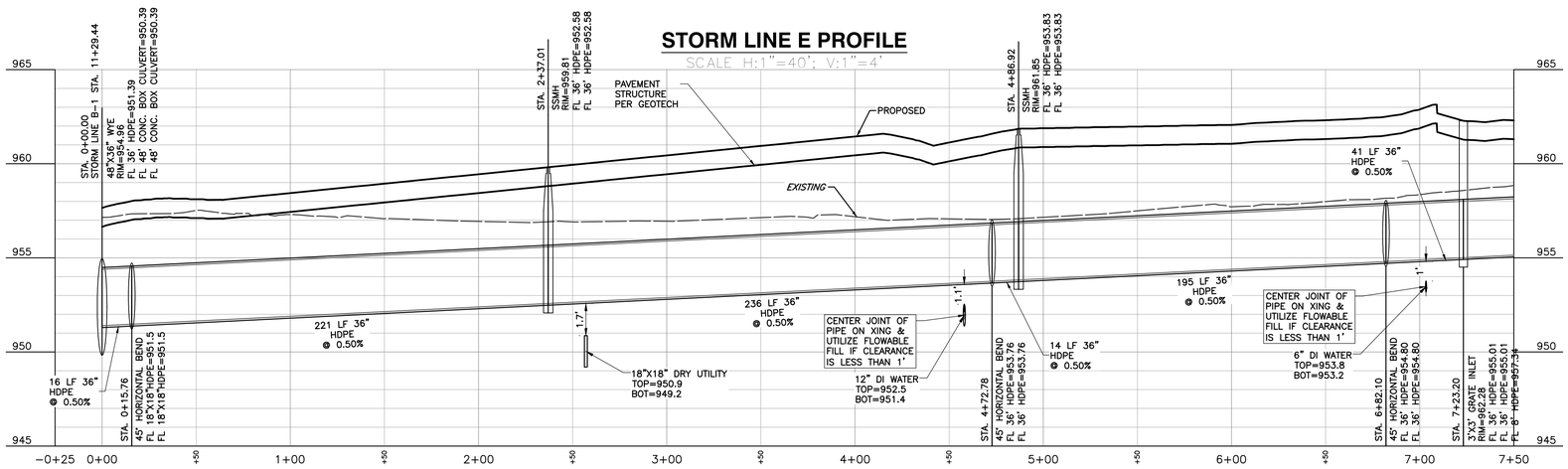
SHEET 81 OF 175

2023-23-SD



STORM LINE E PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

NOTES:
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NORTH
SCALE IN FEET
0 40 80

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

NO	DATE	REVISION RECORD DESCRIPTION

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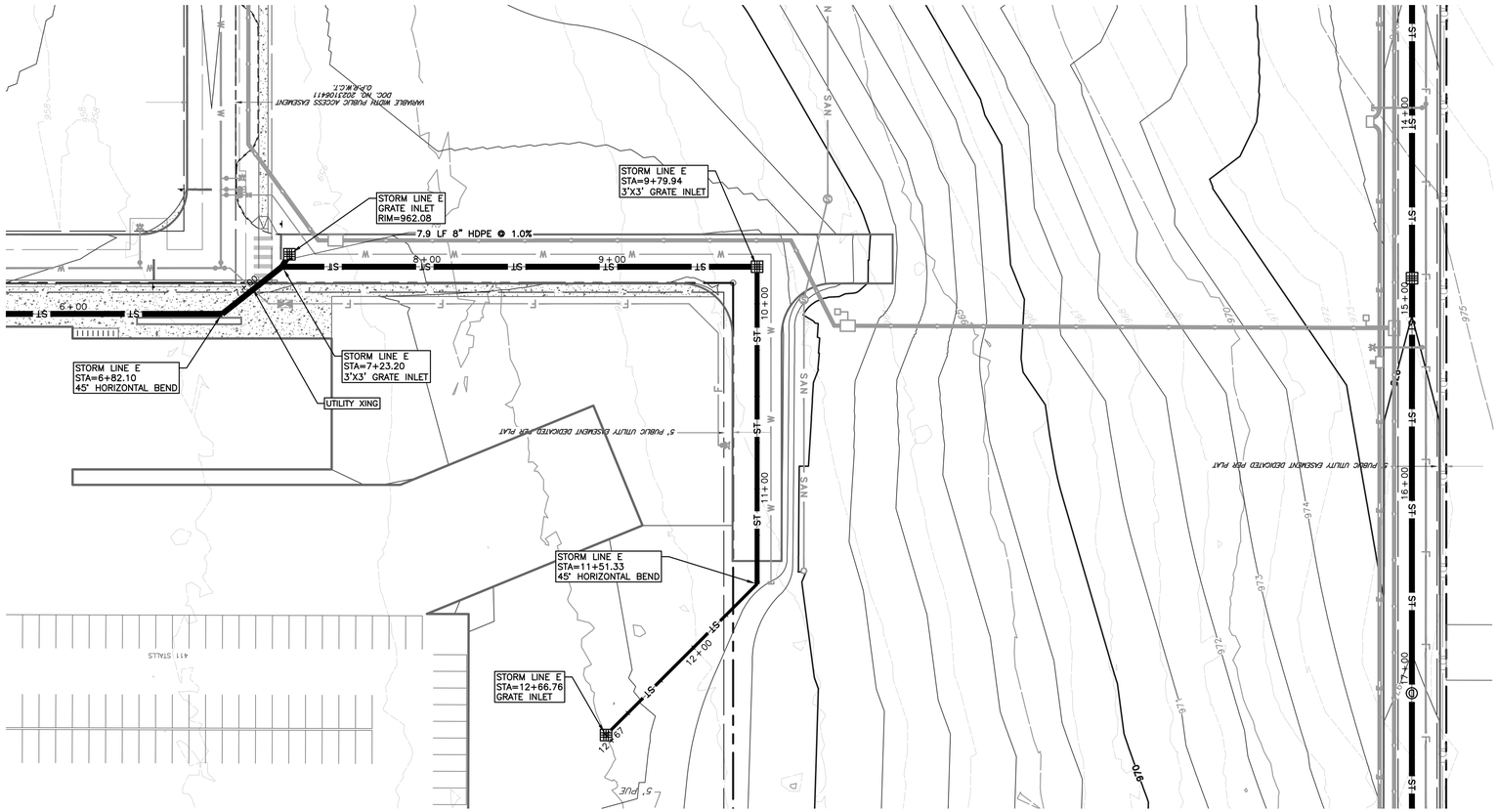
NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE E START-STA 7+50

DRAWN BY:	TK
CHECKED BY:	SRB
DATE:	9/9/2023
DWG SCALE:	1"=40'
PROJECT NO:	331-715
APPROVED BY:	MAT

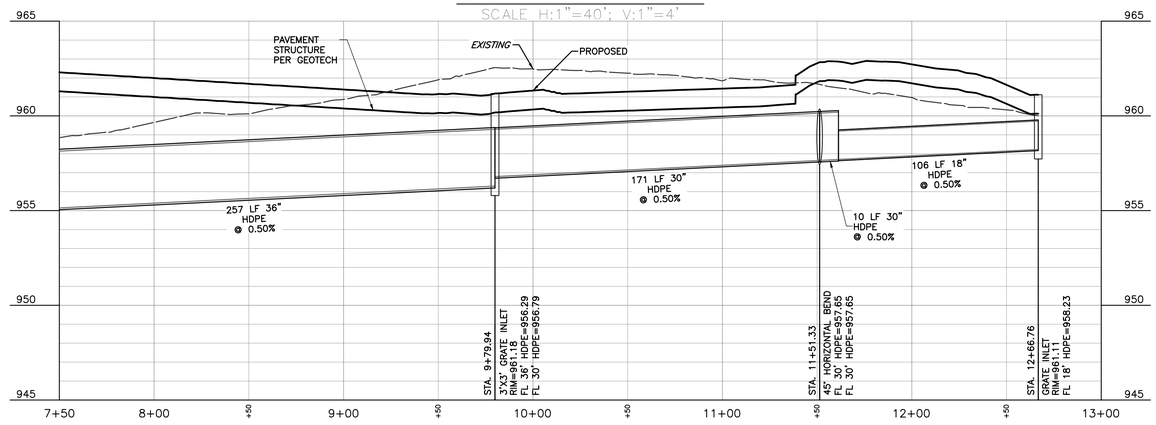
DRAWING NO.: 82
SHEET 82 OF 175

2023-23-SD



STORM LINE E PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
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385	385	MAJOR CONTOUR
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E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
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TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
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	ST	STORM SEWER
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NORTH
SCALE IN FEET
0 40 80

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142972
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PROFESSIONAL ENGINEER

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750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE E STA 7+50-END

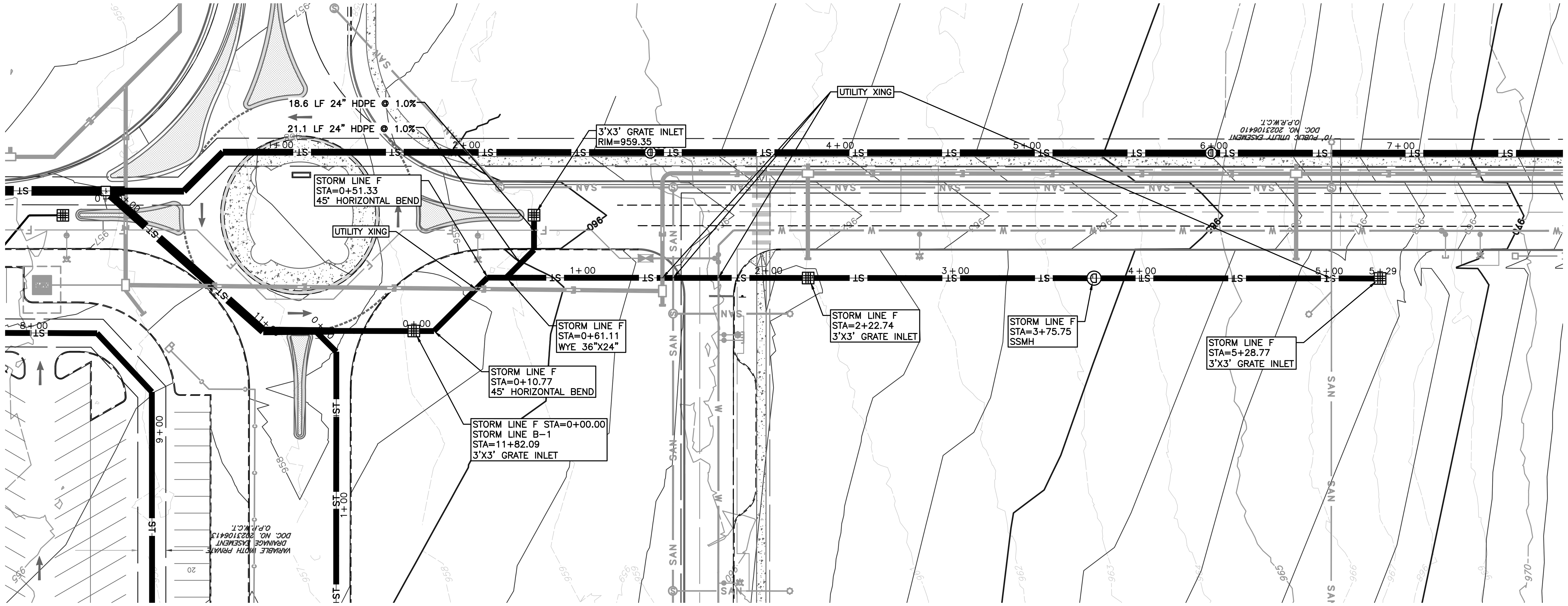
DATE:	9/9/2023
DWG SCALE:	1"=40'
PROJECT NO:	331-715
DRAWN BY:	TK
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 83

SHEET 83 OF 175

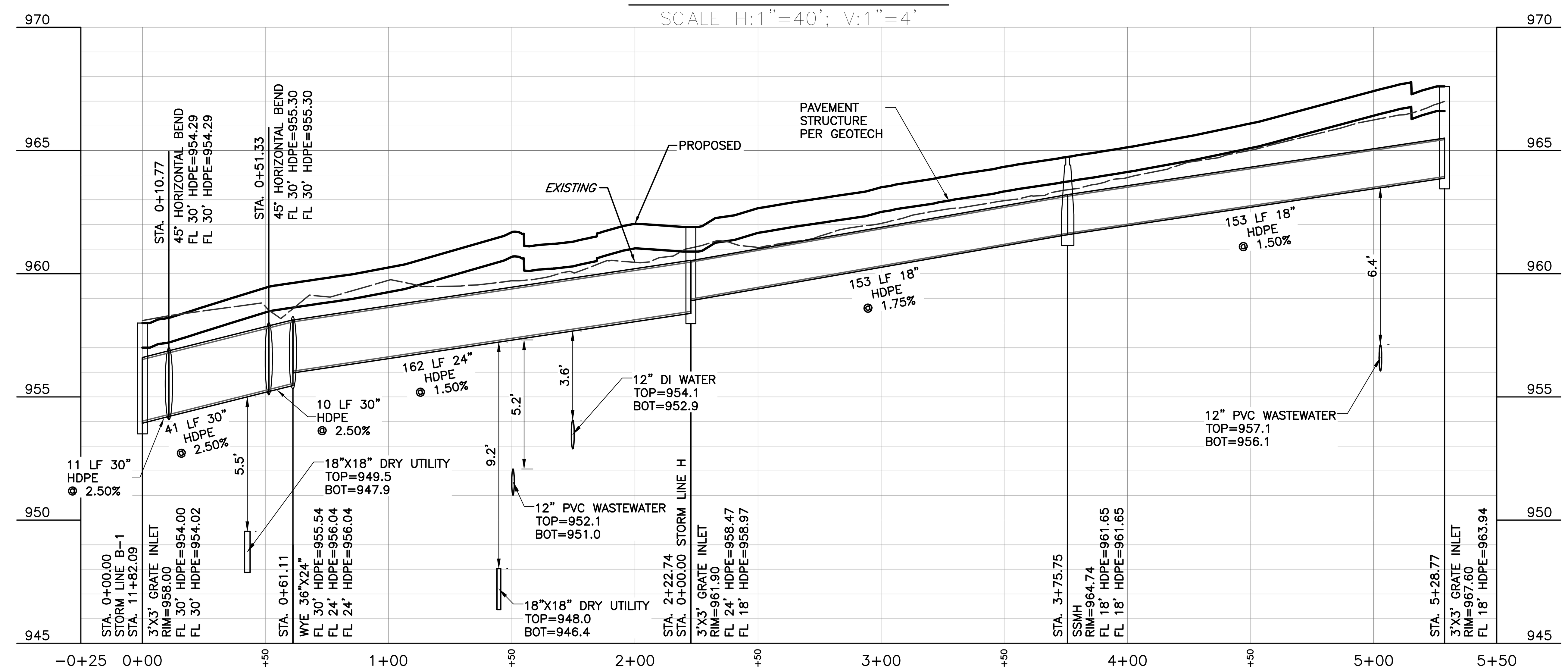
2023-23-SD

P:\330-001\331-715\-CAD\Dwg\CV01\331715-CV01-C400-STORM E.dwg[STORM LINE E STA 7+50-END] LS(4/29/2024 - Autocad) - LP: 4/30/2024 12:36 PM



STORM LINE F PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED | EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
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- HEADWALL
- SAFETY END TREATMENT
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- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED | EXISTING

- RIGHT-OF-WAY
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- FENCE: BARBED
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NORTH

SCALE IN FEET

0 40 80

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

811

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REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR CITY OF CEDAR PARK WILLIAMSON COUNTY

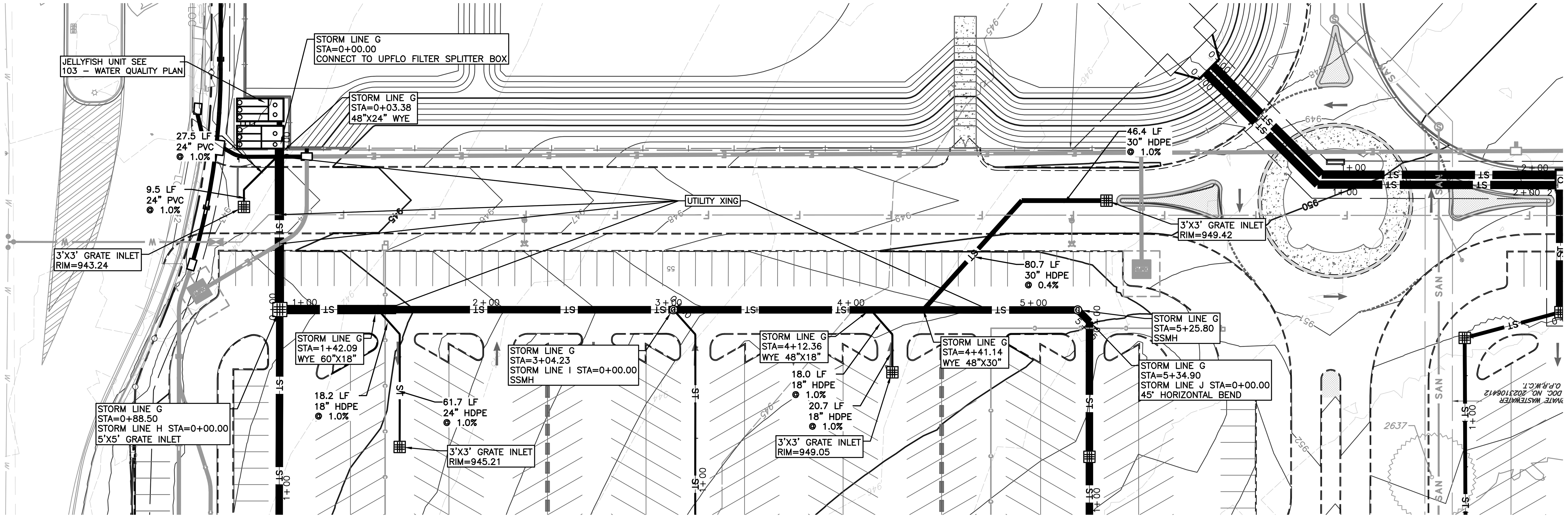
STORM LINE F

DATE:	12/20/2023	DRAWN BY:	CEC
DWG SCALE:	1"=40'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MT

DRAWING NO.: 84

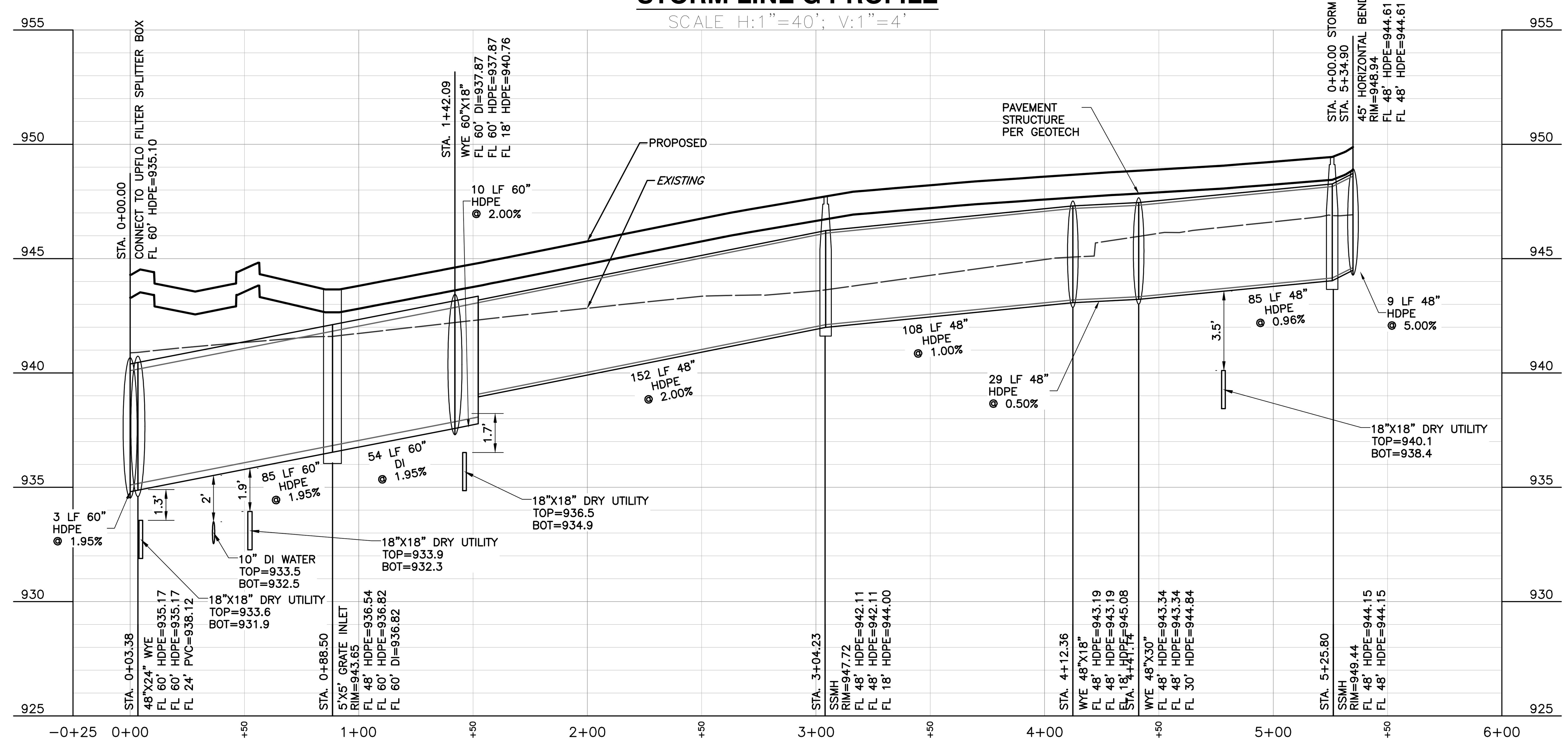
SHEET 84 OF 175

2023-23-SD



STORM LINE G PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED / EXISTING

BENCHMARK, CUT IN CONCRETE, CONTROL POINT, IRON PIPE, IRON ROD, IRON ROD W/ CAP, MONUMENT TYPE 1, MONUMENT TYPE 2, NAIL, PIPE BREAK, PIPE CAP, PIPE FLOW, REDUCER, AIR RELEASE VALVE, BLOW-OFF VALVE, POST INDICATOR VALVE, MISCELLANEOUS VALVE, UTILITY VALVE, UTILITY METER, BACKFLOW PREVENTER, FLUSH CONNECTION, FIRE HYDRANT, (MONITORING) WELL, UTILITY RISER, HOSE BIB, SANITARY M.H., CLEANOUT, WW INSPECTION PORTAL, DRAINAGE M.H., DOWN SPOUT, AREA INLET, CURB INLET, HEADWALL, SAFETY END TREATMENT, DRAINAGE FLOW, ELEC. M.H., ELEC./TELE. POLE, GUY WIRE, LIGHT FIXTURE, TRAFFIC SIGNAL, UTILITY (PULL)BOX

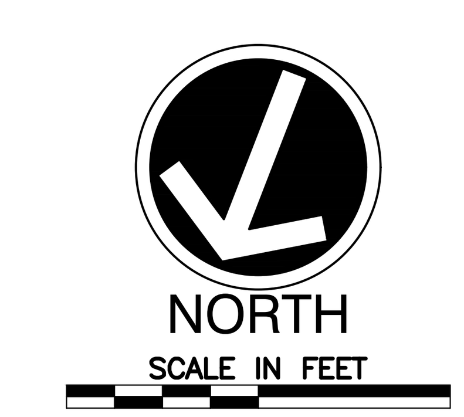
LINETYPE LEGEND

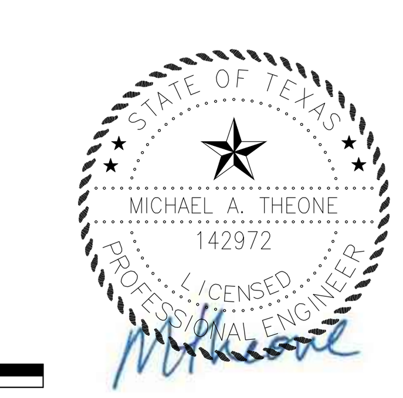
PROPOSED / EXISTING

RIGHT-OF-WAY, LOT BOUNDARY, EASEMENT, FENCE: BARBED, FENCE: WOOD (PICKET), FENCE: GUARDRAIL, FENCE: CHAIN LINK, FENCE: IRON, MAJOR CONTOUR, MINOR CONTOUR, ELECTRIC LINE, OVERHEAD ELECTRIC WIRE, UNDERGROUND ELECTRIC LINE, TELEPHONE, COMMUNICATIONS LINE, CABLE TELEVISION, FIBER OPTIC LINE, GAS LINE, OVERHEAD UTILITY, UNDERGROUND UTILITY, SANITARY SEWER LINE, WATER LINE, FIRE LINE, ROAD CENTERLINE, CURB & GUTTER, DEEP CURB & GUTTER, STRIPING, FIRE LANE STRIPING, H.C. ACCESSIBLE ROUTE, LIMITS OF CONSTRUCTION, DRAINAGE AREA, FLOODWAY, CWQZ, STORM SEWER, DRAINAGE CHANNEL

NOTES:

1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.





811 !!! CAUTION !!! !!! CAUTION !!! IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

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NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE G

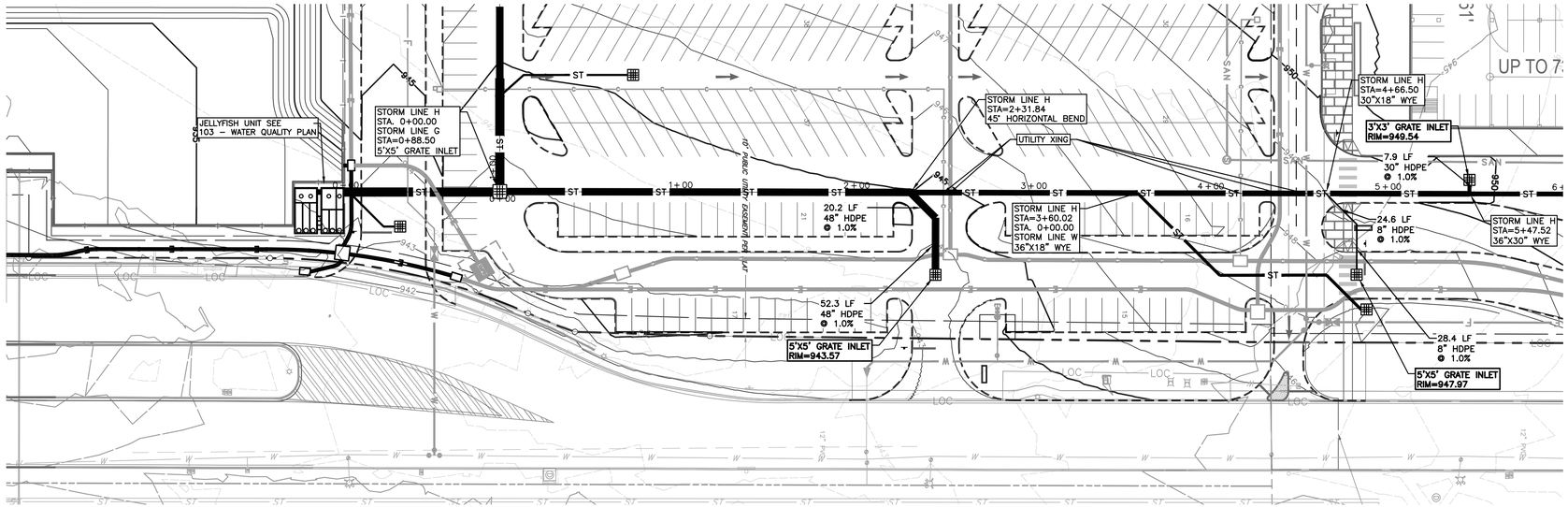
DATE:	12/20/2023	DRAWN BY:	CEC
DWG SCALE:	1"=40'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MT

DRAWING NO.: 85

SHEET 85 OF 175

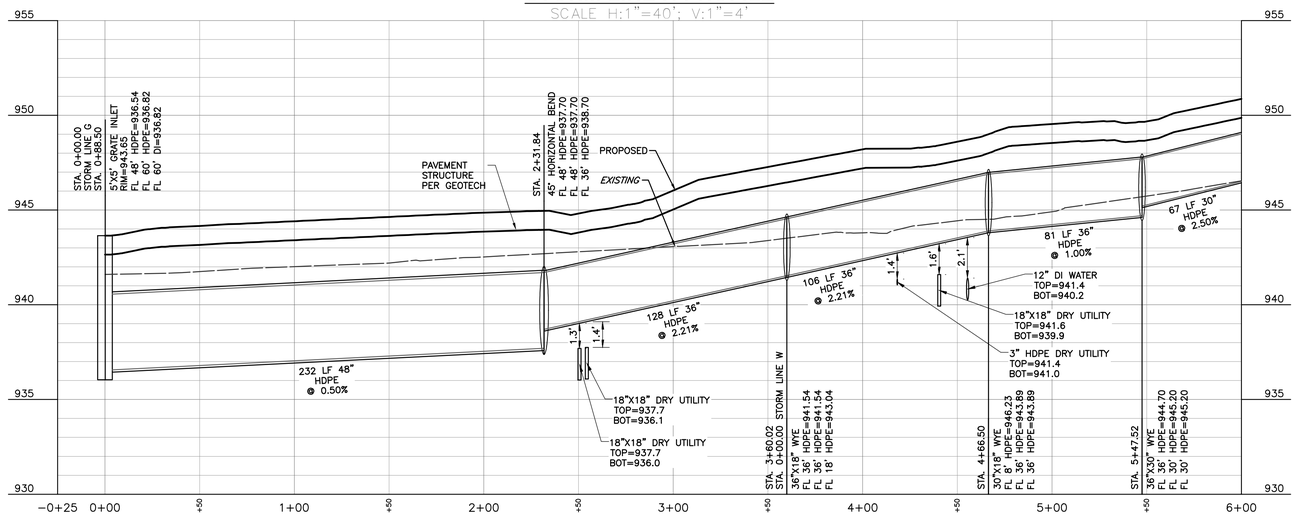
2023-23-SD

P:\330-000\331-715\-CADD\Dwg\CIVIL\331715-CV01-C400-STORM G.dwg{STORM LINE G} LS:(4/29/2024 - btincale) - LP: 4/30/2024 12:39 PM



STORM LINE H PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST		STORM SEWER
		DRAINAGE CHANNEL

NOTES:

1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.

NORTH

SCALE IN FEET

0 40 80

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

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Texas Registered Engineering Firm F-38
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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE H START-6+00

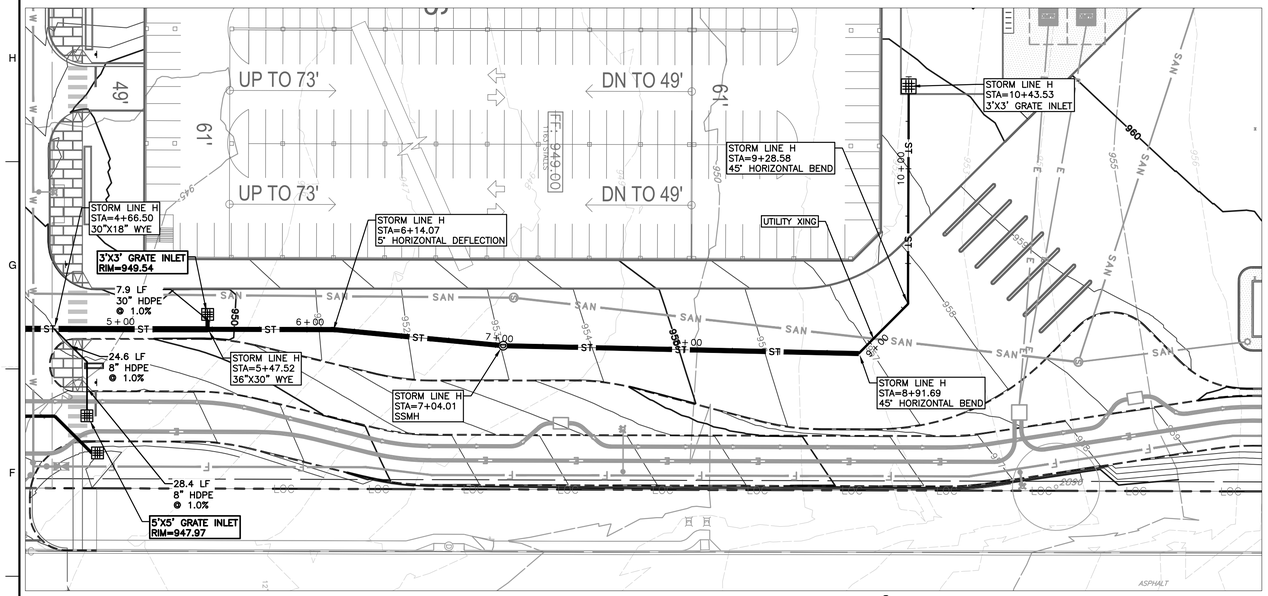
DRAWN BY:	TK
CHECKED BY:	SRB
DATE:	12/20/2023
DWG SCALE:	1"=40'
PROJECT NO.:	331-715
APPROVED BY:	MAT

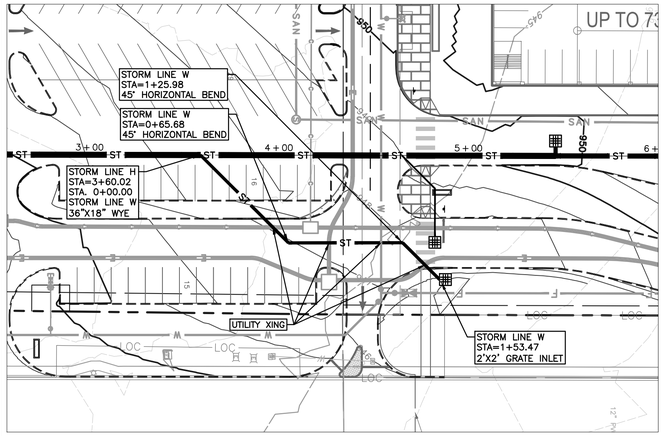
DRAWING NO.:
86

SHEET 86 OF 175

2023-23-SD

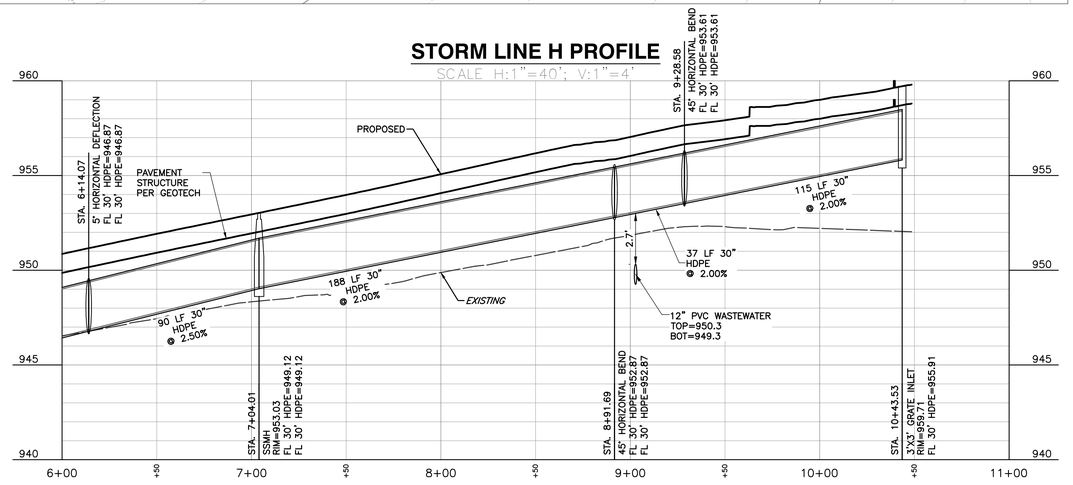
P:\330-0001\331-715\-0400\Dwg\CIVIL\331715-CIV01-C400-STORM H.dwg[STORM LINE H START-6+00] LS(4/29/2024 - Wilcoxde) - LP: 4/30/2024 12:42 PM





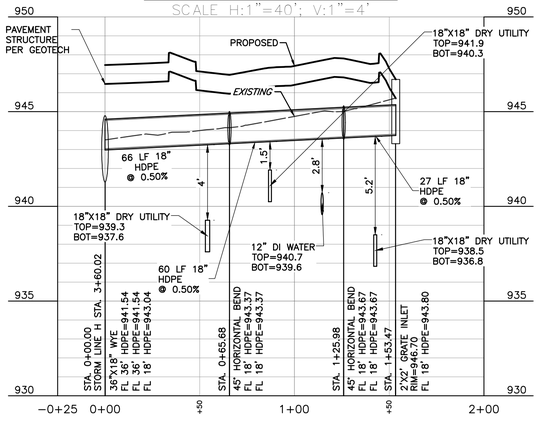
STORM LINE H PROFILE

SCALE H:1"=40'; V:1"=4'



STORM LINE W PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

NOTES:
1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.

NORTH
SCALE IN FEET
0 40 80

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
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www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

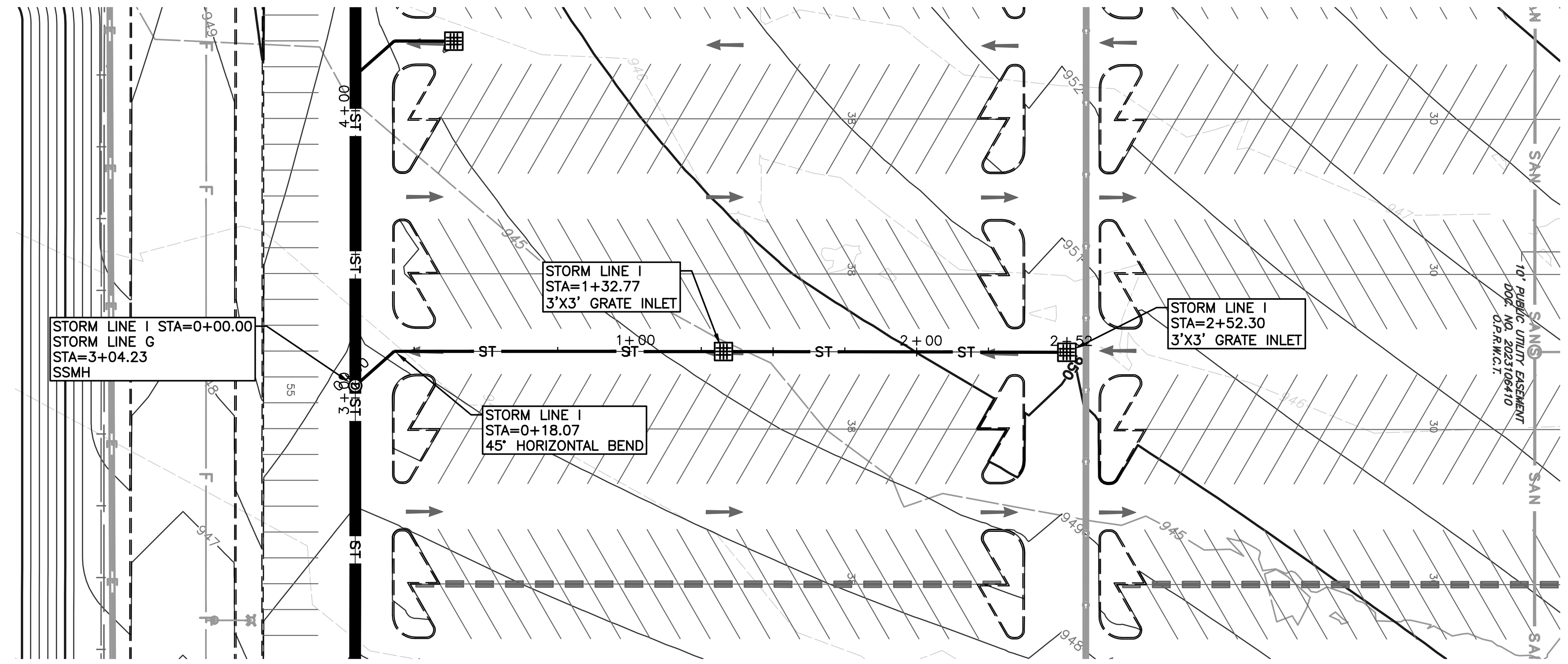
STORM LINE H 6+00-END & STORM LINE W

DATE:	12/20/2023
DRAWN BY:	TK
CHECKED BY:	SRB
DWG SCALE:	1"=40'
PROJECT NO:	331-715
APPROVED BY:	MAT

DRAWING NO.: 87
SHEET 87 OF 175

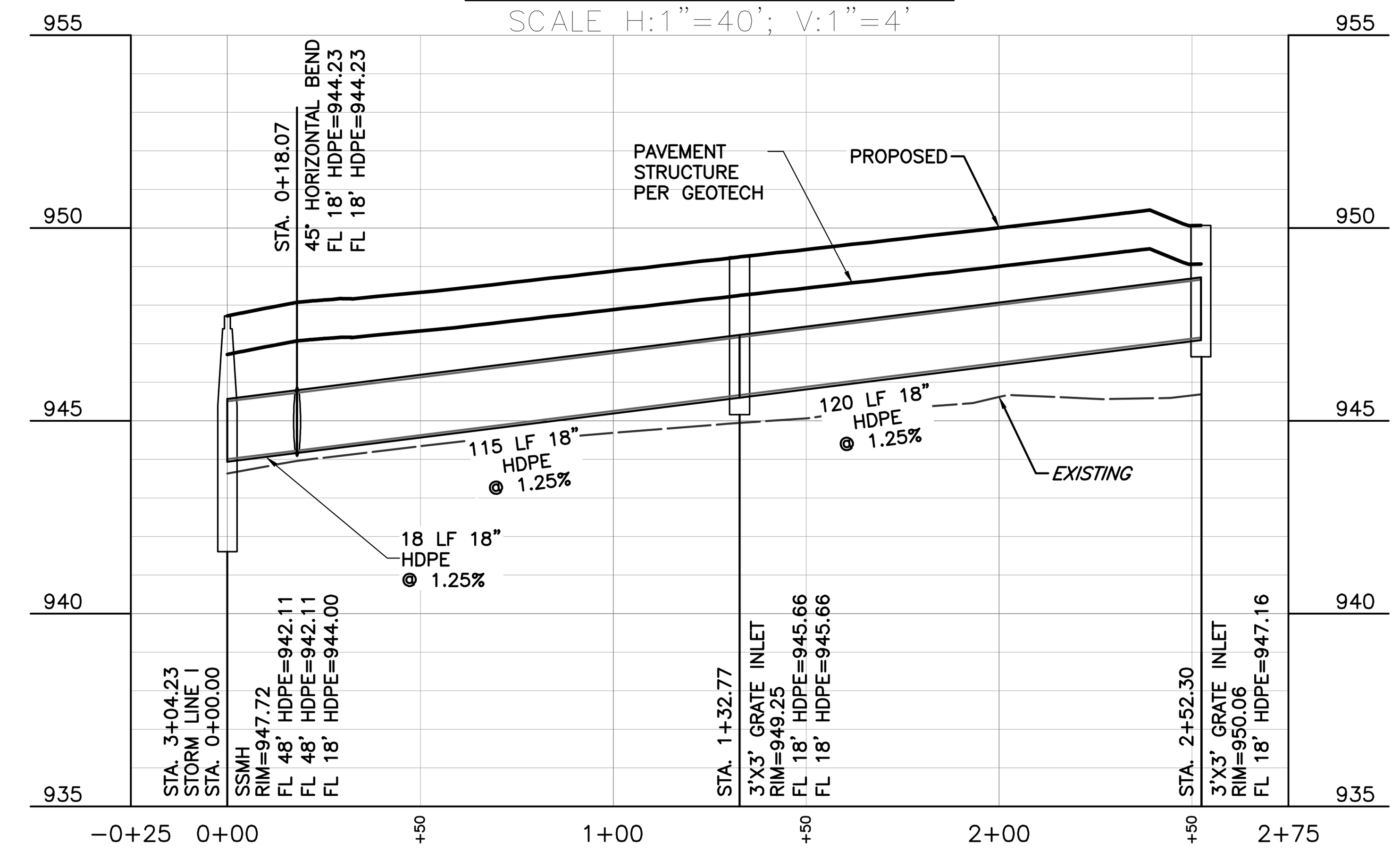
2023-23-SD

P:\330-2001\331-715\-0400\Dwg\CVD1\331715-CVD1-C400-STORM H-Wg[STORM LINE H 6+00-END & STORM LINE W] LS(4/29/2024 - thiscock) - LP: 4/30/2024 12:43 PM



STORM LINE I PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED | EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED | EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- MAJOR CONTOUR (385)
- MINOR CONTOUR
- ELECTRIC LINE (E)
- OVERHEAD ELECTRIC WIRE (OE)
- UNDERGROUND ELECTRIC LINE (UE)
- TELEPHONE (T)
- COMMUNICATIONS LINE (C)
- CABLE TELEVISION (TV)
- FIBER OPTIC LINE (FO)
- GAS LINE (G)
- OVERHEAD UTILITY (OU)
- UNDERGROUND UTILITY (UG)
- SANITARY SEWER LINE (SAN)
- WATER LINE (W)
- FIRE LINE (F)
- ROAD CENTERLINE
- CURB & GUTTER
- DEEP CURB & GUTTER
- STRIPING
- FIRE LANE STRIPING (FIRE)
- H.C. ACCESSIBLE ROUTE
- LIMITS OF CONSTRUCTION (LOC)
- DRAINAGE AREA
- FLOODWAY
- CWQZ
- STORM SEWER (ST)
- DRAINAGE CHANNEL

NOTES:

1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.

NORTH

SCALE IN FEET: 0 40 80

811

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SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE I

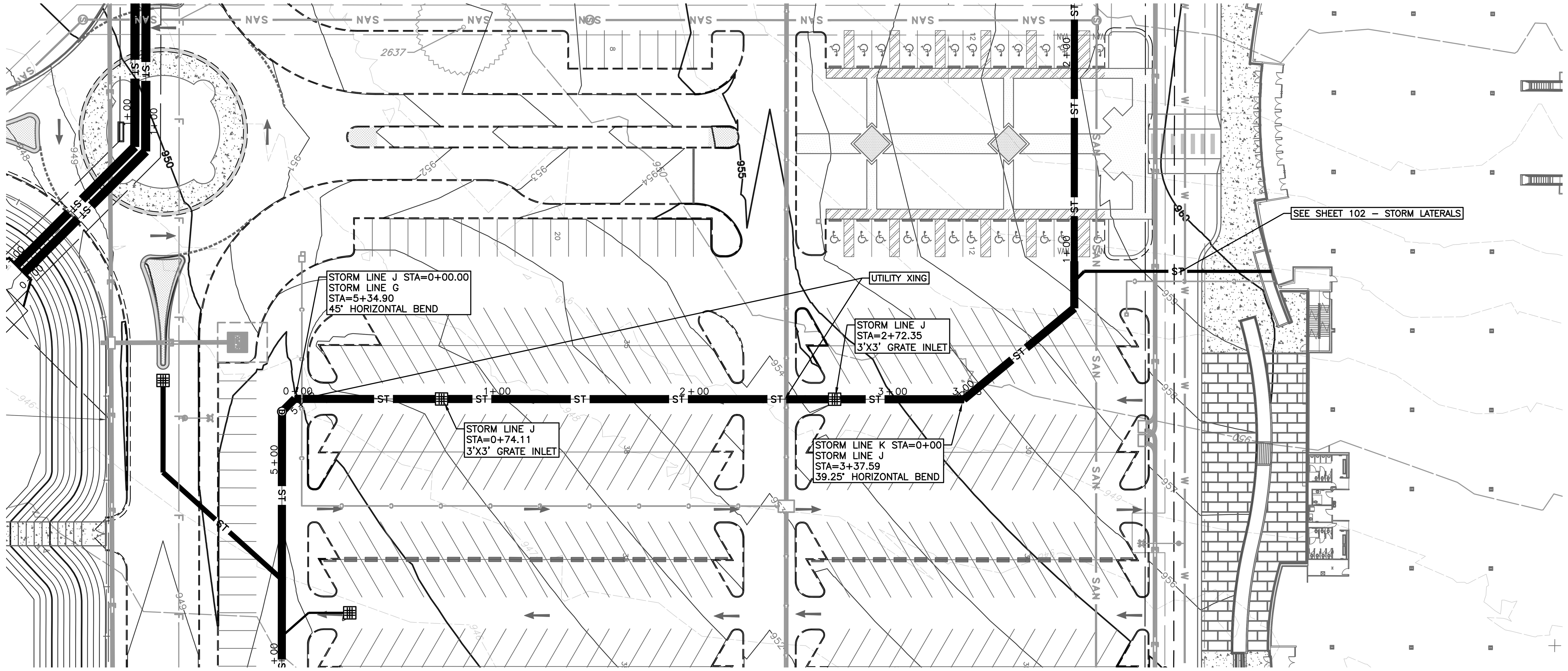
DATE:	12/20/2023	DRAWN BY:	TK
DWG SCALE:	1"=40'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 88

SHEET 88 OF 175

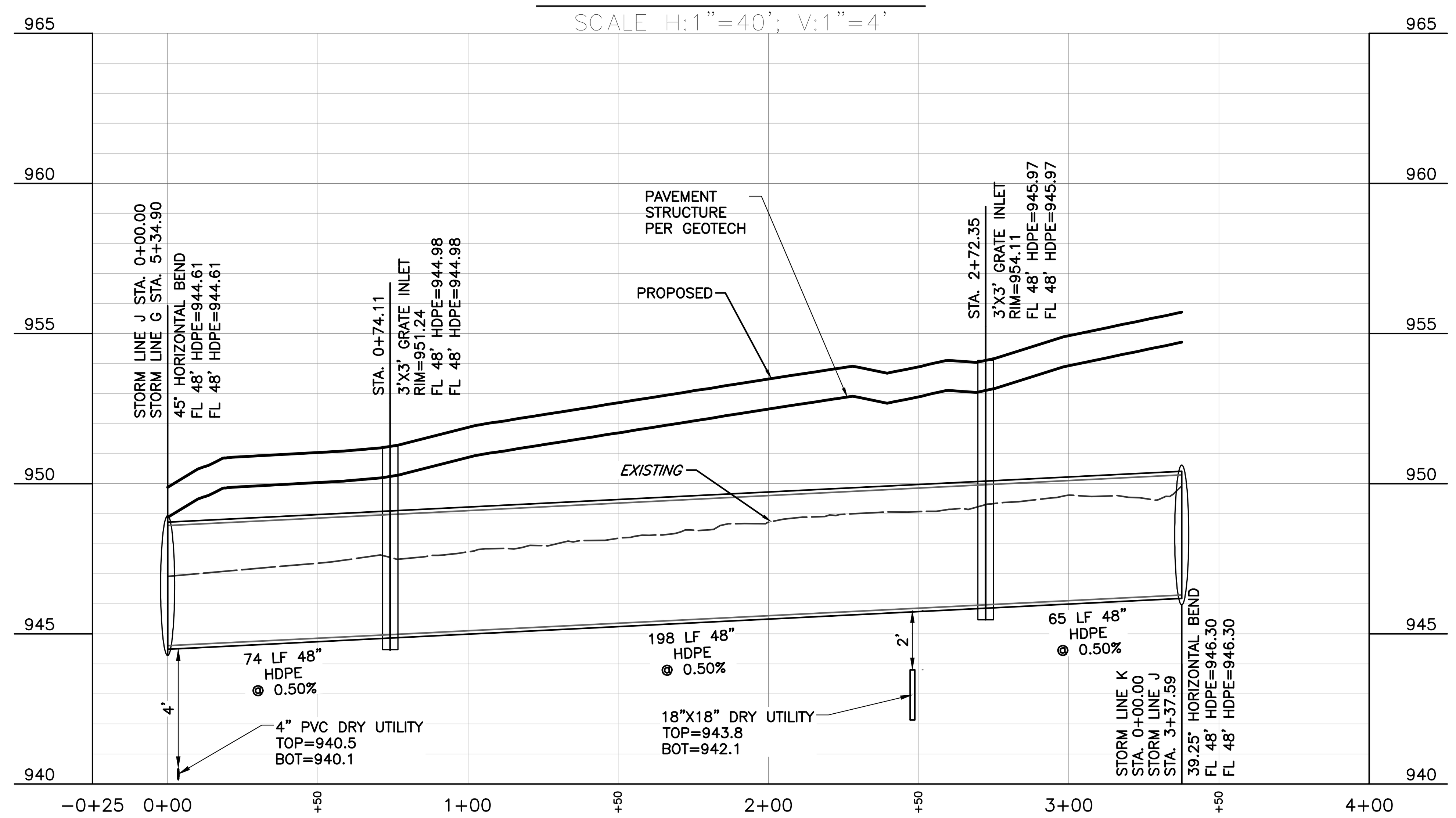
2023-23-SD

P:\330-000\331-715\-0400\Dwg\CIVIL\331715-CV01-C400-STORM.dwg[STORM LINE I] LS:(4/29/2024 - tkincaide) - LP: 4/30/2024 12:45 PM



STORM LINE J PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED / EXISTING

BENCHMARK, CUT IN CONCRETE, CONTROL POINT, IRON PIPE, IRON ROD, IRON ROD W/ CAP, MONUMENT TYPE 1, MONUMENT TYPE 2, NAIL, PIPE BREAK, PIPE CAP, PIPE FLOW, REDUCER, AIR RELEASE VALVE, BLOW-OFF VALVE, POST INDICATOR VALVE, MISCELLANEOUS VALVE, UTILITY VALVE, UTILITY METER, BACKFLOW PREVENTER, FLUSH CONNECTION, FIRE HYDRANT, (MONITORING) WELL, UTILITY RISER, HOSE BIB, SANITARY M.H., CLEANOUT, WW INSPECTION PORTAL, DRAINAGE M.H., DOWN SPOUT, AREA INLET, CURB INLET, HEADWALL, SAFETY END TREATMENT, DRAINAGE FLOW, ELEC. M.H., ELEC./TELE. POLE, GUY WIRE, LIGHT FIXTURE, TRAFFIC SIGNAL, UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED / EXISTING

RIGHT-OF-WAY, LOT BOUNDARY, EASEMENT, FENCE: BARBED, FENCE: WOOD (PICKET), FENCE: GUARDRAIL, FENCE: CHAIN LINK, FENCE: IRON, MAJOR CONTOUR, MINOR CONTOUR, ELECTRIC LINE, OVERHEAD ELECTRIC WIRE, UNDERGROUND ELECTRIC LINE, TELEPHONE, COMMUNICATIONS LINE, CABLE TELEVISION, FIBER OPTIC LINE, GAS LINE, OVERHEAD UTILITY, UNDERGROUND UTILITY, SANITARY SEWER LINE, WATER LINE, FIRE LINE, ROAD CENTERLINE, CURB & GUTTER, DEEP CURB & GUTTER, STRIPING, FIRE LANE STRIPING, H.C. ACCESSIBLE ROUTE, LIMITS OF CONSTRUCTION, DRAINAGE AREA, FLOODWAY, CWQZ, STORM SEWER, DRAINAGE CHANNEL

NOTES:

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NORTH

SCALE IN FEET 0 40 80

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STATE OF TEXAS — MICHAEL A. THEONE — 142972 — LICENSED PROFESSIONAL ENGINEER

REVISION RECORD

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NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR CITY OF CEDAR PARK WILLIAMSON COUNTY

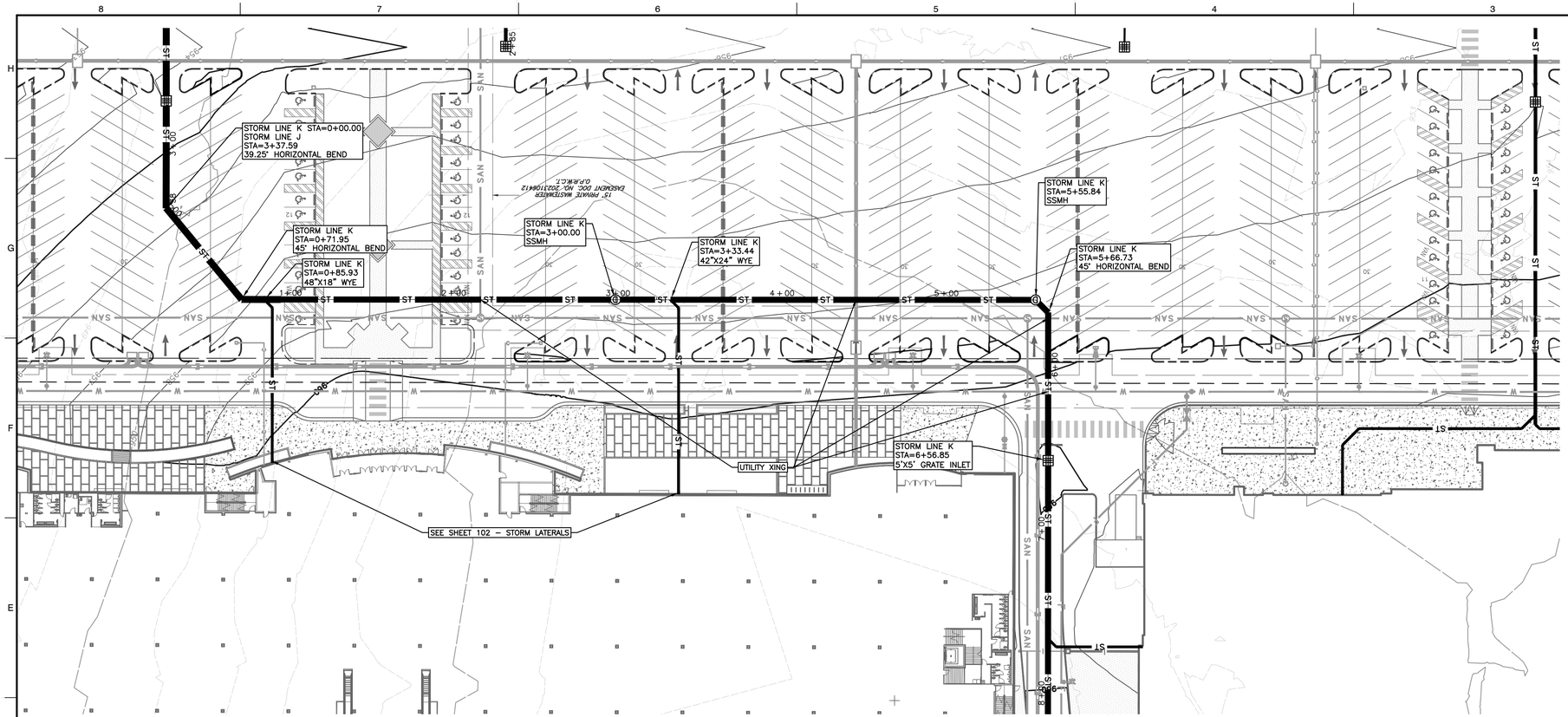
STORM LINE J

DATE:	12/20/2023	DRAWN BY:	TK
DWG SCALE:	1"=40'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 89

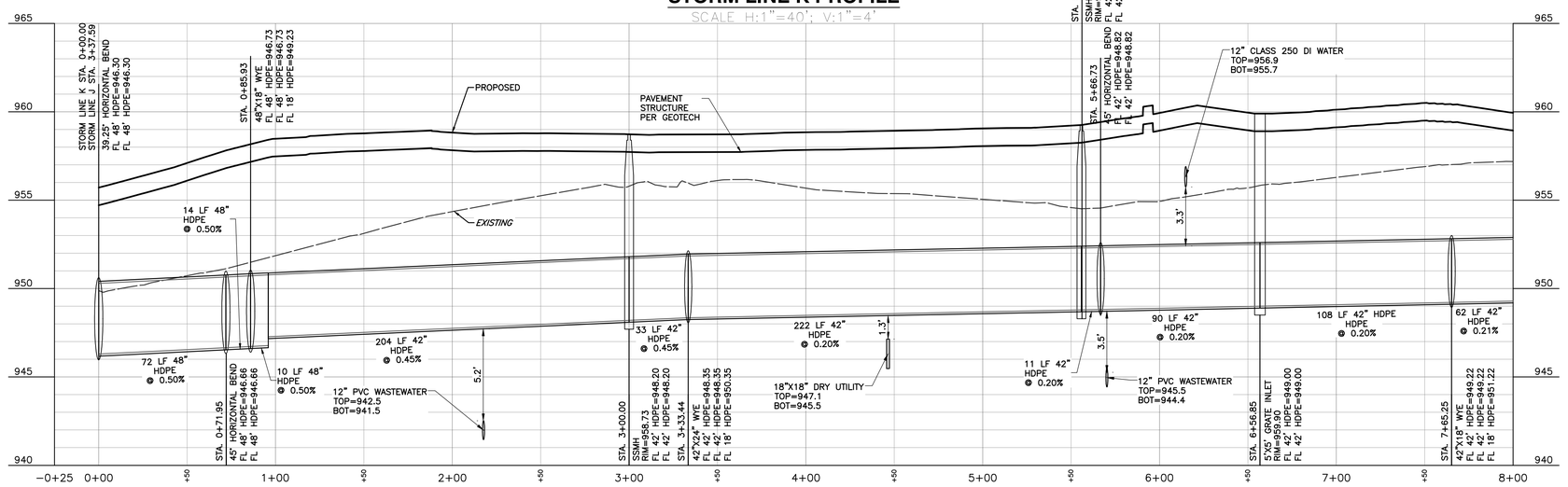
SHEET 89 OF 175

2023-23-SD



STORM LINE K PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST	ST	STORM SEWER
		DRAINAGE CHANNEL

NORTH

SCALE IN FEET

0 40 80

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

NOTES:
1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.

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NO	DATE	REVISION RECORD DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE K START-8+00

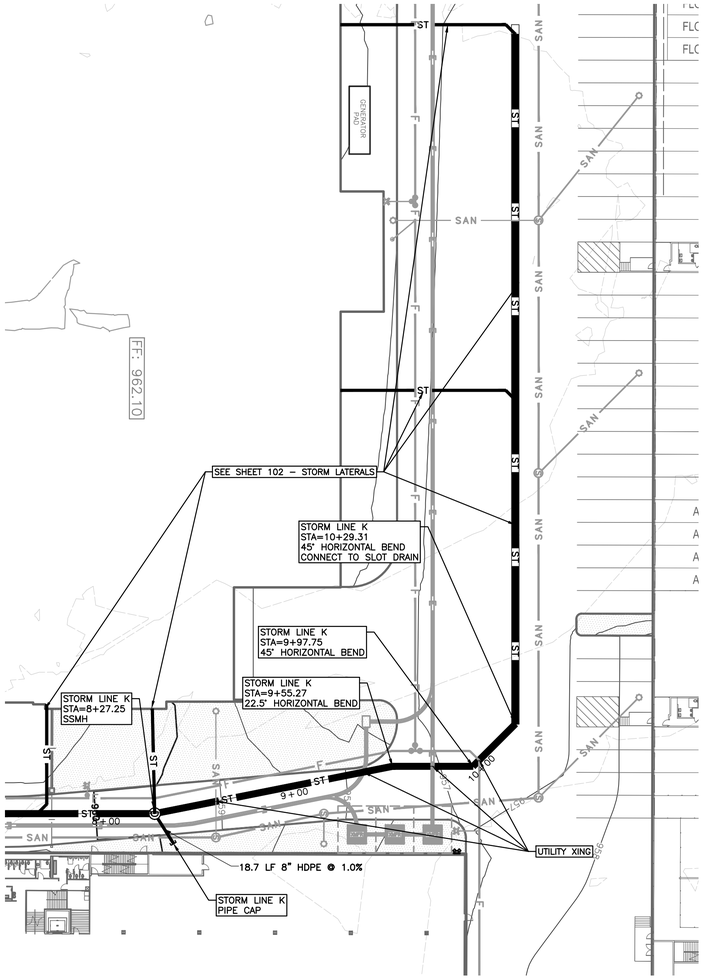
DRAWN BY:	TK
CHECKED BY:	SRB
DATE:	12/20/2023
DWG SCALE:	1"=40'
PROJECT NO.:	331-715
APPROVED BY:	MAT

DRAWING NO.: 90

SHEET 90 OF 175

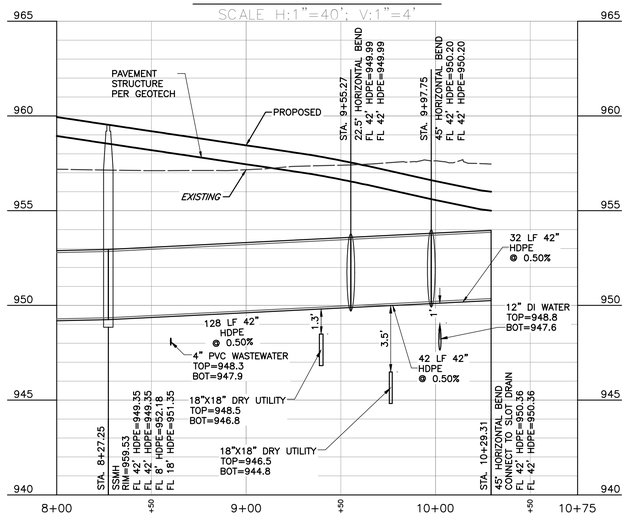
2023-23-SD

P:\330-001\331-715\-CAD\Dwg\CIVIL\331715-CIV1-C400-STORM K.dwg[STORM LINE K START-8+00] LS(4/29/2024 - tkincaid) - LP: 4/30/2024 12:49 PM



STORM LINE K PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

NOTES:
1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.

NORTH
SCALE IN FEET
0 40 80

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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

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Texas Registered Engineering Firm F-38
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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

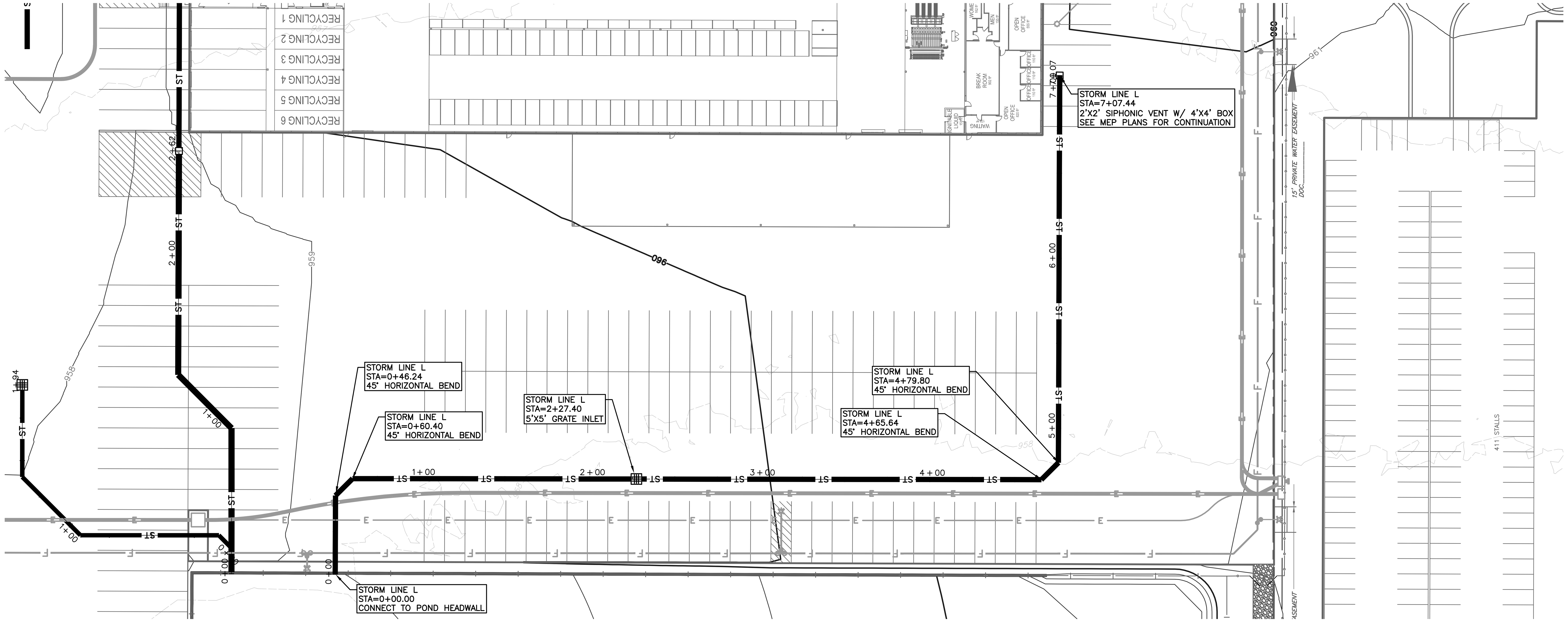
STORM LINE K 8+00-END

DATE:	12/20/2023
DWG SCALE:	1"=40'
PROJECT NO:	331-715
DRAWN BY:	TK
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 91
SHEET 91 OF 175

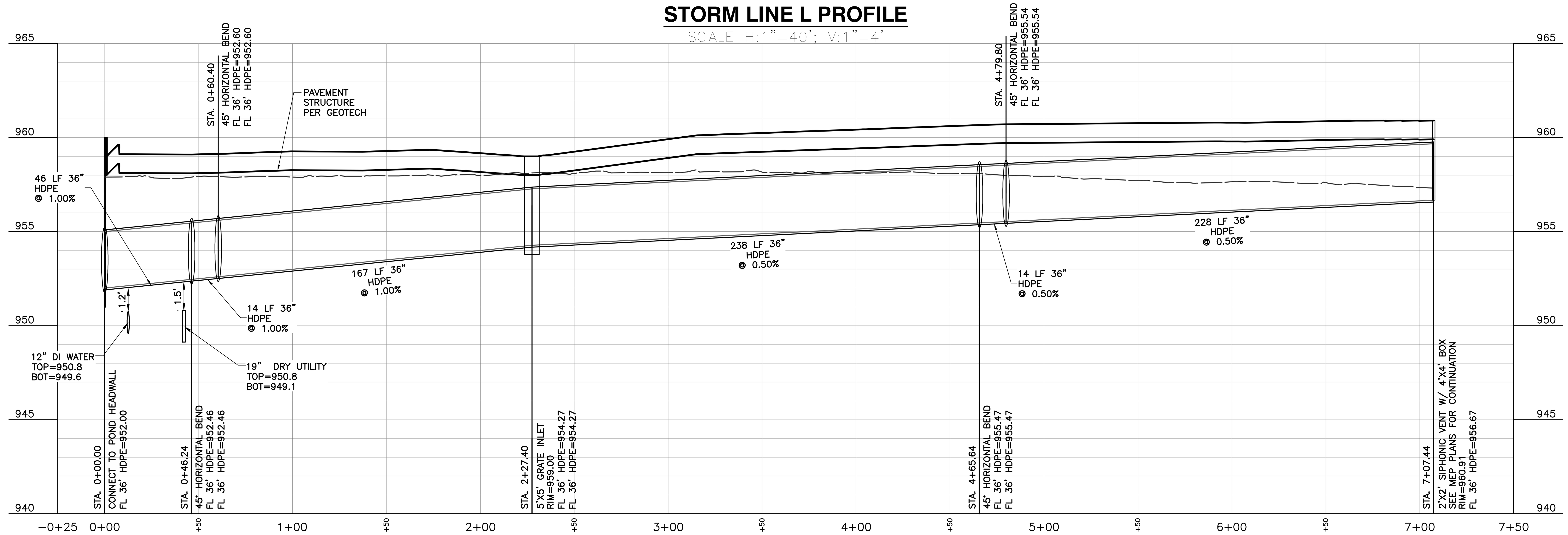
2023-23-SD

F:\330-2000\331-715\-CADD\dwg\CVD\331715-CVD1-C400-STORM K-dwg[STORM LINE K 8+00-END] LS(4/29/2024 - Wednesday) - LP: 4/30/2024 12:50 PM



STORM LINE L PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED / EXISTING

BENCHMARK, CUT IN CONCRETE, CONTROL POINT, IRON PIPE, IRON ROD, IRON ROD W/ CAP, MONUMENT TYPE 1, MONUMENT TYPE 2, NAIL, PIPE BREAK, PIPE CAP, PIPE FLOW, REDUCER, AIR RELEASE VALVE, BLOW-OFF VALVE, POST INDICATOR VALVE, MISCELLANEOUS VALVE, UTILITY VALVE, UTILITY METER, BACKFLOW PREVENTER, FLUSH CONNECTION, FIRE HYDRANT, (MONITORING) WELL, UTILITY RISER, HOSE BIB, SANITARY M.H., CLEANOUT, WW INSPECTION PORTAL, DRAINAGE M.H., DOWN SPOUT, AREA INLET, CURB INLET, HEADWALL, SAFETY END TREATMENT, DRAINAGE FLOW, ELEC. M.H., ELEC./TELE. POLE, GUY WIRE, LIGHT FIXTURE, TRAFFIC SIGNAL, UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED / EXISTING

RIGHT-OF-WAY, LOT BOUNDARY, EASEMENT, FENCE: BARBED, FENCE: WOOD (PICKET), FENCE: GUARDRAIL, FENCE: CHAIN LINK, FENCE: IRON, MAJOR CONTOUR (385), MINOR CONTOUR, ELECTRIC LINE (E), OVERHEAD ELECTRIC WIRE (OE), UNDERGROUND ELECTRIC LINE (UE), TELEPHONE (T), COMMUNICATIONS LINE (C), CABLE TELEVISION (TV), FIBER OPTIC LINE (FO), GAS LINE (G), OVERHEAD UTILITY (OU), UNDERGROUND UTILITY (UG), SANITARY SEWER LINE (SAN), WATER LINE (W), FIRE LINE (F), ROAD CENTERLINE, CURB & GUTTER, DEEP CURB & GUTTER, STRIPING, FIRE LANE STRIPING (FIRE), H.C. ACCESSIBLE ROUTE, LIMITS OF CONSTRUCTION (LOC), DRAINAGE AREA, FLOODWAY, CWQZ, STORM SEWER (ST), DRAINAGE CHANNEL

NOTES:

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NORTH

SCALE IN FEET 0 40 80

STATE OF TEXAS — MICHAEL A. THEONE — 142972 — LICENSED PROFESSIONAL ENGINEER

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REVISION RECORD — NO | DATE | DESCRIPTION

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NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE L

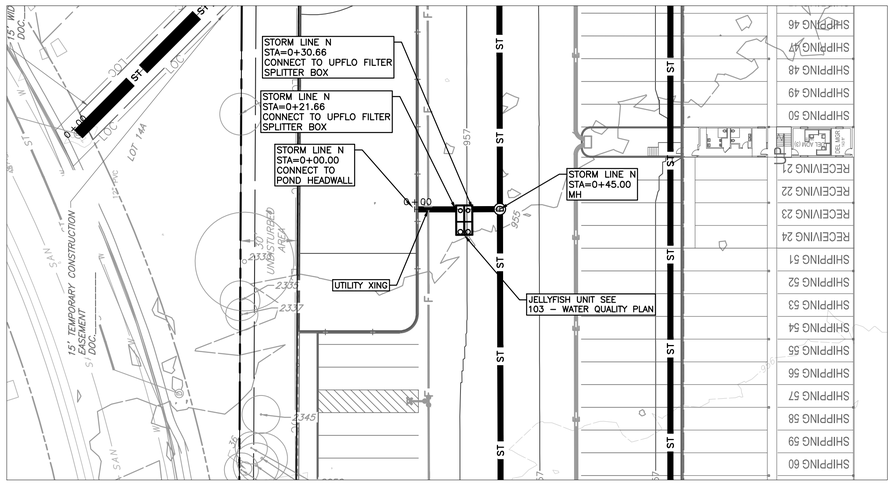
DATE:	12/20/2023
DRAWN BY:	TK
DWG SCALE:	1"=40'
CHECKED BY:	SRB
PROJECT NO:	331-715
APPROVED BY:	MAT

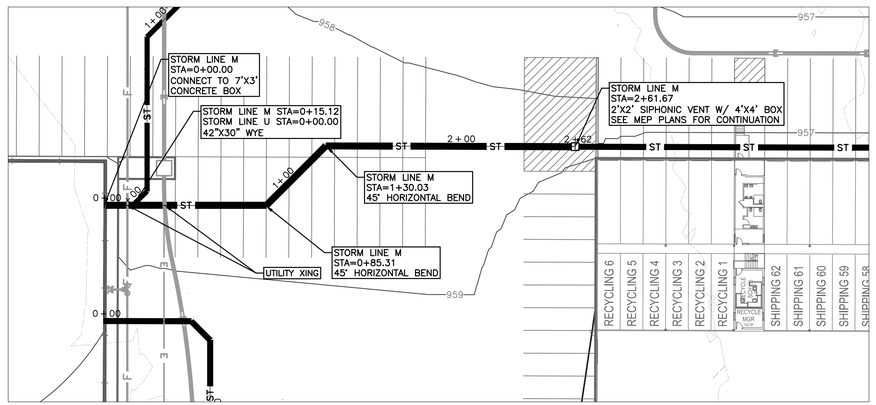
DRAWING NO.: 92

SHEET 92 OF 175

2023-23-SD

P:\330-000\331-715--0400 (Dwg)\CVD\331715-CV01-C400-STORM L M N O.dwg{STORM LINE L} LS:(4/29/2024 - tkincaid) - LP: 4/30/2024 12:52 PM

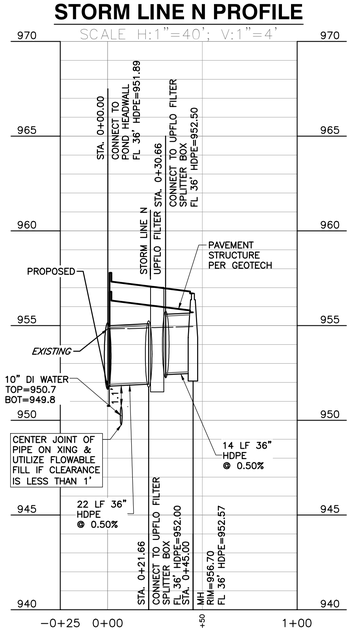




NORTH

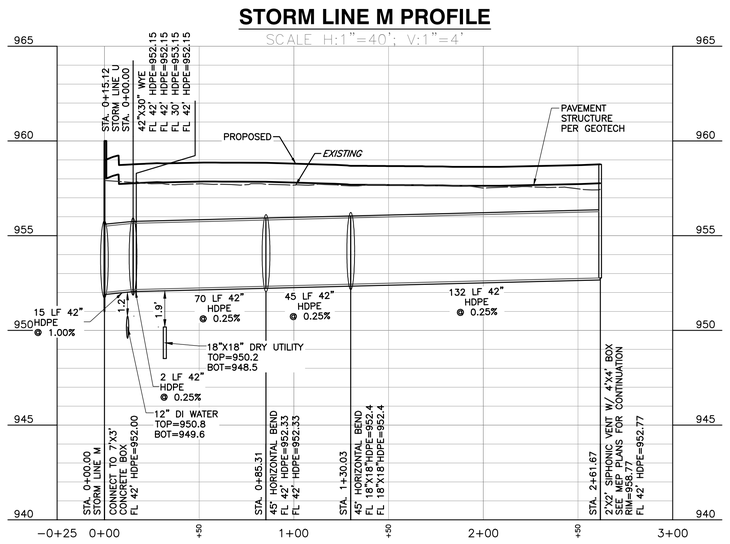
STORM LINE N PROFILE

SCALE H:1"=40'; V:1"=4'



STORM LINE M PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST	ST	STORM SEWER
		DRAINAGE CHANNEL

NOTES:
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SCALE IN FEET
0 40 80

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE M, N

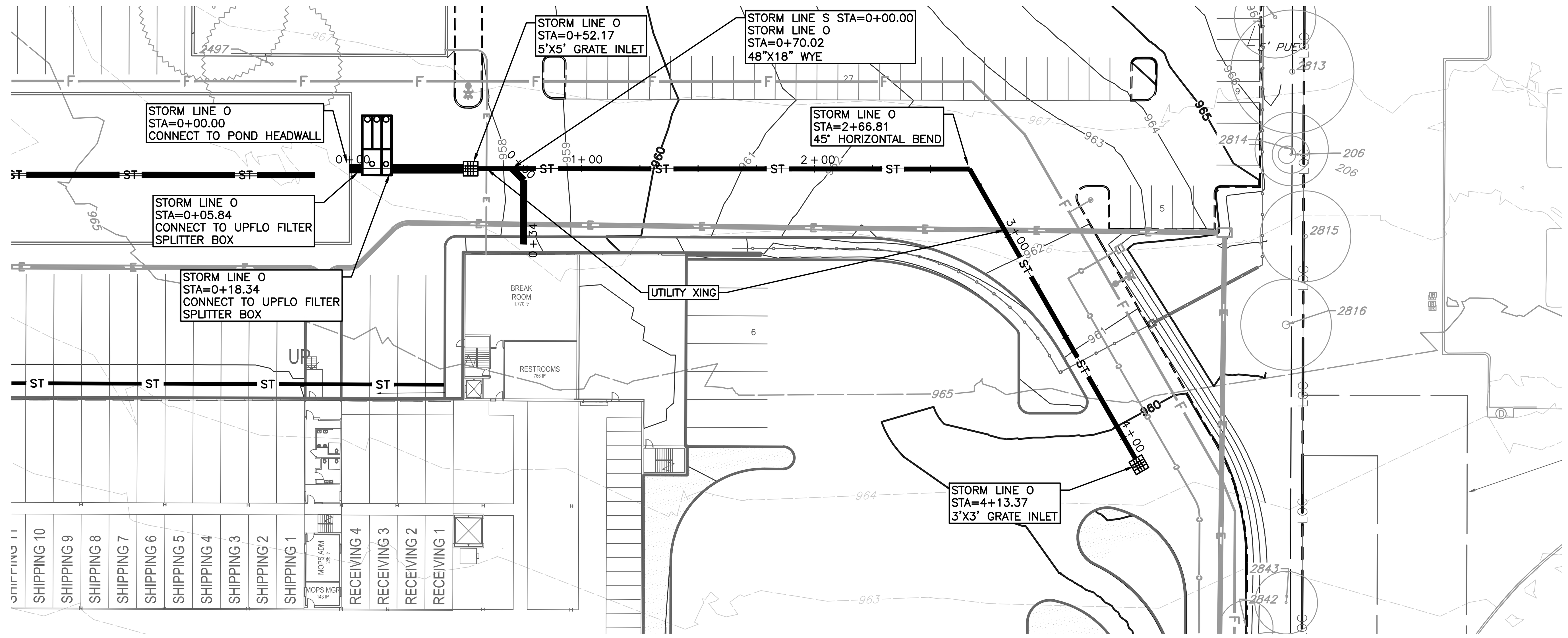
DATE:	12/20/2023
DWG SCALE:	1"=40'
PROJECT NO:	331-715
DRAWN BY:	TK
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 93

SHEET 93 OF 175

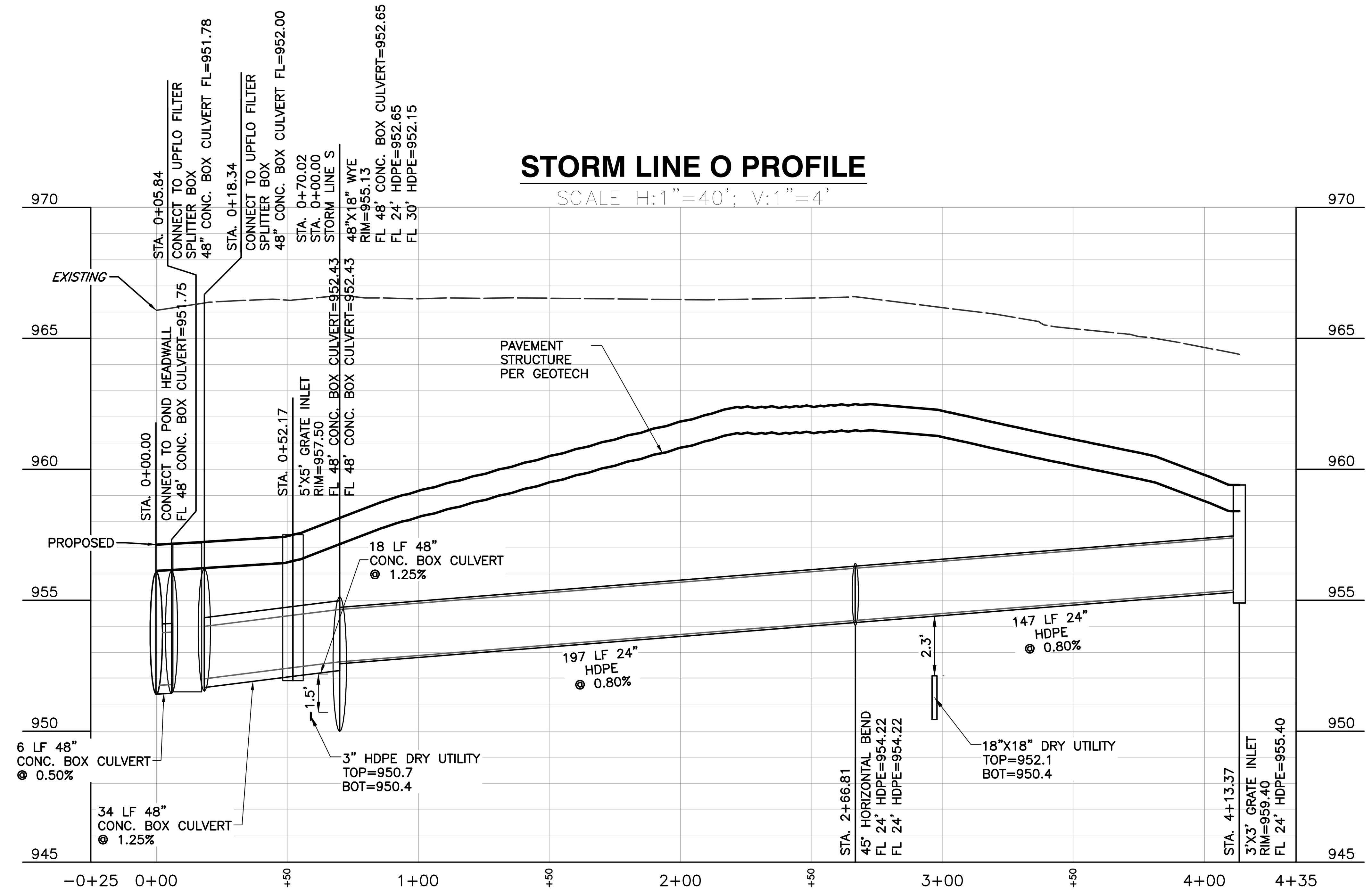
2023-23-SD

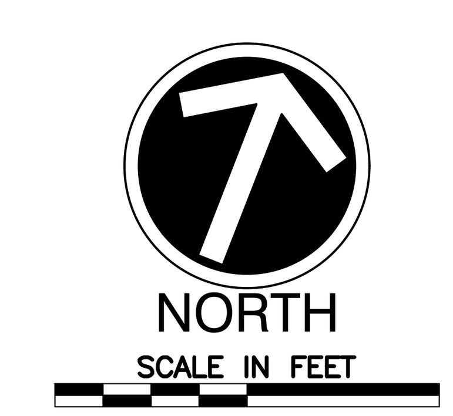
P:\330-2001\331-715\-CAD\[dwg]\CV01\331715-CV01-C400-STORM L M N 0.dwg[STORM LINE M N] LS(4/29/2024 - 6inscale) - LP 4/30/2024 12:54 PM



STORM LINE O PROFILE

SCALE H:1"=40'; V:1"=4'





811

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BLOCK LEGEND

PROPOSED | EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED | EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- MAJOR CONTOUR (385)
- MINOR CONTOUR
- ELECTRIC LINE (E)
- OVERHEAD ELECTRIC WIRE (OE)
- UNDERGROUND ELECTRIC LINE (UE)
- TELEPHONE (T)
- COMMUNICATIONS LINE (C)
- CABLE TELEVISION (TV)
- FIBER OPTIC LINE (FO)
- GAS LINE (G)
- OVERHEAD UTILITY (OU)
- UNDERGROUND UTILITY (UG)
- SANITARY SEWER LINE (SAN)
- WATER LINE (W)
- FIRE LINE (F)
- ROAD CENTERLINE
- CURB & GUTTER
- DEEP CURB & GUTTER
- STRIPING
- FIRE LANE STRIPING (FIRE)
- H.C. ACCESSIBLE ROUTE
- LIMITS OF CONSTRUCTION (LOC)
- DRAINAGE AREA
- FLOODWAY
- CWQZ
- STORM SEWER (ST)
- DRAINAGE CHANNEL

NOTES:

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REVISION RECORD

NO	DATE	DESCRIPTION

CEC
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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

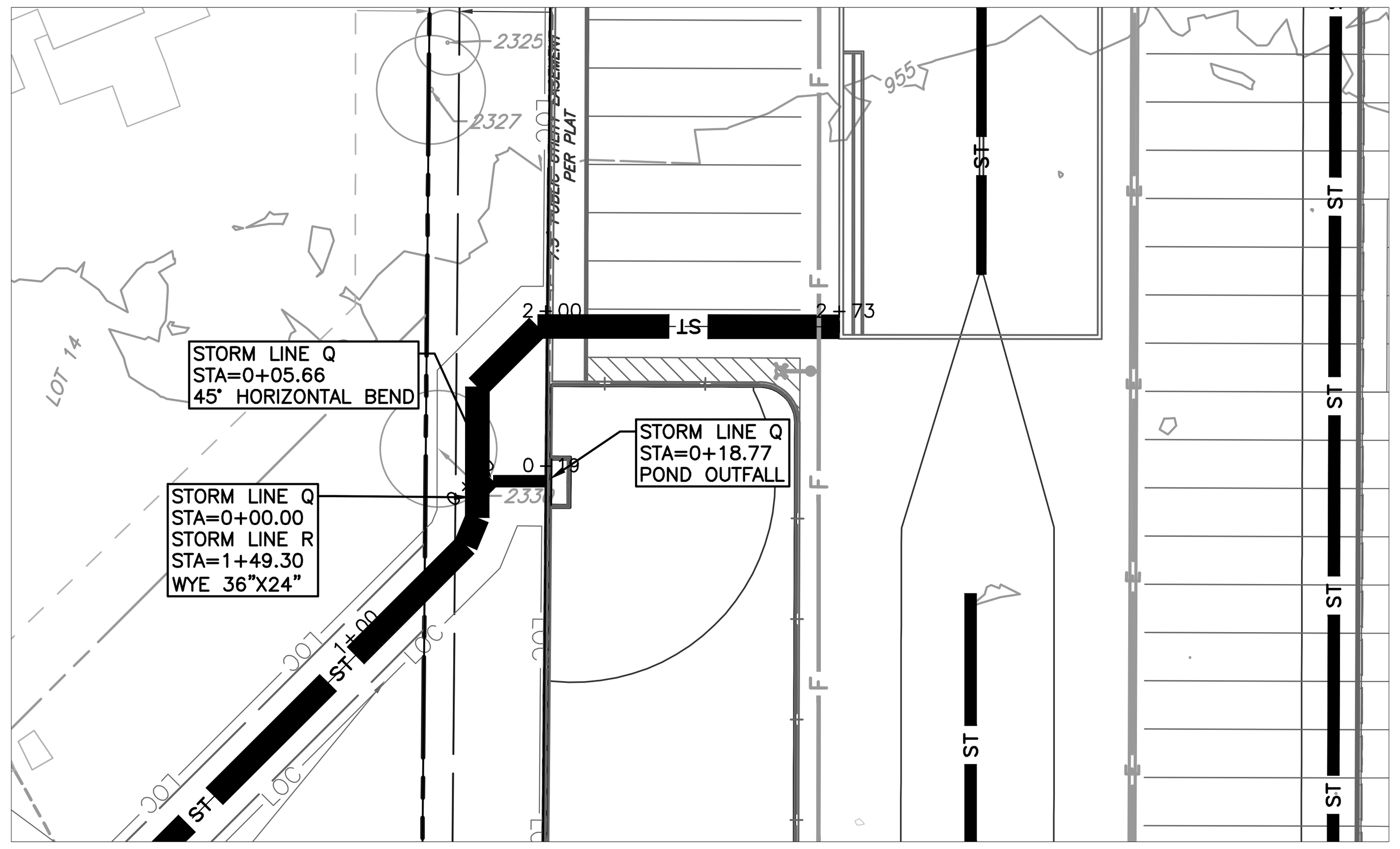
STORM LINE O

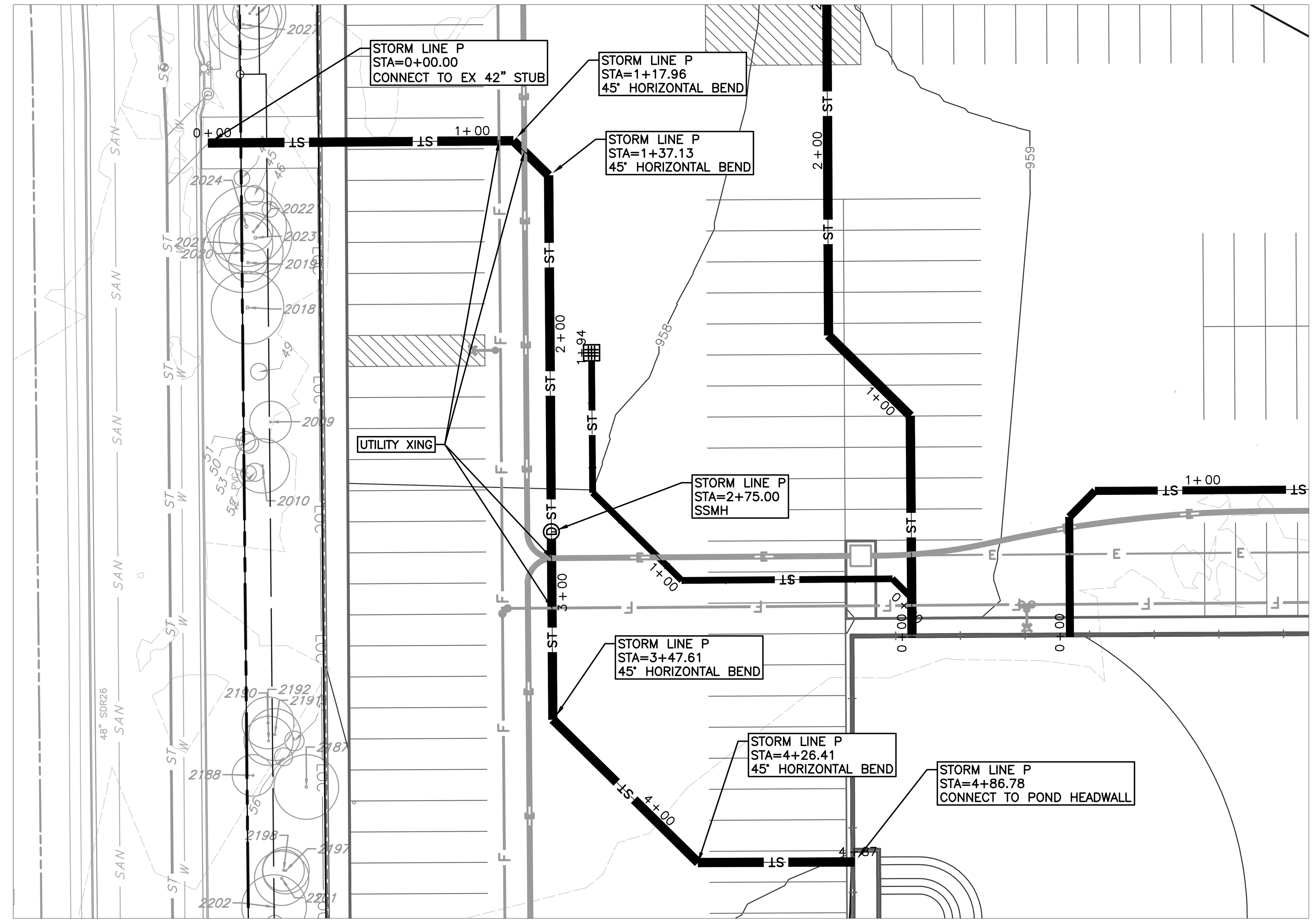
DATE:	12/20/2023	DRAWN BY:	TK
DWG SCALE:	1"=40'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 94

SHEET 94 OF 175

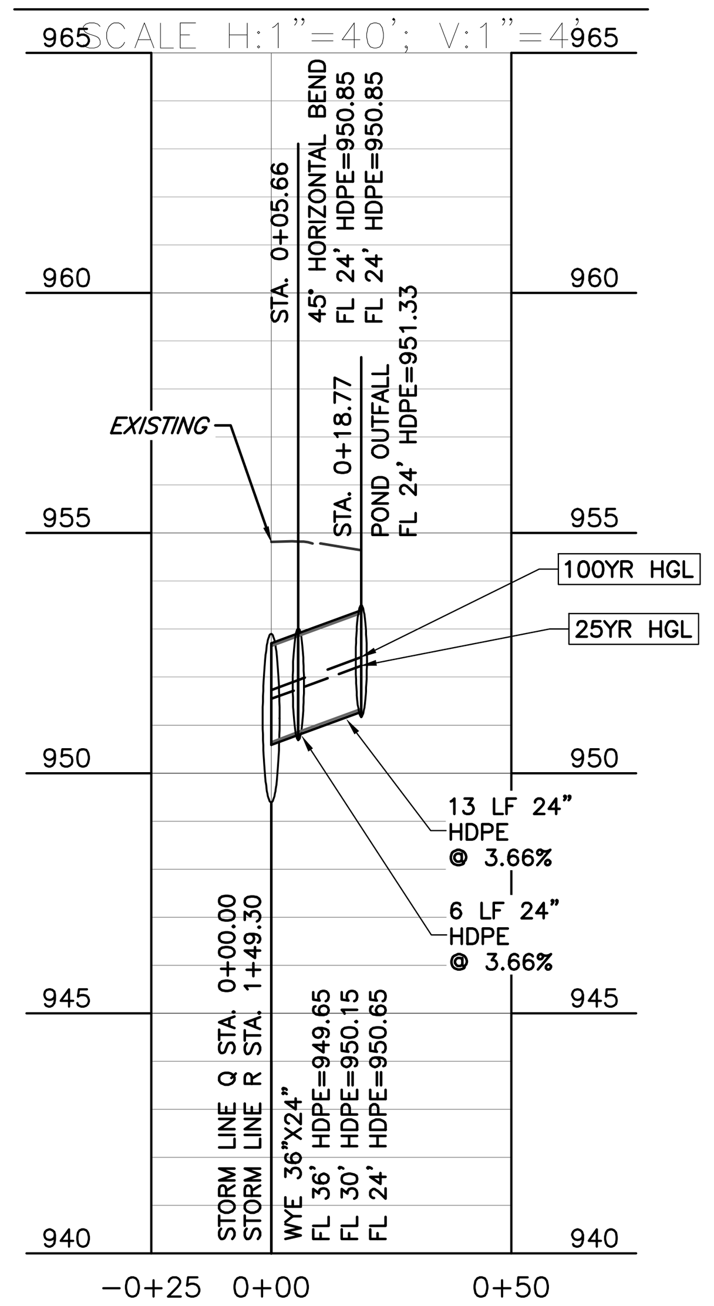
2023-23-SD





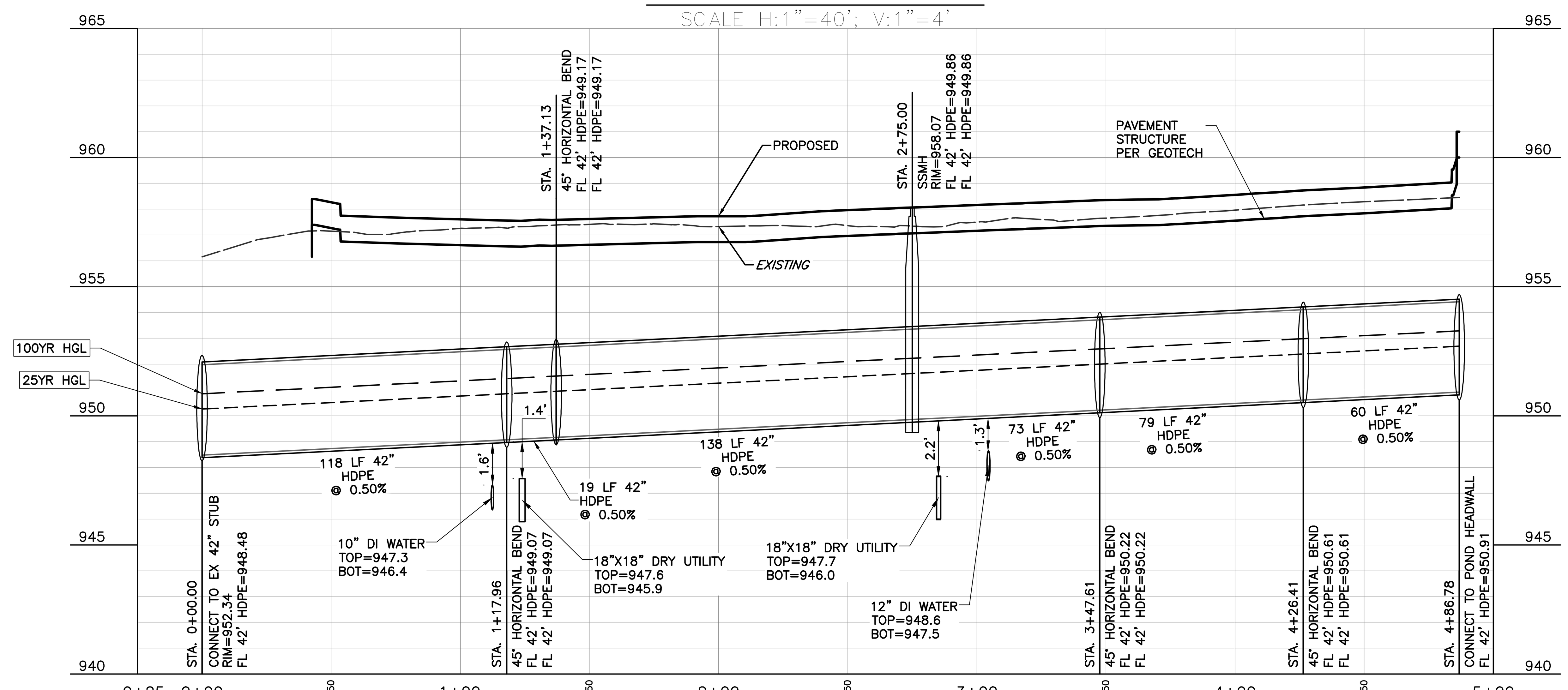
STORM LINE Q PROFILE

SCALE H:1"=40'; V:1"=4'



STORM LINE P PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED / EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

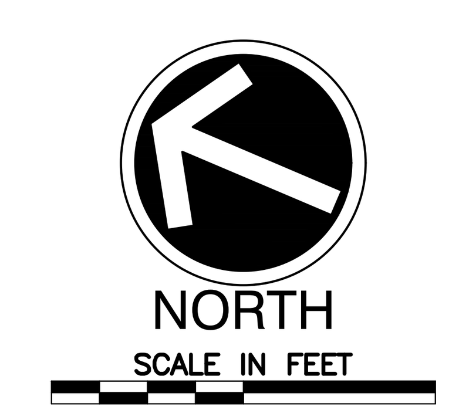
LINETYPE LEGEND

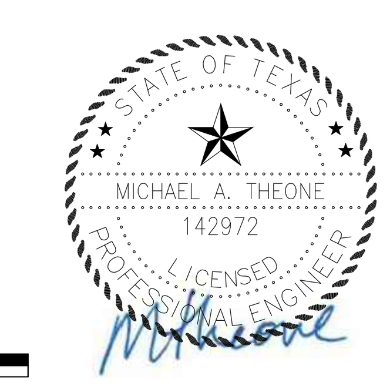
PROPOSED / EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- MAJOR CONTOUR
- MINOR CONTOUR
- ELECTRIC LINE
- OVERHEAD ELECTRIC WIRE
- UNDERGROUND ELECTRIC LINE
- TELEPHONE
- COMMUNICATIONS LINE
- CABLE TELEVISION
- FIBER OPTIC LINE
- GAS LINE
- OVERHEAD UTILITY
- UNDERGROUND UTILITY
- SANITARY SEWER LINE
- WATER LINE
- FIRE LINE
- ROAD CENTERLINE
- CURB & GUTTER
- DEEP CURB & GUTTER
- STRIPING
- FIRE LANE STRIPING
- H.C. ACCESSIBLE ROUTE
- LIMITS OF CONSTRUCTION
- DRAINAGE AREA
- FLOODWAY
- CWQZ
- STORM SEWER
- DRAINAGE CHANNEL

NOTES:

1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.





811

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REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

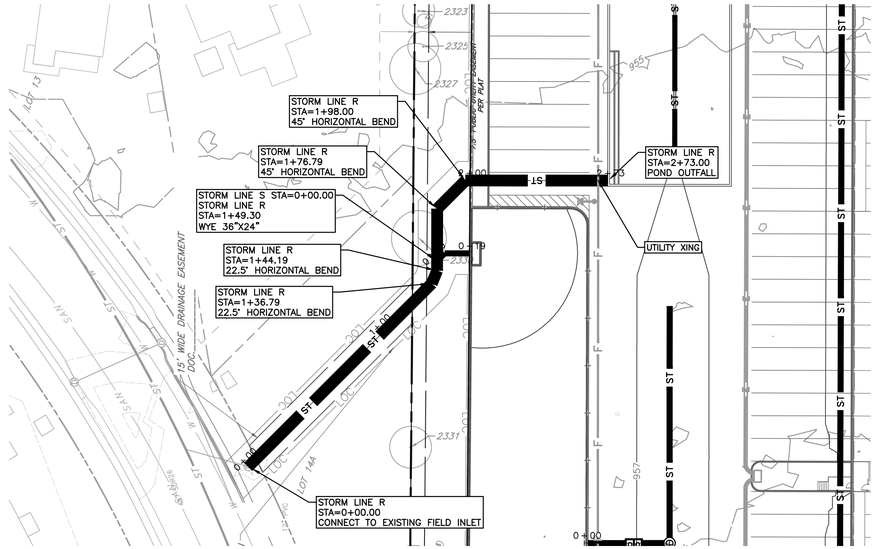
STORM LINE P, Q

DATE:	12/20/2023	DRAWN BY:	TK
DWG SCALE:	1"=40'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 95

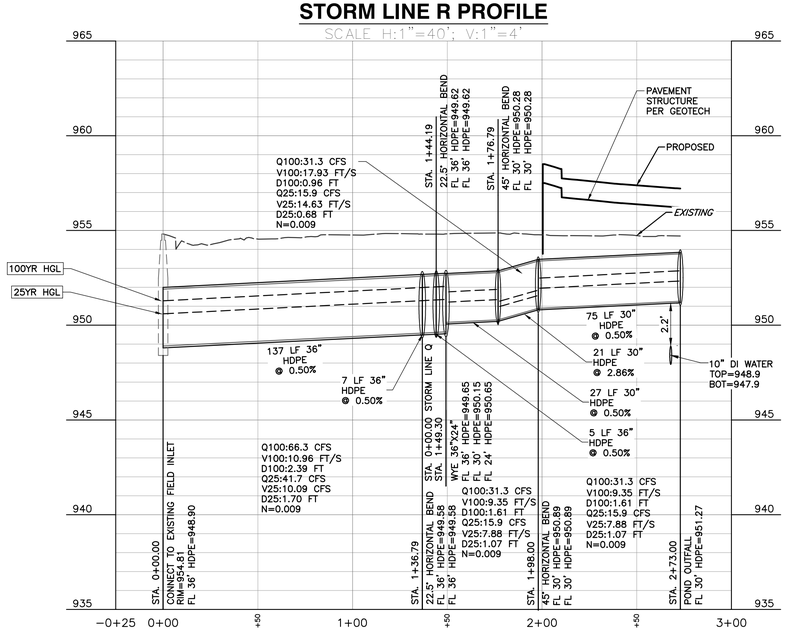
SHEET 95 OF 175

2023-23-SD



STORM LINE R PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	*385*	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	*G*	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	*SAN*	SANITARY SEWER LINE
W	*W*	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

NOTES:

1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.

NORTH

SCALE IN FEET

0 40 80

811 !!! CAUTION !!! !!! CAUTION !!!
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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

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Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE R

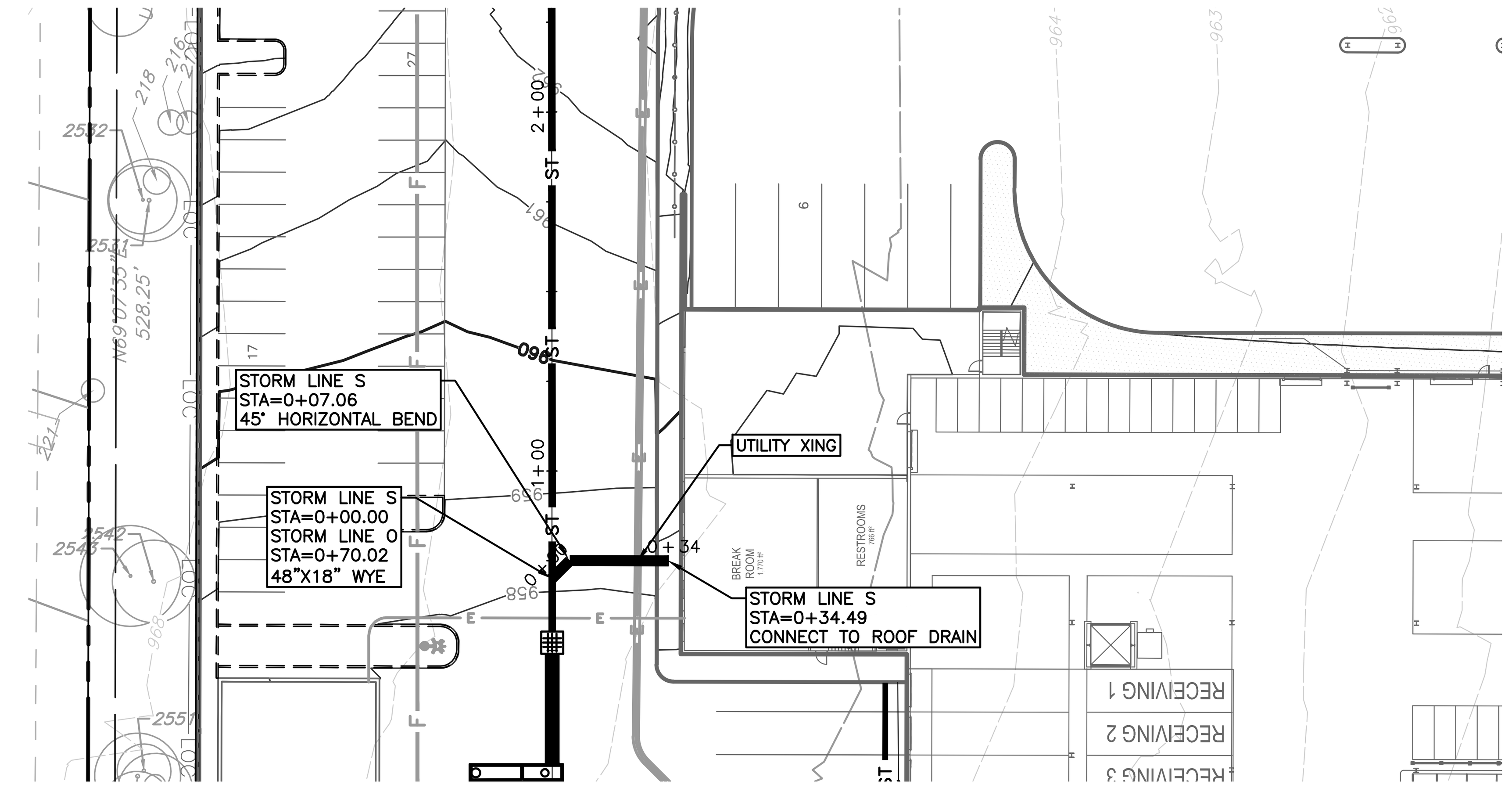
DATE:	12/20/2023
DWG SCALE:	1"=40'
PROJECT NO:	331-715
APPROVED BY:	MAT
DRAWN BY:	TK
CHECKED BY:	SRB

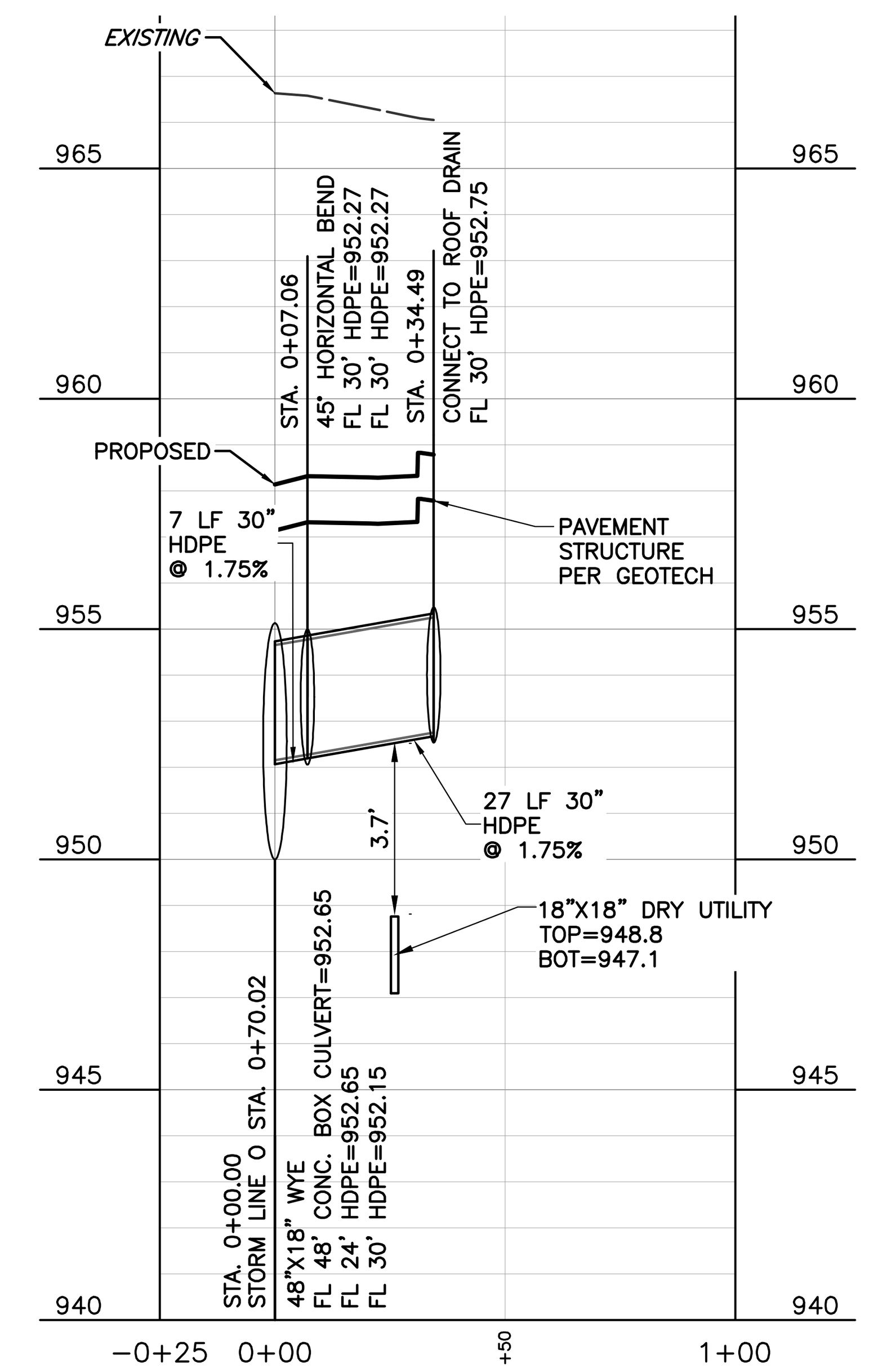
DRAWING NO.:
96

SHEET 96 OF 175

2023-23-SD

P:\330-2001\331-715\-CAD\Dwg\CVD\\331715-CVD1-C400-STORM D-R-S-T-U.dwg[STORM LINE R] LS(1/29/2024 - Unlocked) - LP: 4/30/2024 12:58 PM





BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

NOTES:

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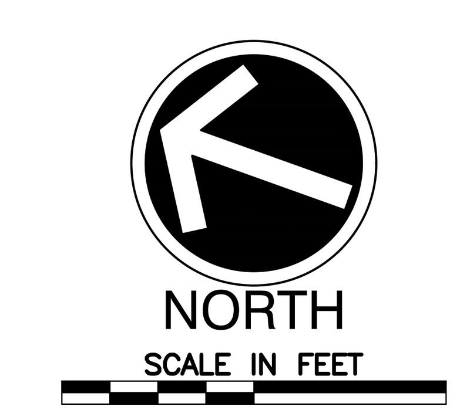

811

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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE S

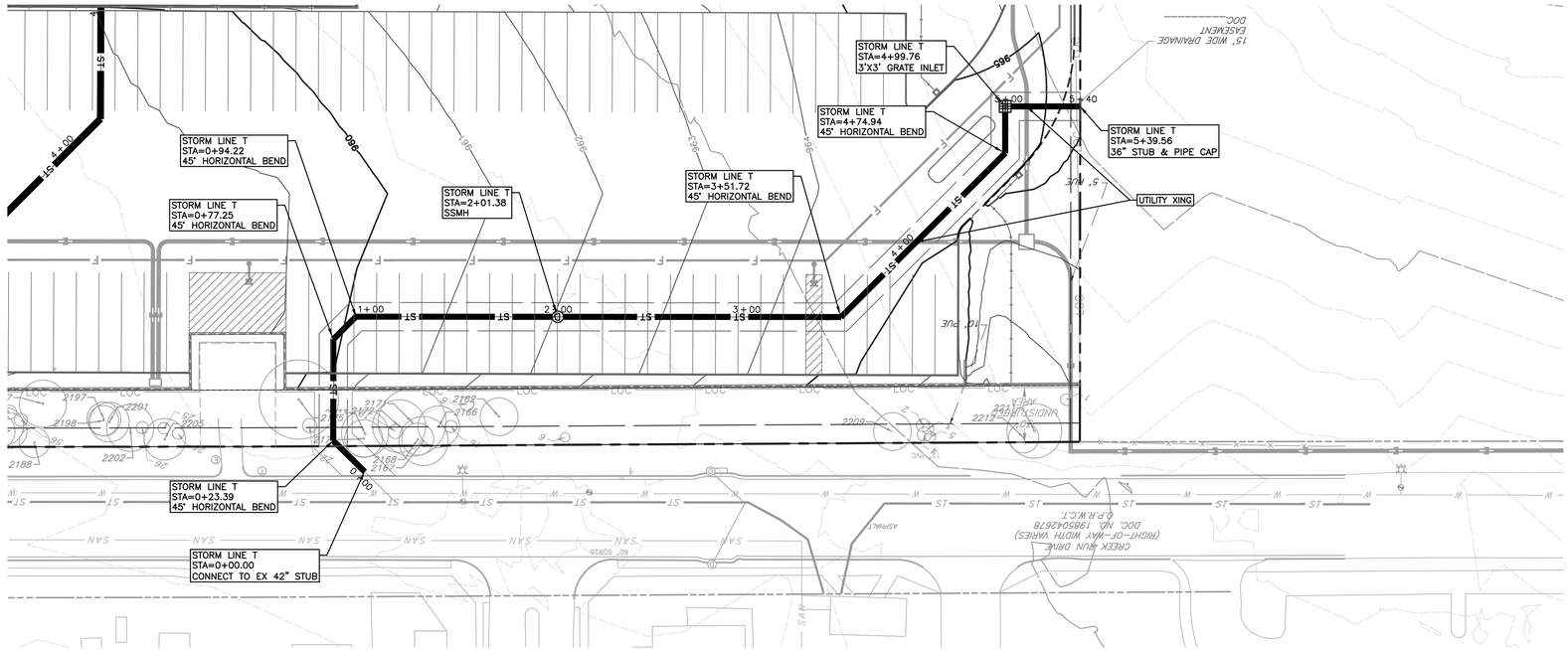
DATE:	12/20/2023	DRAWN BY:	TK
DWG SCALE:	1"=40'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

DRAWING NO.: 97

SHEET 97 OF 175

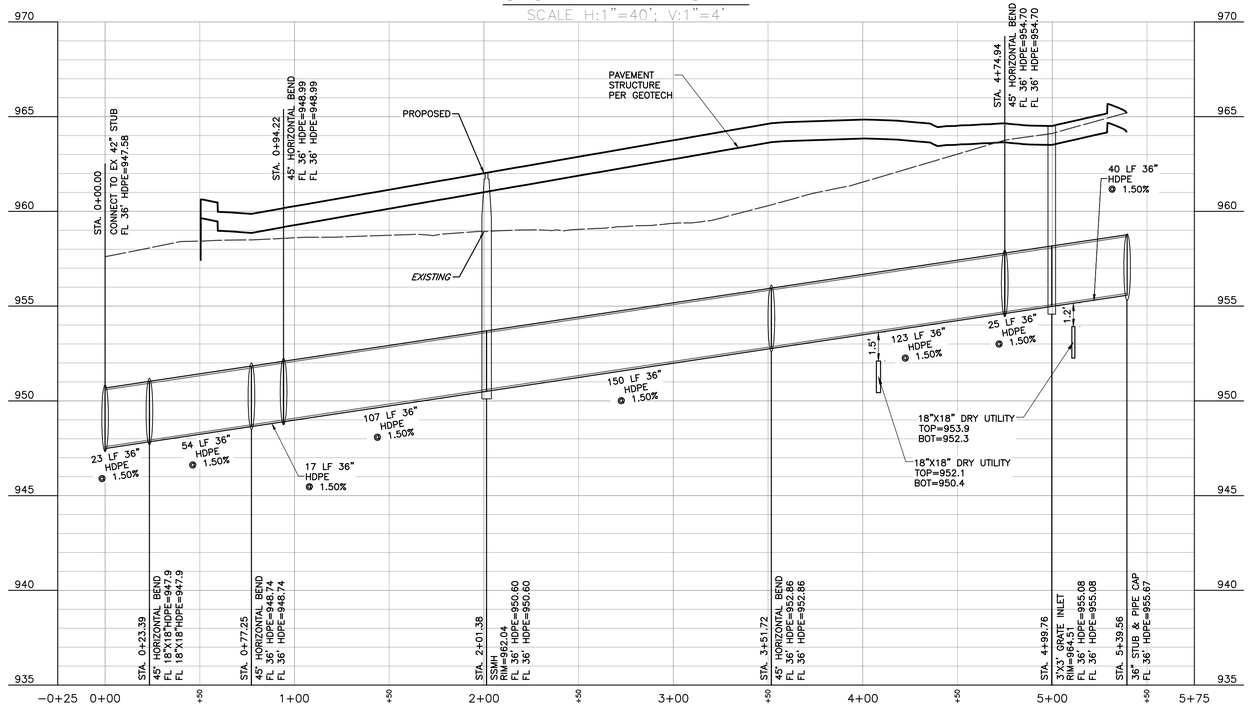
2023-23-SD

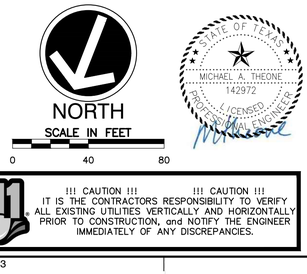
P:\330-000\331-715\-0400\Dwg\CIVIL\331715-CV01-C400-STORM 0-R-S-T-U.dwg[STORM LINE S] LS:(4/29/2024 - tkincade) - LP: 4/30/2024 12:59 PM



STORM LINE T PROFILE

SCALE H:1"=40'; V:1"=4'





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BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST	ST	STORM SEWER
		DRAINAGE CHANNEL

NOTES:
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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE T

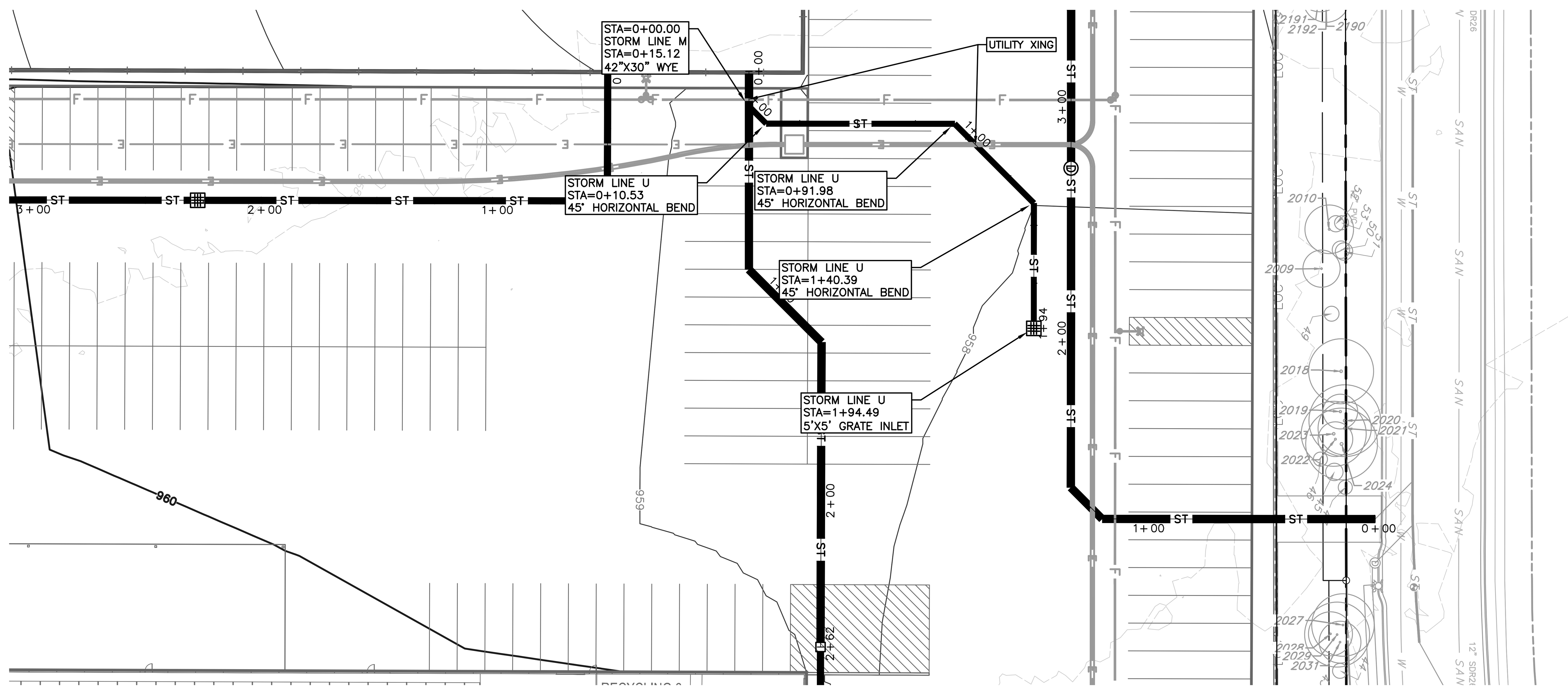
DATE:	12/20/2023
DWG SCALE:	1"=40'
PROJECT NO.:	331-715
DRAWN BY:	TK
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 98

SHEET 98 OF 175

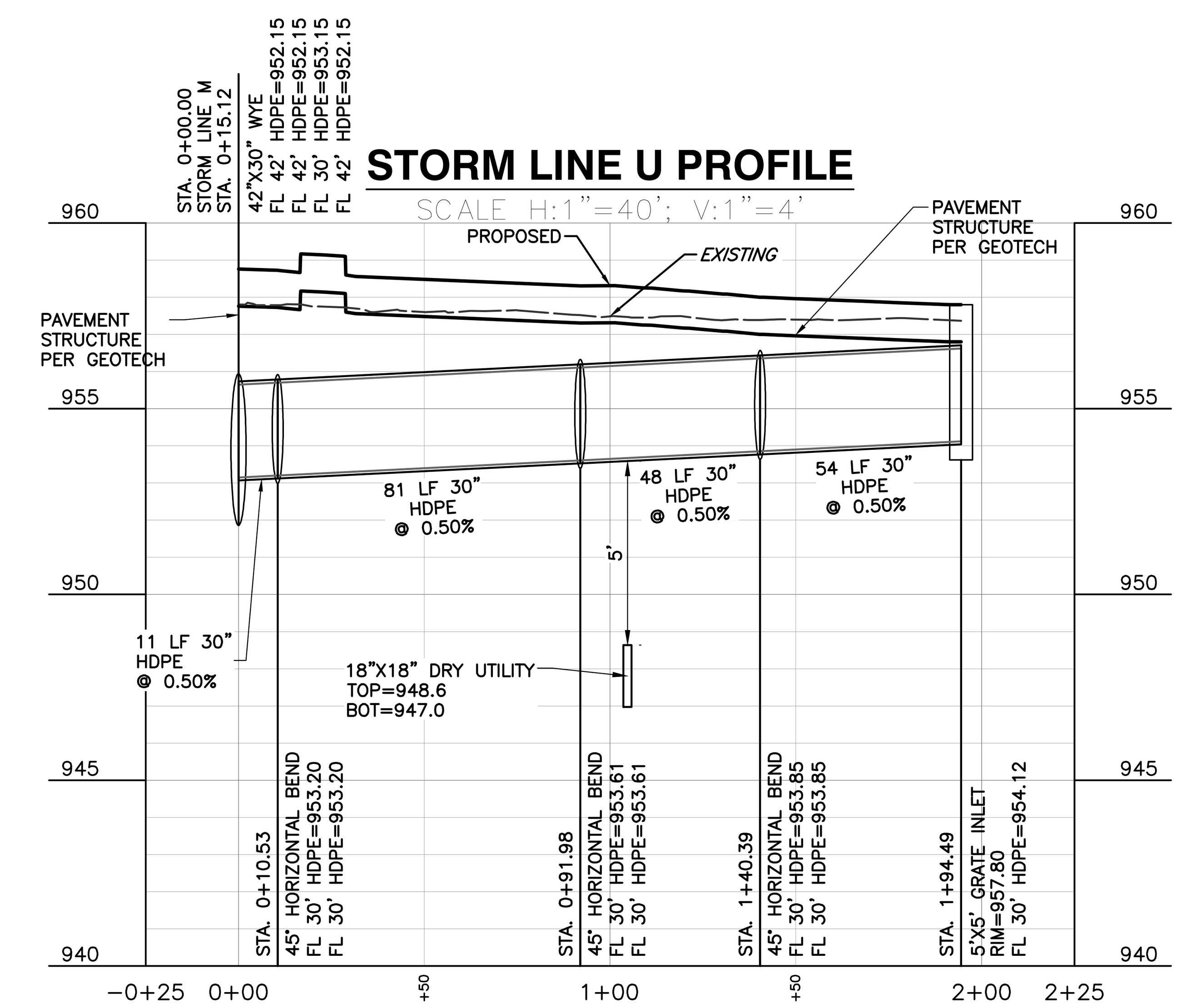
2023-23-SD

P:\330-2001\331-7151-0401\Dwg\CV01\331715-CV01-C400-STORM T.dwg[STORM LINE T] 12/19/2024 - mtheone - LP: 4/30/2024 1:01 PM



STORM LINE U PROFILE

SCALE H:1"=40'; V:1"=4'



BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
X	X	FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
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SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

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NORTH

SCALE IN FEET

0 40 80

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

811

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NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

TK

STORM LINE U

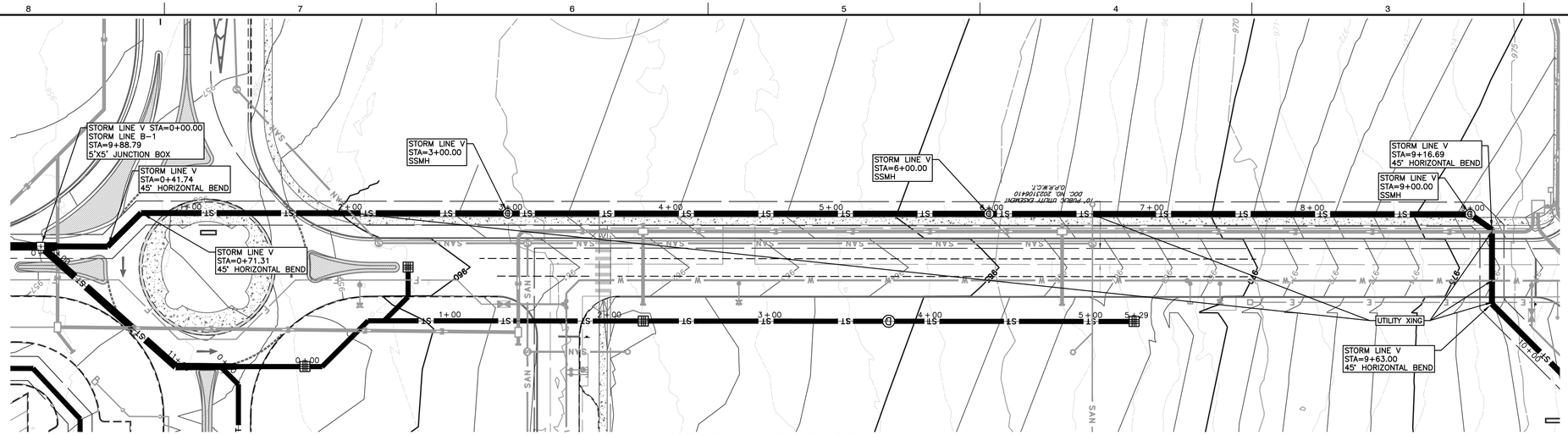
DATE:	12/20/2023	DRAWN BY: CEC
DWG SCALE:	1"=40'	CHECKED BY: SRB
PROJECT NO:	331-715	APPROVED BY: MAT

DRAWING NO.: 99

SHEET 99 OF 175

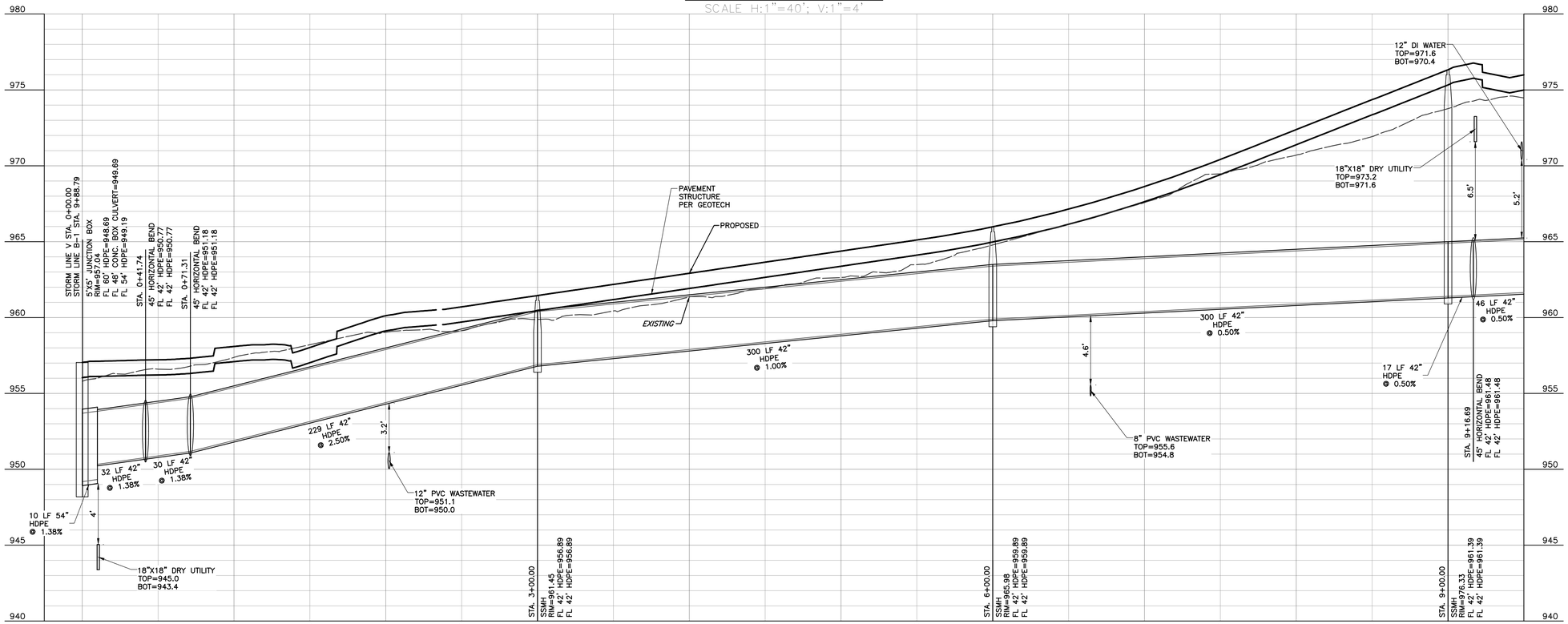
2023-23-SD

P:\330-000\331-715\-DADD\Dwg\CVD1\331715-CV01-C400-STORM U.dwg[STORM LINE U] LS:(4/29/2024 - tkincade) - LP: 4/30/2024 1:03 PM



STORM LINE V PROFILE

SCALE H:1"=40'; V:1"=4'



LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	*385*	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
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FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	*SAN*	SANITARY SEWER LINE
W	*W*	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
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		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
S	S	PIPE BREAK
]	]	PIPE CAP
>	>	PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
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		BACKFLOW PREVENTER
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		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
	HB	HOSE BIB
S	S	SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
D	D	DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
E	E	ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

NORTH

SCALE IN FEET

0 40 80

811 !!! CAUTION !!! !!! CAUTION !!!
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STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

NOTES:
1. CONTRACTOR TO UTILIZE STEEL ENCASEMENT OR FLOWABLE FILL FOR ALL CROSSINGS WITH LESS THAN 1' VERTICAL SEPARATION (OD TO OD). CONTRACTOR TO NOTIFY ENGINEER WHEN CROSSINGS LESS THAN 1' OCCUR IN THE FIELD UNLESS CROSSING TREATMENT IS SPECIFICALLY CALLED OUT IN THE PLANS.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE V START-9+50

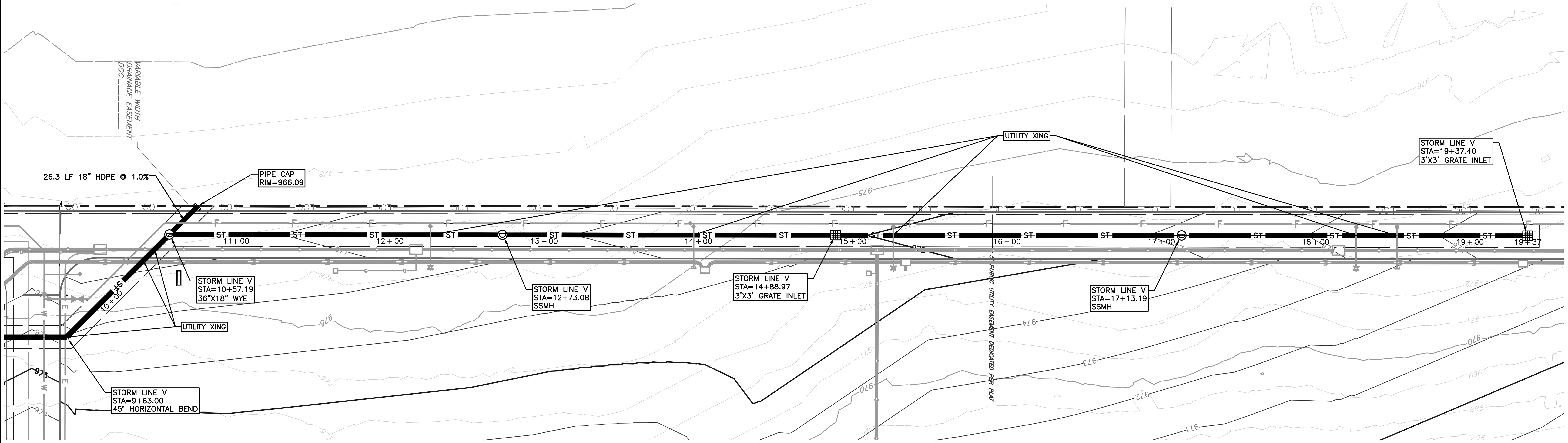
DATE:	12/20/2023
DWG SCALE:	1"=40'
PROJECT NO:	331-715
DRAWN BY:	TK
CHECKED BY:	SRB
APPROVED BY:	MAT

DRAWING NO.: 100

SHEET 100 OF 175

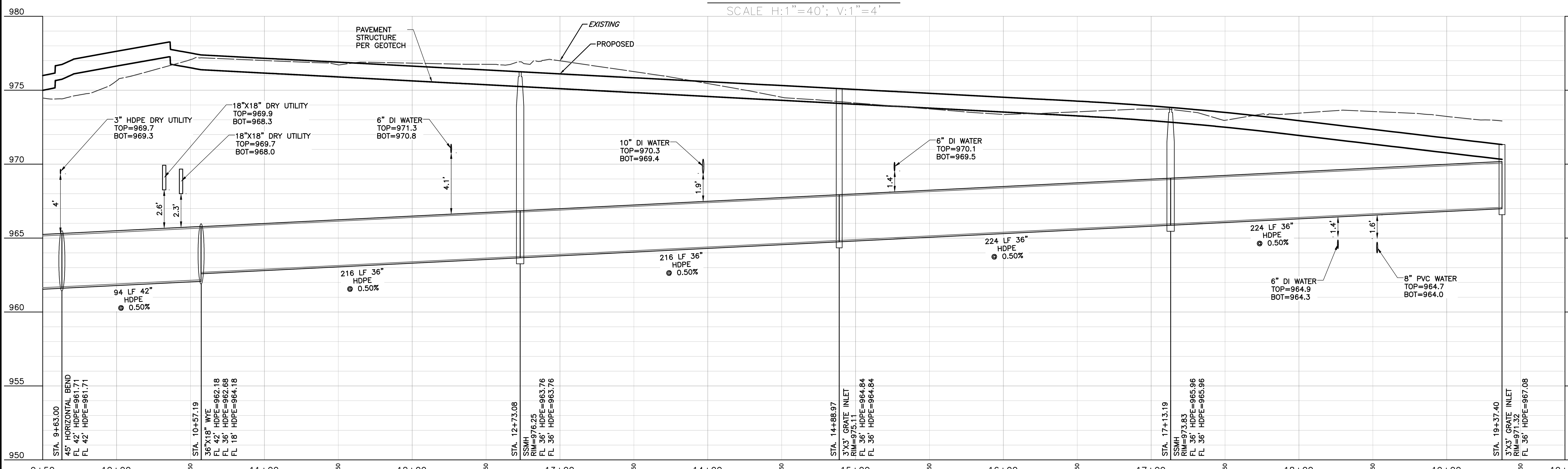
2023-23-SD

P:\330-000\331-715\-CAD\Dwg\CIVIL\331715-CIV01-C400-STORM V.dwg[STORM LINE V START-9+50] LS(4/29/2024 - Autocad) - LP: 4/30/2024 1:03 PM



STORM LINE V PROFILE

SCALE H:1"=40'; V:1"=4'



LINETYPE LEGEND

PROPOSED / EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- MAJOR CONTOUR
- MINOR CONTOUR
- ELECTRIC LINE
- OVERHEAD ELECTRIC WIRE
- UNDERGROUND ELECTRIC LINE
- TELEPHONE
- COMMUNICATIONS LINE
- CABLE TELEVISION
- FIBER OPTIC LINE
- GAS LINE
- OVERHEAD UTILITY
- UNDERGROUND UTILITY
- SANITARY SEWER LINE
- WATER LINE
- FIRE LINE
- ROAD CENTERLINE
- CURB & GUTTER
- DEEP CURB & GUTTER
- STRIPING
- FIRE LANE STRIPING
- H.C. ACCESSIBLE ROUTE
- LIMITS OF CONSTRUCTION
- DRAINAGE AREA
- FLOODWAY
- CWQZ
- STORM SEWER
- DRAINAGE CHANNEL

BLOCK LEGEND

PROPOSED / EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

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NORTH

SCALE IN FEET

0 40 80

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

811

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REVISION RECORD

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www.cecinc.com

NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LINE V 9+50-END

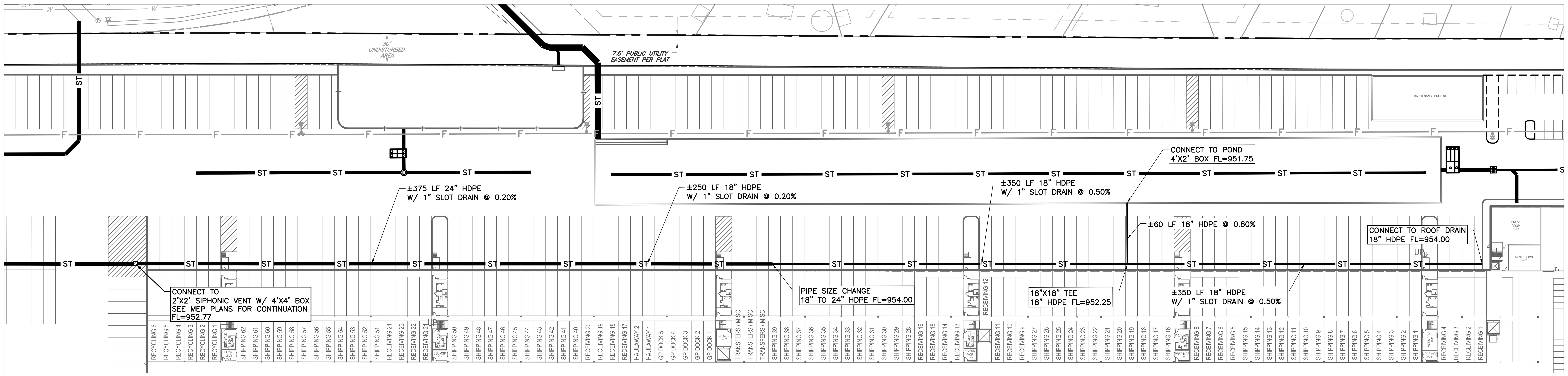
DATE:	12/20/2023	DRAWN BY:	TK
DWG SCALE:	1"=40'	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

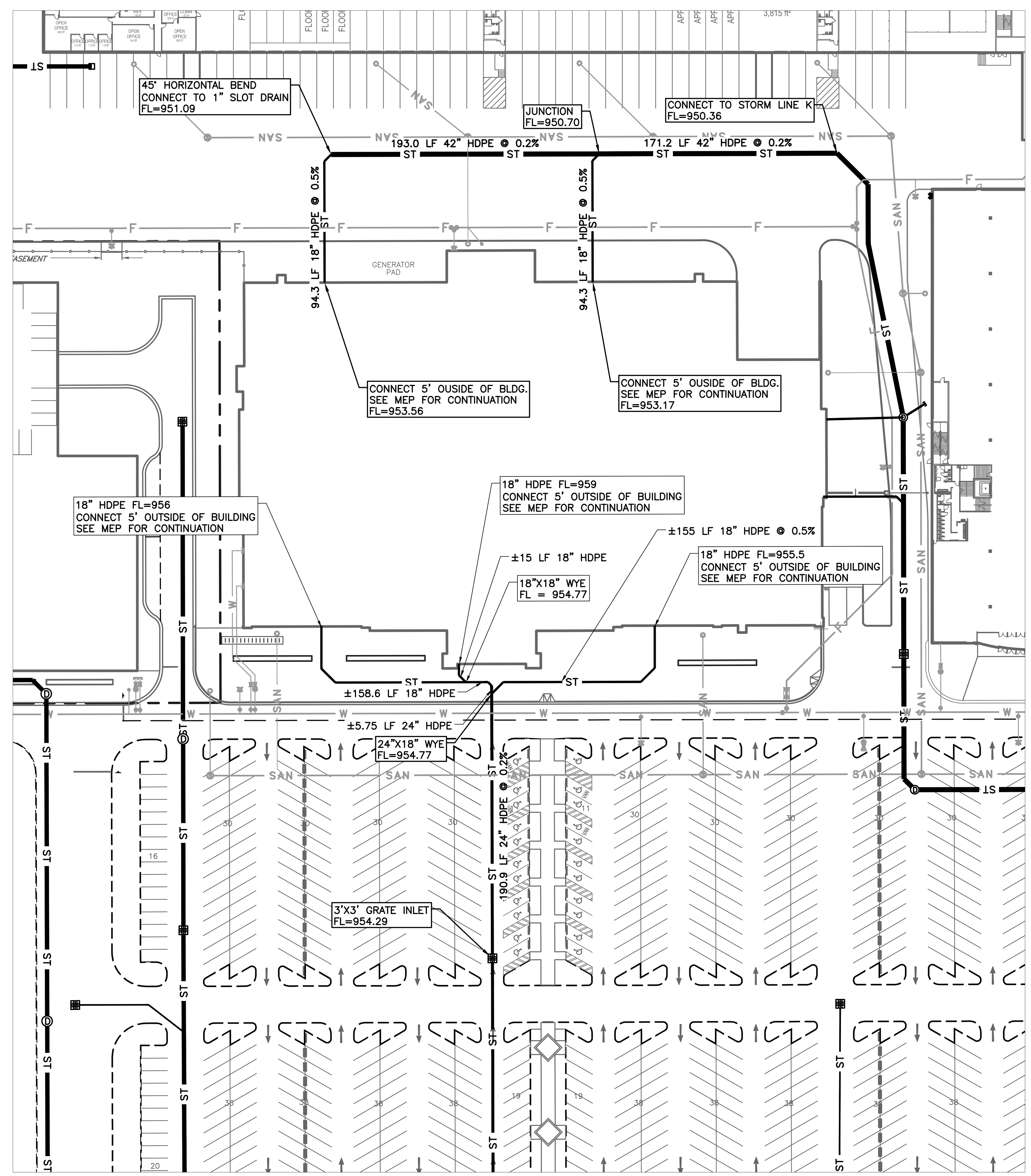
DRAWING NO.: 101

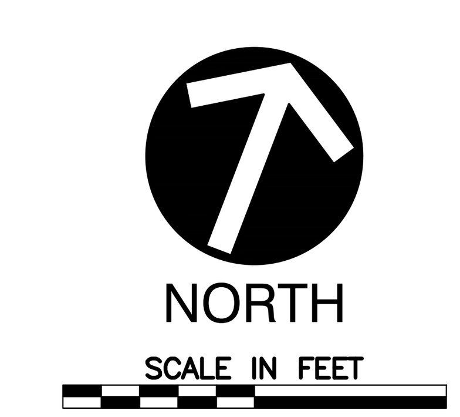
SHEET 101 OF 175

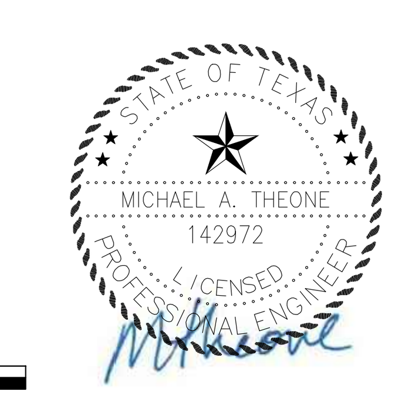
2023-23-SD

P:\330-000\331-715\-CADD\Dwg\CIVIL\331715-CV01-C400-STORM V.dwg[STORM LINE V 9+50-END] LS:4/29/2024 - (Kincade) - LP: 4/30/2024 1:06 PM









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BLOCK LEGEND

PROPOSED / EXISTING

- BENCHMARK
- CUT IN CONCRETE
- CONTROL POINT
- IRON PIPE
- IRON ROD
- IRON ROD W/ CAP
- MONUMENT TYPE 1
- MONUMENT TYPE 2
- NAIL
- PIPE BREAK
- PIPE CAP
- PIPE FLOW
- REDUCER
- AIR RELEASE VALVE
- BLOW-OFF VALVE
- POST INDICATOR VALVE
- MISCELLANEOUS VALVE
- UTILITY VALVE
- UTILITY METER
- BACKFLOW PREVENTER
- FLUSH CONNECTION
- FIRE HYDRANT
- (MONITORING) WELL
- UTILITY RISER
- HOSE BIB
- SANITARY M.H.
- CLEANOUT
- WW INSPECTION PORTAL
- DRAINAGE M.H.
- DOWN SPOUT
- AREA INLET
- CURB INLET
- HEADWALL
- SAFETY END TREATMENT
- DRAINAGE FLOW
- ELEC. M.H.
- ELEC./TELE. POLE
- GUY WIRE
- LIGHT FIXTURE
- TRAFFIC SIGNAL
- UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED / EXISTING

- RIGHT-OF-WAY
- LOT BOUNDARY
- EASEMENT
- FENCE: BARBED
- FENCE: WOOD (PICKET)
- FENCE: GUARDRAIL
- FENCE: CHAIN LINK
- FENCE: IRON
- MAJOR CONTOUR (385)
- MINOR CONTOUR
- ELECTRIC LINE (E)
- OVERHEAD ELECTRIC WIRE (OE)
- UNDERGROUND ELECTRIC LINE (UE)
- TELEPHONE (T)
- COMMUNICATIONS LINE (C)
- CABLE TELEVISION (TV)
- FIBER OPTIC LINE (FO)
- GAS LINE (G)
- OVERHEAD UTILITY (OU)
- UNDERGROUND UTILITY (UG)
- SANITARY SEWER LINE (SAN)
- WATER LINE (W)
- FIRE LINE (F)
- ROAD CENTERLINE
- CURB & GUTTER
- DEEP CURB & GUTTER
- STRIPING
- FIRE LANE STRIPING (FIRE)
- H.C. ACCESSIBLE ROUTE
- LIMITS OF CONSTRUCTION (LOC)
- DRAINAGE AREA
- FLOODWAY
- CWQZ
- STORM SEWER (ST)
- DRAINAGE CHANNEL

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
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www.cecinc.com

NFM CEDARVIEW SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

STORM LATERALS

DATE: 4/25/2024	DRAWN BY: QU
DWG SCALE: 1" = 60'	CHECKED BY: SRB
PROJECT NO: 331-715	APPROVED BY: MAT

DRAWING NO.: 102

2023-23-SD

P:\330-000\331-715--0400\Dwg\CIVIL\331715-CV01-C400-STORM LATERALS.dwg[STORM LATERALS] LS:4/26/2024 - tkincaide - LP: 4/30/2024 1:07 PM

RAINWATER HARVESTING
IRRIGATION AREA ±1.73 ACRES

1 UPFLO FILTER (TYP.)
SERVING UFF-6
SEE DETAIL SHEET 109

UFF-6
AC 2.79
CFS

1 UPFLO FILTER (TYP.)
SERVING UFF-7
SEE DETAIL SHEET 109

UFF-7
AC 10.50
CFS

BATCH B
AC 21.90
CFS

RWH-1
AC 4.95
CFS

RAINWATER HARVESTING (TYP.)
SERVING RWH-1
SEE DETAIL SHEET 106

UFF-4a
AC 4.52
CFS

BATCH A
AC 32.08
CFS

UFF-4b
AC 20.83
CFS

2 UPFLO FILTERS (TYP.)
SERVING UFF-4
SEE DETAIL SHEET 108

1 UPFLO FILTER (TYP.)
SERVING UFF-1
SEE DETAIL SHEET 105

UFF-1
AC 10.22
CFS

UFF-4 ENLARGED VIEW
1"=20'

NORTH
SCALE IN FEET
0 100 200

BLOCK LEGEND

PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
		PIPE BREAK
		PIPE CAP
		PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
		HOSE BIB
		SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
		DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
		ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL
		UTILITY (PULL)BOX

LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	385	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	SAN	SANITARY SEWER LINE
W	W	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
ST	ST	STORM SEWER
		DRAINAGE CHANNEL

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STATE OF TEXAS
MICHAEL A. THEONE
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LICENSED
PROFESSIONAL ENGINEER

REVISION RECORD

NO	DATE	DESCRIPTION

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www.cecinc.com

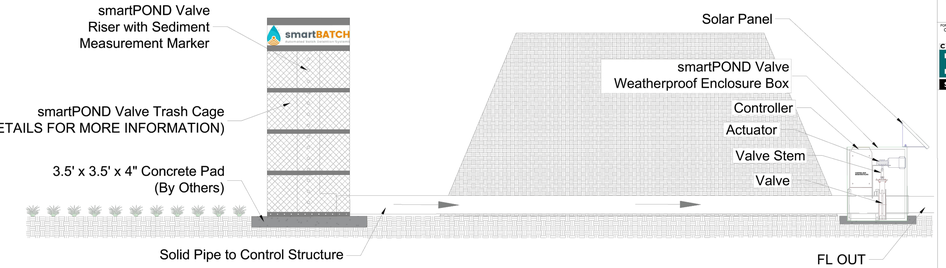
NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

WATER QUALITY PLAN

DATE: 4/22/2024
DWG SCALE: 1"= 150'
PROJECT NO: 331-715
APPROVED BY: MAT
DRAWN BY: QU
CHECKED BY: SRB

DRAWING NO.: 103
SHEET 103 OF 175

2023-23-SD



smartPOND Valve with Berm

NOTE: ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

smartPOND Valve SPECIFICATION

Continuously Monitored Automated Stormwater System with Valve

1. Introduction
The following specifications describe the components, general functions, and applications of a smartPOND Continuously Monitored Automated Stormwater System (C-MASS) with Valve. The system functions as an electronically controlled, solar powered stormwater management device, providing precision management capabilities and real-time data. Using sensors, solar power, an electronic actuator, and an internet-based control interface, the smartPOND valve connects to a specialized perforated riser inside the stormwater impoundment to enable managers to precisely control water retention and detention automatically or in real time.

2. smartPOND Valve Applications in Stormwater Management
The smartPOND valve is a device for active Stormwater management. As opposed to passive devices such as floating skimmers or stationary weirs, active water management dramatically increases the efficiency and effectiveness of a detention or retention pond. Where a passive stormwater detention system allows water to leave immediately upon collection, the smartPOND valve can detain newly caught Stormwater and allow it to settle for a programmed period before automatically dewatering the impoundment completely. For stormwater retention systems, it is possible to manage the treatment volume while maintaining a specified amount of capacity for flood storage or other use.

2.1 Pre-Programmed Control
Many functions can be pre-programmed without any human interactions, leaving the valve to automatically receive commands based on environmental conditions and respond as programmed.

2.1.1 Batch Detention Function for Stormwater Quality
The smartPOND valve meets TCEQ Batch Detention specifications for a 91% Total Suspended Solid removal rate. The function proceeds as follows. With the valve in the closed position and the impoundment dry, the system will stand by and wait for a water collection event. At the first sign of water collection, the unit will begin a 12-hour detention timer. At the end of the 12-hour detention period, the valve will open and release all of the water that has been collected. After the water level drops to 0", the valve will remain open for an additional 2 hours to facilitate final drainage, then return to the closed position to stand by for the next water collection event.

2.1.2 Predevelopment Hydrograph Function for Flood Control
The smartPOND valve predevelopment hydrograph function takes in site specific variables to determine a maximum release rate based on predevelopment conditions. The valve reads water depth in the pond every 15 minutes to determine the maximum release rate desirable to ensure the impoundment neither overtops, nor exceeds its maximum release based on predevelopment flows.

2.1.3 Hazmat Function for Spill Containment
smartPOND when specified for hazmat spill containment can be equipped with pollutant specific sensors that when triggered automatically close the valve until the command is overridden.

2.2 Real Time Monitoring
smartPOND comes standard with telemetry available on each unit and access to the user app available at no additional cost for 1 year. This option allows for real time monitoring of the unit and the data that comes along with it. From the real time monitoring app, a user can:
- Control the valve, either open or close
- See the water level
- See if trash or debris is surrounding the inlet
- Get maintenance alerts (Low Battery, Valve Failure, Etc.)
- Maintain specified water level

3. Components
The smartPOND valve may be implemented either above or below ground, and is comprised of the following components:

3.1 Hardware and Configuration
The standard smartPOND valve features a cast 6" valve. An extended spool and mounting flange on each side of the valve allows it to be attached to the outfall pipe in various configurations. The valve is actuated with an electric motor connected by an extendable drive shaft for underground applications.

For above ground applications, the entire system including all necessary components for operation assemble into one kit and are housed under a single lockable steel enclosure with the solar panel mounted on top. In this configuration, the unit can be installed on a stable, level pad and be bolted onto the back of the outfall pipe with six ¾" bolts and then switched to the "ON" position.

For underground applications, the valve is installed in a vault or concrete encasement as needed. An extended drive shaft connects between the underground valve and the rest of the components, including the motor and all electronics, which are housed in the lockable steel enclosure directly above ground.

3.2 Electronics and Software Specifications
- **Main board** - The main board of the smartPOND valve's electronics box serves as the main connection terminal for all sensors and additional control boards
- **Motor Controller Board -** The motor controller board of the smartPOND valve regulates the connection between the battery and the motor and receives inputs from the main board to control motor direction. It also powers the main board.
- **Motor** - The smartPOND valve's motor operates on 12-volts and has two wires connecting to the motor controller board. It is mounted on a bracket and connects to the directly to the valve with a driveshaft.
- **Battery** - The smartPOND valve is powered by a 12-volt, 30 amp/hour gel battery. Two terminals at the top connect the power wires to the motor controller board and the solar charge controller to the battery.
- **Solar Panel -** The solar panel of the smartPOND valve is 12-volts with 15 watt charging capability. It connects to a solar charge controller which regulates the voltage and current before connecting with two wires to the positive and negative battery terminals.
- **Sensors**
  - *Pressure Transducer* - The water level sensor is a pressure transducer sensor capable of staying submersed in water indefinitely. It mounts on the side of the smartPOND valve's center spool.
  - *Valve position sensor* - A proximity sensor senses the position of the valve's drive shaft in order to control and determine the position of the valve.
- **(Optional)**
  - *Cell data modem* - A cellular data modem will be required for real time control and alert options as well as predevelopment hydrograph functions.
  - *Hydrocarbon Sensor* - This optional sensor may be fitted to the smartPOND valve to perform specific functions based on the presence of hydrocarbon contamination.

4. Real Time Monitoring Interface (optional)
If the real time monitoring option is selected, the smartPOND valve may be monitored in real time through the Autoflow app. Live and historical data from each unit may be viewed in the app, as well as alerts (detailed in section 5).

4.1 Accessing unit data
To access live and historical data in the Autoflow app, select the unit of interest on the home page by clicking on the unit's name. From there, select the "Data" button, and the data page for that unit will be displayed.

4.2 Sending a command
To send a remote-control command to the SmartPOND valve, click the "Send New Command" button on the unit's home page. The unit's current position will be displayed at the top. To change the unit's position, simply select "OPEN" or "CLOSE". Within 1-3 minutes, the unit will move to the new position and update its status in the app.

5. Alerts
The smartPOND valve will indicate the following alerts by illuminating an exteriorly visible red LED light
- Low battery
- Loss of function
- Valve malfunction
- Hydrocarbon contamination (optional)

If the telemetry option is selected, the unit will upload the above alerts to the Autoflow app and notify the operator via text or email.

6. In Case of Failure
To bypass the smartPOND valve's normal automated functions and control the valve position in case of failure:

6.1 Removal of motor and manual direct control
In case of a total electronic or motor failure, the motor and motor bracket can be uninstalled together by removing the two bolts at the bottom of the motor bracket. With the motor and motor bracket removed, the output shaft on the butterfly valve can be manually controlled with a socket wrench, or any other tool that can grip the output shaft.

7. Additional Components List

7.1 Perforated Riser
The smartPOND valve system includes a stackable perforated steel riser which installs on the inlet side of the outfall pipe within the impoundment area. The perforated riser features an 8-inch steel perforated square tube within a 24" round steel mesh tube. At the bottom of the 8-inch square tube, there is a female threaded fitting for a six inch PVC outfall pipe to connect. The steel tube is perforated with 1-inch holes every 4" on center to the height of the impoundment.

7.2 Trash Cage
The trash cage attaches to the perforated riser with a coupling and calder pin. The trash cage will be comprised of steel banding and a 1.5" x 1.5" mesh to prevent floatable's and other contaminants from entering and clogging the perforated riser. The trash cage will sit 0.5" above the bottom of the impoundment to allow the last 0.5" out of the impoundment.

7.3 Valve Stem Extension
The drive shaft/valve stem of the smartPOND system may be extended to any length necessary for instances where the valve will be in an underground vault or manhole. The valve stem will connect the valve to the above ground controls.

8. Maintenance

8.1 Grease
The smartPOND valve includes a grease fitting on the valve itself which should be greased twice per year. It is also recommended that a thick, mildly heat-resistant grease be used to avoid grease melting out of the groove in warmer temperatures.

8.2 Flange Bolts
There are 6 bolts connecting the smartPOND valve's flange to the outfall pipe or fixture. During routine maintenance intervals, these bolts should be checked for tightness. All bolts should be tightened evenly.

8.3 Perforated Riser
Silt, sediment, and debris can build up around the perforated riser with time. An annual inspection of the unit is necessary to ensure that excess debris or sediment has not limited the drainage capacity of the perforated riser. To access the perforated riser for maintenance, lift the trash cage off of the riser, dig out any accumulated sediment, and clear all perforations.

8.4 Trash Cage
As a part of routine maintenance, it is advisable to remove trash and debris that has accumulated on the trash cage and properly dispose.

8.5 Solar Panel
On all inspection visits, it is necessary to confirm that the solar panel is facing south and is well secured. The solar panel is commonly utilized by birds and insects. It is important to keep the surface clean of bird litter, insect nests and debris in order to maintain optimal performance.

8.6 Battery
Over time, battery terminals may corrode. Check annually for corrosion and clean as needed. The battery should be replaced every 4 to 6 years.

8.7 Storage
The smartPOND valve is shipped in a near-fully assembled configuration and should be stored likewise. The systems are transported and stored on pallets and must remain secured via straps or steel bands to said pallet at all times. The solar panel is not installed at times of transport or storage and should not be installed until the unit is ready to begin operation. The battery may be stored inside the electronics box and if removed, should never be stored on a concrete surface.

9. Installation
The smartPOND valve can be installed in a near-completely assembled configuration. Only the solar panel should be removed during the installation process. There are several ways to install the smartPOND valve with the key being structured support.

9.1 Structural Support
If the smartPOND valve is mounted to a steel pipe in an above ground/fully assembled configuration, the weight of the unit may be supported by the steel pipe. For plastic or concrete pipes, it is recommended that the weight of the unit be supported by either a concrete pad or steel frame. For below ground installations, the upper unit (electronics and actuator) should be fastened to the surface of the concrete vault. For vault installations, see design details for standard vault design.

10. Important Safety Information and Warnings:
- Always keep hands clear of the valve and motor when unit is in operation.
- Turn the power switch off when doing any electrical work.
- Do not enter the water when the device is actively draining water
- Always use proper PPE and confined space protocol when servicing a valve beneath ground.

11. PRODUCTS
Manufacturer/Supplier/Reseller shall be an established stormwater company that has at least 5 installations of automated stormwater management devices that have been in use and functional for the past 3 or more years.

A. Acceptable smartPOND Valve
"smartBATCH" Automated Batch Detention System
"smartPOND" Automated Detention System

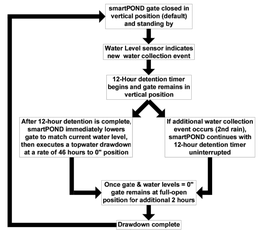
B. Acceptable System Supplier
Convergent Water Technologies, Inc.
(800)711-5428
www.convergentwater.com

C. Authorized Value Added Reseller
Construction EcoServices
(800)456-1000
www.ecosvs.com

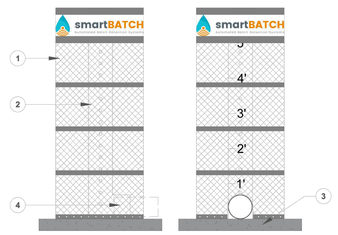
12. Quality Assurance and Performance Specifications
The quality of all system components and all other appurtenances and their assembly process shall be subject to inspection upon delivery of the system to the work site.Installation is to be performed only by skilled work people with satisfactory record of performance on earthworks, pipe, welding, chamber, or pond/landfill construction projects of comparable size and quality.

NOTE: ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

PROGRAMMABLE LOGIC FLOW CHART



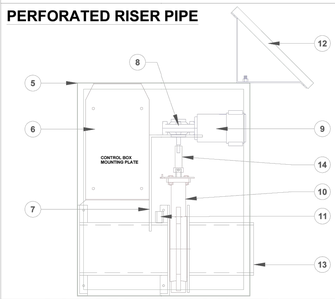
TRASH CAGE WITH PERFORATED RISER PIPE



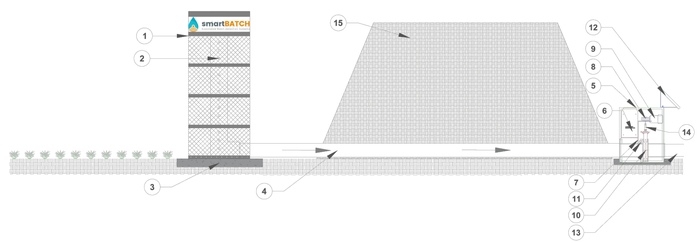
Parts List

Item	smartPOND Valve Component
1	30" DIAMETER CAGE WITH 1 ½" GALVANIZED MESH SCREEN
2	8" SQUARE PERFORATED TUBING WITH 1" PERFORATION, WITH 4" VERTICAL SPACING ON CENTERS WITH WATER DEPTH MARKER
3	3 ½' X 3 ½' X 4" CONCRETE PAD (BY OTHERS)
4	6" PVC OUTFALL PIPE (BY OTHERS)
5	WEATHERPROOF ELECTRONIC BOX
6	CONTROL BOX
7	PEDESTAL
8	ACTUATOR
9	MOTOR
10	6" VALVE
11	LEVEL TRANSDUCER
12	SOLAR PANEL
13	OUTLET PIPE (BY OTHERS)
14	VALVE STEM
15	BERM (BY OTHERS)

PERFORATED RISER PIPE



smartPOND Valve with Berm



CONSTRUCTION ECO SERVICES

smartPOND Automated Stormwater Control.
FOR ADDITIONAL INFORMATION PLEASE CONTACT: CONSTRUCTION ECO SERVICES, 832-456-1000, www.ecosvs.com

CONVERGENT WATER TECHNOLOGIES

811 !!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

smartPOND Automated Stormwater Control
FOR ADDITIONAL INFORMATION PLEASE CONTACT: CONSTRUCTION ECO SERVICES, 832-456-1000, www.ecosvs.com
CONSTRUCTION ECO SERVICES

smartPOND Valve Specifications

REVISION NO. 0
DATE 5/14/2019
SHEET NO.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

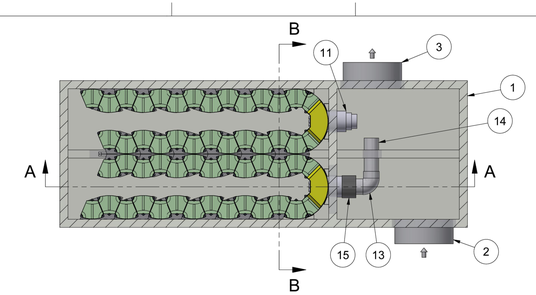
WATER QUALITY SMART POND DETAILS

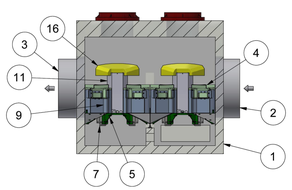
DATE:	4/15/2024	DRAWN BY:	QU
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:			331-715
		APPROVED BY:	MT

DRAWING NO.: 104
SHEET 104 OF 175

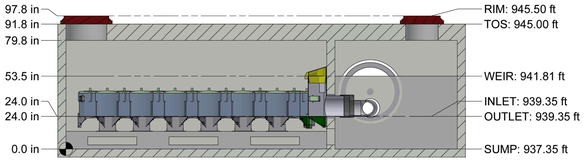
2023-23-SD

\\cecinc.com\global\Projects\350-2001\331-715\-CAD\Dwg\CVD\331715-CVD1-C400-WATER QUALITY PLAN DETAILS.dwg[WATER QUALITY SMART POND DETAILS] LS-(4/26/2024 - mtheeny) - LP: 4/30/2024 12:05 PM





SECTION B-B
SCALE 1:50



SECTION A-A
SCALE 1:50

1. STRUCTURE WALL AND SLAB THICKNESS ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING THE STRUCTURE.
3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.
4. CONTRACTOR IS RESPONSIBLE FOR MATERIALS AND LABOR TO BRING CASTINGS TO FINISHED GRADE.
5. ACTUAL DEPTH OF STRUCTURE MAY VARY DEPENDING ON AVAILABLE PRECAST FORMS. CONTRACTOR TO MEASURE HEIGHT OF STRUCTURE TO ENSURE THAT DEPTH OF EXCAVATION IS CORRECT.
6. UNIT MUST BE INSTALLED ON A LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM OF 6" LEVEL ROCK BASE UNLESS SPECIFIED. CONTRACTOR IS RESPONSIBLE TO VERIFY BASE SPECIFICATIONS.
7. ALL PIPES SHALL BE SEALED WATERTIGHT WITH A NON-SHRINK GROUT OR BOOTS AND SHALL MEET OR EXCEED REGIONAL PIPE CONNECTION STANDARDS.

REVISION HISTORY			
REV	BY	DESCRIPTION	DATE
-	JDP	FIRST RELEASE	4/5/2024

PROJECTION

IF IN DOUBT ASK

DATE:	SCALE:
4/3/2024	1:50
DRAWN BY: JDP	CHECKED BY: WCS
APPROVED BY:	

Title:
UP-FLO FILTER
8ft X 24ft

54 MODULES

UFF-1
NEBRASKA FURNITURE MART
CEDAR PARK, TX

Patent: www.hydro-int.com/patents

Hydro International
hydro-int.com

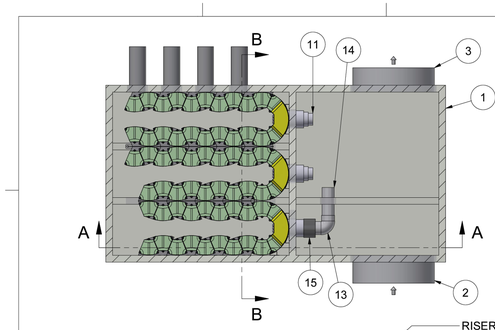
WEIGHT:	MATERIAL:
STOCK NUMBER: 1	
DRAWING NO.: 23_12_3146-UFF-1	
SHEET SIZE: B	SHEET: 1 OF 2
Rev: -	

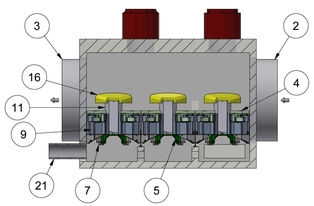
PARTS LIST

ITEM	QTY	DESCRIPTION	TYPE	SIZE (in)
1	1	PRECAST VAULT		8ft X 24ft
2	1	UFF INLET PIPE	HDPE	36
3	1	UFF OUTLET PIPE	HDPE	36
4	54	MODULE LID		
5	8	SUPPORT FRAME		
6	2	BOLTED COVER 30 IN (BY OTHERS)		30
7	6	WEDGE WALL MOUNT		
8	2	BOLTED COVER 24 IN (BY OTHERS)		24
9	54	MODULE BODY (ONLY 9 MEDIA BAG SETS)		
10	12	SUPPORT FRAME LH		
11	2	OUTLET MODULE		
12	12	SUPPORT FRAME RH		
13	1	MCMASTER-CARR 4880K173		
14	1	MCMASTER-CARR 48925K27		
15	1	FERNCO 1056-1515 & 15.2-10.6 EB		
16	2	BYPASS HOOD		
17	6	FOOT WALL MOUNTING BRACKET	CPZ	

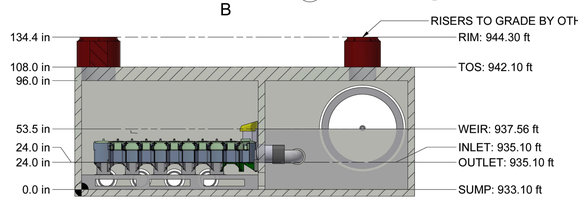
CAPACITIES:
1. Minimum performance: 80% removal. NJDEP - NJDEP Blend; NJCAT, Sil-Co-Sil 106 (d50 = 22 microns) at the peak treatment flow.
2. Maximum number of modules per outlet module: 38 **
3. NJDEP peak treatment flow: .056 cfs (25 gpm) per module, CPZ

ADDITIONAL DESIGN INFORMATION:
1. * Normal operating W.S.E. is 2.46' above the outlet invert at the peak treatment flow of .056 cfs (25 gpm) per module. For a given flow the head requirement can be reduced by adding additional filters.
2. ** Treatment flows that require more modules will require a larger vault design or different arrangement.
3. Media Types Available: New Jersey - Ribbons; Elsewhere - CPZ
4. Unit shall conform to HS20-44 load ratings.





SECTION B-B
SCALE 1:60



SECTION A-A
SCALE 1:60

1. STRUCTURE WALL AND SLAB THICKNESS ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING THE STRUCTURE.
3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.
4. CONTRACTOR IS RESPONSIBLE FOR MATERIALS AND LABOR TO BRING CASTINGS TO FINISHED GRADE
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7. ALL PIPES SHALL BE SEALED WATERTIGHT WITH A NON-SHRINK GROUT OR BOOTS AND SHALL MEET OR EXCEED REGIONAL PIPE CONNECTION STANDARDS.

REVISION HISTORY			
REV	BY	DESCRIPTION	DATE
A	JDP	MOD COUNT, LAYOUT	4/23/2024
-	JDP	FIRST RELEASE	4/1/2024

PROJECTION

IF IN DOUBT ASK

DATE:	SCALE:
2/2/2024	1:60
DRAWN BY: JDP	CHECKED BY: WCS
APPROVED BY:	

Title:
UP-FLO FILTER
12ft X 24ft

63 MODULES

UFF-4A
NEBRASKA FURNITURE MART
CEDAR PARK, TX

Patent: www.hydro-int.com/patents

Hydro International
hydro-int.com

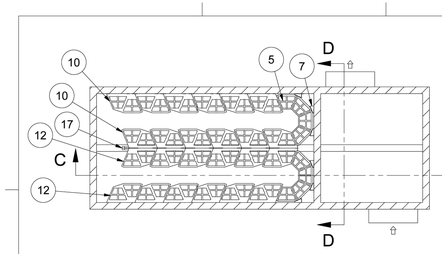
WEIGHT:	MATERIAL:
STOCK NUMBER: 2	
DRAWING NO.: 23_12_3146-UFF-2	
SHEET SIZE: B	SHEET: 1 OF 2
Rev: A	

PARTS LIST

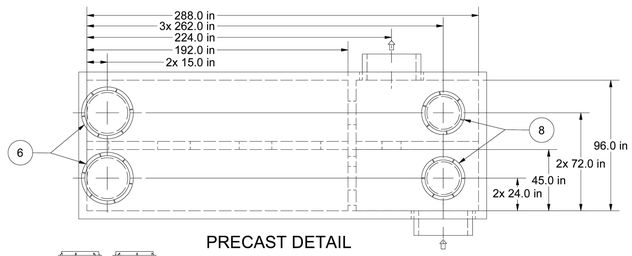
ITEM	QTY	DESCRIPTION	TYPE	SIZE (in)
1	1	PRECAST VAULT		12ft X 24ft
2	1	UFF INLET PIPE	HDPE	60
3	1	UFF OUTLET PIPE	HDPE	60
4	63	MODULE LID		
5	12	SUPPORT FRAME		
6	3	BOLTED COVER 30 IN (BY OTHERS)		30
7	7	WEDGE WALL MOUNT		
8	2	BOLTED COVER 24 IN (BY OTHERS)		24
9	63	MODULE BODY		
10	9	SUPPORT FRAME LH		
11	3	OUTLET MODULE		
12	18	SUPPORT FRAME RH		
13	1	MCMASTER-CARR 4880K173		
14	1	MCMASTER-CARR 48925K27		
15	1	FERNCO 1056-1515 & 15.2-10.6 EB		
16	3	BYPASS HOOD		
17	9	FOOT WALL MOUNTING BRACKET	CPZ	
18	1	AUX PIPE 1	HDPE	12
19	1	AUX PIPE 2	HDPE	12
20	1	AUX PIPE 3	HDPE	12
21	1	AUX PIPE 4	HDPE	12

CAPACITIES:
1. Minimum performance: 80% removal. NJDEP - NJDEP Blend; NJCAT, Sil-Co-Sil 106 (d50 = 22 microns) at the peak treatment flow.
2. Maximum number of modules per outlet module: 38 **
3. NJDEP peak treatment flow: .056 cfs (25 gpm) per module, CPZ

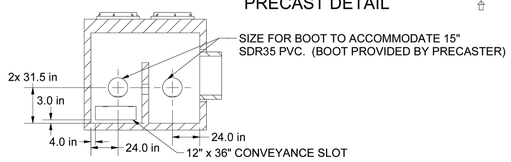
ADDITIONAL DESIGN INFORMATION:
1. * Normal operating W.S.E. is 2.46' above the outlet invert at the peak treatment flow of .056 cfs (25 gpm) per module. For a given flow the head requirement can be reduced by adding additional filters.
2. ** Treatment flows that require more modules will require a larger vault design or different arrangement.
3. Media Types Available: New Jersey - Ribbons; Elsewhere - CPZ
4. Unit shall conform to HS20-44 load ratings.



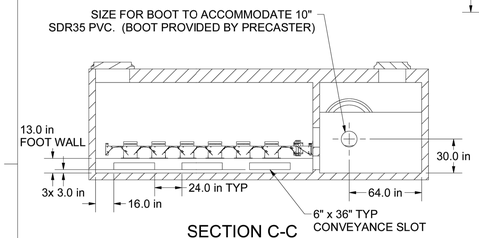
MOUNTING BRACKET
LAYOUT



PRECAST DETAIL



SECTION D-D
SCALE 1:60



SECTION C-C
SCALE 1:60

PROJECTION

IF IN DOUBT ASK

DATE:	SCALE:
4/3/2024	1:60
DRAWN BY: JDP	CHECKED BY: WCS
APPROVED BY:	

Title:
UP-FLO FILTER
8ft X 24ft

54 MODULES

UFF-1
NEBRASKA FURNITURE MART
CEDAR PARK, TX

Hydro International
hydro-int.com

WEIGHT:	MATERIAL:
STOCK NUMBER: 1	
DRAWING NO.: 23_12_3146-UFF-1	
SHEET SIZE: B	SHEET: 2 OF 2
Rev: -	

PARTS LIST

ITEM	QTY	DESCRIPTION	SIZE (in)
1	1	PRECAST VAULT	8ft X 24ft
2	1	UFF INLET PIPE	36
3	1	UFF OUTLET PIPE	36
4	54	MODULE LID	
5	8	SUPPORT FRAME	
6	2	BOLTED COVER 30 IN (BY OTHERS)	30
7	6	WEDGE WALL MOUNT	
8	2	BOLTED COVER 24 IN (BY OTHERS)	24
9	54	MODULE BODY (ONLY 9 MEDIA BAG SETS)	
10	12	SUPPORT FRAME LH	
11	2	OUTLET MODULE	
12	12	SUPPORT FRAME RH	
13	1	MCMASTER-CARR 4880K173	
14	1	MCMASTER-CARR 48925K27	
15	1	FERNCO 1056-1515 & 15.2-10.6 EB	
16	2	BYPASS HOOD	
17	6	FOOT WALL MOUNTING BRACKET	

811 !!! CAUTION !!! !!! CAUTION !!!
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REVISION RECORD

NO	DATE	DESCRIPTION

CEC
Texas Registered Engineering Firm F-36
Civil & Environmental Consultants, Inc.
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

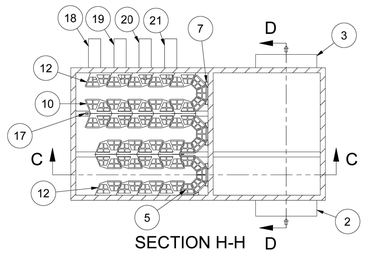
NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

WATER QUALITY DETAILS 1

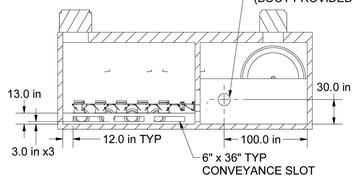
DATE:	4/15/2024	DRAWN BY:	QU
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MT

DRAWING NO.: 105
SHEET 105 OF 175

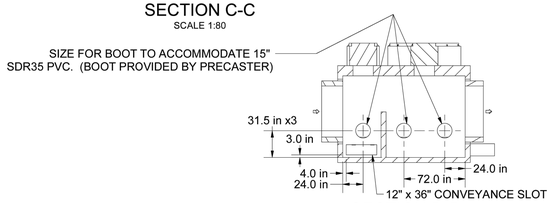
2023-23-SD



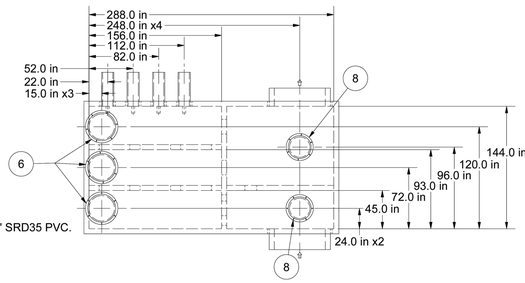
SECTION H-H
SCALE 1:80



SECTION C-C
SCALE 1:80



SECTION D-D
SCALE 1:80



PRECAST DETAIL

PARTS LIST			
ITEM	QTY	DESCRIPTION	SIZE (in)
1	1	PRECAST VAULT	12ft X 24ft
2	1	UFF INLET PIPE	60
3	1	UFF OUTLET PIPE	60
4	63	MODULE LID	
5	12	SUPPORT FRAME	
6	3	BOLTED COVER 30 IN (BY OTHERS)	30
7	7	WEDGE WALL MOUNT	
8	2	BOLTED COVER 24 IN (BY OTHERS)	24
9	63	MODULE BODY	
10	9	SUPPORT FRAME LH	
11	3	OUTLET MODULE	
12	18	SUPPORT FRAME RH	
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14	1	MCMASTER-CARR 48925K27	
15	1	FERNCO 1056-1515 & 15.2-10.6 EB	
16	3	BYPASS HOOD	
17	9	FOOT WALL MOUNTING BRACKET	
18	1	AUX PIPE 1	12
19	1	AUX PIPE 2	12
20	1	AUX PIPE 3	12
21	1	AUX PIPE 4	12

PROJECTION

IF IN DOUBT ASK

DATE: 2/2/2024 | SCALE: 1:80
DRAWN BY: JDP | CHECKED BY: WCS | APPROVED BY:

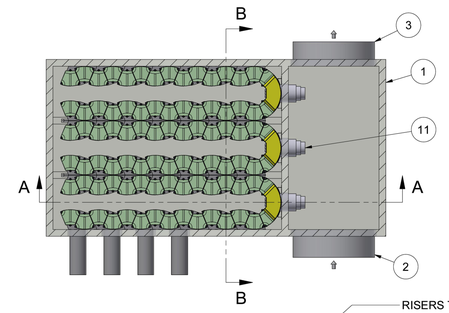
Title: UP-FLO FILTER
12ft X 24ft

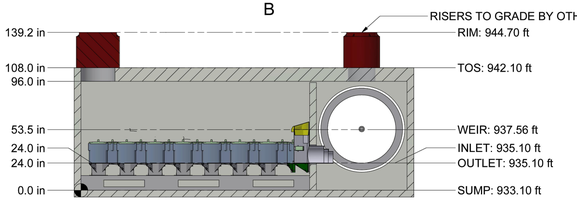
63 MODULES

UFF-4A
NEBRASKA FURNITURE MART
CEDAR PARK, TX

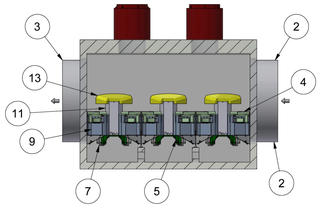
Hydro International
hydro-int.com

WEIGHT: | MATERIAL:
STOCK NUMBER: 2
DRAWING NO.: 23_12_3146-UFF-2
SHEET SIZE: B | SHEET: 2 OF 2 | Rev: A





SECTION A-A
SCALE 1:60



SECTION B-B
SCALE 1:60

CAPACITIES:
1. Minimum performance: 80% removal. NJDEP - NJDEP Blend; NJCAT, Sil-Co-Sil 106 (d50 = 22 microns) at the peak treatment flow.
2. Maximum number of modules per outlet module: 38 **
3. NJDEP peak treatment flow: .056 cfs (25 gpm) per module, CPZ

ADDITIONAL DESIGN INFORMATION:
1. * Normal operating W.S.E. is 2.46' above the outlet invert at the peak treatment flow of .056 cfs (25 gpm) per module. For a given flow the head requirement can be reduced by adding additional filters.
2. ** Treatment flows that require more modules will require a larger vault design or different arrangement.
3. Media Types Available: New Jersey - Ribbons; Elsewhere - CPZ
4. Unit shall conform to HS20-44 load ratings.

1. STRUCTURE WALL AND SLAB THICKNESS ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING THE STRUCTURE.
3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.
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7. ALL PIPES SHALL BE SEALED WATERTIGHT WITH A NON-SHRINK GROUT OR BOOTS AND SHALL MEET OR EXCEED REGIONAL PIPE CONNECTION STANDARDS.

PARTS LIST				
ITEM	QTY	DESCRIPTION	TYPE	SIZE (in)
1	1	PRECAST VAULT		12ft X 24ft
2	1	UFF INLET PIPE	HDPE	60
3	1	UFF OUTLET PIPE	HDPE	60
4	90	MODULE LID		
5	9	SUPPORT FRAME		
6	3	BOLTED COVER 30 IN (BY OTHERS)		30
7	6	WEDGE WALL MOUNT		
8	2	BOLTED COVER 24 IN (BY OTHERS)		24
9	90	MODULE BODY		
10	21	SUPPORT FRAME LH		
11	3	OUTLET MODULE		
12	21	SUPPORT FRAME RH		
13	3	BYPASS HOOD		
14	14	FOOT WALL MOUNTING BRACKET	CPZ	
15	1	AUX PIPE 1	HDPE	12
16	1	AUX PIPE 2	HDPE	12
17	1	AUX PIPE 3	HDPE	12
18	1	AUX PIPE 4	HDPE	12

REVISION HISTORY			
REV.	BY	DESCRIPTION	DATE
-	JDP	FIRST RELEASE	4/10/2024

PROJECTION

IF IN DOUBT ASK

DATE: 2/2/2024 | SCALE: 1:60
DRAWN BY: JDP | CHECKED BY: WCS | APPROVED BY:

Title: UP-FLO FILTER
12ft X 24ft

90 MODULES

UFF-4B
NEBRASKA FURNITURE MART
CEDAR PARK, TX

Patent: www.hydro-int.com/patents

Hydro International
hydro-int.com

WEIGHT: | MATERIAL:
STOCK NUMBER: 7
DRAWING NO.: 23_12_3146-UFF-7
SHEET SIZE: B | SHEET: 1 OF 2 | Rev: -

811 !!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

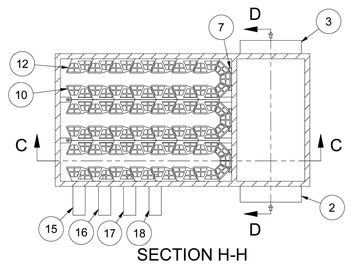
NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

WATER QUALITY DETAILS 2

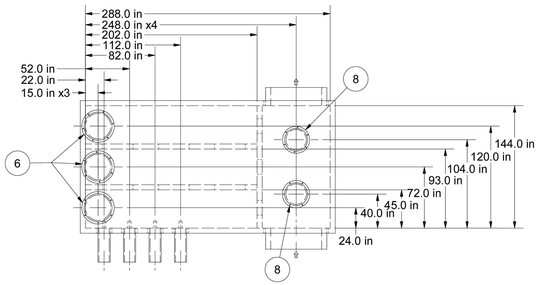
DATE:	4/15/2024
DWG SCALE:	NTS
PROJECT NO.:	331-715
DRAWN BY:	QU
CHECKED BY:	SRB
APPROVED BY:	MT

DRAWING NO.: 106
SHEET 106 OF 175

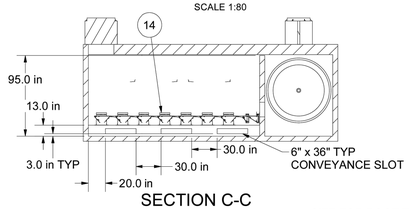
2023-23-SD



SECTION H-H
SCALE 1:80

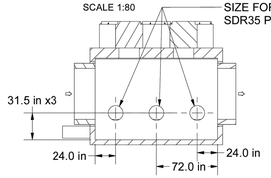


PRECAST DETAIL



SECTION C-C
SCALE 1:80

SIZE FOR BOOT TO ACCOMMODATE 15" SDR35 PVC. (BOOT PROVIDED BY PRECASTER)



SECTION D-D
SCALE 1:80

PARTS LIST			
ITEM	QTY	DESCRIPTION	SIZE (in)
1	1	PRECAST VAULT	12ft X 24ft
2	1	UFF INLET PIPE	60
3	1	UFF OUTLET PIPE	60
4	90	MODULE LID	
5	9	SUPPORT FRAME	
6	3	BOLTED COVER 30 IN (BY OTHERS)	30
7	6	WEDGE WALL MOUNT	
8	2	BOLTED COVER 24 IN (BY OTHERS)	24
9	90	MODULE BODY	
10	21	SUPPORT FRAME LH	
11	3	OUTLET MODULE	
12	21	SUPPORT FRAME RH	
13	3	BYPASS HOOD	
14	14	FOOT WALL MOUNTING BRACKET	
15	1	AUX PIPE 1	12
16	1	AUX PIPE 2	12
17	1	AUX PIPE 3	12
18	1	AUX PIPE 4	12

PROJECTION

IF IN DOUBT ASK

DATE:	SCALE:
2/2/2024	1:80
DRAWN BY: JDP	CHECKED BY: WCS
APPROVED BY:	

Title:
UP-FLO FILTER
12ft X 24ft

90 MODULES

UFF-4B
NEBRASKA FURNITURE MART
CEDAR PARK, TX

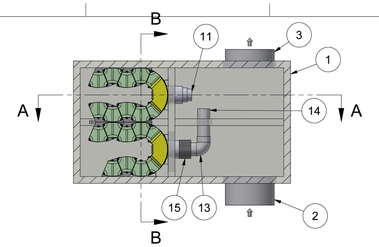
Hydro International
hydro-int.com

WEIGHT:	MATERIAL:

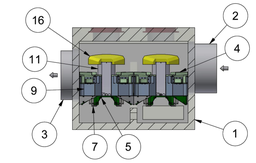
STOCK NUMBER: 7

DRAWING NO.: 23_12_3146-UFF-7

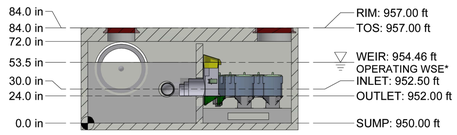
SHEET SIZE:	SHEET:	Rev:
B	2 OF 2	-



SECTION C-C
SCALE 1:60



SECTION B-B
SCALE 1:60



SECTION A-A
SCALE 1:60

CAPACITIES:
1. MINIMUM PERFORMANCE: 80% REMOVAL. NJDEP - NJDEP BLEND; NJCAT, SIL-CO-SIL 106 (d50 = 22 MICRONS) AT THE PEAK TREATMENT FLOW.
2. MAXIMUM NUMBER OF MODULES PER OUTLET MODULE: 38
3. NJDEP PEAK TREATMENT FLOW: .056 cfs (25 gpm) per module, CPZ

ADDITIONAL DESIGN INFORMATION:
1. * NORMAL OPERATING W.S.E. IS 2.46' ABOVE THE OUTLET INVERT AT THE PEAK TREATMENT FLOW OF .056 cfs (25 gpm) per module. FOR A GIVEN FLOW THE HEAD REQUIREMENT CAN BE REDUCED BY ADDING ADDITIONAL FILTERS.
2. UNIT SHALL CONFORM TO HS20-44 LOAD RATINGS.

CONTRACTOR NOTES:
1. STRUCTURE WALL AND SLAB THICKNESS ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING THE STRUCTURE.
3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.
4. CONTRACTOR IS RESPONSIBLE FOR MATERIALS AND LABOR TO BRING CASTINGS TO FINISHED GRADE.
5. ACTUAL DEPTH OF STRUCTURE MAY VARY DEPENDING ON AVAILABLE PRECAST FORMS. CONTRACTOR TO MEASURE HEIGHT OF STRUCTURE TO ENSURE THAT DEPTH OF EXCAVATION IS CORRECT.
6. UNIT MUST BE INSTALLED ON A LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM OF 6" LEVEL ROCK BASE UNLESS SPECIFIED. CONTRACTOR IS RESPONSIBLE TO VERIFY BASE SPECIFICATIONS.
7. ALL PIPES SHALL BE SEALED WATERTIGHT WITH A NON-SHRINK GROUT OR BOOTS AND SHALL MEET OR EXCEED REGIONAL PIPE CONNECTION STANDARDS.

PARTS LIST				
ITEM	QTY	DESCRIPTION	TYPE	SIZE (in)
1	1	PRECAST VAULT		8ft X 15ft
2	1	UFF INLET PIPE	HDPE	36
3	1	UFF OUTLET PIPE	HDPE	36
4	19	MODULE LID		
5	7	SUPPORT FRAME		
6	2	BOLTED COVER 30 IN (BY OTHERS)		30
7	5	TRIANGLE SUPPORT BRACKET		
8	2	BOLTED COVER 24 IN (BY OTHERS)		24
9	19	MODULE BODY		
10	2	SUPPORT FRAME LH		
11	2	OUTLET MODULE		
12	5	SUPPORT FRAME RH		
13	1	MCMASTER-CARR 4880K173		
14	1	MCMASTER-CARR 48925K27		
15	1	FERNCO 1056-1515 & 15.2-10.6 EB		
16	2	BYPASS HOOD		
17	2	FOOT WALL MOUNTING BRACKET	CPZ	

PROJECTION

IF IN DOUBT ASK

DATE:	SCALE:
4/3/2024	1:60
DRAWN BY: JDP	CHECKED BY: WCS
APPROVED BY:	

Title:
CPZ UP-FLO FILTER
8ft X 15ft

19 MODULES

UFF-6
NEBRASKA FURNITURE MART
CEDAR PARK, TX

Patent: www.hydro-int.com/patents

Hydro International
hydro-int.com

WEIGHT:	MATERIAL:

STOCK NUMBER: 4

DRAWING NO.: 23_12_3146-UFF-4

SHEET SIZE:	SHEET:	Rev:
B	1 OF 2	-

REVISION HISTORY				
REV	DESCRIPTION	BY	CHK	DATE
-	FIRST RELEASE	JDP	WCS	4/9/2024

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

WATER QUALITY DETAILS 3

DATE:	4/15/2024
DWG SCALE:	NTS
PROJECT NO.:	331-715
DRAWN BY:	QU
CHECKED BY:	SRB
APPROVED BY:	MT

DRAWING NO.: 107

SHEET 107 OF 175

811 !!! CAUTION !!! !!! CAUTION !!!
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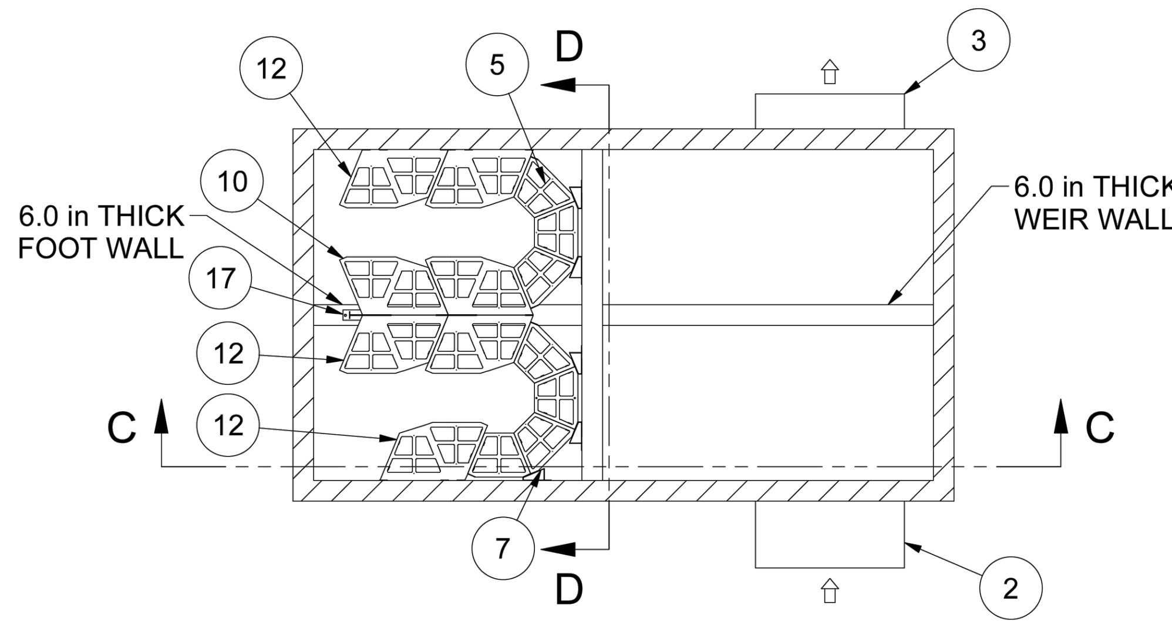
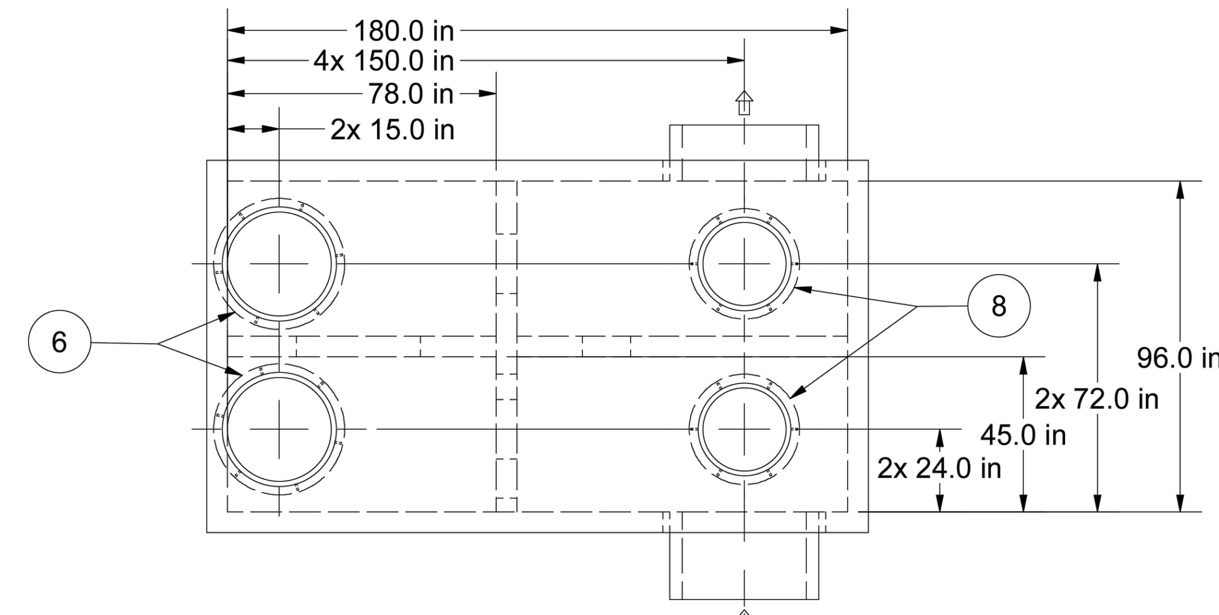
2023-23-SD

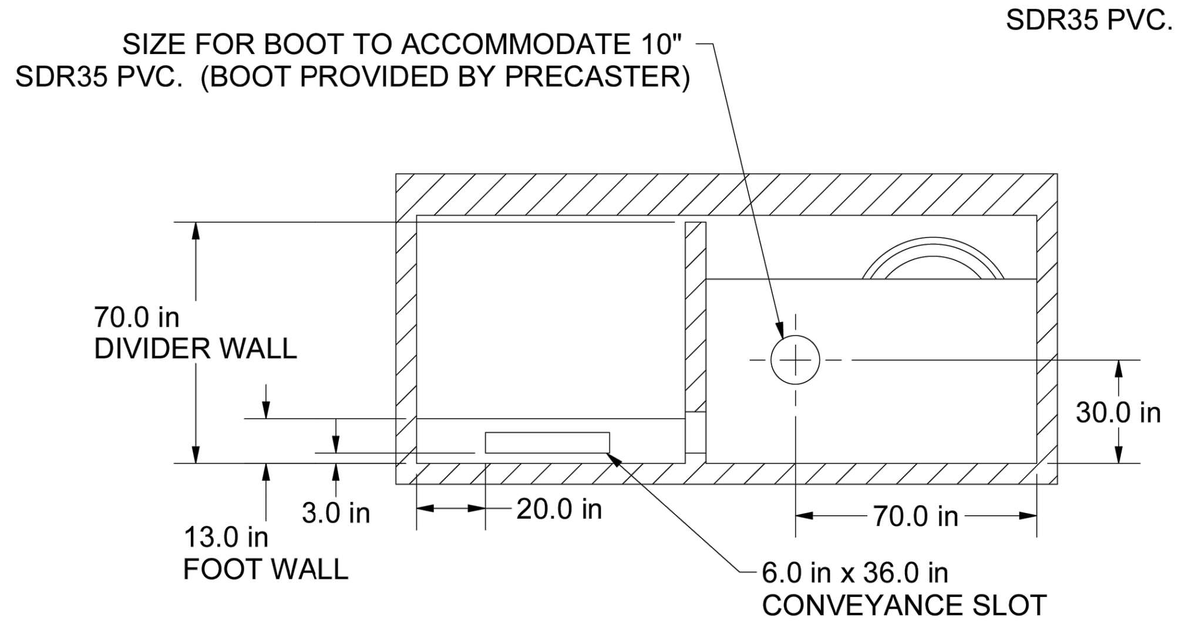


SECTION H-H

SCALE 1:50

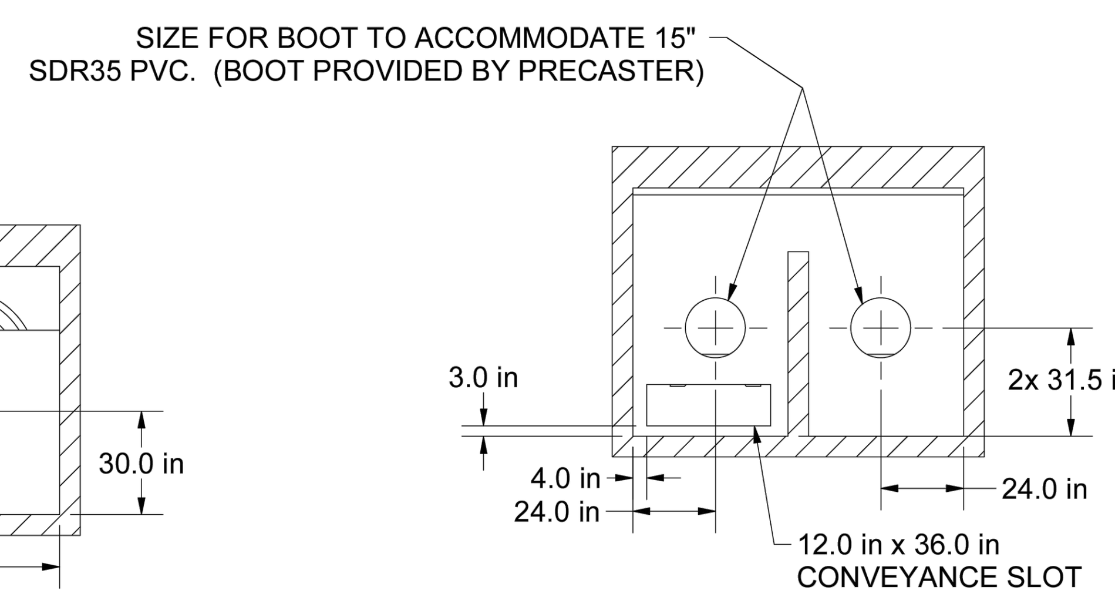


PRECAST DETAIL



SECTION C-C

SCALE 1:50



SECTION D-D

SCALE 1:50

PROJECTION

IF IN DOUBT ASK

DATE: 4/3/2024 | SCALE: 1:50

DRAWN BY: JDP | CHECKED BY: WCS | APPROVED BY:

Title: CPZ UP-FLO FILTER 8ft X 15ft

19 MODULES

UFF-6
NEBRASKA FURNITURE MART
CEDAR PARK, TX

Hydro International

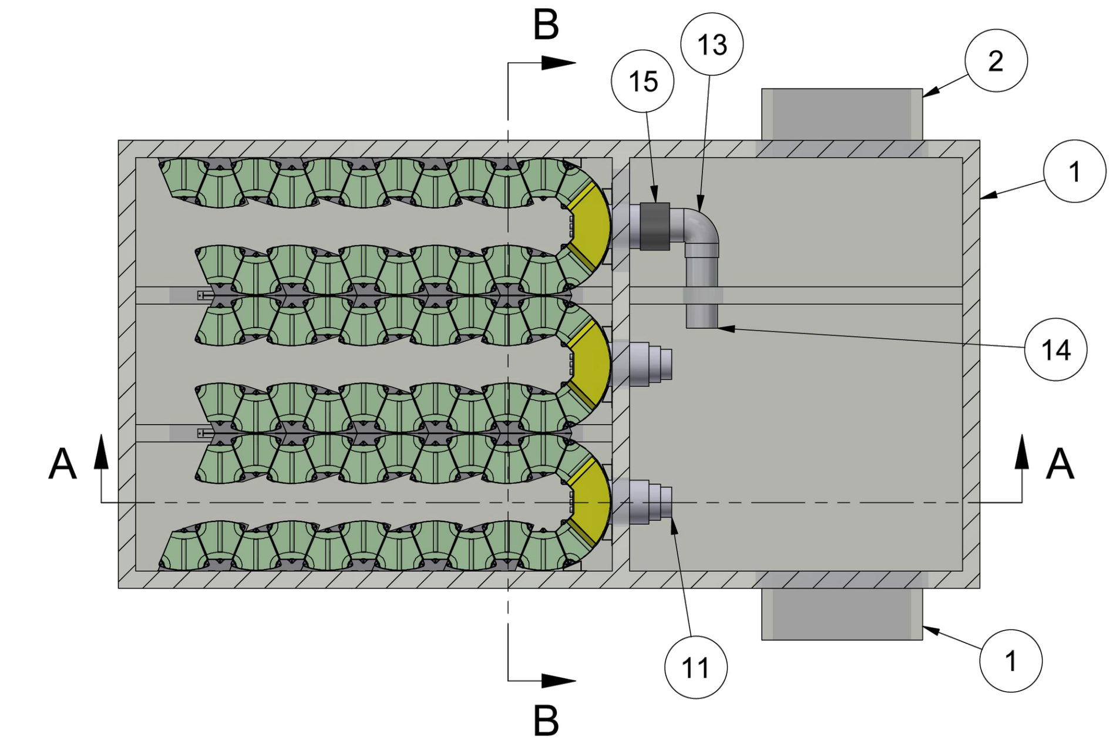
hydro-int.com

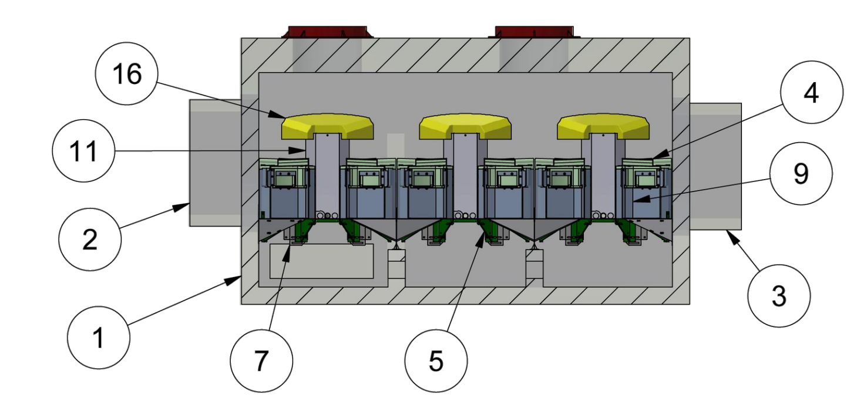
WEIGHT: | MATERIAL:

STOCK NUMBER: 4

DRAWING NO.: 23_12_3146-UFF-4

SHEET SIZE: B | SHEET: 2 OF 2 | Rev: -





SECTION B-B

SCALE 1:60

1. STRUCTURE WALL AND SLAB THICKNESS ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING THE STRUCTURE.
3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.
4. CONTRACTOR IS RESPONSIBLE FOR MATERIALS AND LABOR TO BRING CASTINGS TO FINISHED GRADE
5. ACTUAL DEPTH OF STRUCTURE MAY VARY DEPENDING ON AVAILABLE PRECAST FORMS. CONTRACTOR TO MEASURE HEIGHT OF STRUCTURE TO ENSURE THAT DEPTH OF EXCAVATION IS CORRECT.
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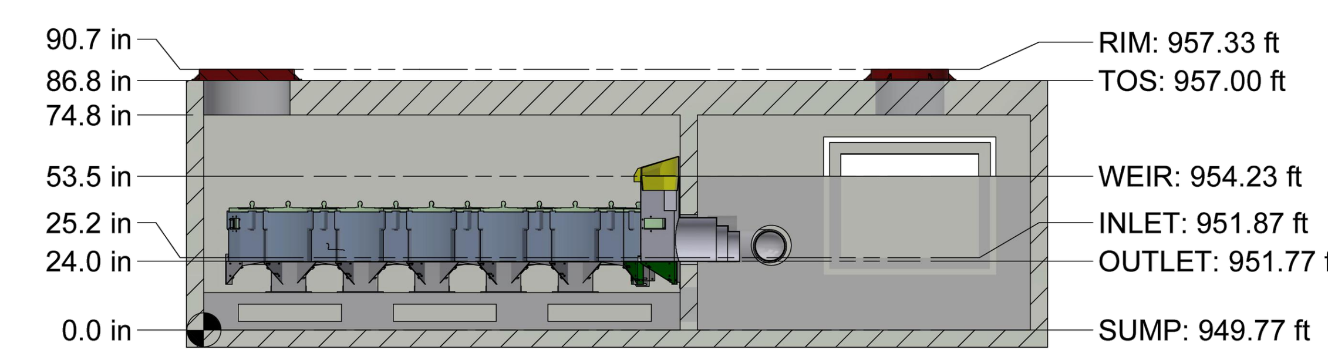
7. ALL PIPES SHALL BE SEALED WATERTIGHT WITH A NON-SHRINK GROUT OR BOOTS AND SHALL MEET OR EXCEED REGIONAL PIPE CONNECTION STANDARDS.

REVISION HISTORY

REV	BY	DESCRIPTION	DATE
-	JDP	FIRST RELEASE	4/10/2024



SECTION A-A

SCALE 1:60

CAPACITIES:

1. Minimum performance: 80% removal. NJDEP - NJDEP Blend; NJCAT, Sil-Co-Sil 106 (d50 = 22 microns) at the peak treatment flow.
2. Maximum number of modules per outlet module: 38 **
3. NJDEP peak treatment flow: .056 cfs (25 gpm) per module, CPZ

ADDITIONAL DESIGN INFORMATION:

1. * Normal operating W.S.E. is 2.46' above the outlet invert at the peak treatment flow of .056 cfs (25 gpm) per module. For a given flow the head requirement can be reduced by adding additional filters.
2. ** Treatment flows that require more modules will require a larger vault design or different arrangement.
3. Media Types Available: New Jersey - Ribbons; Elsewhere - CPZ
4. Unit shall conform to HS20-44 load ratings.

PARTS LIST

ITEM	QTY	DESCRIPTION	TYPE	SIZE (in)
1	1	PRECAST VAULT		12ft X 24ft
2	1	UFF INLET PIPE	RCP	36 X 48
3	1	UFF OUTLET PIPE	RCP	36 x 48
4	68	MODULE LID		
5	11	SUPPORT FRAME		
6	3	BOLTED COVER 30 IN (BY OTHERS)		30
7	8	WEDGE WALL MOUNT		
8	2	BOLTED COVER 24 IN (BY OTHERS)		24
9	68	MODULE BODY		
10	15	SUPPORT FRAME LH		
11	3	OUTLET MODULE		
12	15	SUPPORT FRAME RH		
13	1	MCMASTER-CARR 4880K173		
14	1	MCMASTER-CARR 48925K27		
15	1	FERNCO 1056-1515 & 15.2-10.6 EB		
16	3	BYPASS HOOD		
17	10	FOOT WALL MOUNTING BRACKET	CPZ	

PROJECTION

IF IN DOUBT ASK

DATE: 4/3/2024 | SCALE: 1:60

DRAWN BY: JDP | CHECKED BY: WCS | APPROVED BY:

Title: UP-FLO FILTER 12ft X 24ft

68 MODULES

UFF-7
NEBRASKA FURNITURE MART
CEDAR PARK, TX

Patent: www.hydro-int.com/patents

Hydro International

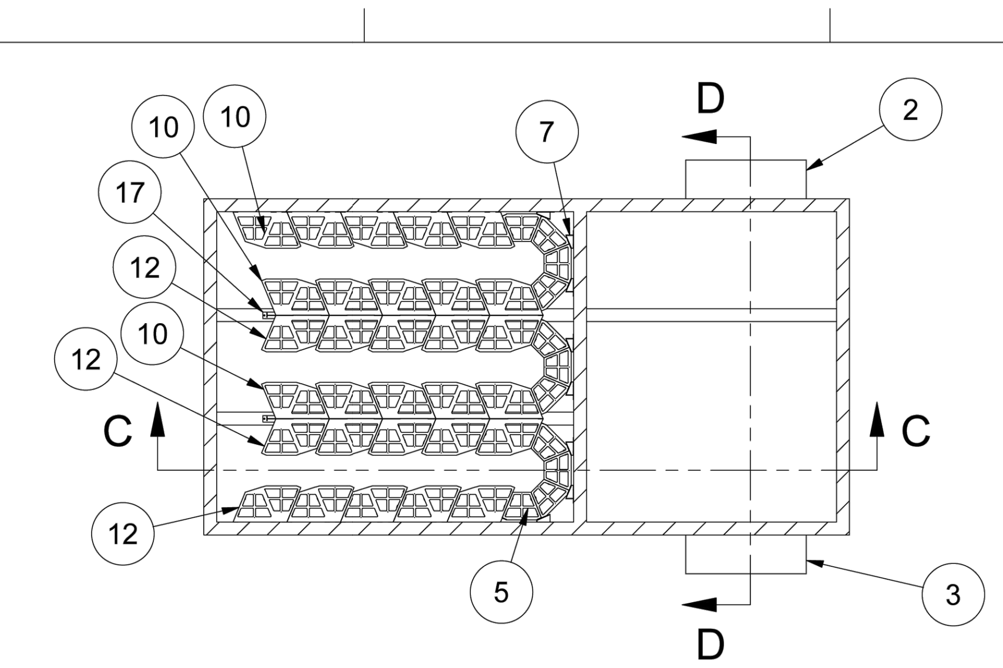
hydro-int.com

WEIGHT: | MATERIAL:

STOCK NUMBER: 5

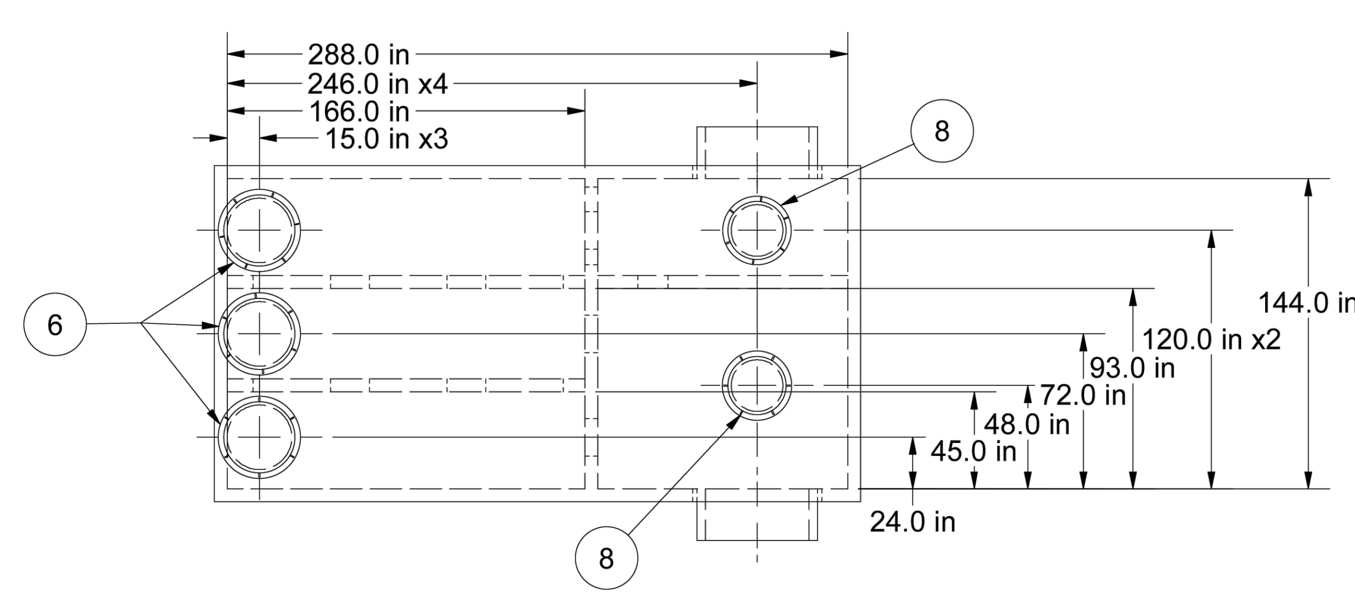
DRAWING NO.: 23_12_3146-UFF-5

SHEET SIZE: B | SHEET: 1 OF 2 | Rev: -

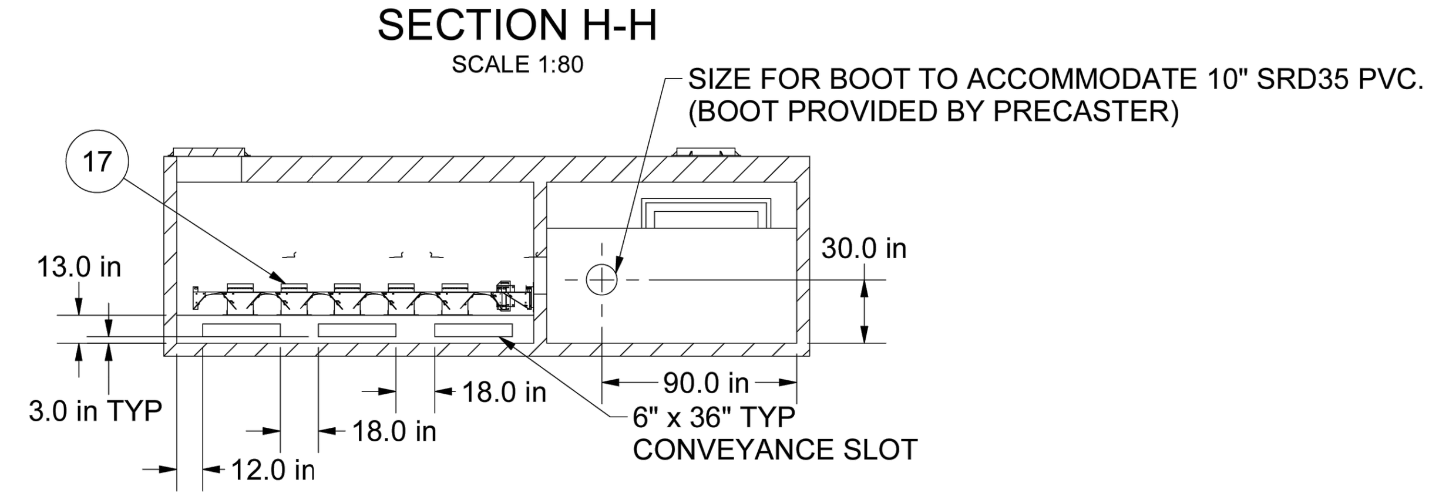


SECTION H-H

SCALE 1:80

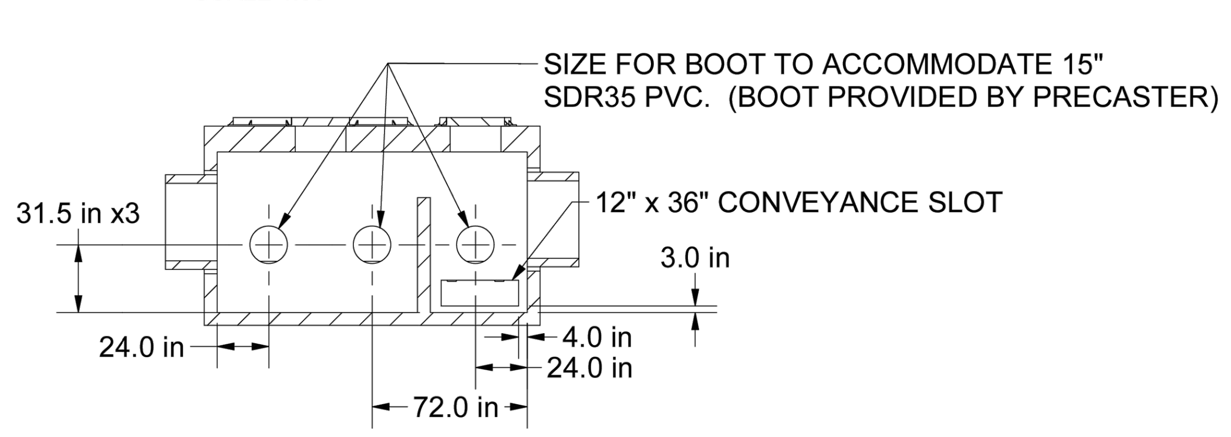


PRECAST DETAIL



SECTION C-C

SCALE 1:80



SECTION D-D

SCALE 1:80

PARTS LIST

ITEM	QTY	DESCRIPTION	SIZE (in)
1	1	PRECAST VAULT	12ft X 24ft
2	1	UFF INLET PIPE	36 X 48
3	1	UFF OUTLET PIPE	36 x 48
4	68	MODULE LID	
5	11	SUPPORT FRAME	
6	3	BOLTED COVER 30 IN (BY OTHERS)	30
7	8	WEDGE WALL MOUNT	
8	2	BOLTED COVER 24 IN (BY OTHERS)	24
9	68	MODULE BODY	
10	15	SUPPORT FRAME LH	
11	3	OUTLET MODULE	
12	15	SUPPORT FRAME RH	
13	1	MCMASTER-CARR 4880K173	
14	1	MCMASTER-CARR 48925K27	
15	1	FERNCO 1056-1515 & 15.2-10.6 EB	
16	3	BYPASS HOOD	
17	10	FOOT WALL MOUNTING BRACKET	

PROJECTION

IF IN DOUBT ASK

DATE: 4/3/2024 | SCALE: 1:80

DRAWN BY: JDP | CHECKED BY: WCS | APPROVED BY:

Title: UP-FLO FILTER 12ft X 24ft

68 MODULES

UFF-7
NEBRASKA FURNITURE MART
CEDAR PARK, TX

Hydro International

hydro-int.com

WEIGHT: | MATERIAL:

STOCK NUMBER: 5

DRAWING NO.: 23_12_3146-UFF-5

SHEET SIZE: B | SHEET: 2 OF 2 | Rev: -

811

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REVISION RECORD

NO	DATE	DESCRIPTION

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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

WATER QUALITY DETAILS 4

DATE: 4/15/2024 | DRAWN BY: QU
DWG SCALE: NTS | CHECKED BY: SRB
PROJECT NO: 331-715 | APPROVED BY: MT

DRAWING NO.: **108**

2023-23-SD

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: NFM CedarView
Date Prepared: 4/22/2024

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson		
Total project area included in plan * =	115.74	acres	
Predevelopment impervious area within the limits of the plan * =	0.00	acres	
Total post-development impervious area within the limits of the plan * =	69.56	acres	*4.95 acres removed per RWH
Total post-development impervious cover fraction * =	0.60		
P =	32	inches	
$L_{M\ TOTAL\ PROJECT}$ =	60545	lbs.	

Number of drainage basins / outfalls areas leaving the plan area = 7

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = Batch A

Total drainage basin/outfall area =	32.08	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	18.20	acres
Post-development impervious fraction within drainage basin/outfall area =	0.57	
$L_{M\ THIS\ BASIN}$ =	15841	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Extended Dete "Batch Pond"
Removal efficiency = 91 percent

Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	32.08	acres
A_I =	18.20	acres
A_P =	13.88	acres
L_R =	18556	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ = 18275 lbs.

F = 0.98

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth =	3.33	inches
Post Development Runoff Coefficient =	0.40	
On-site Water Quality Volume =	154268	cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP =	13.70	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	3312	cubic feet
Storage for Sediment =	31516	
Total Capture Volume (required water quality volume(s) x 1.20) =	189096	cubic feet

8. Extended Detention Basin System Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin = 189096 cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: NFM CedarView Private
Date Prepared: 4/14/2024

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson		
Total project area included in plan * =	115.74	acres	
Predevelopment impervious area within the limits of the plan* =	0.00	acres	
Total post-development impervious area within the limits of the plan* =	69.56	acres	*4.95 acres removed per RWH
Total post-development impervious cover fraction * =	0.60		
P =	32	inches	
$L_{M\ TOTAL\ PROJECT}$ =	60545	lbs.	

* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 7

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = Batch B

Total drainage basin/outfall area =	21.90	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	13.39	acres
Post-development impervious fraction within drainage basin/outfall area =	0.61	
$L_{M\ THIS\ BASIN}$ =	11655	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Extended Dete "Batch Pond"
Removal efficiency = 91 percent

Aqualogic Cartridge Filter
Bioretention
Contech StormFilter
Constructed Wetland
Extended Detention
Grassy Swale
Retention / Irrigation
Sand Filter
Stormceptor
Vegetated Filter Strips
Vortechs
Wet Basin
Wet Vault

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	21.90	acres
A_I =	13.39	acres
A_P =	8.51	acres
L_R =	13625	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ = 9755 lbs.

F = 0.72

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth =	0.83	inches
Post Development Runoff Coefficient =	0.43	
On-site Water Quality Volume =	28357	cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	5671	
Total Capture Volume (required water quality volume(s) x 1.20) =	34028	cubic feet

8. Extended Detention Basin System Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin = 34028 cubic feet

!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

WATER QUALITY DETAILS 5

DATE: 4/15/2024 | DRAWN BY: QU
DVG SCALE: NTS | CHECKED BY: SRB
PROJECT NO: 331-715
APPROVED BY: MT

DRAWING NO.: 109
SHEET 109 OF 175

2023-23-SD

Calculations for Texas Commission on Environmental Quality TSS Removal Calculations
Hydro International Up-Flo® Filter - Sizing Spreadsheet Revision 1.0

Project Name: NFM CedarView
Date Prepared: 4.14.24

1. The Required Load Reduction for the Total Project.

Calculations from RG-348, Pages 3-27 to 3-30
Page 3-29 Equation 3.3:
$L_M = 27.2(A_N \times P)$

Where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan =	115.74	acres
Predevelopment impervious area within the limits of the plan =	0.00	acres
Total post-development impervious area within the limits of the plan =	69.56	acres
Total post-development impervious cover fraction =	0.60	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	60545	lb
Number of drainage basins / outfalls areas leaving the plan area =	7	

2. Drainage Basin Parameters (This information should be provided for each basin).

Drainage Basin/Outfall Area No. =	UFF-1	
Total drainage basin/outfall area =	10.22	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	1.15	acres
Post-development impervious fraction within drainage basin/outfall area =	0.11	
$L_{M\ THIS\ BASIN}$ =	1,001	lb

3. Indicate the Proposed BMP Code for this Basin.

Proposed BMP = **Up-Flo® Filter CPZ**
Removal efficiency = 78 percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the Selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
L_R = (BMP efficiency) x P x (A_C x 34.6 + A_P x 0.54)

Where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	10.22	acres
A_I =	1.15	acres
A_P =	9.07	acres
L_R =	1,115	lb

5. Calculate Fraction of Annual Runoff to Treat the Drainage Basin / Outfall Area. Note

Desired $L_{M\ THIS\ BASIN}$ = 1,115 lb
F = 1.00

6. Calculate Capture Volume Required by the BMP Type for this Drainage Basin / Outfall Area.

Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth = 4.00 inches
Post Development Runoff Coefficient = 0.14
On-site Water Quality Volume = 20,169 cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = 0.00 acres
Off-site Impervious cover draining to BMP = 0.00 acres
Impervious fraction of off-site area = 0
Off-site Runoff Coefficient = 0.00
Off-site Water Quality Volume = 0 cubic feet
Storage for Sediment = 4,034 cubic feet
Total Capture Volume (required water quality volume x 1.20) = 24,202 cubic feet

7. Up-Flo® Filter TSS Load Based Sizing.

Minimum Filter Modules based on L_R = 9 modules
Maximum Release Rate = 0.50 cfs

Calculations for Texas Commission on Environmental Quality TSS Removal Calculations
Hydro International Up-Flo® Filter - Sizing Spreadsheet Revision 1.0

Project Name: NFM CedarView
Date Prepared: 4.23.24

1. The Required Load Reduction for the Total Project.

Calculations from RG-348, Pages 3-27 to 3-30
Page 3-29 Equation 3.3:
$L_M = 27.2(A_N \times P)$

Where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan =	115.74	acres
Predevelopment impervious area within the limits of the plan =	0.00	acres
Total post-development impervious area within the limits of the plan =	69.56	acres
Total post-development impervious cover fraction =	0.60	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	60545	lb
Number of drainage basins / outfalls areas leaving the plan area =	7	

2. Drainage Basin Parameters (This information should be provided for each basin).

Drainage Basin/Outfall Area No. =	UFF-4	
Total drainage basin/outfall area =	25.35	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	23.31	acres
Post-development impervious fraction within drainage basin/outfall area =	0.92	
$L_{M\ THIS\ BASIN}$ =	20,289	lb

3. Indicate the Proposed BMP Code for this Basin.

Proposed BMP = **Up-Flo® Filter CPZ**
Removal efficiency = 78 percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the Selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
L_R = (BMP efficiency) x P x (A_C x 34.6 + A_P x 0.54)

Where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	25.35	acres
A_I =	23.31	acres
A_P =	2.04	acres
L_R =	20,158	lb

5. Calculate Fraction of Annual Runoff to Treat the Drainage Basin / Outfall Area. Note

Desired $L_{M\ THIS\ BASIN}$ = 20,158 lb
F = 1.00

6. Calculate Capture Volume Required by the BMP Type for this Drainage Basin / Outfall Area.

Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth = 4.00 inches
Post Development Runoff Coefficient = 0.75
On-site Water Quality Volume = 276,344 cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = 0.00 acres
Off-site Impervious cover draining to BMP = 0.00 acres
Impervious fraction of off-site area = 0
Off-site Runoff Coefficient = 0.00
Off-site Water Quality Volume = 0 cubic feet
Storage for Sediment = 55,269 cubic feet
Total Capture Volume (required water quality volume x 1.20) = 331,612 cubic feet

7. Up-Flo® Filter TSS Load Based Sizing.

Minimum Filter Modules based on L_R = 153 modules
Maximum Release Rate = 8.57 cfs

Calculations for Texas Commission on Environmental Quality TSS Removal Calculations
Hydro International Up-Flo® Filter - Sizing Spreadsheet Revision 1.0

Project Name: NFM CedarView
Date Prepared: 4.14.24

1. The Required Load Reduction for the Total Project.

Calculations from RG-348, Pages 3-27 to 3-30
Page 3-29 Equation 3.3:
$L_M = 27.2(A_N \times P)$

Where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan =	115.74	acres
Predevelopment impervious area within the limits of the plan =	0.00	acres
Total post-development impervious area within the limits of the plan =	69.56	acres
Total post-development impervious cover fraction =	0.60	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	60545	lb
Number of drainage basins / outfalls areas leaving the plan area =	7	

2. Drainage Basin Parameters (This information should be provided for each basin).

Drainage Basin/Outfall Area No. =	UFF-6	
Total drainage basin/outfall area =	2.79	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	2.79	acres
Post-development impervious fraction within drainage basin/outfall area =	1.00	
$L_{M\ THIS\ BASIN}$ =	2,428	lb

3. Indicate the Proposed BMP Code for this Basin.

Proposed BMP = **Up-Flo® Filter CPZ**
Removal efficiency = 78 percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the Selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
L_R = (BMP efficiency) x P x (A_C x 34.6 + A_P x 0.54)

Where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	2.79	acres
A_I =	2.79	acres
A_P =	0.00	acres
L_R =	2,409	lb

5. Calculate Fraction of Annual Runoff to Treat the Drainage Basin / Outfall Area. Note

Desired $L_{M\ THIS\ BASIN}$ = 2,409 lb
F = 1.00

6. Calculate Capture Volume Required by the BMP Type for this Drainage Basin / Outfall Area.

Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth = 4.00 inches
Post Development Runoff Coefficient = 0.82
On-site Water Quality Volume = 33,068 cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = 0.00 acres
Off-site Impervious cover draining to BMP = 0.00 acres
Impervious fraction of off-site area = 0
Off-site Runoff Coefficient = 0.00
Off-site Water Quality Volume = 0 cubic feet
Storage for Sediment = 6,614 cubic feet
Total Capture Volume (required water quality volume x 1.20) = 39,682 cubic feet

7. Up-Flo® Filter TSS Load Based Sizing.

Minimum Filter Modules based on L_R = 19 modules
Maximum Release Rate = 1.06 cfs

Calculations for Texas Commission on Environmental Quality TSS Removal Calculations
Hydro International Up-Flo® Filter - Sizing Spreadsheet Revision 1.0

Project Name: NFM CedarView
Date Prepared: 4.14.24

1. The Required Load Reduction for the Total Project.

Calculations from RG-348, Pages 3-27 to 3-30
Page 3-29 Equation 3.3:
$L_M = 27.2(A_N \times P)$

Where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resulting from the proposed development = 80% of increased load
A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan =	115.74	acres
Predevelopment impervious area within the limits of the plan =	0.00	acres
Total post-development impervious area within the limits of the plan =	69.56	acres
Total post-development impervious cover fraction =	0.60	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	60545	lb
Number of drainage basins / outfalls areas leaving the plan area =	7	

2. Drainage Basin Parameters (This information should be provided for each basin).

Drainage Basin/Outfall Area No. =	UFF-7	
Total drainage basin/outfall area =	10.50	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	10.26	acres
Post-development impervious fraction within drainage basin/outfall area =	0.98	
$L_{M\ THIS\ BASIN}$ =	8,930	lb

3. Indicate the Proposed BMP Code for this Basin.

Proposed BMP = **Up-Flo® Filter CPZ**
Removal efficiency = 78 percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the Selected BMP Type.

RG-348 Page 3-33 Equation 3.7:
L_R = (BMP efficiency) x P x (A_C x 34.6 + A_P x 0.54)

Where:
A_C = Total On-Site drainage area in the BMP catchment area
A_I = Impervious area proposed in the BMP catchment area
A_P = Pervious area remaining in the BMP catchment area
L_R = TSS Load removed from this catchment area by the proposed BMP

A_C =	10.50	acres
A_I =	10.26	acres
A_P =	0.24	acres
L_R =	8,864	lb

5. Calculate Fraction of Annual Runoff to Treat the Drainage Basin / Outfall Area. Note

Desired $L_{M\ THIS\ BASIN}$ = 8,864 lb
F = 1.00

6. Calculate Capture Volume Required by the BMP Type for this Drainage Basin / Outfall Area.

Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth = 4.00 inches
Post Development Runoff Coefficient = 0.80
On-site Water Quality Volume = 121,614 cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = 0.00 acres
Off-site Impervious cover draining to BMP = 0.00 acres
Impervious fraction of off-site area = 0
Off-site Runoff Coefficient = 0.00
Off-site Water Quality Volume = 0 cubic feet
Storage for Sediment = 24,323 cubic feet
Total Capture Volume (required water quality volume x 1.20) = 145,937 cubic feet

7. Up-Flo® Filter TSS Load Based Sizing.

Minimum Filter Modules based on L_R = 68 modules
Maximum Release Rate = 3.81 cfs

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REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

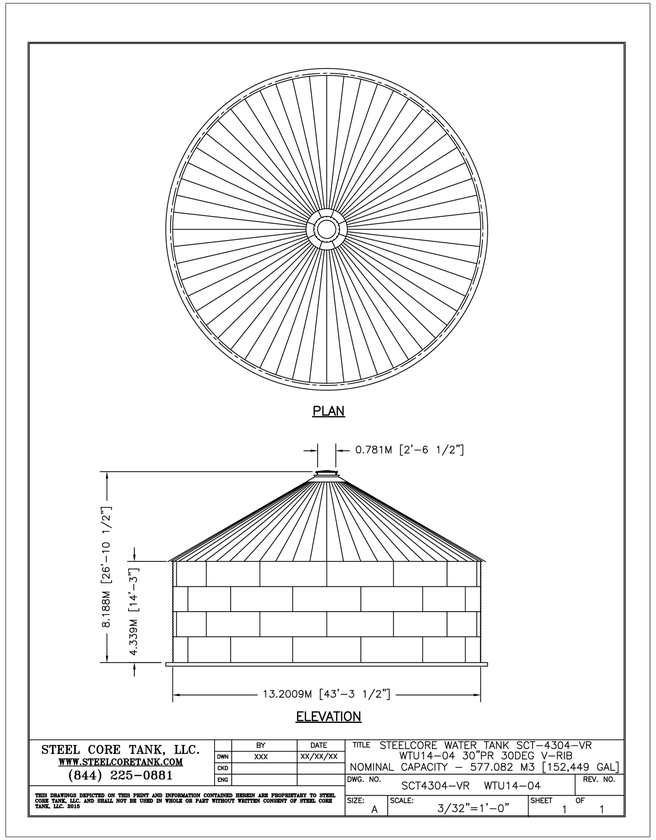
NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

WATER QUALITY DETAILS 6

DATE: 4/15/2024 | DRAWN BY: QU
DVG SCALE: NTS | CHECKED BY: SRB
PROJECT NO: 331-715 | APPROVED BY: MT

DRAWING NO.: 110
SHEET 110 OF 175

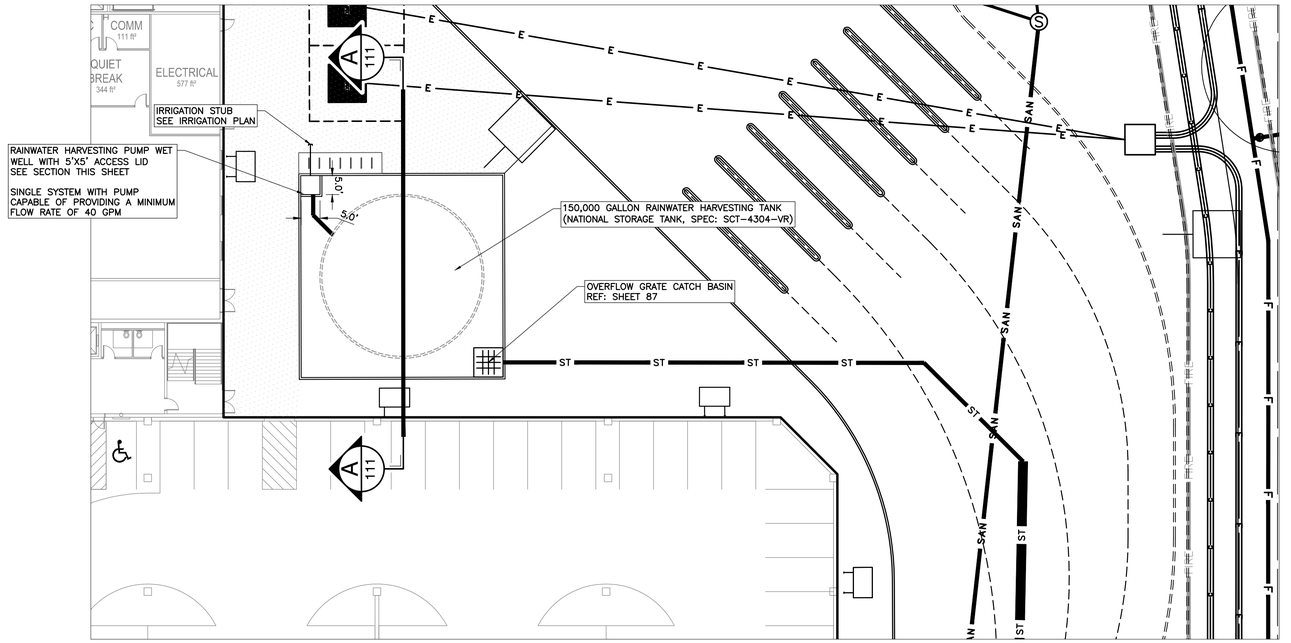
2023-23-SD

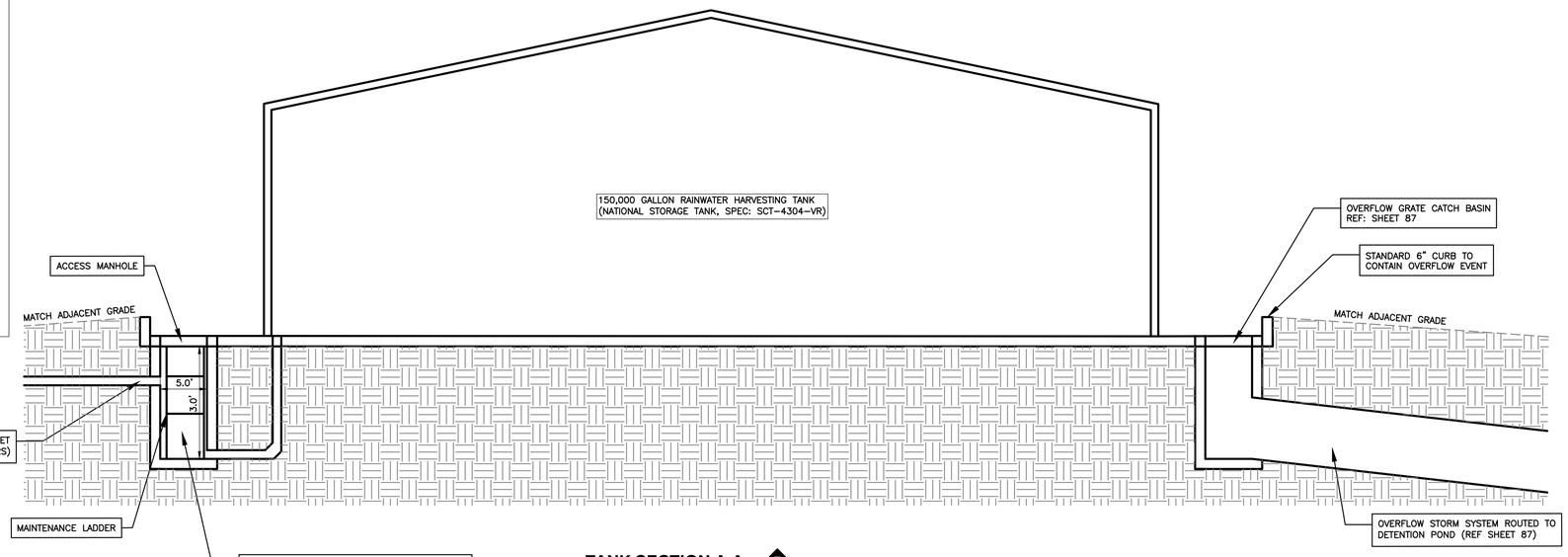


STEEL CORE TANK, LLC.		BY	DATE	TITLE STEELCORE WATER TANK SCT-4304-VR
WWW.STEELCORETANK.COM	DWN	XXX	XX/XX/XX	WTU14-04 30"PR 30DEG V-RIB
(844) 225-0881	CKD			NOMINAL CAPACITY - 577.082 M3 [152,449 GAL]
	ENG			DWG. NO. SCT4304-VR WTU14-04 REV. NO.

THESE DRAWINGS DEPICTED ON THIS PRINT AND INFORMATION CONTAINED HEREIN ARE PROPRIETARY TO STEEL CORE TANK, LLC. AND SHALL NOT BE USED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF STEEL CORE TANK, LLC. 2015

SIZE: A | SCALE: 3/32"=1'-0" | SHEET 1 OF 1





TANK SECTION A-A (A-A)
N.T.S.

SPLITTER BOX WEIR LENGTH CALC.	
weir equation: $q = 3.33\ (b - 0.2\ h)\ h^{3/2}$	
Q (100-yr storm) =	74.50 cfs
max Q over weir	74.79 cfs
b = length of weir	22.66 ft.
h = head abv. Weir	1.00 ft.

7. Retention/Irrigation System — Designed as Required in RG-348 — Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **18348** cubic feet — 137,241 **GAL**

Irrigation Area Calculations:

Soil infiltration/permeability rate = **0.1** in/hr **Enter determined permeability rate or assumed value of 0.1**
Irrigation area = **73391** square feet
1.68 acres

NORTH
SCALE IN FEET
0 20 40

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

811
!!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

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Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

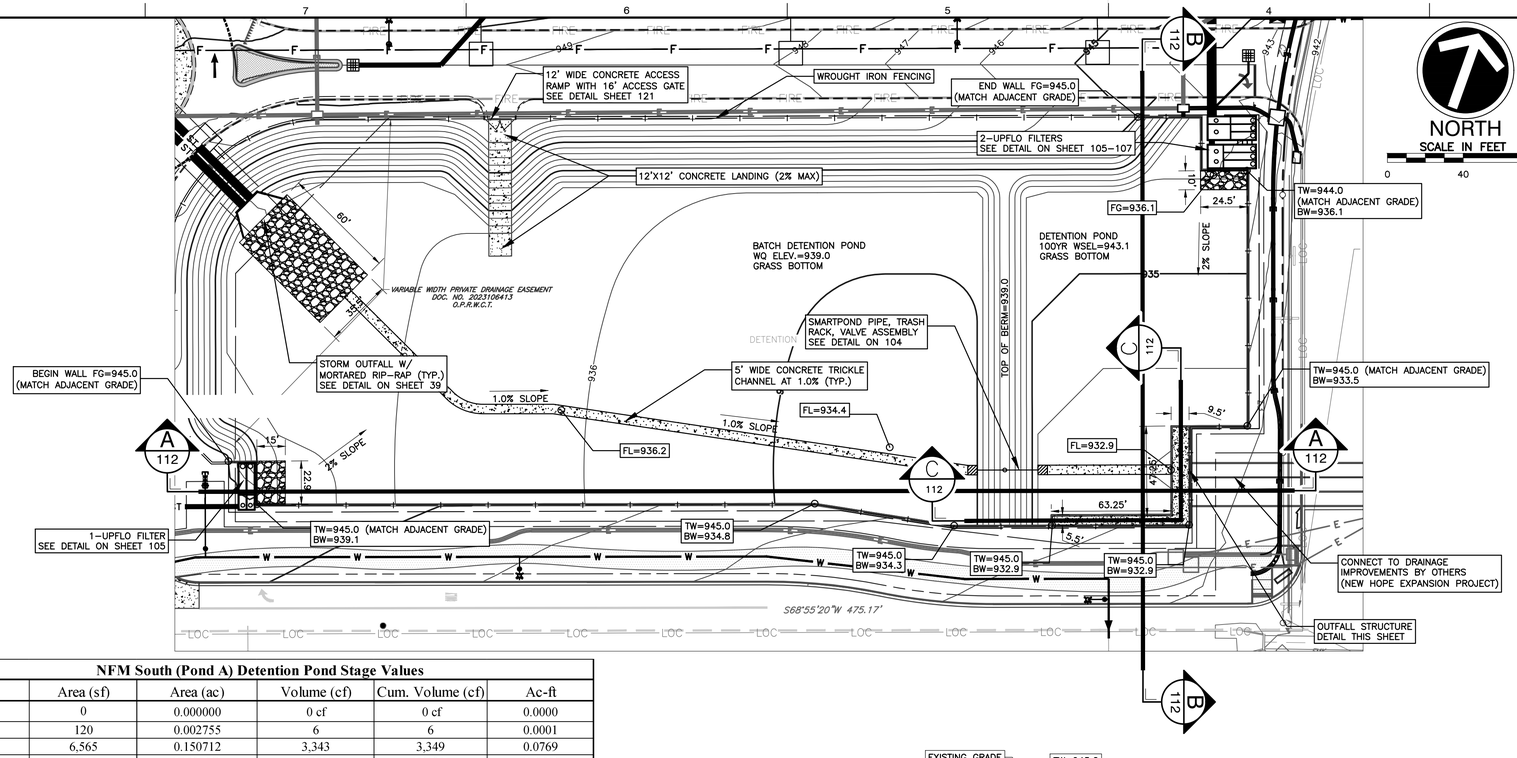
NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

WATER QUALITY DETAILS 7

DATE:	4/24/2024	DRAWN BY:	QU
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MT

DRAWING NO.: **111**
SHEET 111 OF 175

2023-23-SD



LINETYPE LEGEND

PROPOSED	EXISTING	
		RIGHT-OF-WAY
		LOT BOUNDARY
		EASEMENT
		FENCE: BARBED
		FENCE: WOOD (PICKET)
		FENCE: GUARDRAIL
		FENCE: CHAIN LINK
		FENCE: IRON
385	*385*	MAJOR CONTOUR
		MINOR CONTOUR
E	E	ELECTRIC LINE
OE	OE	OVERHEAD ELECTRIC WIRE
UE	UE	UNDERGROUND ELECTRIC LINE
T	T	TELEPHONE
C	C	COMMUNICATIONS LINE
TV	TV	CABLE TELEVISION
FO	FO	FIBER OPTIC LINE
G	G	GAS LINE
OU	OU	OVERHEAD UTILITY
UG	UG	UNDERGROUND UTILITY
SAN	*SAN*	SANITARY SEWER LINE
W	*W*	WATER LINE
F	F	FIRE LINE
		ROAD CENTERLINE
		CURB & GUTTER
		DEEP CURB & GUTTER
		STRIPING
FIRE	FIRE	FIRE LANE STRIPING
		H.C. ACCESSIBLE ROUTE
LOC		LIMITS OF CONSTRUCTION
		DRAINAGE AREA
		FLOODWAY
		CWQZ
	ST	STORM SEWER
		DRAINAGE CHANNEL

BLOCK LEGEND

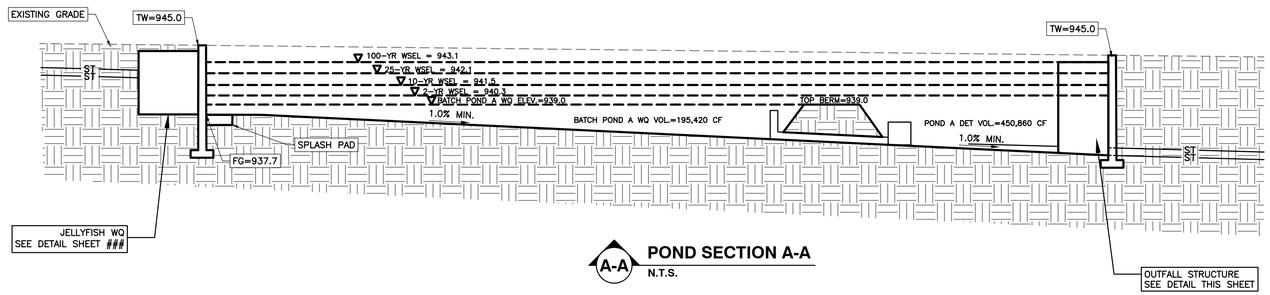
PROPOSED	EXISTING	
		BENCHMARK
		CUT IN CONCRETE
		CONTROL POINT
		IRON PIPE
		IRON ROD
		IRON ROD W/ CAP
		MONUMENT TYPE 1
		MONUMENT TYPE 2
		NAIL
S	S	PIPE BREAK
J	J	PIPE CAP
›	›	PIPE FLOW
		REDUCER
		AIR RELEASE VALVE
		BLOW-OFF VALVE
		POST INDICATOR VALVE
		MISCELLANEOUS VALVE
		UTILITY VALVE
		UTILITY METER
		BACKFLOW PREVENTER
		FLUSH CONNECTION
		FIRE HYDRANT
		(MONITORING) WELL
		UTILITY RISER
HB	HB	HOSE BIB
S	S	SANITARY M.H.
		CLEANOUT
		WW INSPECTION PORTAL
D	D	DRAINAGE M.H.
		DOWN SPOUT
		AREA INLET
		CURB INLET
		HEADWALL
		SAFETY END TREATMENT
		DRAINAGE FLOW
E	E	ELEC. M.H.
		ELEC./TELE. POLE
		GUY WIRE
		LIGHT FIXTURE
		TRAFFIC SIGNAL

NFM South (Pond A) Detention Pond Stage Values

Stage	Area (sf)	Area (ac)	Volume (cf)	Cum. Volume (cf)	Ac-ft
932.90	0	0.000000	0 cf	0 cf	0.0000
933.00	120	0.002755	6	6	0.0001
934.00	6,565	0.150712	3,343	3,349	0.0769
935.00	12,715	0.291896	9,640	12,989	0.2982
936.00	18,895	0.433770	15,805	28,794	0.6610
937.00	20,335	0.466827	19,615	48,409	1.1113
938.00	21,160	0.485767	20,748	69,156	1.5876
939.00	21,990	0.504821	21,575	90,731	2.0829
940.00	94,275	2.164256	58,133	148,864	3.4174
941.00	96,286	2.210422	95,281	244,144	5.6048
942.00	98,295	2.256543	97,291	341,435	7.8383
943.00	100,300	2.302571	99,298	440,732	10.1178
944.00	102,300	2.348485	101,300	542,032	12.4433
945.00	104,300	2.394399	103,300	645,332	14.8148

NFM South (BATCH Pond A) Detention Pond Stage Values

Stage	Area (sf)	Area (ac)	Volume (cf)	Cum. Volume (cf)	Ac-ft
934.00	0	0.000000	0 cf	0 cf	0.0000
935.00	12,195	0.279959	6,098	6,098	0.1400
936.00	32,750	0.751837	22,473	28,570	0.6559
937.00	50,150	1.151286	41,450	70,020	1.6074
938.00	65,850	1.511708	58,000	128,020	2.9389
939.00	68,950	1.582874	67,400	195,420	4.4862

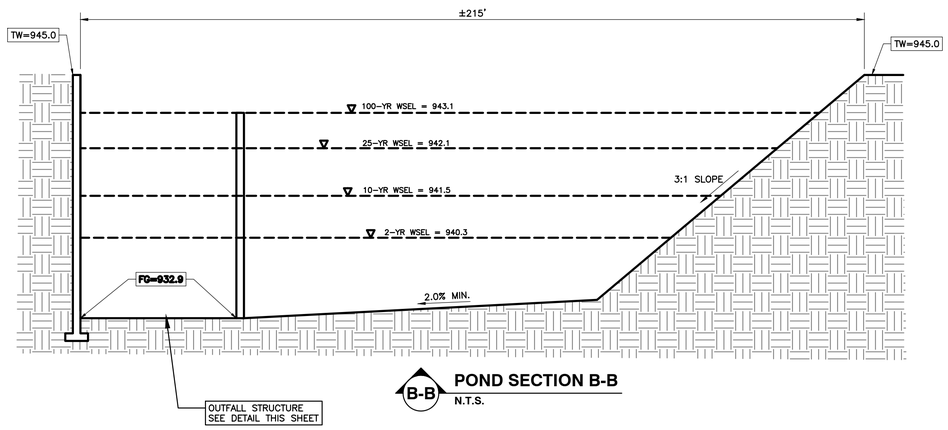


A-A **POND SECTION A-A**
N.T.S.

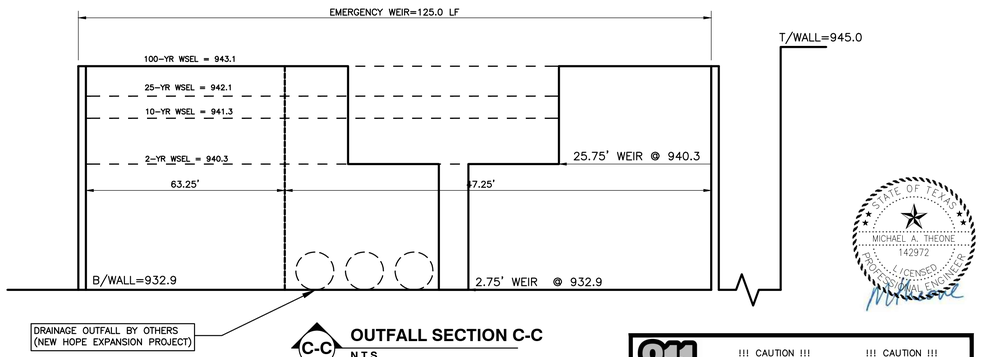
EMERGENCY WEIR LENGTH CALC.

weir equation: $q = 3.33\ (b - 0.2\ h)\ h^{3/2}$

Q (100-yr storm) =	1053.80 cfs
max Q over weir	1086.83 cfs
b = length of weir	125.00 ft.
h = head abv. Weir	1.90 ft.



B-B **POND SECTION B-B**
N.T.S.



C-C **OUTFALL SECTION C-C**
N.T.S.

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

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REVISION RECORD

NO	DATE	DESCRIPTION

CEC
Texas Registered Engineering Firm F-38
Civil & Environmental Consultants, Inc.
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

POND A PLAN

DRAWN BY:	QU
CHECKED BY:	SRB
DATE:	4/25/2024
DWG SCALE:	NTS
PROJECT NO:	331-715
APPROVED BY:	MT

DRAWING NO.: 112

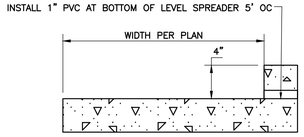
SHEET 112 OF 175

2023-23-SD

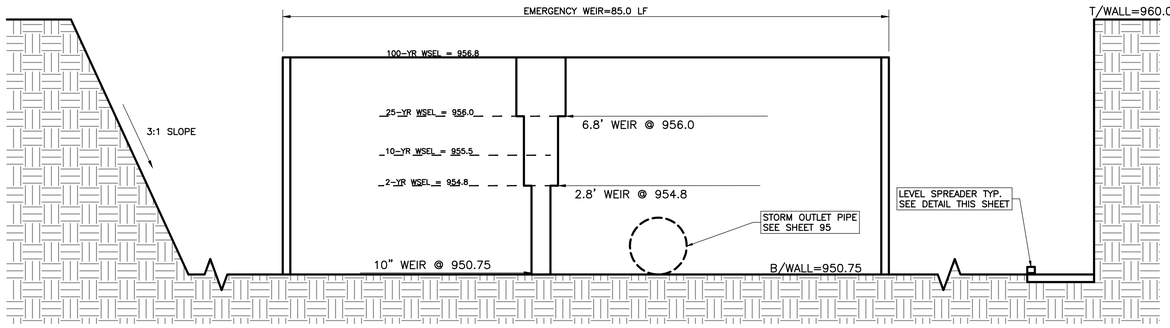
NFM Northwest (Pond B) Detention Pond Stage Values					
Stage	Area (sf)	Area (ac)	Volume (cf)	Cum. Volume (cf)	Ac-ft
950.75	0	0.0000	0 cf	0 cf	0.0000
951.00	710	0.0163	89	89	0.0020
952.00	935	0.0215	823	911	0.0209
953.00	1,200	0.0275	1,068	1,979	0.0454
953.40	1,285	0.0295	497	2,476	0.0568
954.00	68,500	1.5725	20,936	23,411	0.5374
955.00	84,900	1.9490	76,700	100,111	2.2982
956.00	100,150	2.2991	92,525	192,636	4.4223
957.00	106,900	2.4541	263,100	286,511	6.5774

NFM Northwest (BATCH Pond B) Detention Pond Stage Values					
Stage	Area (sf)	Area (ac)	Volume (cf)	Cum. Volume (cf)	Ac-ft
951.10	0	0.000000	0 cf	0 cf	0.0000
952.00	27,500	0.631313	12,375	12,375	0.2841
953.00	50,150	1.151286	38,825	51,200	1.1754
953.40	55,375	1.271235	21,105	72,305	1.6599

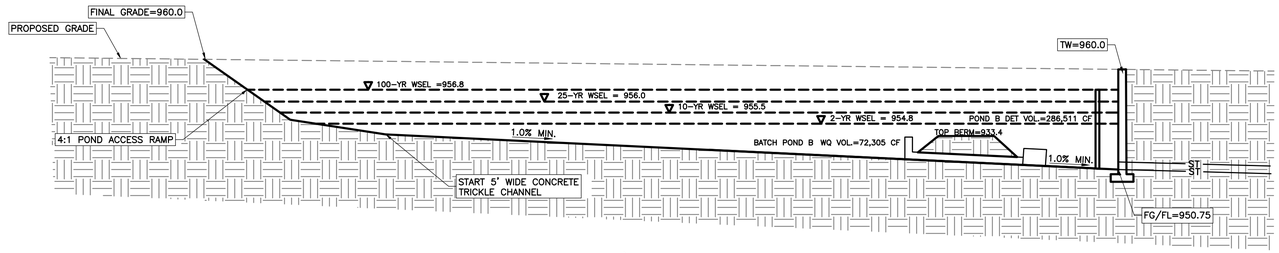
EMERGENCY WEIR LENGTH CALC.	
weir equation: $q = 3.33\ (b - 0.2\ h)\ h^{3/2}$	
Q (100-yr storm) =	267.10 cfs
max Q over weir	282.38 cfs
b = length of weir	85.00 ft.
h = head abv. Weir	1.00 ft.



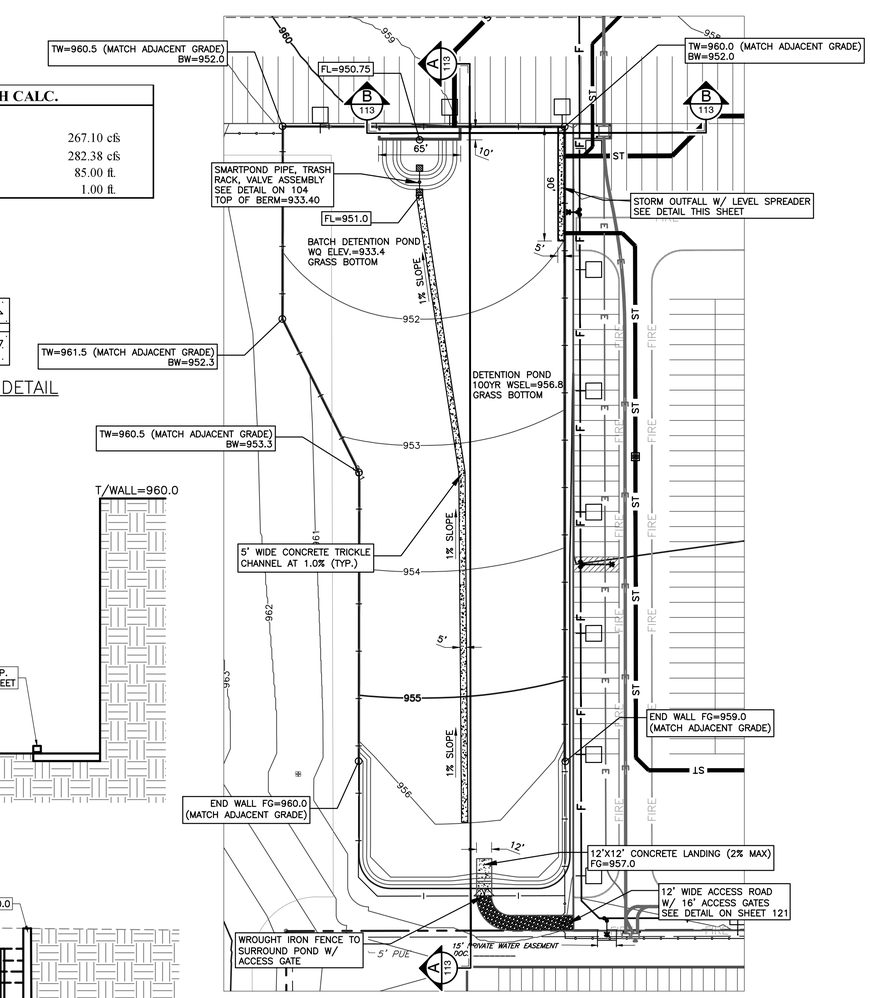
TYPICAL LEVEL SPREADER DETAIL



B-B POND OUTFALL SECTION B-B
N.T.S.



A-A POND SECTION A-A
N.T.S.



NORTH
SCALE IN FEET
0 60 120

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REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-98
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

POND B PLAN

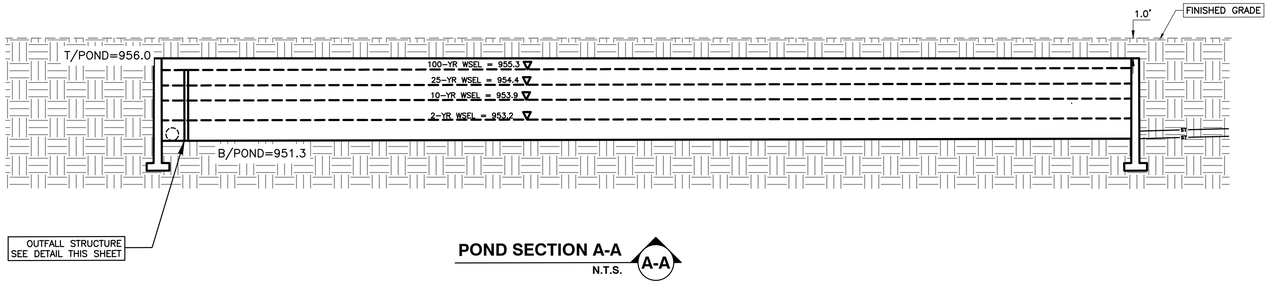
DATE:	4/25/2024
DWG SCALE:	NTS
PROJECT NO:	331-7115
DRAWN BY:	QU
CHECKED BY:	SRB
APPROVED BY:	MT

DRAWING NO.: 113
SHEET 113 OF 175

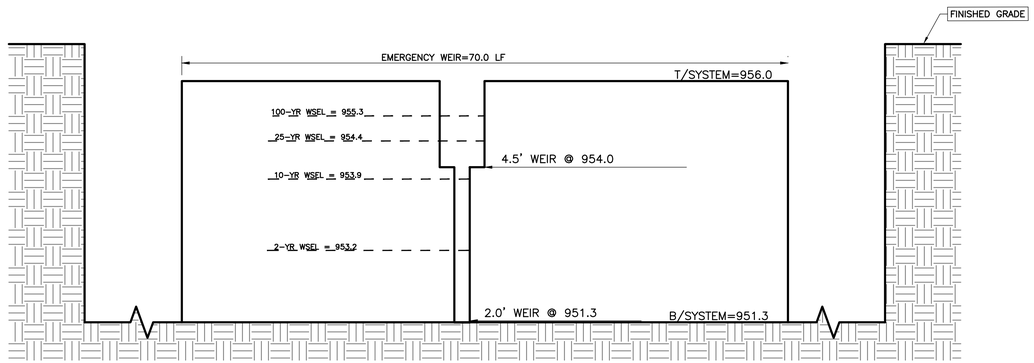
2023-23-SD

NFM Northeast (Pond C) Detention Pond Stage Values			
Stage	Volume (cf)	Cum. Volume (cf)	Ac-ft
951.30	0.0	0	0.0000
951.46	1,340.2	1,340	0.0308
951.63	2,411.4	3,752	0.0861
951.80	3,068.0	6,820	0.1566
951.96	3,566.7	10,386	0.2384
952.13	3,968.7	14,355	0.3295
952.30	4,301.5	18,656	0.4283
952.46	4,580.3	23,237	0.5334
952.63	4,814.6	28,051	0.6440
952.80	5,010.6	33,062	0.7590
952.96	5,172.6	38,235	0.8777
953.13	5,303.9	43,538	0.9995
953.30	5,406.6	48,945	1.1236
953.46	5,482.4	54,427	1.2495
953.63	5,532.3	59,960	1.3765
953.80	5,557.1	65,517	1.5041
953.96	5,557.1	71,074	1.6316
954.13	5,532.3	76,606	1.7586
954.30	5,482.4	82,089	1.8845
954.46	5,406.6	87,495	2.0086
954.63	5,303.9	92,799	2.1304
954.80	5,172.6	97,972	2.2491
954.96	5,010.6	102,983	2.3642
955.13	4,814.6	107,797	2.4747
955.30	4,580.3	112,377	2.5798
955.46	4,301.5	116,679	2.6786
955.63	3,968.7	120,648	2.7697
955.80	3,566.7	124,214	2.8516
955.96	3,068.0	127,282	2.9220
956.13	2,411.4	129,694	2.9774
956.30	1,340.2	131,034	3.0081

EMERGENCY WEIR LENGTH CALC.	
weir equation: $q = 3.33\ (b - 0.2\ h)\ h^{3/2}$	
Q (100-yr storm) =	133.80 cfs
max Q over weir	136.24 cfs
b = length of weir	70.00 ft.
h = head abv. Weir	0.70 ft.



POND SECTION A-A (A-A) N.T.S.



POND OUTFALL SECTION B-B (B-B) N.T.S.

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

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REVISION RECORD

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www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

POND C PLAN

DATE:	4/25/2024
DWG SCALE:	NTS
PROJECT NO:	331-715
DRAWN BY:	QU
CHECKED BY:	SRB
APPROVED BY:	MT

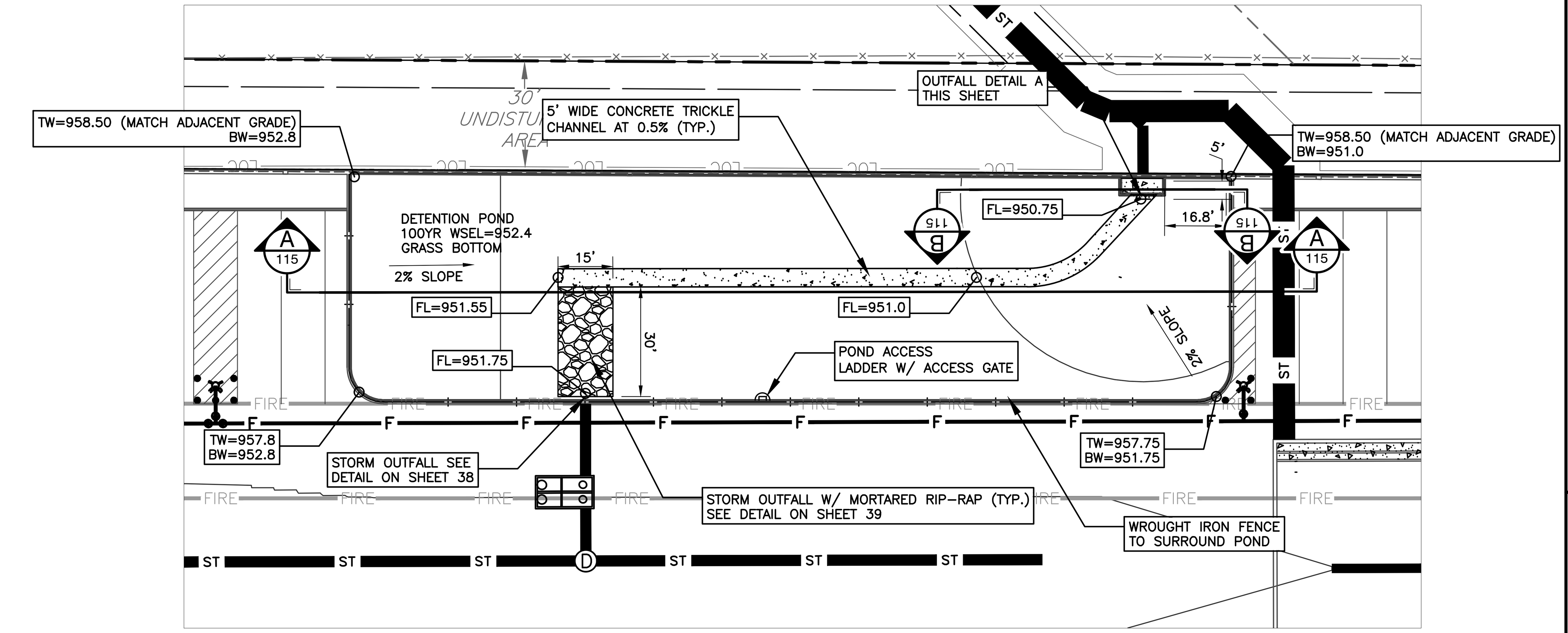
DRAWING NO.: 114

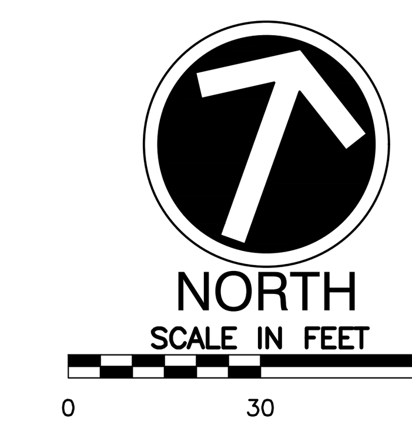
SHEET 114 OF 175

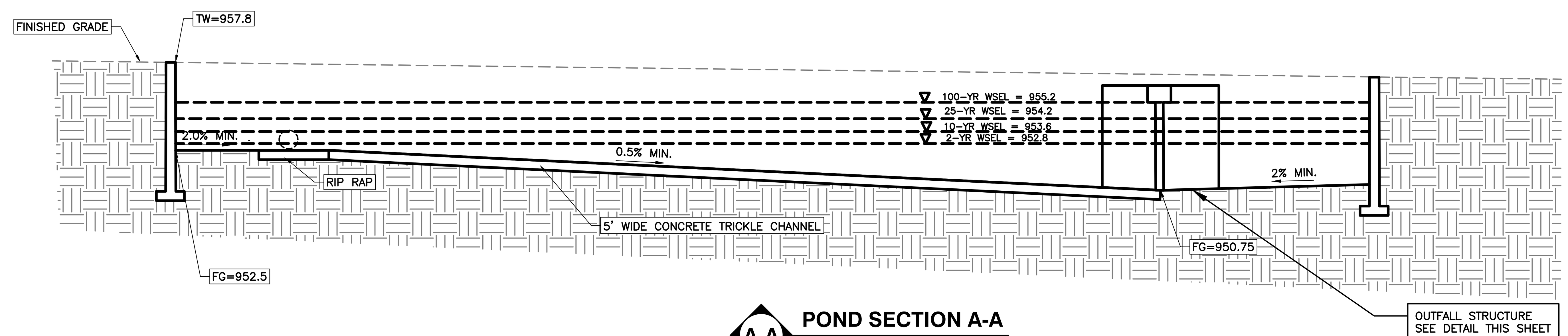
2023-23-SD

NFM North (Pond D) Detention Pond Stage Values					
Stage	Area (sf)	Area (ac)	Volume (cf)	Cum. Volume (cf)	Ac-ft
950.75	0	0.000000	0 cf	0 cf	0.0000
951.00	3,368	0.077319	421	421	0.0097
952.00	14,192	0.325803	8,780	9,201	0.2112
953.00	14,192	0.325803	14,192	23,393	0.5370
954.00	14,192	0.325803	14,192	37,585	0.8628
955.00	14,192	0.325803	14,192	51,777	1.1886
956.00	14,192	0.325803	14,192	65,969	1.5144
957.00	14,192	0.325803	14,192	80,161	1.8402

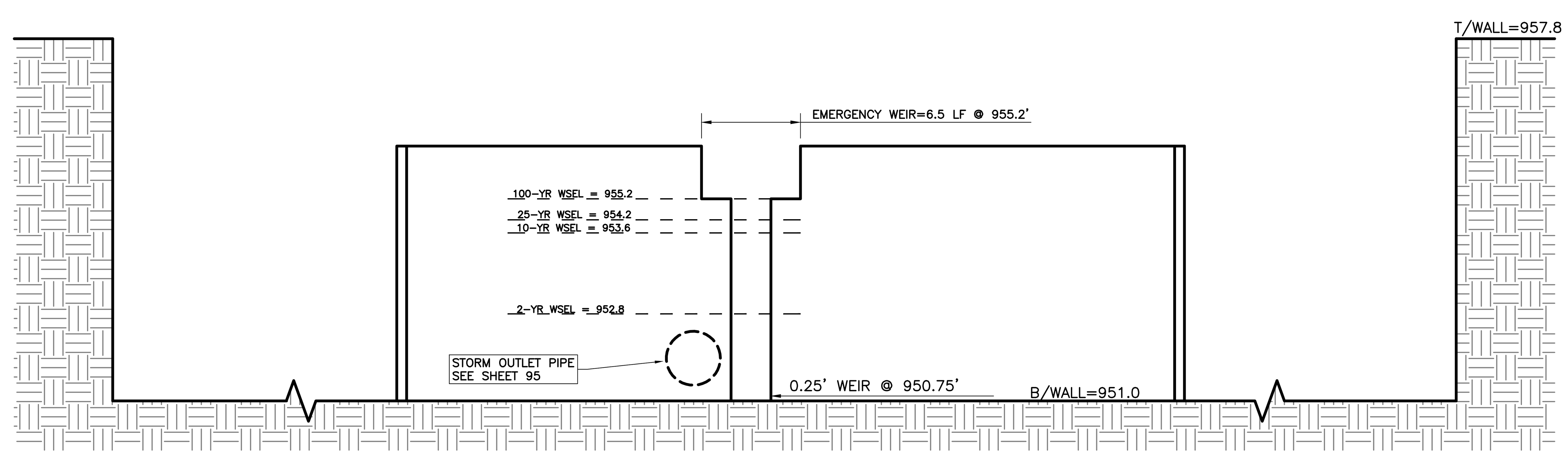
EMERGENCY WEIR LENGTH CALC.	
weir equation: $q = 3.33\,(b - 0.2\,h)\,h^{3/2}$	
Q (100-yr storm) =	39.40 cfs
max Q over weir	49.38 cfs
b = length of weir	6.50 ft.
h = head abv. Weir	1.80 ft.







A-A **POND SECTION A-A**
N.T.S.



B-B **POND OUTFALL SECTION B-B**
N.T.S.

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

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Texas Registered Engineering Firm F-38
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NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

POND D PLAN

DATE:	4/25/2024	DRAWN BY:	QU
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:	331-715		
APPROVED BY:	MT		

DRAWING NO.: 115
SHEET 115 OF 175

2023-23-SD

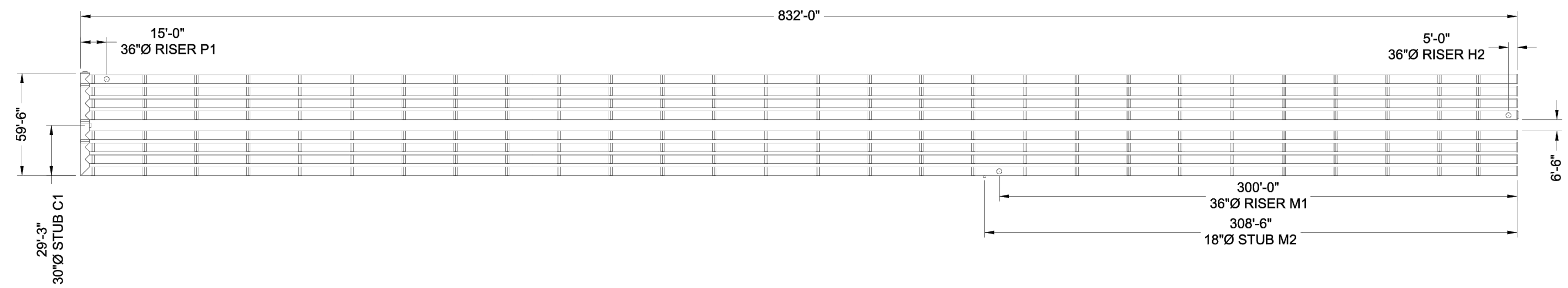
PROJECT SUMMARY

CALCULATION DETAILS
- LOADING = HS20/HS25
- APPROX. LINEAR FOOTAGE = 6,676 LF

STORAGE SUMMARY
- STORAGE VOLUME REQUIRED = 131,000 CF
- PIPE STORAGE VOLUME = 131,073 CF
- BACKFILL STORAGE VOLUME = 0 CF
- TOTAL STORAGE PROVIDED = 131,073 CF

PIPE DETAILS
- DIAMETER = 60"
- CORRUGATION = 5x1
- GAGE = 16
- COATING = ALT2
- WALL TYPE = SOLID
- BARREL SPACING = 24"

BACKFILL DETAILS
- WIDTH AT ENDS = 12"
- ABOVE PIPE = 0"
- WIDTH AT SIDES = 12"
- BELOW PIPE = 0"



ASSEMBLY
SCALE: 1" = 80'

NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE $2\frac{2}{3}$" x $\frac{1}{2}$" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

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DATE	REVISION DESCRIPTION	BY

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH® CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO43527 Nebraska Furniture Mart Cedar Park
60" Solid Underground Detention System
Cedar Park, TX
DETENTION SYSTEM

PROJECT No.: 29925	SEQ. No.: 43527	DATE: 1/10/2024
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

POND DETAILS 1

DATE: 4/25/2024	DRAWN BY: QU		
DWG SCALE: NTS	CHECKED BY: SRB		
PROJECT NO: 331-715	APPROVED BY: MT		

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

811

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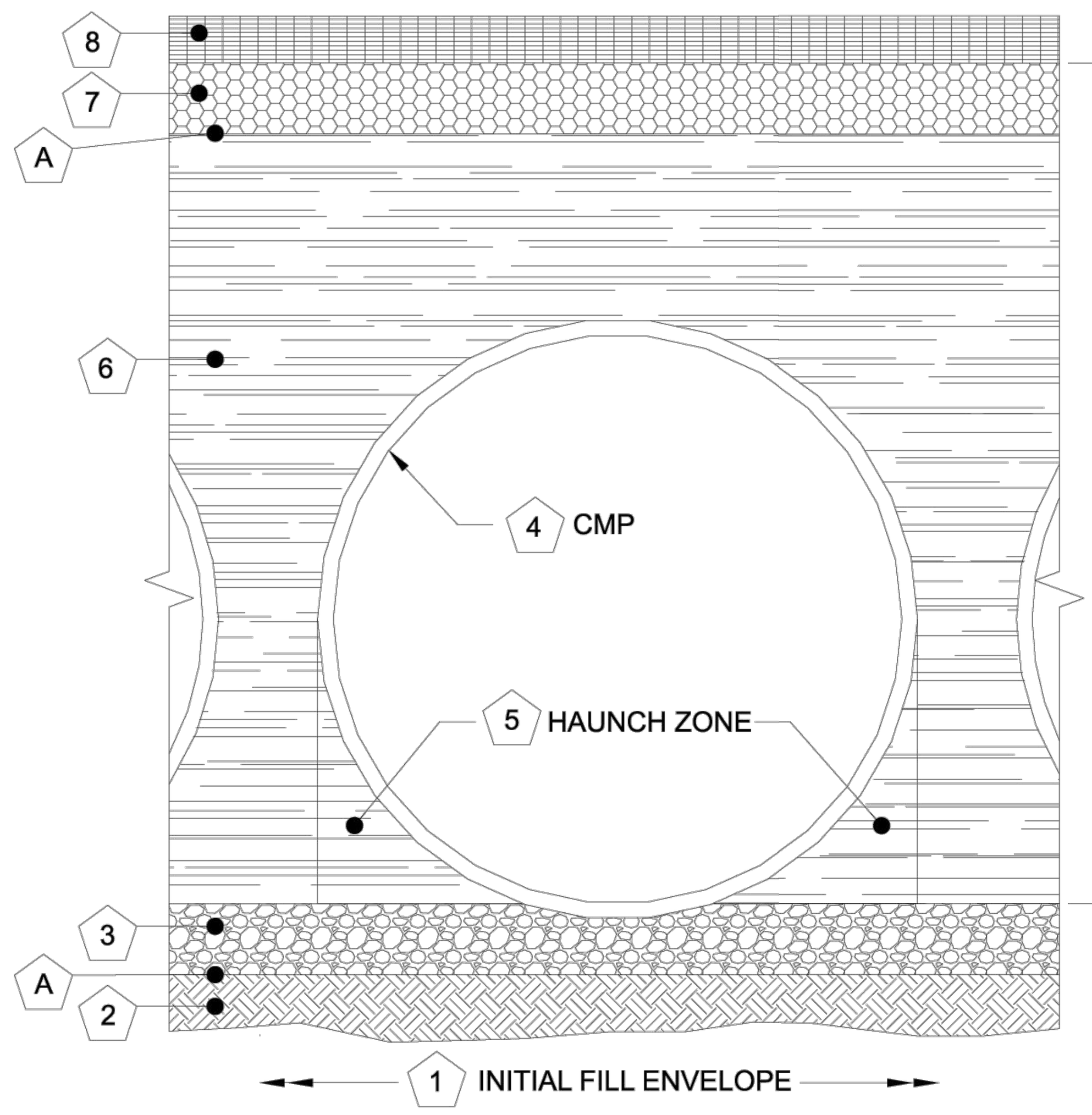
DRAWING NO.: 116

2023-23-SD



DETENTION SYSTEMS - CMP DETENTION / CMP DRAINAGE

	Material Location	Description	Material Designation	Designation
8	Rigid or Flexible Pavement (if applicable)			
7	Road Base (if applicable)			
A	Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types
6	Backfill	Well graded granular material which may contain small amounts of silt or clay.	AASHTO M 145- A-1, A-2, A-3	Placed in 8" +/- loose lifts and compacted to 90% Standard Proctor Per AASHTO T 99
3	Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	Engineer to determine if bedding is required. Pipe may be placed on the trench bottom of a relatively loose, native suitable well graded & granular material. For Arch pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Unsuitable material should be over-excavated and re-placed with a 4"-6" layer of well graded & granular stone per the material designation. See AASHTO 26.3.8.1 / 26.5.3 Bedding info.
A	Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types
*	*Note: Backfill using controlled low-strength material (CLSM, "flash fill" or "flowable fill") when the spacing between the pipes will not allow for placement and adequate compaction of the backfill.*			

1. MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT

FOUNDATION/BEDDING PREPARATION

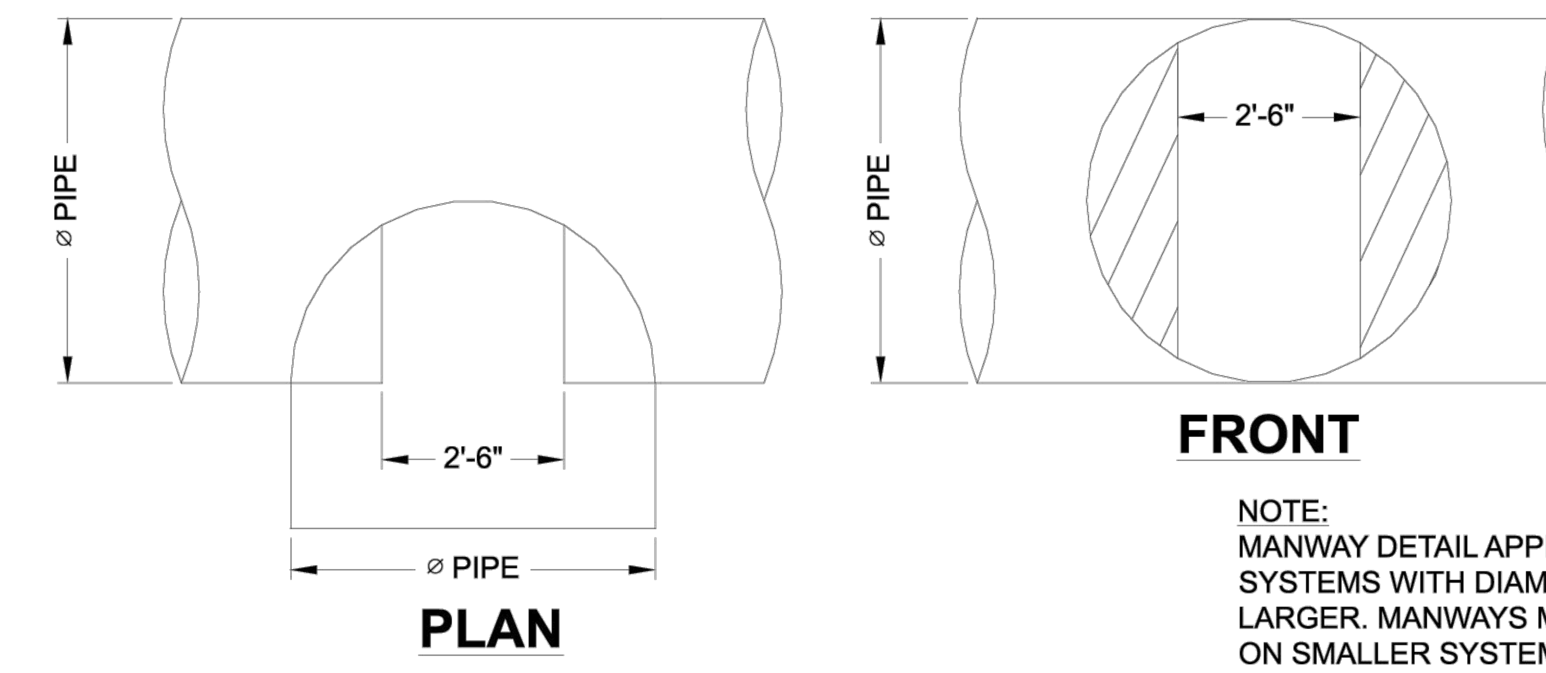
2. PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.

5. HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMALLY COMPACTED WITHOUT SOFT SPOTS.

BACKFILL

WHEN PLACING THE FIRST LIFTS OF BACKFILL IT IS IMPORTANT TO MAKE SURE THAT THE BACKFILL IS PROPERLY COMPACTED UNDER AND AROUND THE PIPE HAUNCHES. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO LIFT (16") DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. THE BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE DETENTION SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON THE PIPE.

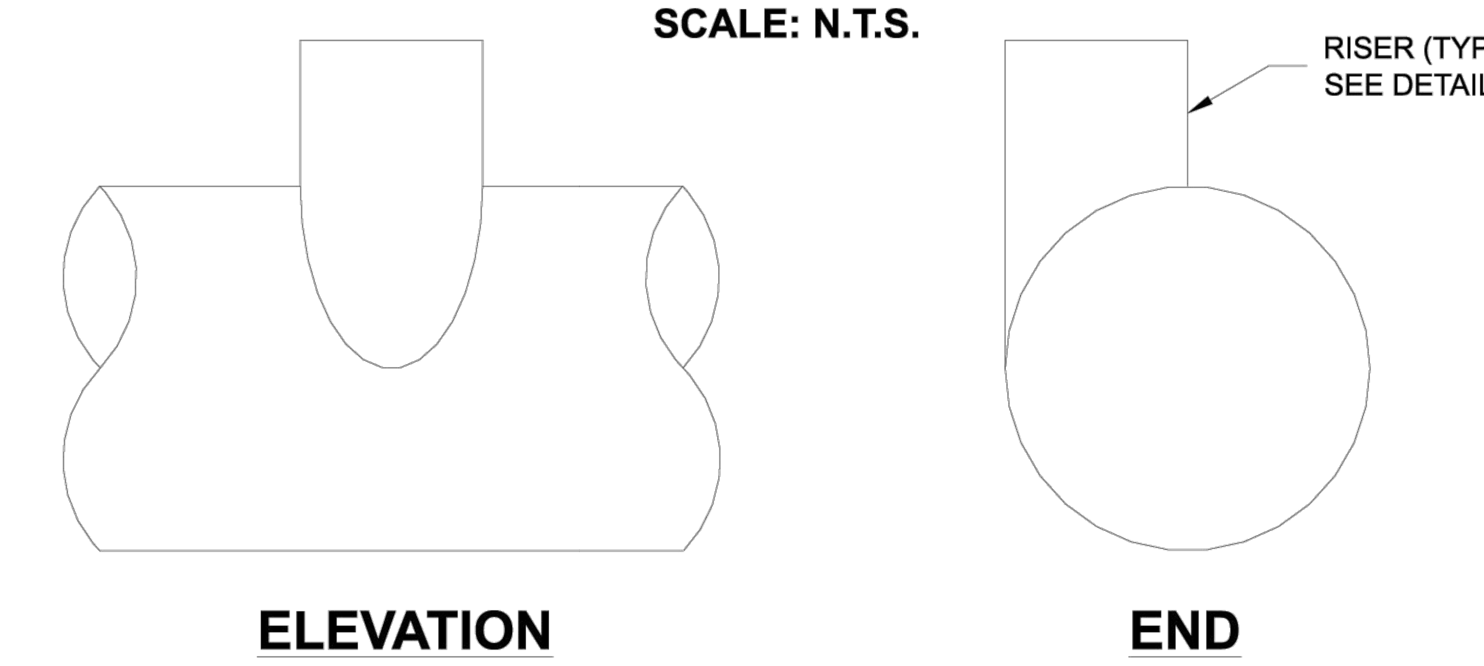
OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS, AS APPROVED BY SITE ENGINEER.



NOTE:
MANWAY DETAIL APPLICABLE FOR CMP SYSTEMS WITH DIAMETERS 48" AND LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.

TYPICAL MANWAY DETAIL

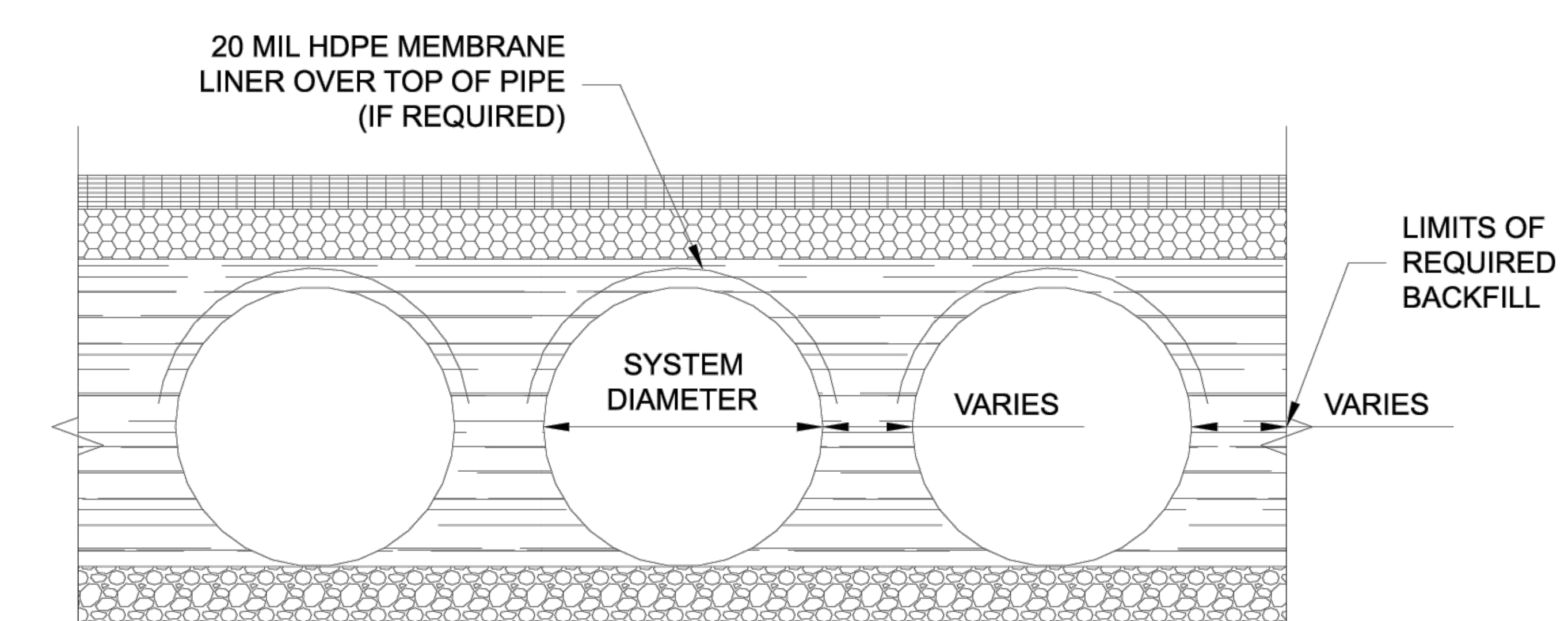
SCALE: N.T.S.



TYPICAL RISER DETAIL

SCALE: N.T.S.

NOTE:
LADDERS ARE OPTIONAL AND ARE NOT REQUIRED FOR ALL SYSTEMS.



TYPICAL SECTION VIEW

LINER OVER ROWS
SCALE: N.T.S.

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, AN HDPE MEMBRANE LINER IS RECOMMENDED WITH THE SYSTEM. THE IMPERMEABLE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

C:\EXPORTS\TEMPLATES\CMP_V8.DWG 10/16/2019 10:02 AM

DATE	REVISION DESCRIPTION	BY

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO38329 Hope City Church
42" diameter solid CMP - 9-21-23
Houston, TX
DETENTION SYSTEM

PROJECT No.: 25235	SEQ. No.: 38329	DATE: 9/21/2023
DESIGNED: DYO		DRAWN: DYO
CHECKED: DYO		APPROVED: DYO
SHEET NO.: 1		

REVISION RECORD

NO	DATE	DESCRIPTION

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www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

POND DETAILS 2

DATE: 4/25/2024	DRAWN BY: QU
DWG SCALE: NTS	CHECKED BY: SRB
PROJECT NO: 331-715	APPROVED BY: MT

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

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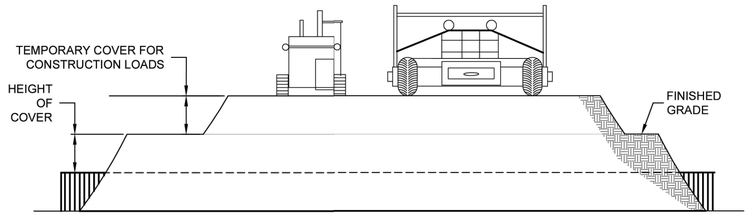
DRAWING NO.: 117
SHEET 117 OF 175

2023-23-SD

\\cecinc.com\global\Projects\330-000\331-715\-CADD\Dwg\CIVIL\331715C401-C405-POND PLAN.dwg[POND DETAILS 2] LS:(4/29/2024 - tkincade) - LP: 4/30/2024 12:12 PM



CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIAL
THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929.

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

NOTE:
THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

PIPE
THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

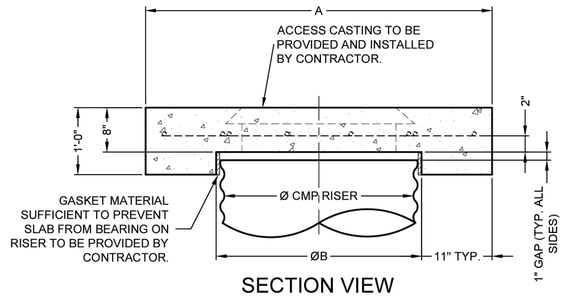
POLYMER COATED: AASHTO M-245 OR ASTM A-762

ALUMINUM: AASHTO M-196 OR ASTM B-745

HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.

INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

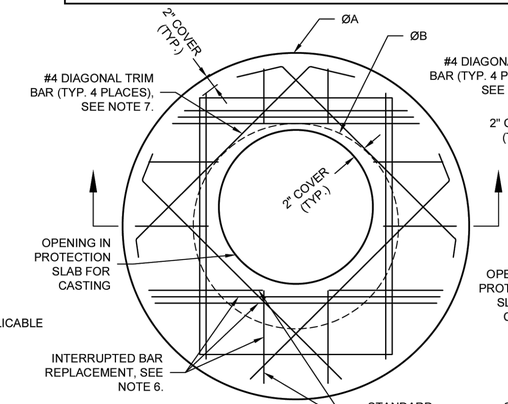


SECTION VIEW

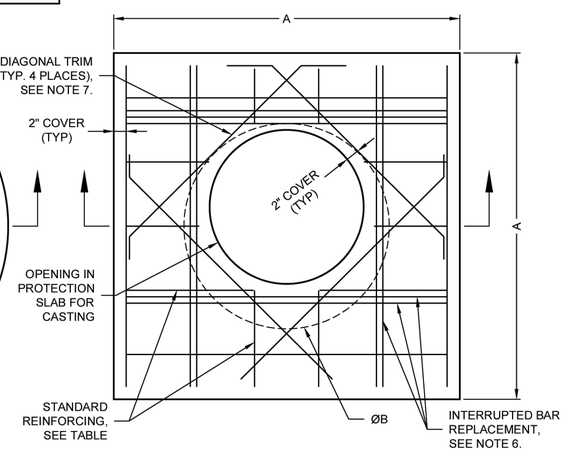
ACCESS CASTING SUPPLIED BY CONTECH IN SELECT MARKETS UNDER SEPARATE SUBMITTAL

REINFORCING TABLE				
Ø CMP RISER	A	Ø B	REINFORCING	**BEARING PRESSURE (PSF)
24"	Ø 4' 4'X4'	26"	#5 @ 12" OCEW #5 @ 12" OCEW	2,410 1,780
30"	Ø 4'-6" 4'-6" X 4'-6"	32"	#5 @ 12" OCEW #5 @ 12" OCEW	2,120 1,530
36"	Ø 5' 5' X 5'	38"	#5 @ 10" OCEW #5 @ 10" OCEW	1,890 1,350
42"	Ø 5'-6" 5'-6" X 5'-6"	44"	#5 @ 10" OCEW #5 @ 9" OCEW	1,720 1,210
48"	Ø 6' 6' X 6'	50"	#5 @ 9" OCEW #5 @ 8" OCEW	1,600 1,100

** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

MANHOLE CAP DETAIL

SCALE: N.T.S.

DATE	REVISION DESCRIPTION	BY

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

XFILTRATION RETENTION SYSTEM DETAILS

PROJECT No.:	SEQ. No.:	DATE:	
DESIGNED: DYO	DRAWN: DYO		
CHECKED: DYO	APPROVED: DYO		
SHEET NO.:			

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED PROFESSIONAL ENGINEER

!!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

POND DETAILS 3

DATE:	4/25/2024	DRAWN BY:	QU
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:		APPROVED BY:	331-715 MT

DRAWING NO.: 118

SHEET 118 OF 175

2023-23-SD

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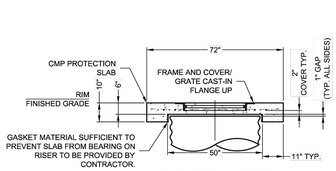
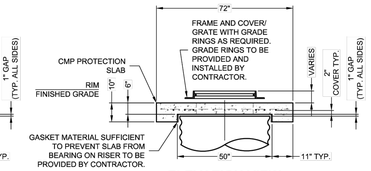
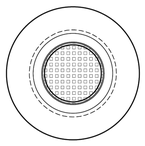
\\ cecinc.com \ global \ Projects \ 330-000 \ 331 - 715 \ - CAD \ Dwg \ CIVIL \ 331715CIVD1 - CADD - POND PLAN.dwg(POND DETAILS 3) LS(4/29/2024 - Released) - LP: 4/30/2024 12:12 PM



ELEVATION VIEW
(FLUSH MOUNTED)



ELEVATION VIEW



PLAN VIEW
(GRATED CASTING)
30"Ø HS25 LOAD RATED

PLAN VIEW
(SOLID CASTING)
24"Ø HS25 LOAD RATED
30"Ø HS25 LOAD RATED

FABRICATION NOTES:

1. CONCRETE STRENGTH = 4,000 psi
2. REINFORCING STEEL - ASTM A615, GRADE 60, OR EQUIVALENT WELDED WIRE FABRIC.
3. NICE LIGHT BROOM FINISH FOR UNITS W/ CAST-IN FRAME AND COVER
4. LIFTERS IN SIDE FOR UNITS W/ CAST-IN FRAME AND COVER AND LIFTERS IN TOP SLAB FOR UNITS W/ SEPARATE COVER

GENERAL NOTES:

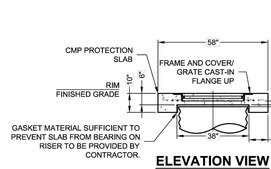
1. DESIGN LOAD HS20/HS25
2. EARTH COVER = 1' MAX
3. RISER CAP MUST BE ADEQUATELY SUPPORTED WITH PROPER BEDDING AND BEARING PRESSURE OF 3110 PSF AS TO NOT TRANSFER LOADS ONTO RISER.
4. HEAVY PICK WEIGHT = 2,900 LBS

CONTECH
ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

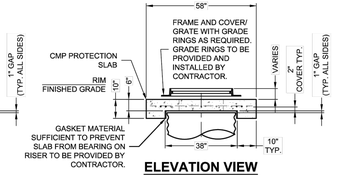
72" OD CMP RISER CAP
UP TO 48" RISERS
PRECASTER: SEALY, TX

CONTECH CMP DETENTION SYSTEMS

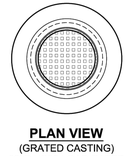
DATE: 04/07/2021	SCALE: NONE	PROJECT No.:	SEQUENCE No.:	DRAWN: TJS	CHECKED: KMR



ELEVATION VIEW
(FLUSH MOUNTED)



ELEVATION VIEW



PLAN VIEW
(GRATED CASTING)
30"Ø HS25 LOAD RATED

PLAN VIEW
(SOLID CASTING)
24"Ø HS25 LOAD RATED
30"Ø HS25 LOAD RATED

FABRICATION NOTES:

1. CONCRETE STRENGTH = 4,000 PSI
2. REINFORCING STEEL - ASTM A615, GRADE 60, OR EQUIVALENT WELDED WIRE FABRIC.
3. NICE LIGHT BROOM FINISH FOR UNITS W/ CAST-IN FRAME AND COVER
4. LIFTERS IN SIDE FOR UNITS W/ CAST-IN FRAME AND COVER AND LIFTERS IN TOP SLAB FOR UNITS W/ SEPARATE COVER

GENERAL NOTES:

1. DESIGN LOAD HS20/HS25
2. EARTH COVER = 1' MAX
3. RISER CAP MUST BE ADEQUATELY SUPPORTED WITH PROPER BEDDING AND BEARING PRESSURE OF 3350 PSF AS TO NOT TRANSFER LOADS ONTO RISER.
4. HEAVY PICK WEIGHT = 1,900 LBS

CONTECH
ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

58" OD CMP RISER CAP
UP TO 36" RISERS
PRECASTER: SEALY, TX

CONTECH CMP DETENTION SYSTEMS

DATE: 04/07/2021	SCALE: NONE	PROJECT No.:	SEQUENCE No.:	DRAWN: TJS	CHECKED: KMR

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

POND DETAILS 4

DATE:	4/25/2024	DRAWN BY:	QU
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:			331-715
APPROVED BY:			MT

DRAWING NO.: **119**

SHEET 119 OF 175

STATE OF TEXAS
MICHAEL A. THEONE
142972
LICENSED
PROFESSIONAL ENGINEER

811 !!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

2023-23-SD

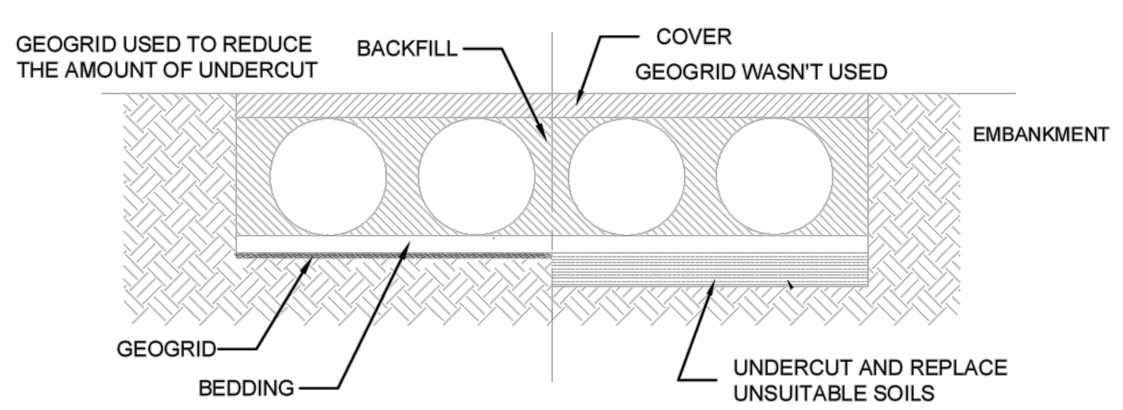
CMP DETENTION INSTALLATION GUIDE

PROPER INSTALLATION OF A FLEXIBLE UNDERGROUND DETENTION SYSTEM WILL ENSURE LONG-TERM PERFORMANCE. THE CONFIGURATION OF THESE SYSTEMS OFTEN REQUIRES SPECIAL CONSTRUCTION PRACTICES THAT DIFFER FROM CONVENTIONAL FLEXIBLE PIPE CONSTRUCTION. CONTECH ENGINEERED SOLUTIONS STRONGLY SUGGESTS SCHEDULING A PRE-CONSTRUCTION MEETING WITH YOUR LOCAL SALES ENGINEER TO DETERMINE IF ADDITIONAL MEASURES, NOT COVERED IN THIS GUIDE, ARE APPROPRIATE FOR YOUR SITE.

FOUNDATION

CONSTRUCT A FOUNDATION THAT CAN SUPPORT THE DESIGN LOADING APPLIED BY THE PIPE AND ADJACENT BACKFILL WEIGHT AS WELL AS MAINTAIN ITS INTEGRITY DURING CONSTRUCTION.

IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED, REMOVE THE POOR SOILS DOWN TO A SUITABLE DEPTH AND THEN BUILD UP TO THE APPROPRIATE ELEVATION WITH A COMPETENT BACKFILL MATERIAL. THE STRUCTURAL FILL MATERIAL GRADATION SHOULD NOT ALLOW THE MIGRATION OF FINES, WHICH CAN CAUSE SETTLEMENT OF THE DETENTION SYSTEM OR PAVEMENT ABOVE. IF THE STRUCTURAL FILL MATERIAL IS NOT COMPATIBLE WITH THE UNDERLYING SOILS AN ENGINEERING FABRIC SHOULD BE USED AS A SEPARATOR. IN SOME CASES, USING A STIFF REINFORCING GEOGRID REDUCES OVER EXCAVATION AND REPLACEMENT FILL QUANTITIES.

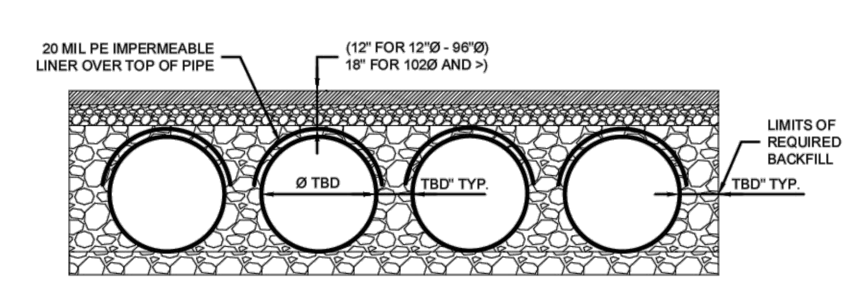


GRADE THE FOUNDATION SUBGRADE TO A UNIFORM OR SLIGHTLY SLOPING GRADE. IF THE SUBGRADE IS CLAY OR RELATIVELY NON-POROUS AND THE CONSTRUCTION SEQUENCE WILL LAST FOR AN EXTENDED PERIOD OF TIME, IT IS BEST TO SLOPE THE GRADE TO ONE END OF THE SYSTEM. THIS WILL ALLOW EXCESS WATER TO DRAIN QUICKLY, PREVENTING SATURATION OF THE SUBGRADE.

GEOMEMBRANE BARRIER

A SITE'S RESISTIVITY MAY CHANGE OVER TIME WHEN VARIOUS TYPES OF SALTING AGENTS ARE USED, SUCH AS ROAD SALTS FOR DEICING AGENTS. IF SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM THE USE OF SUCH AGENTS INCLUDING PREMATURE CORROSION AND REDUCED ACTUAL SERVICE LIFE.

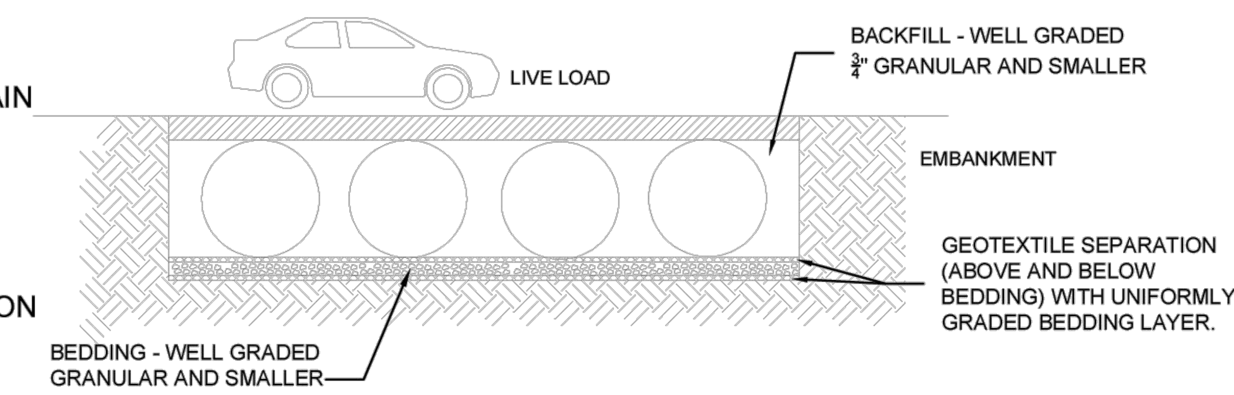
THE PROJECT'S ENGINEER OF RECORD IS TO EVALUATE WHETHER SALTING AGENTS WILL BE USED ON OR NEAR THE PROJECT SITE, AND USE HIS/HER BEST JUDGEMENT TO DETERMINE IF ANY ADDITIONAL PROTECTIVE MEASURES ARE REQUIRED. BELOW IS A TYPICAL DETAIL SHOWING THE PLACEMENT OF A GEOMEMBRANE BARRIER FOR PROJECTS WHERE SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE.



IN-SITU TRENCH WALL

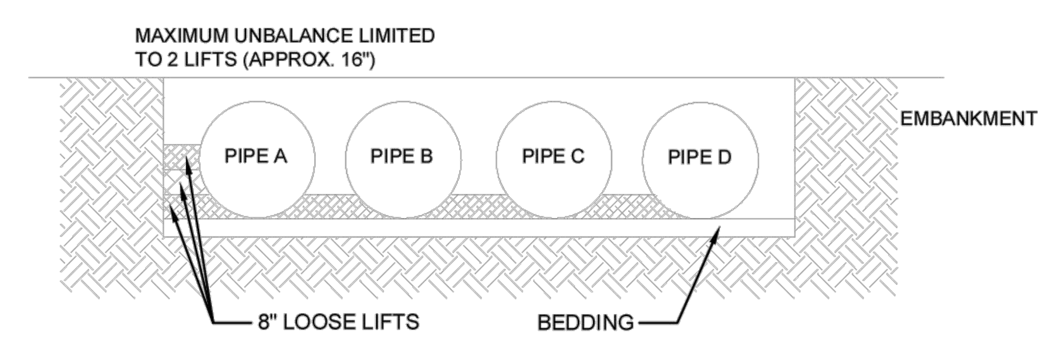
IF EXCAVATION IS REQUIRED, THE TRENCH WALL NEEDS TO BE CAPABLE OF SUPPORTING THE LOAD THAT THE PIPE SHEDS AS THE SYSTEM IS LOADED. IF SOILS ARE NOT CAPABLE OF SUPPORTING THESE LOADS, THE PIPE CAN DEFLECT. PERFORM A SIMPLE SOIL PRESSURE CHECK USING THE APPLIED LOADS TO DETERMINE THE LIMITS OF EXCAVATION BEYOND THE SPRING LINE OF THE OUTER MOST PIPES.

IN MOST CASES THE REQUIREMENTS FOR A SAFE WORK ENVIRONMENT AND PROPER BACKFILL PLACEMENT AND COMPACTION TAKE CARE OF THIS CONCERN.



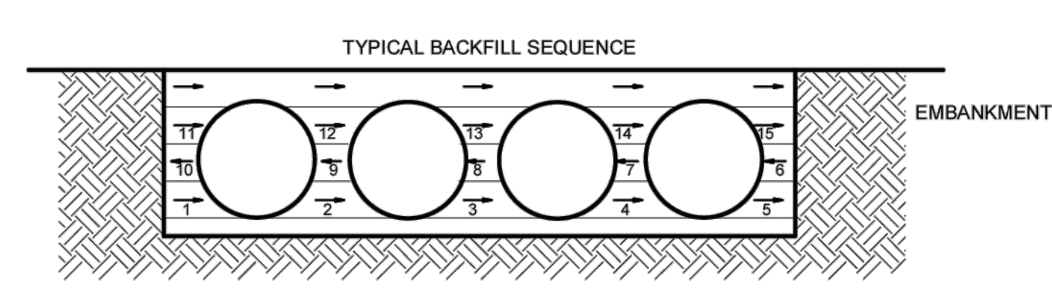
BACKFILL PLACEMENT

MATERIAL SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL-SLICING, RODDING, AIR TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS.

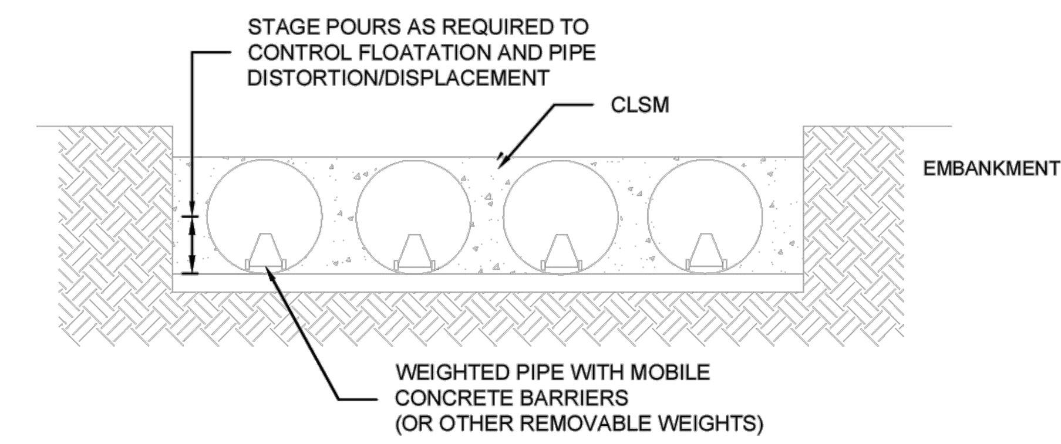


IF AASHTO T99 PROCEDURES ARE DETERMINED INFEASIBLE BY THE GEOTECHNICAL ENGINEER OF RECORD, COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE GEOTECHNICAL ENGINEER OF RECORD (OR REPRESENTATIVE THEREOF) IS SATISFIED WITH THE LEVEL OF COMPACTION.

FOR LARGE SYSTEMS, CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHES OR DRAGLINES WITH STONE BUCKETS MAY BE USED TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED DETENTION SYSTEM SHOULD BE LIMITED TO 8- TO 10-FEET HIGH AND MUST PROVIDE BALANCED LOADING ACROSS ALL BARRELS. TO DETERMINE THE PROPER COVER OVER THE PIPES TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT SEE TABLE 1, OR CONTACT YOUR LOCAL CONTECH SALES ENGINEER.



WHEN FLOWABLE FILL IS USED, YOU MUST PREVENT PIPE FLOATATION. TYPICALLY, SMALL LIFTS ARE PLACED BETWEEN THE PIPES AND THEN ALLOWED TO SET-UP PRIOR TO THE PLACEMENT OF THE NEXT LIFT. THE ALLOWABLE THICKNESS OF THE CLSM LIFT IS A FUNCTION OF A PROPER BALANCE BETWEEN THE UPLIFT FORCE OF THE CLSM, THE OPPOSING WEIGHT OF THE PIPE, AND THE EFFECT OF OTHER RESTRAINING MEASURES. THE PIPE CAN CARRY LIMITED FLUID PRESSURE WITHOUT PIPE DISTORTION OR DISPLACEMENT, WHICH ALSO AFFECTS THE CLSM LIFT THICKNESS. YOUR LOCAL CONTECH SALES ENGINEER CAN HELP DETERMINE THE PROPER LIFT THICKNESS.

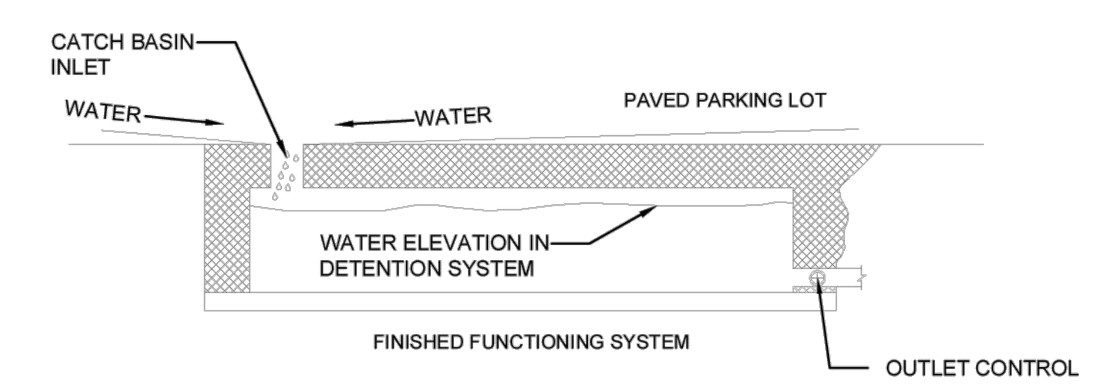


CONSTRUCTION LOADING

TYPICALLY, THE MINIMUM COVER SPECIFIED FOR A PROJECT ASSUMES H-20 LIVE LOAD. BECAUSE CONSTRUCTION LOADS OFTEN EXCEED DESIGN LIVE LOADS, INCREASED TEMPORARY MINIMUM COVER REQUIREMENTS ARE NECESSARY. SINCE CONSTRUCTION EQUIPMENT VARIES FROM JOB TO JOB, IT IS BEST TO ADDRESS EQUIPMENT SPECIFIC MINIMUM COVER REQUIREMENTS WITH YOUR LOCAL CONTECH SALES ENGINEER DURING YOUR PRE-CONSTRUCTION MEETING.

ADDITIONAL CONSIDERATIONS

BECAUSE MOST SYSTEMS ARE CONSTRUCTED BELOW-GRADE, RAINFALL CAN RAPIDLY FILL THE EXCAVATION; POTENTIALLY CAUSING FLOATATION AND MOVEMENT OF THE PREVIOUSLY PLACED PIPES. TO HELP MITIGATE POTENTIAL PROBLEMS, IT IS BEST TO START THE INSTALLATION AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR THE WATER TO ESCAPE. TEMPORARY DIVERSION MEASURES MAY BE REQUIRED FOR HIGH FLOWS DUE TO THE RESTRICTED NATURE OF THE OUTLET PIPE.



CMP DETENTION SYSTEM INSPECTION AND MAINTENANCE

UNDERGROUND STORMWATER DETENTION AND INFILTRATION SYSTEMS MUST BE INSPECTED AND MAINTAINED AT REGULAR INTERVALS FOR PURPOSES OF PERFORMANCE AND LONGEVITY.

INSPECTION

INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE OF CMP DETENTION SYSTEMS AND IS EASILY PERFORMED. CONTECH RECOMMENDS ONGOING, ANNUAL INSPECTIONS. SITES WITH HIGH TRASH LOAD OR SMALL OUTLET CONTROL ORIFICES MAY NEED MORE FREQUENT INSPECTIONS. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEPEND MORE ON SITE SPECIFIC ACTIVITIES RATHER THAN THE SIZE OR CONFIGURATION OF THE SYSTEM.

INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN EQUIPMENT WASHDOWN AREAS, IN CLIMATES WHERE SANDING AND/OR SALTING OPERATIONS TAKE PLACE, AND IN OTHER VARIOUS INSTANCES IN WHICH ONE WOULD EXPECT HIGHER ACCUMULATIONS OF SEDIMENT OR ABRASIVE/ CORROSIVE CONDITIONS. A RECORD OF EACH INSPECTION IS TO BE MAINTAINED FOR THE LIFE OF THE SYSTEM

MAINTENANCE

CMP DETENTION SYSTEMS SHOULD BE CLEANED WHEN AN INSPECTION REVEALS ACCUMULATED SEDIMENT OR TRASH IS CLOGGING THE DISCHARGE ORIFICE.

ACCUMULATED SEDIMENT AND TRASH CAN TYPICALLY BE EVACUATED THROUGH THE MANHOLE OVER THE OUTLET ORIFICE. IF MAINTENANCE IS NOT PERFORMED AS RECOMMENDED, SEDIMENT AND TRASH MAY ACCUMULATE IN FRONT OF THE OUTLET ORIFICE. MANHOLE COVERS SHOULD BE SECURELY SEATED FOLLOWING CLEANING ACTIVITIES. CONTECH SUGGESTS THAT ALL SYSTEMS BE DESIGNED WITH AN ACCESS/INSPECTION MANHOLE SITUATED AT OR NEAR THE INLET AND THE OUTLET ORIFICE. SHOULD IT BE NECESSARY TO GET INSIDE THE SYSTEM TO PERFORM MAINTENANCE ACTIVITIES, ALL APPROPRIATE PRECAUTIONS REGARDING CONFINED SPACE ENTRY AND OSHA REGULATIONS SHOULD BE FOLLOWED.

ANNUAL INSPECTIONS ARE BEST PRACTICE FOR ALL UNDERGROUND SYSTEMS. DURING THIS INSPECTION, IF EVIDENCE OF SALTING/DE-ICING AGENTS IS OBSERVED WITHIN THE SYSTEM, IT IS BEST PRACTICE FOR THE SYSTEM TO BE RINSED, INCLUDING ABOVE THE SPRING LINE SOON AFTER THE SPRING THAW AS PART OF THE MAINTENANCE PROGRAM FOR THE SYSTEM.

MAINTAINING AN UNDERGROUND DETENTION OR INFILTRATION SYSTEM IS EASIEST WHEN THERE IS NO FLOW ENTERING THE SYSTEM. FOR THIS REASON, IT IS A GOOD IDEA TO SCHEDULE THE CLEANOUT DURING DRY WEATHER.

THE FOREGOING INSPECTION AND MAINTENANCE EFFORTS HELP ENSURE UNDERGROUND PIPE SYSTEMS USED FOR STORMWATER STORAGE CONTINUE TO FUNCTION AS INTENDED BY IDENTIFYING RECOMMENDED REGULAR INSPECTION AND MAINTENANCE PRACTICES. INSPECTION AND MAINTENANCE RELATED TO THE STRUCTURAL INTEGRITY OF THE PIPE OR THE SOUNDNESS OF PIPE JOINT CONNECTIONS IS BEYOND THE SCOPE OF THIS GUIDE.

DATE	REVISION DESCRIPTION	BY

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
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CONTECH CMP DETENTION SYSTEMS
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XFILTRATION RETENTION SYSTEM DETAILS

PROJECT No.:	SEQ. No.:	DATE:
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.:		

C:\USERS\KIMBERLY.RICHON\DRIVE - THE QUIKRETE COMPANIES\DESKTOP\XFILTRATION - 17857 (6-8-2022 15-15-26).DWG 6/9/2022 1:09 PM

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
Texas Registered Engineering Firm F-38
1221 South MoPac Expressway · Suite 350 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
www.cecinc.com

NFM CEDARVIEW
SITE DEVELOPMENT PLANS
750 E NEW HOPE DR
CITY OF CEDAR PARK
WILLIAMSON COUNTY

POND DETAILS 5

DATE:	4/25/2024	DRAWN BY:	QU
DWG SCALE:	NTS	CHECKED BY:	SRB
PROJECT NO:	331-715	APPROVED BY:	MAT

STATE OF TEXAS · MICHAEL A. THEONE · 142972 · LICENSED PROFESSIONAL ENGINEER

811 !!! CAUTION !!! !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

DRAWING NO.: 120
SHEET 120 OF 175

2023-23-SD

\\cecinc.com\global\Projects\330-000\331-715\-CADD\Dwg\CIVIL\331715CV01-C400-POND PLAN.dwg(POND DETAILS 5) LS:(4/29/2024 - hlincoln) - LP: 4/30/2024 12:12 PM