

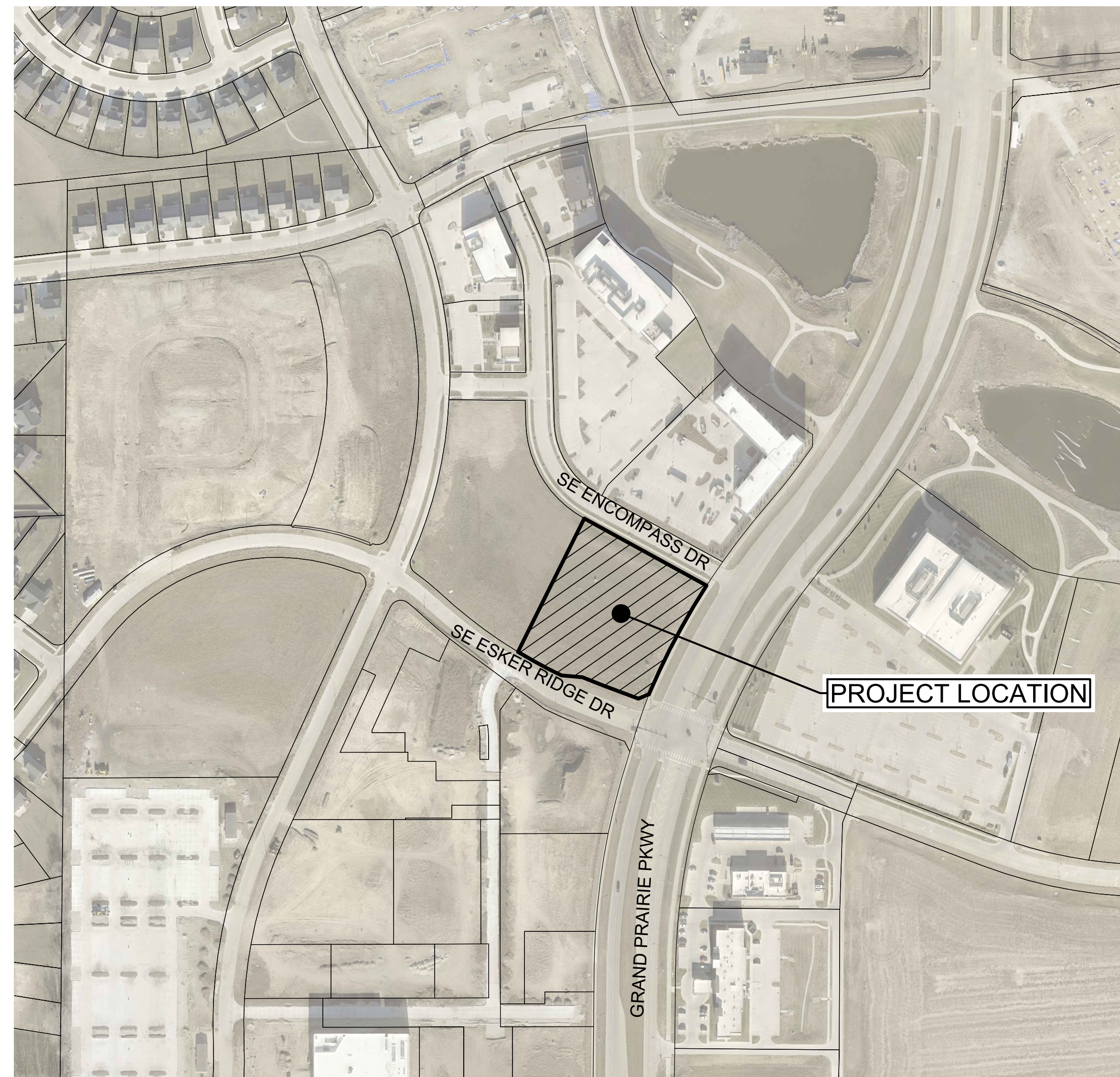
# SITE PLAN FOR KETTLESTONE COMMUNITY CHOICE CREDIT UNION

2780 GRAND PRAIRIE PARKWAY  
CITY OF WAUKEE, DALLAS COUNTY, IOWA

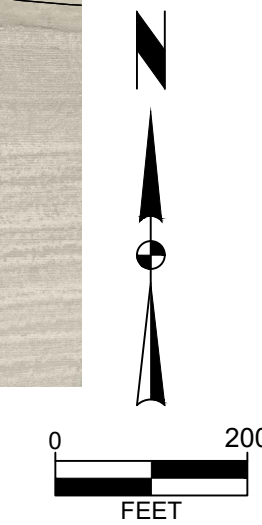
**OWNER**  
COMMUNITY CHOICE CREDIT UNION  
6163 NW 86TH ST. STE 105  
JOHNSTON, IA 50131

**ARCHITECT**  
J CORP DESIGN BUILD  
3611 NE OTTERVIEW CIRCLE #42  
ANKENY, IOWA 50021  
CONTACT: NICK JENSEN  
PHONE: (515) 290-3401

**ENGINEER**  
SNYDER & ASSOCIATES  
2727 SW SNYDER BLVD.  
ANKENY, IOWA 50023  
CONTACT: ERIC CANNON, P.E.  
PHONE: (515) 964-2020

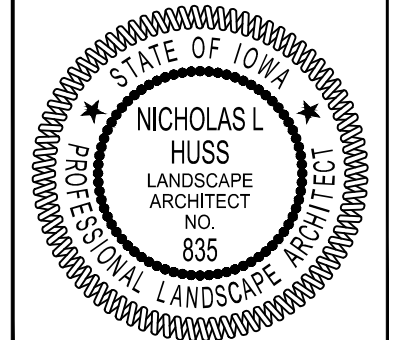


VICINITY MAP



**Sheet List Table**


C100	TITLE SHEET
C101	PROJECT INFORMATION
C200	DIMENSION PLAN
C300	UTILITY PLAN
C400	EROSION CONTROL PLAN
C401	DETAILED GRADING PLAN
C402	RAMP DETAILS
C500	PLANTING PLAN
C600	SITE DETAILS
C601	SITE DETAILS



I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly licensed Professional Landscape Architect under the laws of the State of Iowa.

Nicholas L. Huss, PLA \_\_\_\_\_ Date  
License Number 835

Pages or sheets covered by this seal:  
C500



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Eric D. Cannon, P.E. \_\_\_\_\_ Date  
License Number P18954  
My License Renewal Date is December 31, 2025

Pages or sheets covered by this seal:  
C100-C401, C600-C601

	REVISED PER CITY COMMENTS	08-19-25	LJM	LJM	BY
2	REVISED PER CITY COMMENTS	08-07-25	LJM		
1	MARK	REVISION	DATE		
	Engineer: KMM	Checked By: EDC	Scale: 1" = 200'		
	Technician: LJM	Date: 07-22-2025	T-R-S: TTN-RRW-SS		
Project No: 124.0115.01					Sheet C100


**KETTLESTONE COMMUNITY CHOICE CREDIT UNION**

**WAUKEE, IOWA**

**TITLE SHEET**

**SNYDER & ASSOCIATES, INC. I**

2727 SW SNYDER BLVD  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com



**SNYDER & ASSOCIATES**

Project No: 124.0115.01

Sheet C100

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LEGEND

Table with 2 columns: FEATURES and SET. Lists various survey markers and their corresponding symbols.

Table with 3 columns: FEATURES, EXISTING, and PROPOSED. Shows symbols for various utility lines and structures.

(\*) Denotes the survey quality service level for utilities

Table with 2 columns: Sanitary Manhole, Storm Sewer with Size, etc. Lists symbols for various underground utilities.

UTILITY QUALITY SERVICE LEVELS

QUALITY LEVELS OF UTILITIES ARE SHOWN IN THE PARENTHESES WITH THE UTILITY TYPE AND WHEN APPLICABLE, SIZE. THE QUALITY LEVELS ARE BASED ON THE CI / ASCE 38-02 STANDARD.

UTILITY WARNING

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA.

GENERAL USE

CREDIT UNION/ RESTAURANT

PROPERTY DESCRIPTION

THE SHOPS AT KETTLESTONE NORTH PLAT 1, OUTLOT U

PROPERTY ADDRESS

2780 GRAND PRAIRIE PARKWAY WAUKEE, IOWA 50263

ZONING

K-RC: KETTLESTONE RETAIL COMMUNITY ZONING DISTRICT

OPEN SPACE

SITE AREA: 91,225 SF (2.09 AC) IMPERVIOUS AREA: 64,309 SF (70.5%) OPEN SPACE AREA: 26,916 SF (29.5%)

BULK REGULATIONS

LOT AREA = NONE FRONT YARD= NONE, 20' FOR ACCESSORY STRUCTURES SIDE YARD = NONE, 5' FOR ACCESSORY STRUCTURES REAR YARD = NONE, 5' FOR ACCESSORY STRUCTURES MINIMUM OPEN SPACE = 20%

PARKING REQUIREMENTS

RESTAURANT: 15 PER /1,000 SF 4,945 SF/ 1,000 X 15 = 75 SPACES REQUIRED

CREDIT UNION: 3 PER /1,000 SF 2,278 SF/ 1,000 X 3 = 7 SPACES REQUIRED

FLEX SPACE: 8 PER /1,000 SF 2,359 SF/ 1,000 X 8 = 19 SPACES REQUIRED

GENERAL: 1 PER /1,000 SF 1,319 SF/ 1,000 X 1 = 2 SPACES REQUIRED

PATIOS: 1 PER /1,000 SF 1,122 SF/ 1,000 X 1 = 2 SPACES REQUIRED

TOTAL SPACES REQUIRED= 105 SPACES TOTAL SPACES PROVIDED = 131 SPACES (INCLUDING 5 ACCESSIBLE STALLS)

BICYCLE PARKING PER KETTLESTONE DESIGN GUIDELINES: 3% OF REQUIRED AUTO SPACES .03 X 105 = 4 SPACES

BUILDING DESCRIPTION

BUILDING 1ST FLOOR= 9,335 SF BUILDING 2ND FLOOR= 2,688 SF TOTAL BUILDING= 12,023 SF BUILDING HEIGHT= 28'-0" (2 STORY) PROPOSED FLOOR AREA RATION = 0.10



NOTES

- A. NOTIFY UTILITY PROVIDERS PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES AND COORDINATE WITH UTILITY PROVIDERS AS NECESSARY DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE, EXACT LOCATION, AND DEPTH OF ALL UTILITIES. PROTECT ALL UTILITY LINES AND STRUCTURES NOT SHOWN FOR REMOVAL OR MODIFICATION. ANY DAMAGES TO UTILITY ITEMS NOT SHOWN FOR REMOVAL OR MODIFICATION SHALL BE REPAIRED TO THE UTILITY OWNER'S SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.

FIRE SAFETY CONSTRUCTION NOTE

A. APPROVED FIRE APPARATUS ACCESS ROADS SHALL BE PROVIDED AS SOON AS CONSTRUCTION COMMENCES. IF PAVING IS NOT INSTALLED PRIOR TO BUILDING CONSTRUCTION COMMENCING AFTER FOOTING INSTALLED, AN APPROVED ROUTE AROUND THE EXTERIOR OF THE BUILDING TO EXTEND WITHIN 100 FEET OF ALL PORTIONS OF THE EXTERIOR WALLS SHALL BE PROVIDED AND COMPLY WITH THE REQUIREMENTS OF SECTION 503.2 OF THE IFC.

POLLUTION PREVENTION NOTES

- A. POLLUTION PREVENTION AND EROSION PROTECTION
1. CODE COMPLIANCE: THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL POTENTIAL POLLUTION AND SOIL EROSION CONTROL REQUIREMENTS OF THE IOWA CODE, THE IOWA DEPARTMENT OF NATURAL RESOURCES (IDNR) NPDES PERMIT, THE U.S. CLEAN WATER ACT AND ANY LOCAL ORDINANCES.

Table with 4 columns: REVISED PER CITY COMMENTS, DATE, REVISION, and BY. Shows revision history.

Table with 2 columns: MARK, REVISION, and BY. Shows mark and revision details.

Table with 2 columns: Engineer: KMM, Checked By: EDC, Technician: LJM, Date: 07-22-2025. Shows project personnel.

Table with 2 columns: Project No.: 124-0115.01, Sheet C101. Shows project and sheet information.

Table with 2 columns: PROJECT INFORMATION, WAUKEE, IOWA. Shows project location.

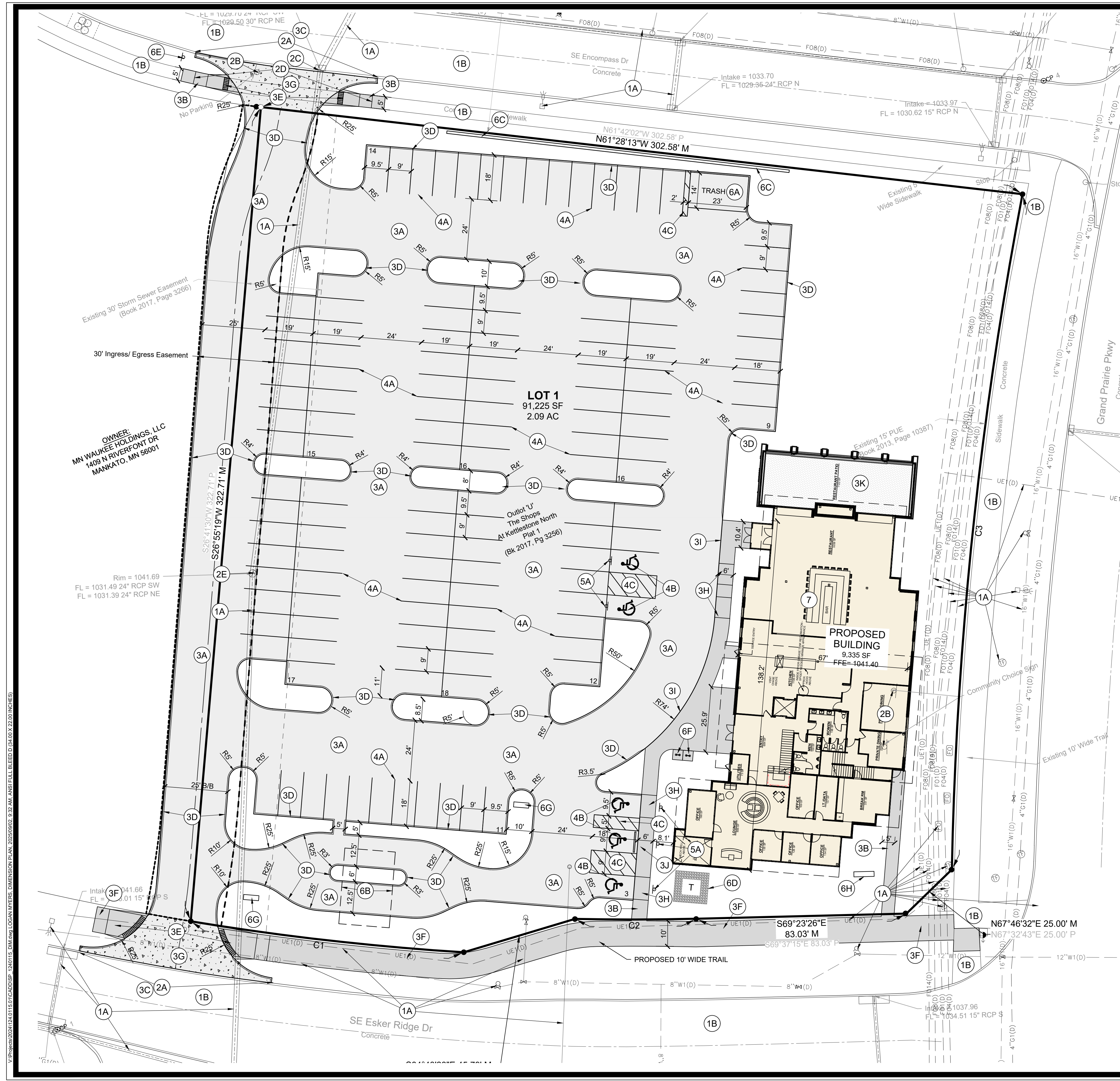
Table with 2 columns: PROJECT INFORMATION, SNYDER & ASSOCIATES, INC. I. Shows project name.

Table with 2 columns: PROJECT INFORMATION, 2727 S.W. SNYDER BLVD ANKENY, IOWA 50023. Shows project address.



Table with 2 columns: Project No.: 124.0115.01, Sheet C101. Shows project and sheet information.

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**DIMENSION PLAN CONSTRUCTION NOTES**

- PROTECT ALL SITE FEATURES NOT SCHEDULED FOR DEMOLITION OR MODIFICATION. ANY DAMAGES TO ITEMS NOT SHOWN FOR REMOVAL SHALL BE REPAIRED BY THE CONTRACTOR TO THE OWNERS SPECIFICATIONS WITHOUT ADDITIONAL COMPENSATION.
  - EXISTING UTILITIES. COORDINATE ANY NECESSARY RELOCATIONS OR ADJUSTMENTS WITH THE OWNER AND UTILITY PROVIDER PRIOR TO CONSTRUCTION. ADJUSTMENTS OF UTILITY APPURTENANCE TO FINISH GRADE IS CONSIDERED INCIDENTAL TO THE PROJECT.
  - EXISTING PAVEMENTS TO REMAIN.
- DEMOLITION. REMOVE AND DISPOSE OF THE FOLLOWING EXISTING ITEMS:
  - GRIND CURB AT DRIVEWAY CONNECTION LOCATIONS.
  - REMOVE EXISTING SIGNAGE AND RELOCATE.
  - REMOVE EXISTING CASTING AND REPLACE WITH TYPE Q CASTING. ADJUST RIM TO PROPOSED GRADE.
  - REMOVE EXISTING SIDEWALK TO LIMITS SHOWN.
  - ADJUST MANHOLE TO GRADE. SEE UTILITY PLAN FOR MORE INFORMATION.
- PAVEMENTS. PROVIDE THE FOLLOWING:
  - 6" DEPTH PCC PAVEMENT ON 12" DEPTH PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY. (C4 PCC MIX).
  - 4" DEPTH PCC SIDEWALK ON 6" DEPTH PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY. PROVIDE 6" DEPTH PCC RAMP AT DRIVEWAY ENTRANCES.
  - CONNECT TO EXISTING PAVEMENTS WITH SUDAS TYPE "A" CONNECTION.
  - 6" STANDARD CURB.
  - PEDESTRIAN RAMP WITH A MAXIMUM SLOPE OF 8.33%. PROVIDE DETECTABLE WARNING SYSTEM AT RAMPS WHERE PEDESTRIAN TRAFFIC MEETS VEHICULAR TRAFFIC. 6" DEPTH PCC RAMP.
  - 6" DEPTH PCC TRAIL. CONNECT TO EXISTING AT NEAREST JOINT.
  - 8" DEPTH PCC PAVEMENT ON 12" DEPTH PREPARED SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY. (C4 PCC MIX)
  - ADA ACCESSIBLE RAMP AT 8.33% MAXIMUM SLOPE. TAPER FROM 6" INTEGRAL CURB TO NO CURB. 6" DEPTH PCC RAMP.
  - 6" INTEGRAL CURB AND SIDEWALK.
  - PRECAST PCC PARKING BARRIER.
  - OUTDOOR PATIO AREA. REFER TO ARCHITECTURAL PLANS FOR PAVEMENT DEPTH.
- PAVEMENT MARKINGS PROVIDE THE FOLLOWING:
  - 4" WIDE PAINTED PARKING STALL LINES. COLOR AS PER OWNER.
  - PAINTED STATE OF IOWA APPROVED ACCESSIBLE SYMBOL.
  - 45' STRIPING AT 3' ON CENTER SPACING WHERE SHOWN.
- ACCESSIBLE PARKING SIGNAGE:
  - PROVIDE SIGN WITH VAN ACCESSIBLE SYMBOL AS PER "ADAAG" STANDARDS.
- SITE AMENITIES. PROVIDE THE FOLLOWING:
  - TRASH ENCLOSURE. SEE ARCHITECTURAL PLANS FOR DETAILS.
  - ITM WITH CANOPY. SEE ARCHITECTURAL PLANS FOR DETAILS.
  - SEGMENTAL BLOCK RETAINING WALL. COLOR AS PER OWNER. THE RETAINING WALL WILL BE REQUIRED TO BE DESIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF IOWA.
  - TRANSFORMER LOCATION.
  - RELOCATED "NO PARKING" SIGN.
  - TWO BIKE PARKING STALLS WITH ONE LOOP BIKE RACK.
  - ITM WAYFINDING SIGN.
  - MONUMENT SIGN.
- SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILED BUILDING CONSTRUCTION INFORMATION.
- THE CITY OF WAUKEE IS NOT RESPONSIBLE FOR PAVEMENT REPLACEMENT WITHIN THE EXISTING 30' STORM SEWER EASEMENT IF PAVEMENT NEEDS TO BE REMOVED FOR MAINTENANCE OF THE STORM SEWER.

OWNER:  
MN WAUKEE HOLDINGS, LLC  
1408 N RIVERFORD DR  
MANKATO, MN 56001

**LOT 1**  
91,225 SF  
2.09 AC

**PROPOSED BUILDING**  
9,335 SF  
FFE=1041.40

**KETTLESTONE COMMUNITY CHOICE CREDIT UNION**

**DIMENSION PLAN**

**SNYDER & ASSOCIATES, INC. I**



Project No: 124.0115.01

Sheet C200

**WAUKEE, IOWA**

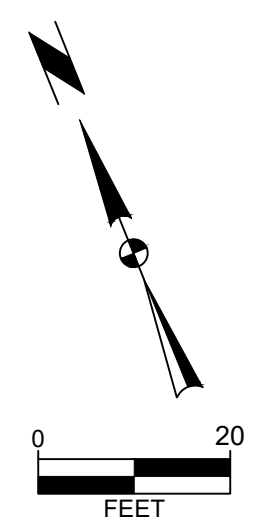
2727 S.W. SNYDER BLVD  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com

Sheet C200

Project No: 124.0115.01

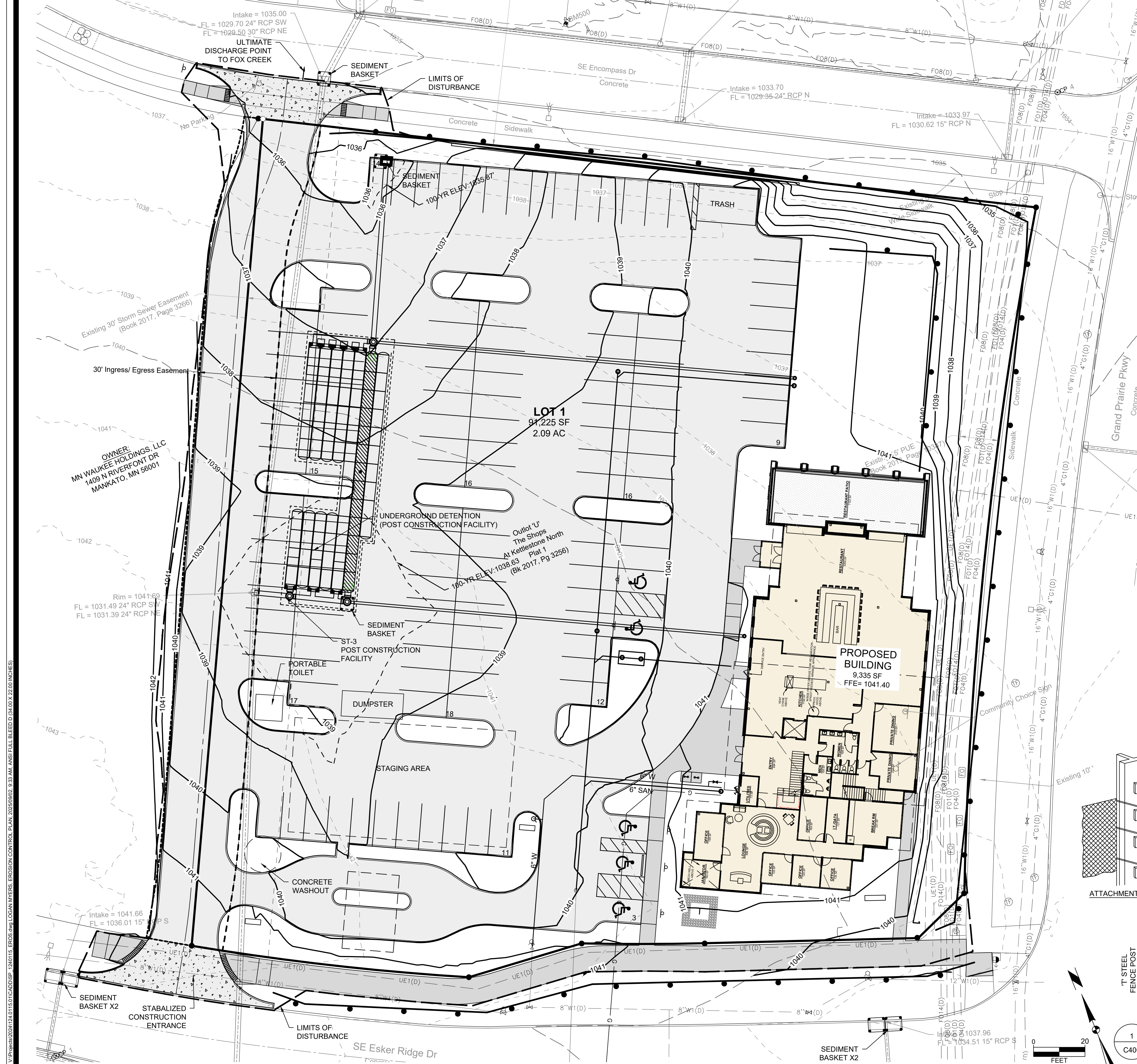
MARK	REVISION	DATE	BY
2	REVISED PER CITY COMMENTS	08-19-25	LJM
1	REVISED PER CITY COMMENTS	06-07-25	LJM

Checked By: EDC  
Date: 07-22-2025  
Engineer: KMM  
Technician: LJM  
Scale: 1" = 20'  
T-R-S: TTN-RRW-SS



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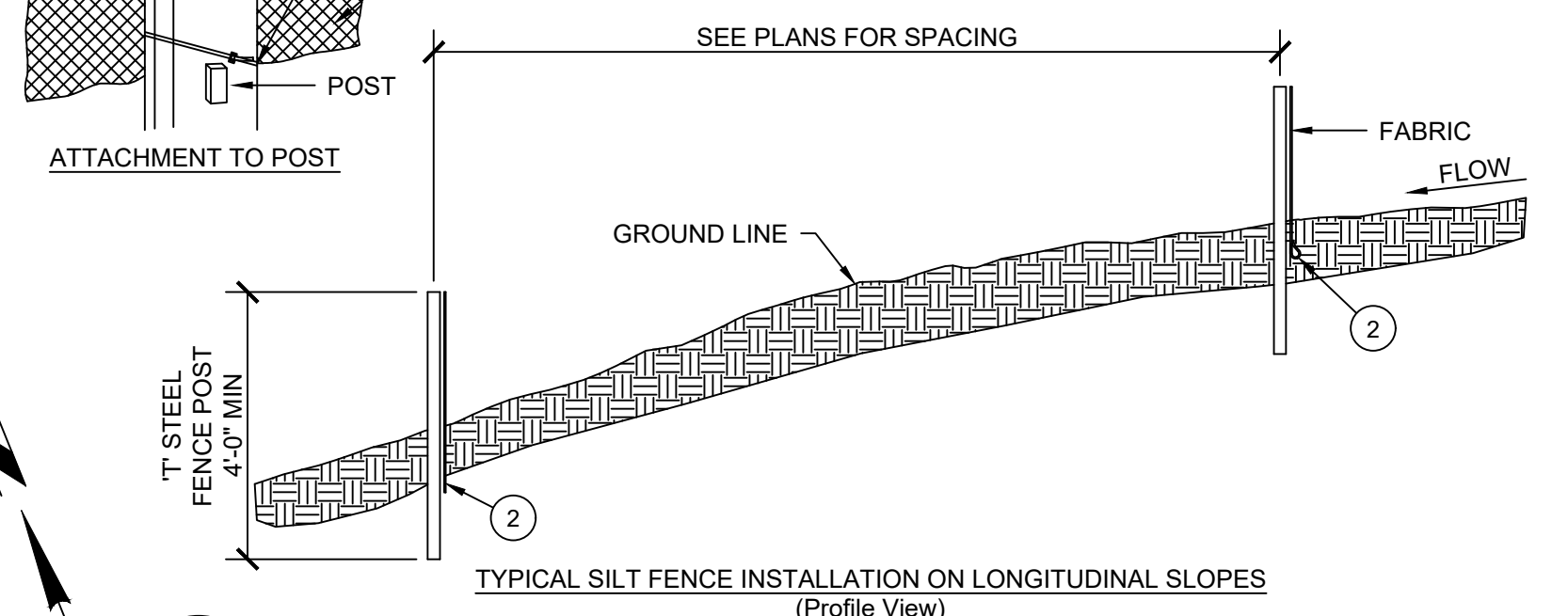
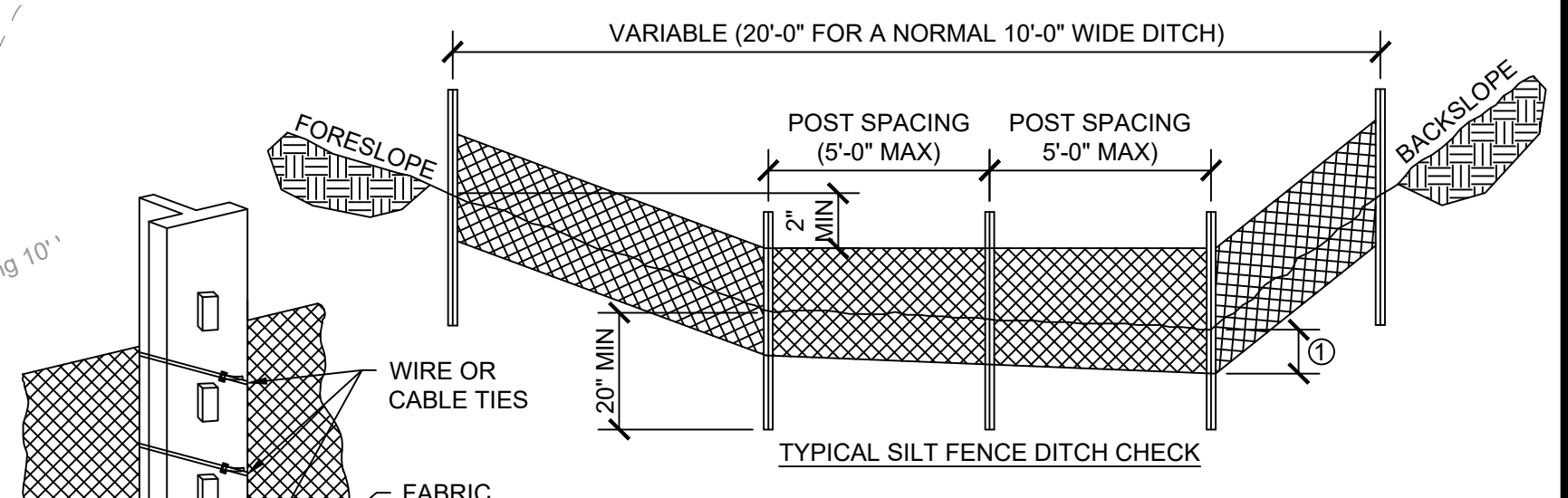
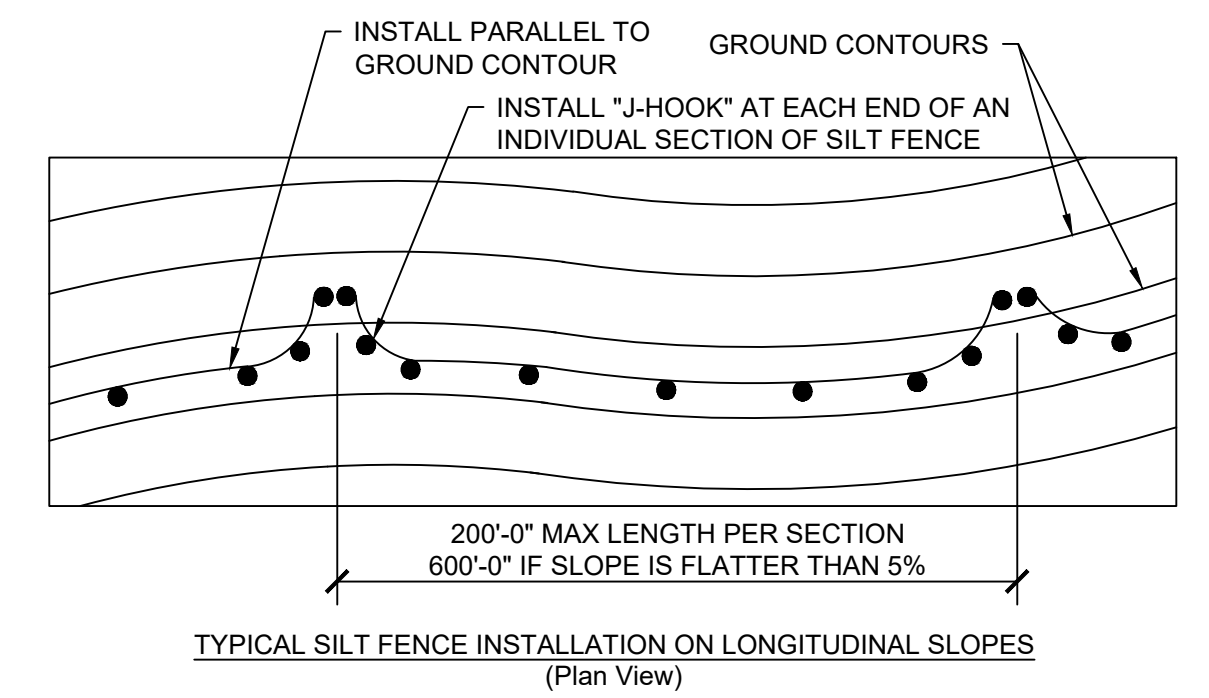
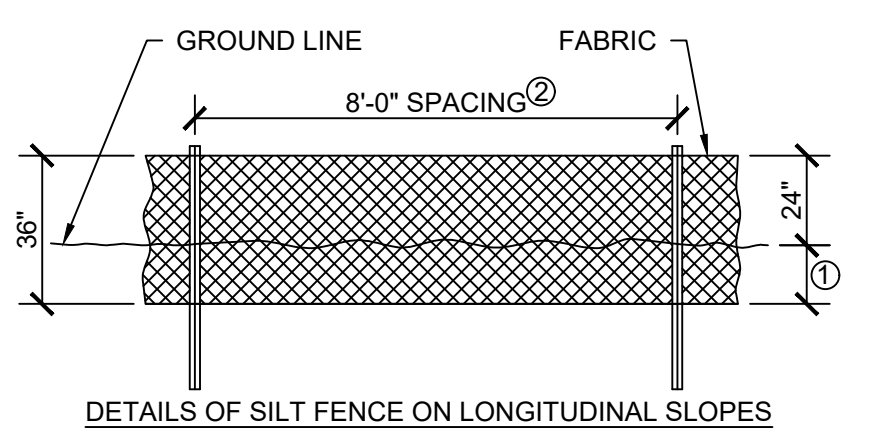
**GRADING NOTES**

- UTILITY WARNING: THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEY FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.
- NOTIFY UTILITY OWNERS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE, EXACT LOCATION AND DEPTH OF ALL UTILITIES. AVOID DAMAGE TO UTILITIES AND SERVICES DURING CONSTRUCTION. ANY DAMAGE DUE TO THE CONTRACTOR'S CARELESSNESS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. COORDINATE ANY UTILITY RELOCATIONS WITH UTILITY PROVIDER.
- ALL PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN ARE FINISHED GRADES AND/OR TOP OF PAVING SLAB (GUTTER), UNLESS OTHERWISE NOTED.
- ALL STORM SEWER PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND INCLUDE FLARED END SECTION.
- CONTRACTOR TO STRIP AND STOCKPILE TOPSOIL FROM ALL AREAS TO BE CUT OR FILLED. RESPREAD TO MINIMUM 8" DEPTH TO FINISH GRADES.
- THE CONTRACTOR IS RESPONSIBLE FOR CLEANING DIRT AND DEBRIS FROM STREETS, DRIVEWAYS AND SIDEWALKS CAUSED BY CONSTRUCTION ACTIVITIES BY THE END OF THE WORK DAY AND PRIOR TO A RAIN EVENT.
- SLOPES OF ALL UNPAVED AREAS TO BE 2.0% MINIMUM.
- CONTRACTOR TO CONTAIN SAWCUTTING/GRINDING SLURRY ON SITE AND DISPOSE OF ACCORDING TO IOWA DNR GENERAL PERMIT NO. 2.
- PROVIDE SEDIMENT BASKETS AT ALL INTAKES.
- PROVIDE SILT FENCE WHERE SHOWN AND AS DETAILED ON THIS SHEET. MAINTAIN AND ADJUST SILT FENCE AS NECESSARY DURING CONSTRUCTION.

**QUANTITIES**

SUDAS TYPE 4 SEEDING, FERTILIZING & MULCHING	2.37 AC.
SILT FENCE	955 LF
SEDIMENT BASKETS	7 EA
DISTURBED AREA	2.37 AC.
SOD	0.72 AC.

- INSERT 12 INCHES OF FABRIC A MINIMUM OF 6 INCHES DEEP (FABRIC MAY BE FOLDED BELOW THE GROUND LINE)
- REDUCE POST SPACING TO 5'-0" AT WATER CONCENTRATION AREAS, OR AS REQUIRED TO ADEQUATELY SUPPORT FENCE.



**SILT FENCE DETAIL**

NO SCALE

**KETTLESTONE COMMUNITY CHOICE CREDIT UNION**

**EROSION CONTROL PLAN**

**SNYDER & ASSOCIATES, INC. I**



Project No: 124.0115.01

Sheet C400

WAUKEE, IOWA

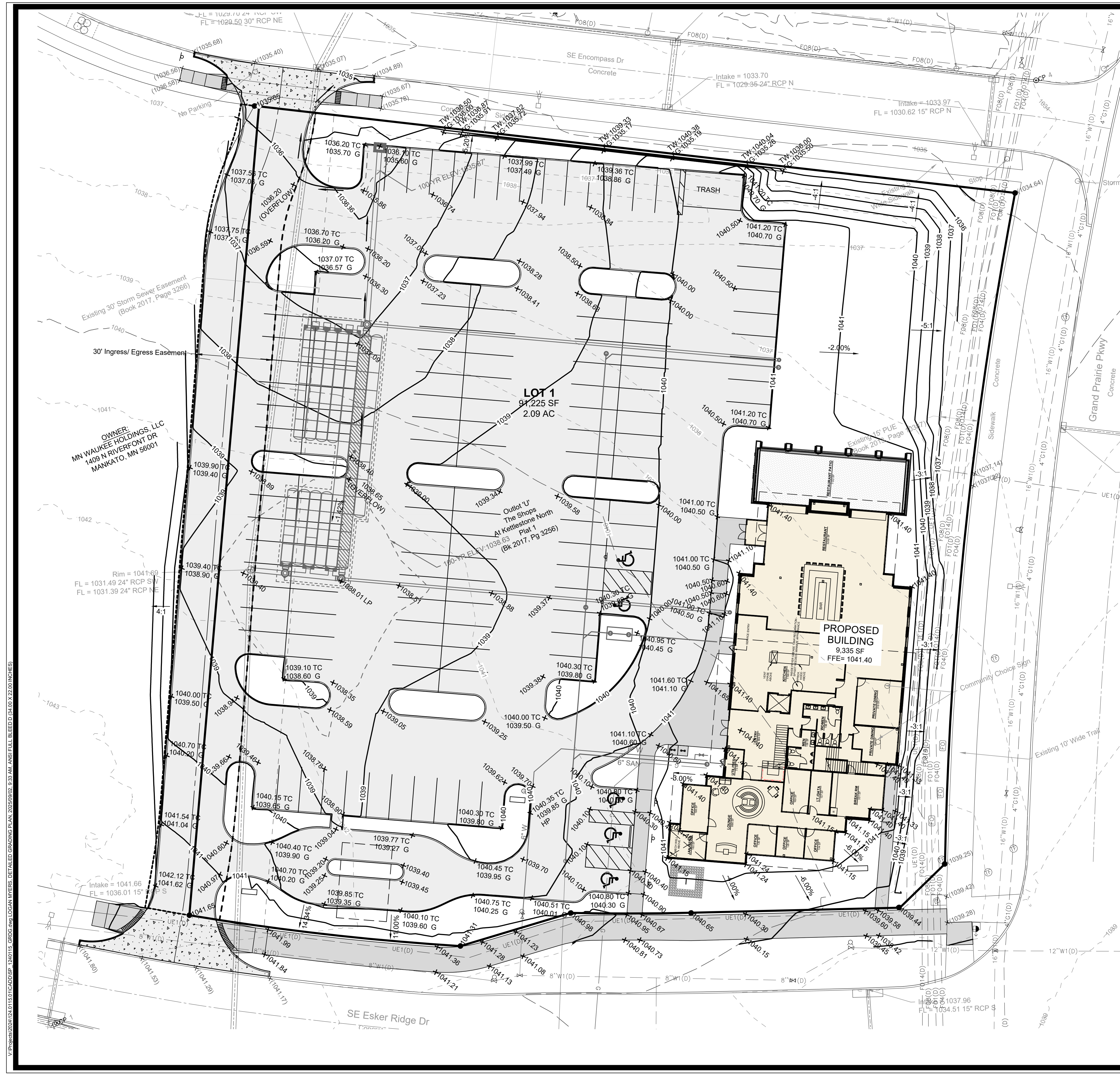
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Sheet C400

Project No: 124.0115.01

REVISED PER CITY COMMENTS	08-19-25	LJM	DATE	BY
REVISED PER CITY COMMENTS	08-07-25	LJM	DATE	BY
MARK	REVISION	Checked By: EDC	Scale: 1" = 20'	
Engineer: KMM	Date: 07-22-2025	TR-S: TTN-RRW-SS		
Technician: LJM				

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**GRADING NOTES**

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- SLOPES OF ALL UNPAVED AREAS TO BE 2.0% MINIMUM.
- CONTRACTOR TO CONTAIN SAWCUTTING/GRINDING SLURRY ON SITE AND DISPOSE OF ACCORDING TO IOWA DNR GENERAL PERMIT NO. 2.
- PROVIDE SEDIMENT BASKETS AT ALL INTAKES.
- PROVIDE SILT FENCE WHERE SHOWN AND AS DETAILED ON THIS SHEET. MAINTAIN AND ADJUST SILT FENCE AS NECESSARY DURING CONSTRUCTION.

**KETTLESTONE COMMUNITY CHOICE CREDIT UNION**

**DETAILED GRADING PLAN**

**WAUKEE, IOWA**

**SNYDER & ASSOCIATES, INC. I**



Project No: 124.0115.01

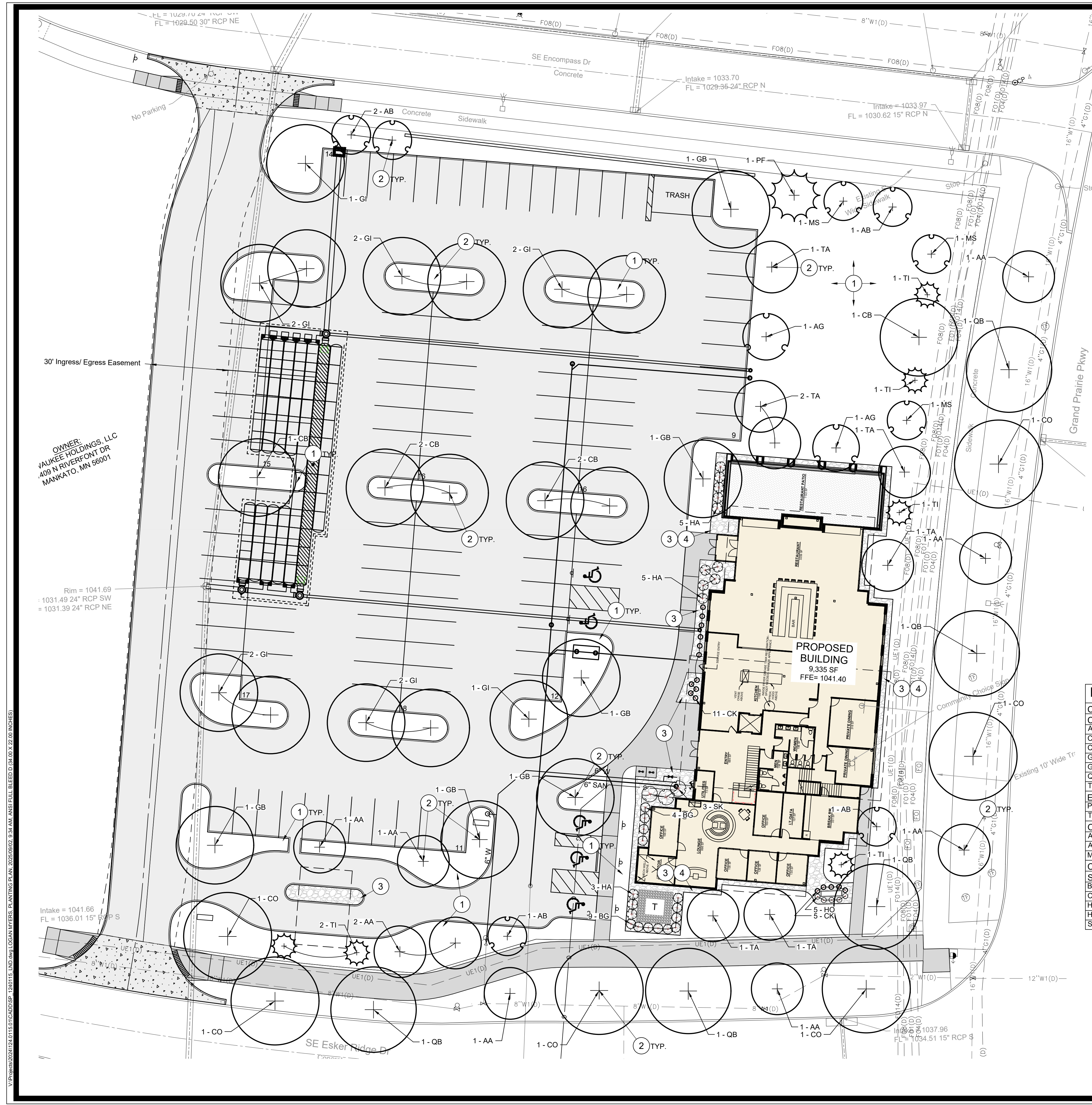
Sheet C401

2	REVISED PER CITY COMMENTS	08-19-25	LJM
1	REVISED PER CITY COMMENTS	08-07-25	LJM
MARK	REVISION	DATE	BY
1	Engineer: KMM	Checked By: EDC	Scale: 1" = 20'
	Technician: LJM	Date: 07-22-2025	T-R-S: TTR-RRW-SS
			Sheet C401
			Project No: 124.0115.01

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ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com

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OWNER:  
VALKEE HOLDINGS, LLC  
409 N RIVERFORD DR  
MANKATO, MN 56001

Rim = 1041.69  
1031.49 24" RCP SW  
= 1031.39 24" RCP NE

Intake = 1041.66  
FL = 1036.01 15" RCP S

**PLANTING PLAN GENERAL NOTES**

- A. UTILITY WARNING: THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEY FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.
- B. NOTIFY UTILITY OWNERS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE, EXACT LOCATION AND DEPTH OF ALL UTILITIES. AVOID DAMAGE TO UTILITIES AND SERVICES DURING CONSTRUCTION. ANY DAMAGE DUE TO THE CONTRACTOR'S CARELESSNESS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. COORDINATE AND COOPERATE WITH UTILITY COMPANIES DURING CONSTRUCTION.
- C. ALL PLANT MATERIAL SHALL AT LEAST MEET MINIMUM REQUIREMENTS SHOWN IN THE "AMERICAN STANDARDS FOR NURSERY STOCK" (ANSI Z60.1-LATEST EDITION).
- D. CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.

**PLANTING PLAN CONSTRUCTION NOTES**

- 1. SOD ALL DISTURBED AREAS UNLESS NOTED OTHERWISE. REFER TO EROSION CONTROL PLAN FOR ADDITIONAL INFORMATION.
- 2. PROVIDE A 3-IN DEPTH SHREDDED HARDWOOD MULCH IN A 3-FOOT PERIMETER RING AROUND ALL TREES. PROVIDE VERTICAL CUT NATURAL EDGE TO A DEPTH OF 4-INCHES.
- 3. PROVIDE 1-2" RIVER ROCK TO A DEPTH OF 4-INCHES. TAPER MULCH DEPTH TOWARDS BED EDGING AND/OR PAVEMENT EDGE EXPOSING 1-INCH HEIGHT OF EDGE.
- 4. PROVIDE 3/16" BLACK STEEL EDGER WITH STAKES.
- 5. PLANTING SUBSTITUTIONS SHALL BE APPROVED IN WRITING BY THE COMMUNITY DEVELOPMENT DEPARTMENT.
- 6. ALL DISTURBED AREAS IN THE RIGHT-OF-WAY WILL BE REQUIRED TO BE SODDED.

**PLANTING PLAN REQUIREMENTS**

(LANDSCAPE CALCULATIONS BASED UPON CITY OF WAUKEE ZONING CODE REQUIREMENTS)

**OPEN SPACE:**  
20% OPEN SPACE REQUIRED  
91,225.25 SF (TOTAL LOT) x 20% = 18,245.05 SF REQUIRED (28,369.38 SF OR 31.10% PROVIDED)

1.5 OVERSTORY TREES, 0.5 UNDERSTORY TREES, AND 2 SHRUB PER 1,000 SF OF REQUIRED OPEN SPACE.

MINIMUM OF 50% OF TOTAL REQUIRED TREES SHALL BE OVERSTORY SHADE TREES.

18,245.05 SF / 1,000 = 18.3 PLANT UNITS (PU'S)  
1.5 OVERSTORY TREES x 18.3 PU'S = 27.45 TREES REQUIRED (28 TREES PROVIDED, 21 OVERSTORY, 7 EVERGREEN)  
0.5 UNDERSTORY TREES x 18.3 PU'S = 9.15 UNDERSTORY TREES REQUIRED (10 PROVIDED)  
2 SHRUBS x 18.3 PU'S = 36.6 SHRUBS REQUIRED (50 PROVIDED)

**STREET TREE REQUIREMENTS:**  
ONE TREE FOR EVERY 40 FEET OF STREET FRONTAGE, NOT COUNTING DRIVEWAY  
GRAND PRAIRIE PARKWAY  
268.44/40 = 6.71 TREES REQUIRED (7 PROVIDED)  
SE ESKER RIDGE PKWY  
273.65/40 = 6.84 TREES REQUIRED (7 PROVIDED)

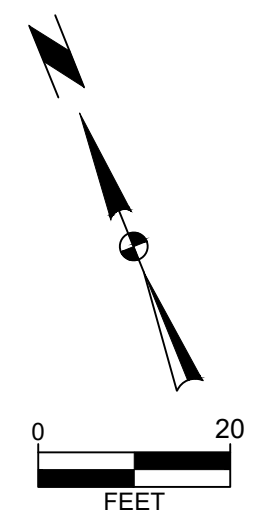
**BUFFER REQUIREMENT:**  
NO BUFFER REQUIRED.

**OFF-STREET PARKING AREA REQUIREMENT:**  
1 TREE FOR EVERY PARKING LOT ISLAND  
16 PARKING LOT ISLANDS  
16 TREES REQUIRED (16 TREES PROVIDED)

**TREE HEIGHT MINIMUM REQUIREMENTS**  
OVERSTORY TREES MUST BE 8 FEET TALL MINIMUM AT TIME OF PLANTING.  
EVERGREEN TREES MUST BE 6 FEET TALL MINIMUM AT TIME OF PLANTING.  
ORNAMENTAL TREES MUST BE 6 FEET TALL MINIMUM AT TIME OF PLANTING.  
STREET TREES MUST BE 12 FEET TALL MINIMUM AT TIME OF PLANTING.

**PLANT SCHEDULE**

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE
<b>CANOPY TREES</b>					
AA	9	Acer rubrum 'Armstrong'	Armstrong Red Maple	1.5" Cal.	B&B
CB	6	Carpinus betulus	European Hornbeam	1.5" Cal.	B&B
CO	6	Celtis occidentalis	Common Hackberry	1.5" Cal.	B&B
GB	6	Ginkgo biloba	Maidenhair Tree	1.5" Cal.	B&B
GI	12	Gleditsia triacanthos inermis	Thornless Honey Locust	1.5" Cal.	B&B
QB	5	Quercus bicolor	Swamp White Oak	1.5" Cal.	B&B
TA	7	Tilia americana	American Linden	1.5" Cal.	B&B
<b>EVERGREEN TREES</b>					
PF	1	Pinus strobus 'Fastigiata'	Pyramidal White Pine	6' Ht.	B&B
TI	6	Thuja x 'Green Giant'	Green Giant Arborvitae	6' Ht.	B&B
<b>ORNAMENTAL TREES</b>					
AB	5	Acer buergerianum	Trident Maple	6" Ht.	B&B
AG	2	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Apple Serviceberry	6" Ht.	B&B
MS	3	Malus x 'Spring Snow'	Spring Snow Crabapple	6" Ht.	B&B
<b>SHRUBS</b>					
BG	13	Buxus x 'Green Velvet'	Green Velvet Boxwood	3 GAL	POT
CK	16	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	2' ft	POT
HO	5	Hemerocallis x 'Stella de Oro'	Stella de Oro Daylily	1 GAL	POT
HA	13	Hydrangea arborescens 'Abetwo'	Incrediball® Hydrangea	3 GAL	POT
SK	3	Syringa pubescens patula 'Miss Kim'	Miss Kim Korean Lilac	3 GAL	POT



KETTLESTONE COMMUNITY CHOICE CREDIT UNION

PLANTING PLAN

WAUKEE, IOWA

SNYDER & ASSOCIATES, INC. I



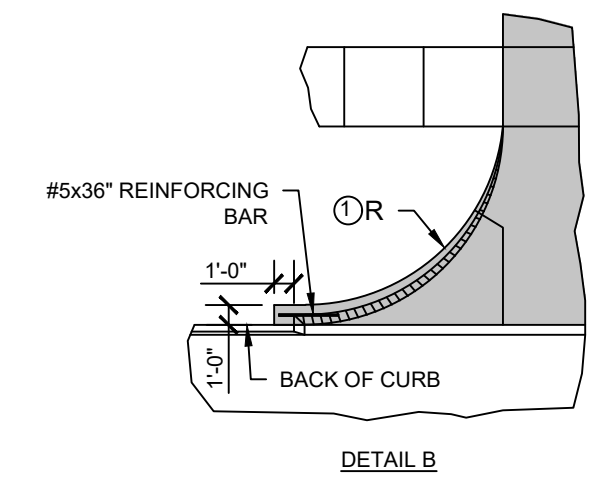
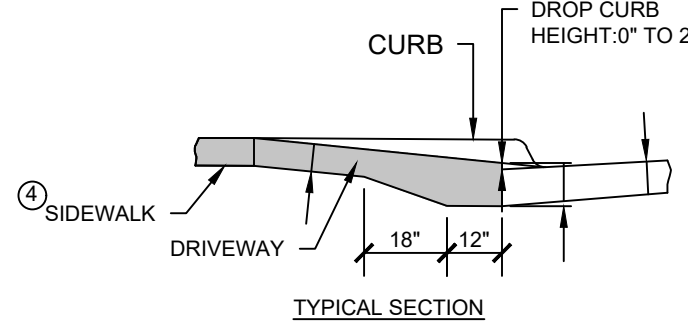
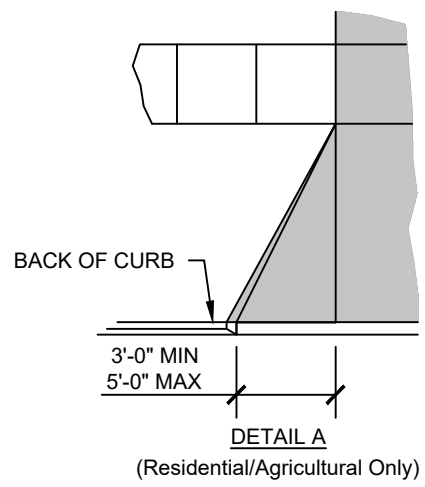
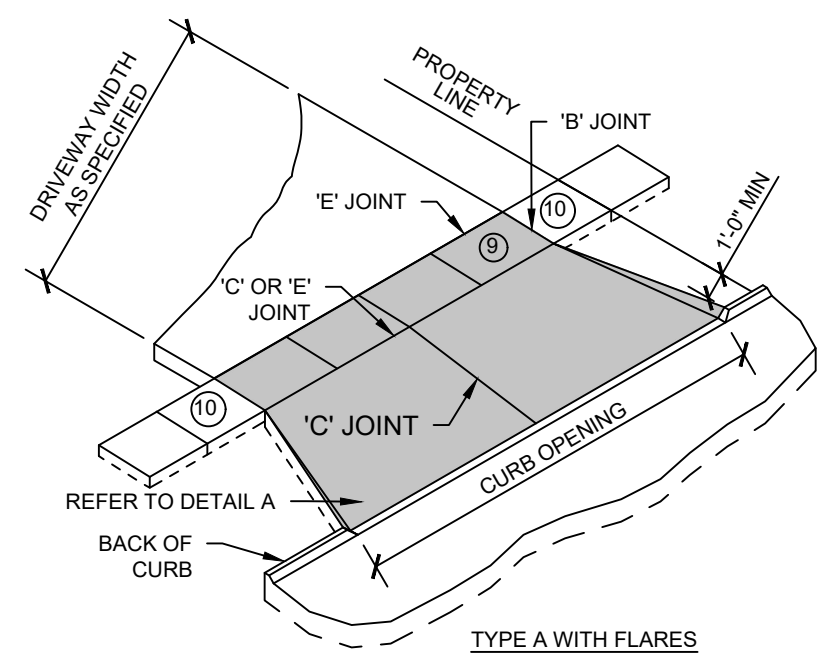
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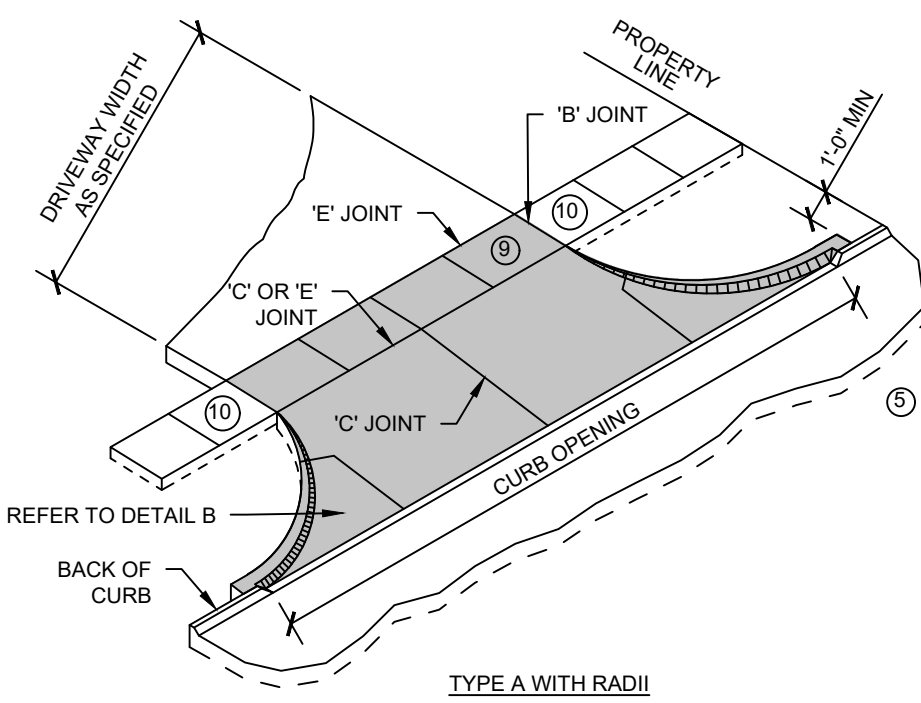
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2727 S.W. SNYDER BLVD  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com

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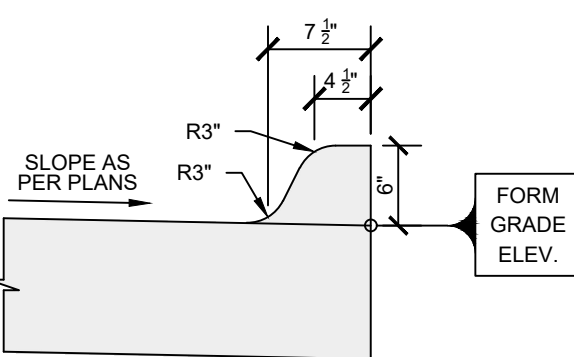


- DRIVEWAY RADIUS (R). RESIDENTIAL: 10 FOOT MINIMUM, 15 FOOT MAXIMUM. COMMERCIAL AND INDUSTRIAL: AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- TRANSITION THE CURB HEIGHT TO 0 INCHES AT END OF TAPER/RADIUS OR AT THE FRONT EDGE OF SIDEWALK. DO NOT EXTEND RAISED CURB ACROSS SIDEWALK.
- PAVEMENT THICKNESS. RESIDENTIAL: 6 INCHES MINIMUM. COMMERCIAL AND INDUSTRIAL: 7 INCHES MINIMUM.
- SIDEWALK THICKNESS THROUGH DRIVEWAY TO MATCH THICKNESS OF DRIVEWAY.
- CENTER REINFORCING BAR VERTICALLY IN THE PAVEMENT.
- MATCH THICKNESS OF ADJACENT ROADWAY. 8 INCHES MINIMUM.
- PROVIDE 'E' JOINT AT BACK OF CURB UNLESS 'B' JOINT IS SPECIFIED.
- FOR ALLEYS, INVERT THE PAVEMENT CROWN 2% TOWARD CENTER OF ALLEY.
- TARGET CROSS SLOPE OF 1.5% WITH A MAXIMUM CROSS SLOPE OF 2.0%. IF SPECIFIED IN THE CONTRACT DOCUMENTS, CONSTRUCT THE SIDEWALK THROUGH THE DRIVEWAY 5 FEET WIDE TO SERVE AS A PASSING SPACE.
- IF CROSS SLOPE OF ADJACENT SIDEWALK PANEL EXCEEDS 2.0%, REMOVE AND REPLACE TO TRANSITION FROM EXISTING SIDEWALK TO SIDEWALK THROUGH DRIVEWAY. IF ELEVATION CHANGE REQUIRES A CURB RAMP, COMPLY WITH FIGURE 7030.205. VERIFY NEED FOR DETECTABLE WARNING PANEL WITH ENGINEER.



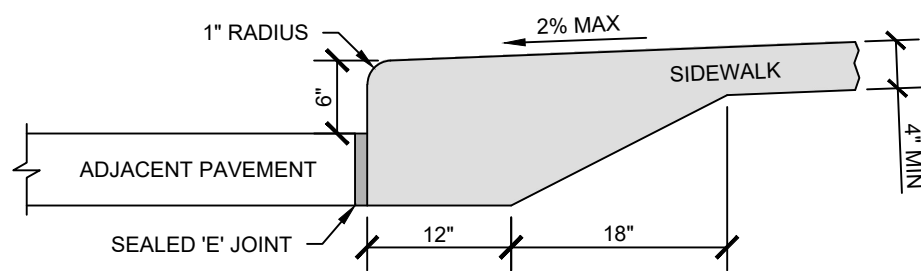
1 CONCRETE DRIVEWAY, TYPE A

C600 NO SCALE



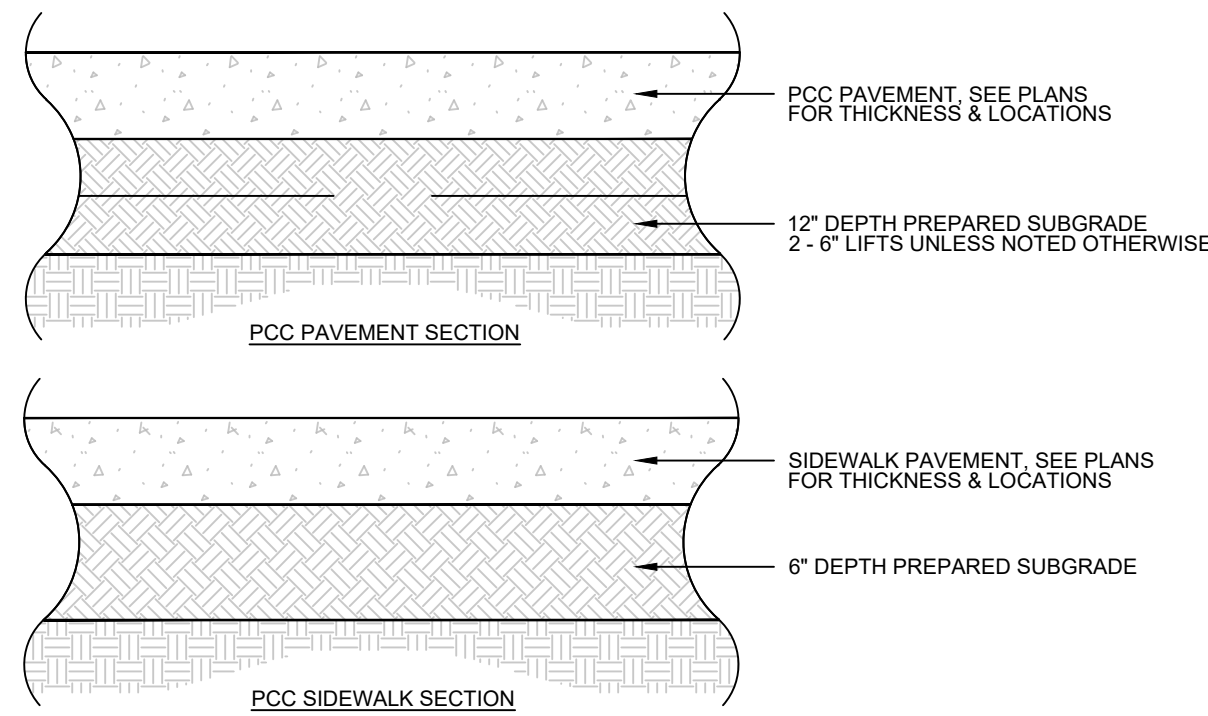
3 6-INCH STANDARD CURB

C600 NO SCALE



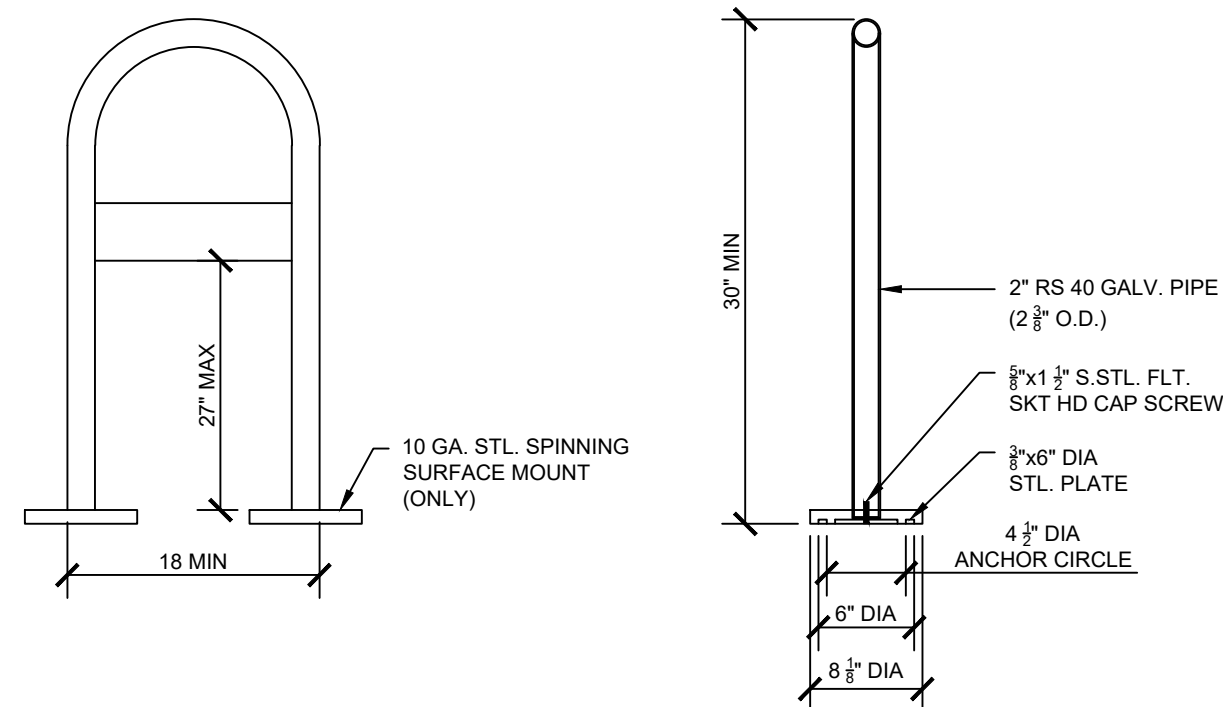
4 INTEGRAL SIDEWALK AND CURB DETAIL

C600 NO SCALE



2 TYPICAL PAVEMENT CROSS SECTIONS

C600 NO SCALE

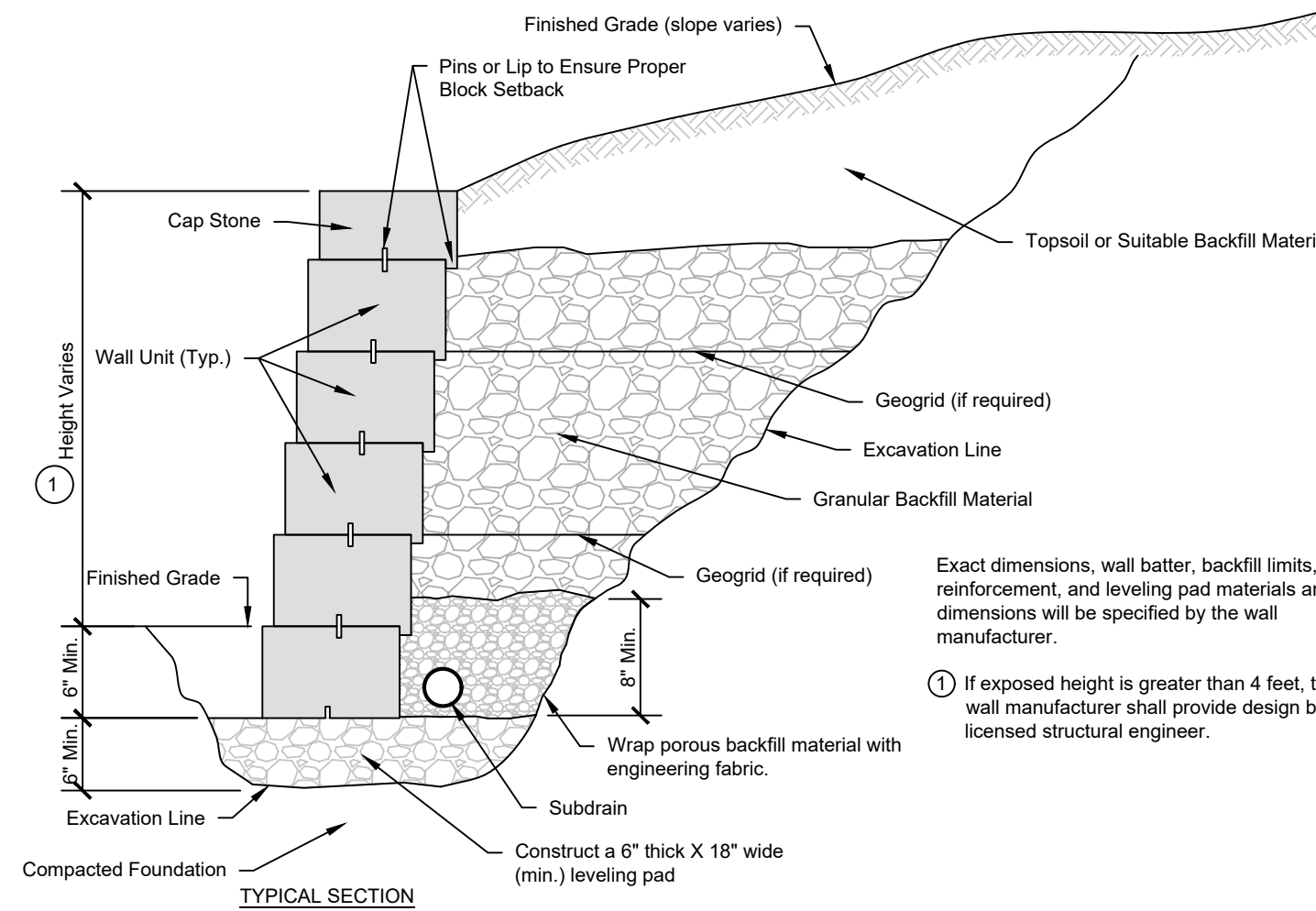


FINISH OPTIONS:  
COATED WITH ZINC RICH EPOXY THEN FINISHED WITH POLYESTER COATING. COLOR AS PER OWNER.

- NOTES:
- INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
  - 3"x3" EXPANSION ANCHOR BOLTS PROVIDED FOR SURFACE MOUNT.

5 LOOP BIKE RACK

C600 NO SCALE



6 SEGMENTAL BLOCK RETAINING WALL

C600 NO SCALE

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	



## KETTLESTONE CCCU

WAUKEE, IA, USA

### SC-800 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-800.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPED FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LFRD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75 YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS HAVING INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 750 LBS/FT<sup>2</sup>, THE ASG IS DEFINED IN SECTION 6.2.8 OF ASTM F2418, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
  - THE STRUCTURAL EVALUATION SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER.
  - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LFRD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
  - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 10-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

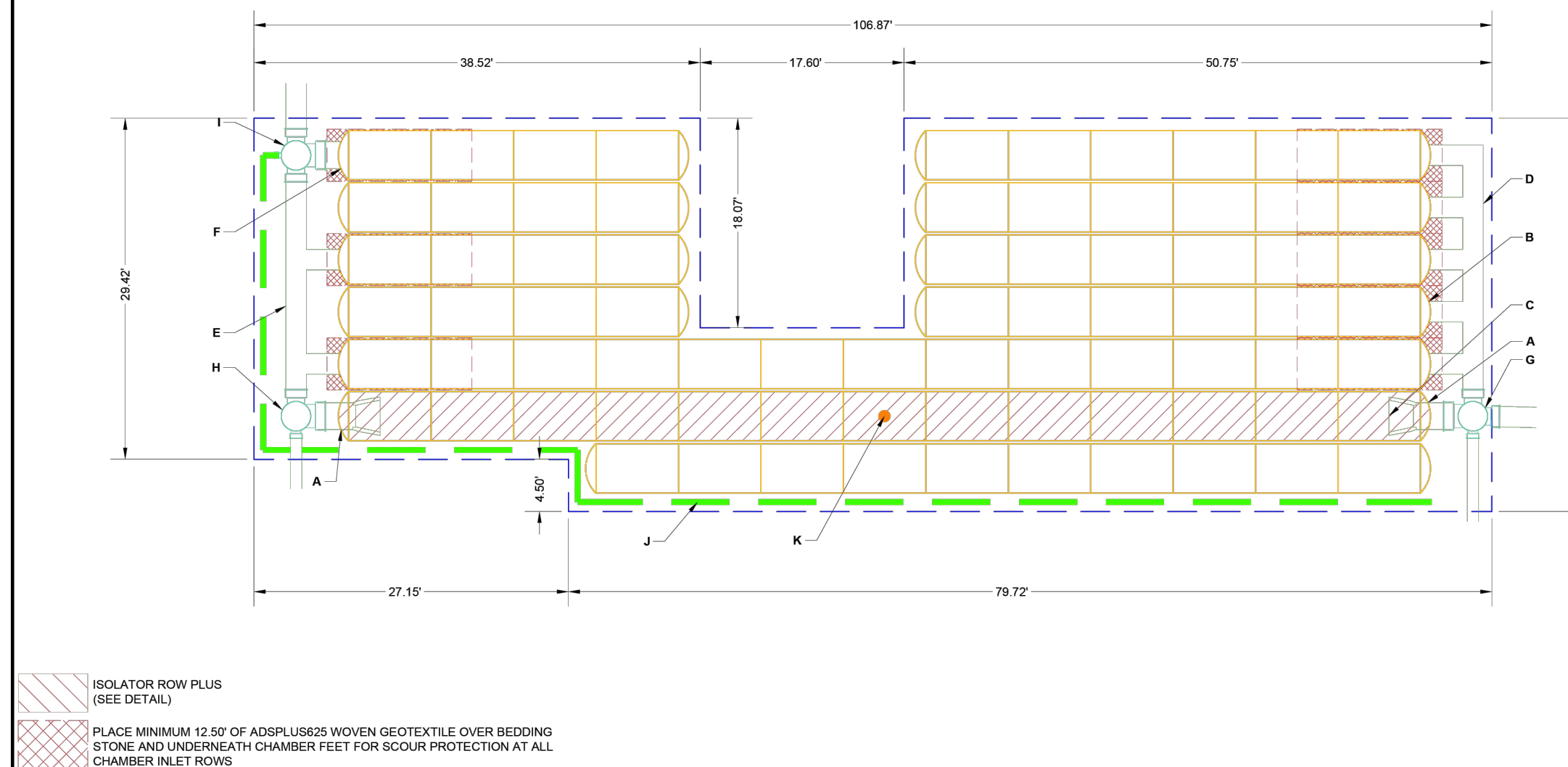
### IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-800 SYSTEM

- STORMTECH SC-800 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
  - STONES/ROCKS LOCATED OFF THE CHAMBER BED.
  - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
  - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 3" (75 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #3, 357, 4, 467, 5, 56, OR 57.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

### NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
  - THE USE OF CONSTRUCTION EQUIPMENT OVER SC-800 CHAMBERS IS LIMITED:
    - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
    - NO RUBBER TREAD TIRES, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
    - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
  - FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
- USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.
- CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT		PROPOSED ELEVATIONS		PART TYPE		ITEM QTY		DESCRIPTION		*INVERT ABOVE BASE OF CHAMBER	
ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION	INVERT	MAX FLOW
76	STORMTECH SC-800 CHAMBERS	1043.06	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)								
22	STORMTECH SC-800 END CAPS	1036.84	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)								
8	STONE ABOVE (IN)	1036.50	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)	A	24" BOTTOM PREFABRICATED EZ END CAP PART# SC800ECEZ / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS					2.30'	
6	STONE BELOW (IN)	1036.54	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT)	B	18" TOP PRE-CORED END CAP PART# SC800EPC18PC / TYP OF ALL 18" TOP CONNECTIONS					8.00'	
40	STONE VOID	1035.20	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)	C	INSTALL FLAMP ON 24" ACCESS PIPE PART# SC800ZARAMP (TYP 2 PLACES)					8.00'	
	INSTALLED SYSTEM VOLUME (CF)			D	18" x 18" TOP MANIFOLD ADS N-12					8.00'	
7129	PERIMETER STONE INCLUDED (COVER STONE INCLUDED)	1033.00		E	18" x 18" TOP MANIFOLD ADS N-12					8.00'	
		1033.00		F	24" BOTTOM CONNECTION					2.30'	
3184	SYSTEM MANIFOLD (IN)	1033.00		G	30" DIAMETER (24.00" SUMP MIN)					14.0 CFS IN	
3177	SYSTEM PERIMETER (IN)	1032.50		H	30" DIAMETER (24.00" SUMP MIN)					8.4 CFS IN	
		1032.50		I	30" DIAMETER (DESIGN BY ENGINEER)					7.0 CFS OUT	
		1031.84		J	18" TOP PLAST (OUTLET)						
		1031.84		K	6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN						
		1031.84			INSPECTION PORT						



- ISOLATOR ROW PLUS (SEE DETAIL)
- PLACE MINIMUM 12 50' OF ADS PLUS 625 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS
- BED LIMITS

NOTES:  
THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET. NOT FOR CONSTRUCTION. THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVIDE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

StormTech Chamber System

460 TRIEBMAN BLVD  
WAUKEE, IA 50085  
1-800-733-7473

DATE: 08/11/2025  
PROJECT: KETTLESTONE CCCU  
DRAWN BY: J. SNYDER  
CHECKED BY: J. SNYDER

2 OF 6

# KETTLESTONE COMMUNITY CHOICE CREDIT UNION

## SITE DETAILS

# SNYDER & ASSOCIATES, INC. I



Project No: 124.0115.01

Sheet C600

MARK	REVISION	DATE	BY
2	REVISED PER CITY COMMENTS	08-19-25	LJM
1	REVISED PER CITY COMMENTS	08-07-25	LJM

Scale: 1" =

Checked By: EDC  
Date: 07-22-2025  
T-R-S: TTN-RRW-SS

Project No: 124.0115.01

Sheet C600

WAUKEE, IOWA

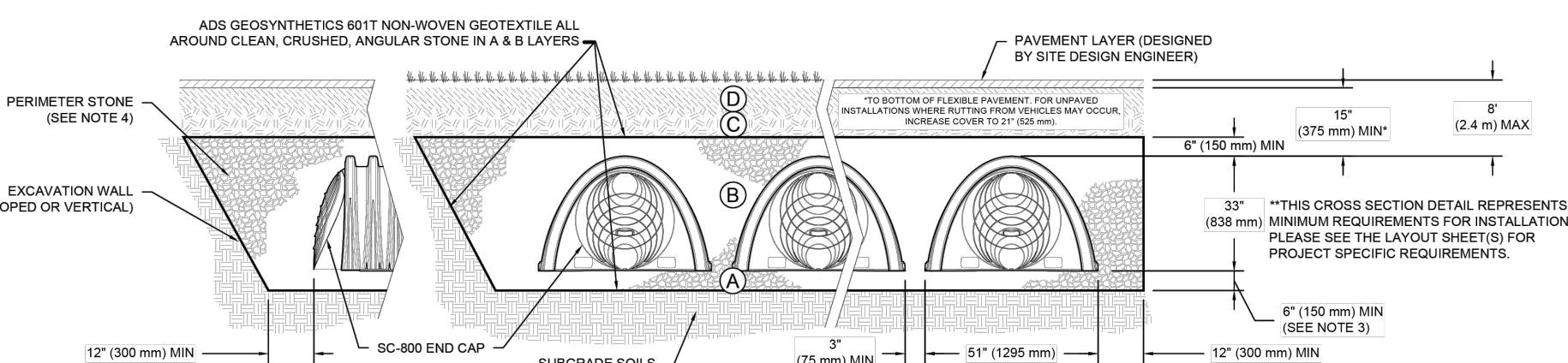
2727 S.W. SNYDER BLVD  
ANKENY, IOWA 50023  
515-964-2020 | www.snyder-associates.com

L:\Projects\2024\124.0115.CC.CDD.SP - 124.0115 - SH - AMT - LOGAN METERS SITE DETAILS - 20250302 - 2:34 AM - ANSI FULL BLEED (34.00 X 22.00 INCHES)

**ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (E LAYER) TO 15" (375 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2.1, A-3 OR AASHTO M43 <sup>2</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>2</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>2</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE <sup>2,3</sup>

**PLEASE NOTE:**  
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE."  
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.  
 3. WHERE FILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.  
 4. ONCE LAYER 'C' IS PLACED, ANY SOLID MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.  
 5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.25 "RECYCLED CONCRETE STRUCTURAL BACKFILL".

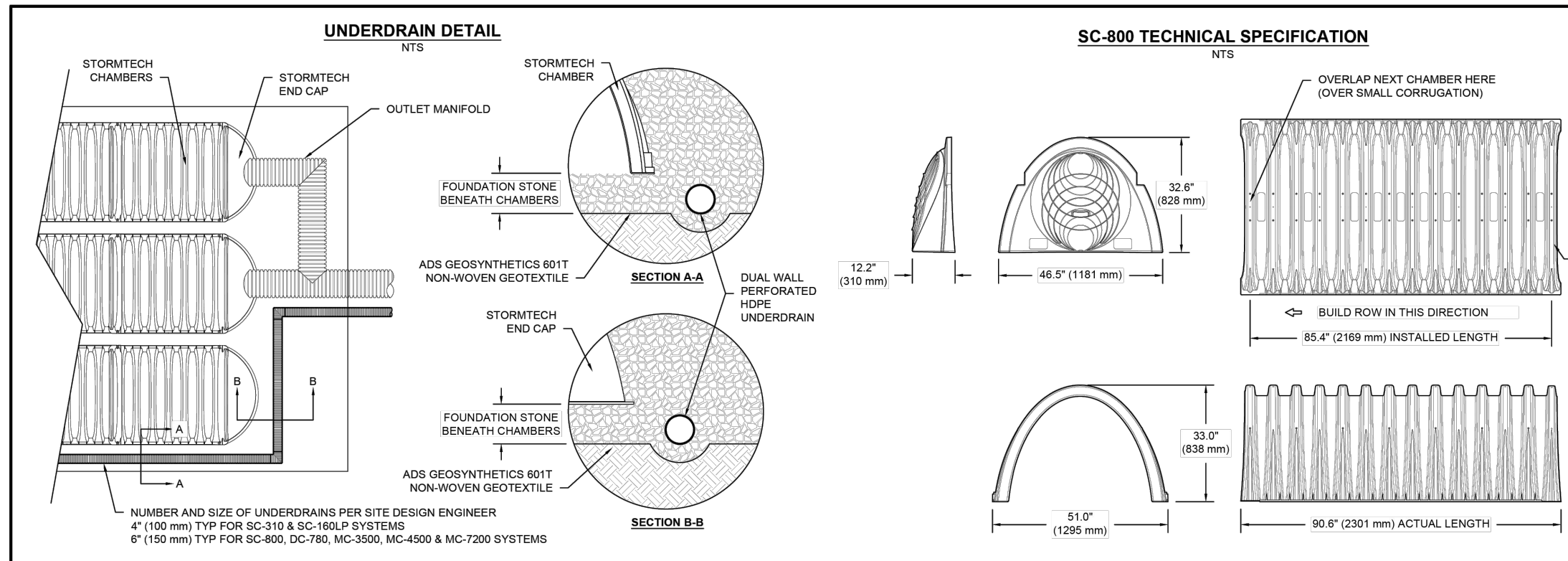


- NOTES:**
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
  - SC-800 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
  - THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
  - PERMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
  - REQUIREMENTS FOR HANDLING AND INSTALLATION:
    - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTER-LOCKING STACKING LUGS.
    - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
    - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 750 LBS/FT<sup>2</sup> (AND 5) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

**KETTLESTONE CCU**  
 WAUKEE, IA, USA  
 DATE: 08/11/2025  
 DRAWN: JM  
 CHECKED: NA  
 PROJECT #

**StormTech Chamber System**  
 4640 TREHMAN BLVD  
 HILLIARD, OH 43026  
 1-800-753-9473

SHEET 3 OF 6



**NOMINAL CHAMBER SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	CHAMBER STORAGE	MINIMUM INSTALLED STORAGE*	WEIGHT
51.0" X 33.0" X 85.4" (1295 mm X 838 mm X 2169 mm)	50.6 CUBIC FEET (1.43 m <sup>3</sup> )	78.4 CUBIC FEET (2.22 m <sup>3</sup> )	81.8 lbs (37.1 kg)

**NOMINAL END CAP SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	END CAP STORAGE	MINIMUM INSTALLED STORAGE**	WEIGHT
48.5" X 32.0" X 10.5" (1181 mm X 828 mm X 267 mm)	3.4 CUBIC FEET (0.42 m <sup>3</sup> )	14.7 CUBIC FEET (0.42 m <sup>3</sup> )	15.7 lbs (7.1 kg)

\*ASSUMES 6" (150 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS, 3" (75 mm) BETWEEN CHAMBERS  
 \*\*ASSUMES 6" (150 mm) STONE ABOVE AND BELOW END CAPS, 3" (150 mm) BETWEEN ROWS, 12" (300 mm) BEYOND END CAPS

PRE-CORED HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "BPC"  
 PRE-CORED HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "TFC"

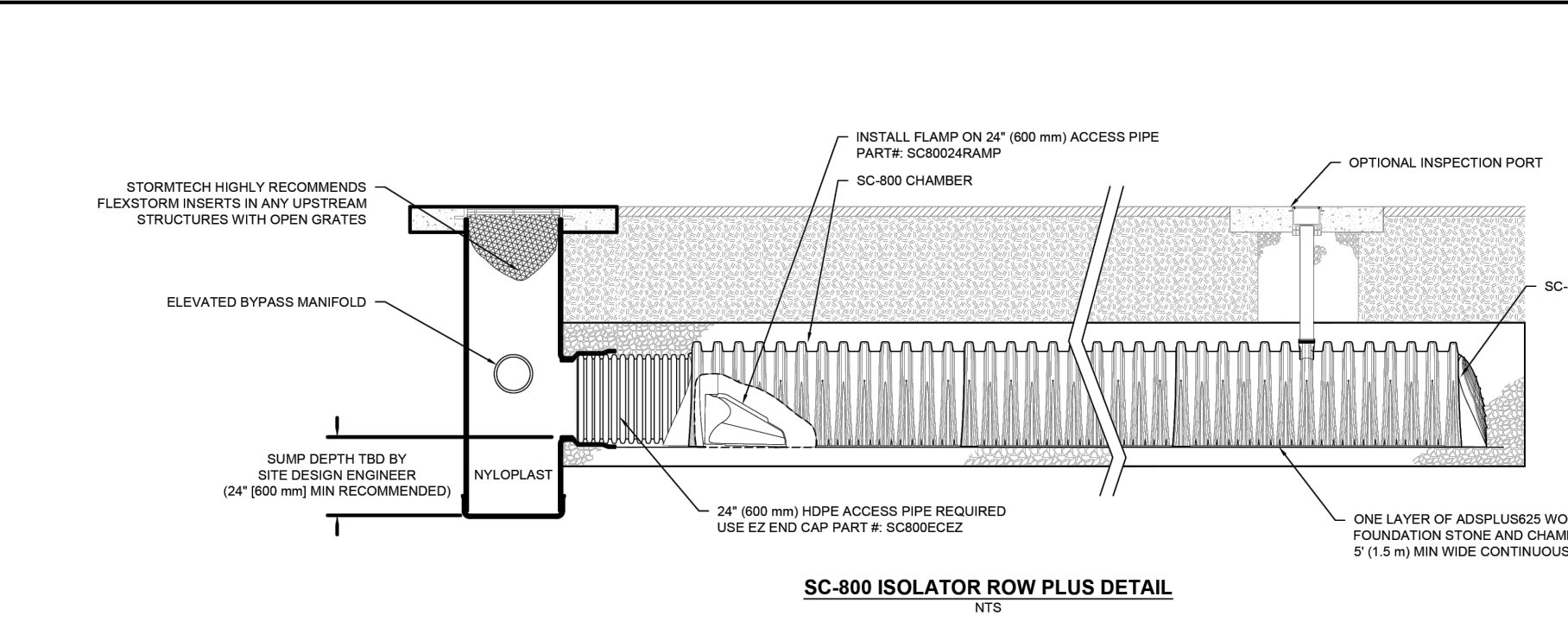
PART #	STUB	B	C
SC800PE08TFC	8" (200 mm)	21.4" (544 mm)	0.9" (23 mm)
SC800PE10TFC	10" (250 mm)	19.2" (488 mm)	1.0" (25 mm)
SC800PE12TFC	12" (300 mm)	17.0" (432 mm)	1.2" (30 mm)
SC800PE15TFC	15" (375 mm)	14.4" (366 mm)	1.6" (41 mm)
SC800PE18TFC	18" (450 mm)	11.3" (287 mm)	1.7" (43 mm)
SC800PE24TFC	24" (600 mm)	8.0" (203 mm)	2.0" (51 mm)
SC800PE	NONE	---	2.3" (58 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL

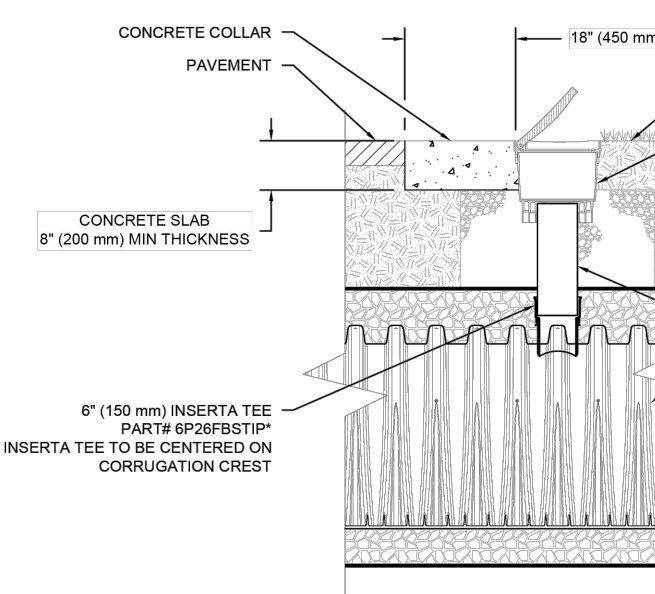
**KETTLESTONE CCU**  
 WAUKEE, IA, USA  
 DATE: 08/11/2025  
 DRAWN: JM  
 CHECKED: NA  
 PROJECT #

**StormTech Chamber System**  
 4640 TREHMAN BLVD  
 HILLIARD, OH 43026  
 1-800-753-9473

SHEET 5 OF 6



- INSPECTION & MAINTENANCE**
- STEP 1: INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2: CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A FIXED CURVED CLEANING NOZZLE WITH REAR FACING SPRING OF 48" (1.1 m) OR MORE IS PREFERRED
  - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
  - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3: REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4: INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

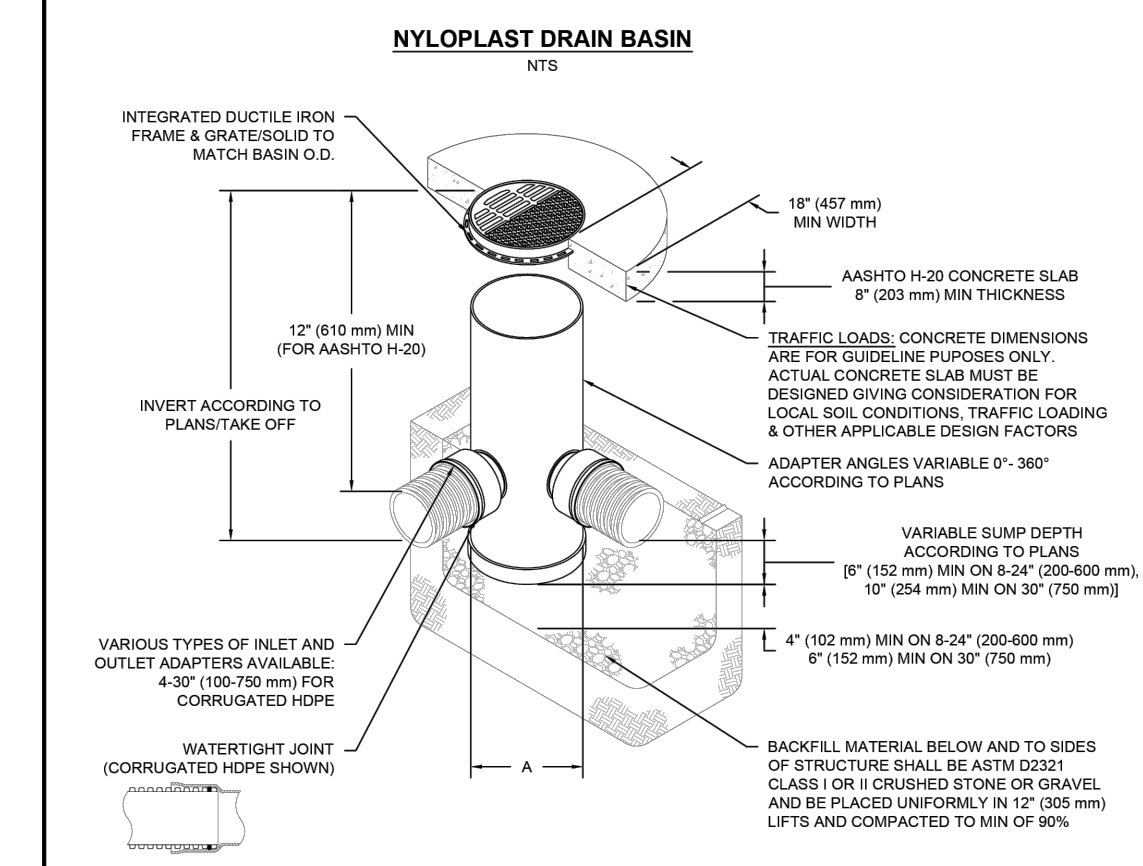


- NOTES**
- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION, ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
  - CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

**KETTLESTONE CCU**  
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SHEET 4 OF 6



- NOTES**
- 15-30" (380-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A538 GRADE 70-50-5
  - 15-30" (380-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A538 GRADE 70-50-5
  - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
  - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE AND A HANCOCK DUAL WALL & SDR 35 PVC
  - FOR COMPLETE DESIGN AND PRODUCT INFORMATION: WWW.NYLOPLAST.US.COM
  - TO ORDER CALL: 800-821-8710

A	PART #	GRATE/SOLID COVER OPTIONS
200 mm	2808AG	PEDESTRIAN LIGHT DUTY STANDARD LIGHT DUTY SOLID LIGHT DUTY
10"	2819AG	PEDESTRIAN LIGHT DUTY STANDARD LIGHT DUTY SOLID LIGHT DUTY
12"	2812AG	PEDESTRIAN AASHTO H-10 STANDARD AASHTO H-20 SOLID AASHTO H-20
15"	2815AG	PEDESTRIAN AASHTO H-10 STANDARD AASHTO H-20 SOLID AASHTO H-20
18"	2818AG	PEDESTRIAN AASHTO H-10 STANDARD AASHTO H-20 SOLID AASHTO H-20
24"	2824AG	PEDESTRIAN AASHTO H-10 STANDARD AASHTO H-20 SOLID AASHTO H-20
30"	2830AG	PEDESTRIAN AASHTO H-20 STANDARD AASHTO H-20 SOLID AASHTO H-20

**KETTLESTONE CCU**  
 WAUKEE, IA, USA  
 DATE: 08/11/2025  
 DRAWN: JM  
 CHECKED: NA  
 PROJECT #

**Nyloplast**  
 4640 TREHMAN BLVD  
 HILLIARD, OH 43026  
 1-800-753-9473

SHEET 6 OF 6

**KETTLESTONE COMMUNITY CHOICE CREDIT UNION**

**SITE DETAILS**

**WAUKEE, IOWA**

2727 S.W. SNYDER BLVD  
 ANKENY, IOWA 50023  
 515-964-2020 | www.snyder-associates.com

