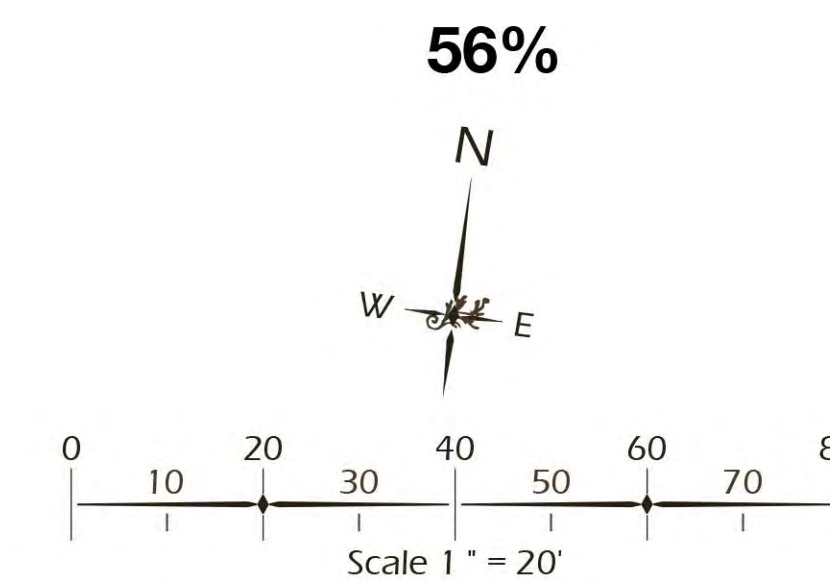


BRUIN ROAD



	AREA (SF)	PERCENT OF TOTAL SITE (%)
TOTAL SITE AREA	41,608 SF	
EXISTING TREE CANOPY	23,303 SF	56%





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THIS SHEET TO SCALE AT: 24"X36"

SITE DEVELOPMENT PLANS
FOR
JOINER PROPERTY
9 BRUIN ROAD
BLUFFTON, SOUTH CAROLINA

DATE: MAY 29, 2024
PROJECT NO.: 22-054-01
DRAWN BY: JM
CHECKED BY: DK



REVISIONS:

DRAWING TITLE
SITE PLAN

DRAWING NUMBER
B

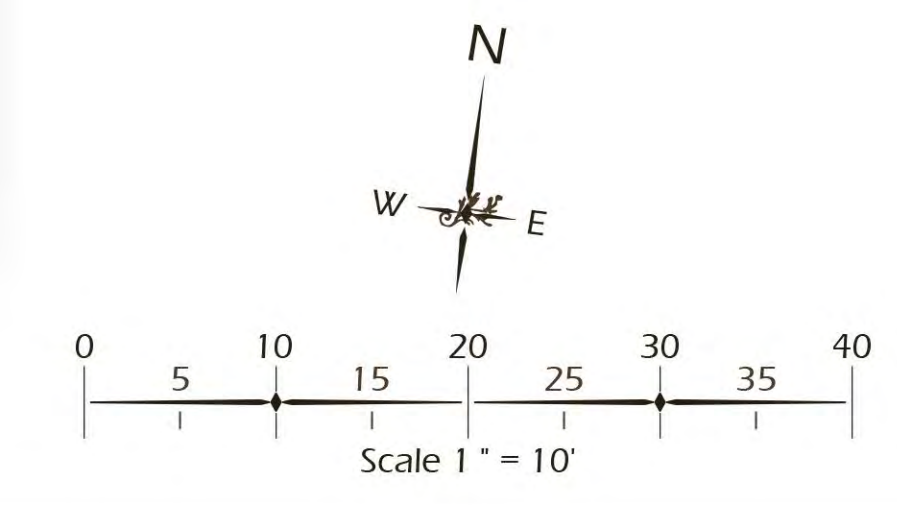
PARKING SUMMARY

LOTS 1 - 4
REQUIRED SPACES = 47
(SEE TABLE 1)

PROVIDED SPACES = 47

- INCLUDES 3 SPACES ALLOCATED FOR BLDG 4 AND BLDG 4A
- INCLUDES 3 EXISTING SPACES ON BLUFFTON ROAD
- INCLUDES 6 GOLF CART SPACES AND 1 COMPACT SPACE

NOTE: APPROXIMATE BUILDING AND PORCH FOOTPRINTS SHOWN ARE FOR REFERENCE ONLY. FINAL BUILDING FOOTPRINTS SUBJECT TO CHANGE BASED ON FUTURE BUILDING DESIGNS.



SITE DEVELOPMENT PLANS
FOR
JOINER PROPERTY
9 BRUIN ROAD
BLUFFTON, SOUTH CAROLINA

DATE: MAY 29, 2024
PROJECT NO.: 22-054-01
DRAWN BY: JM
CHECKED BY: DK



REVISIONS:

DRAWING TITLE
SITE DATA AND OPEN SPACE

DRAWING NUMBER

C

NEIGHBORHOOD CORE - HD INFO

A. Neighborhood Core Historic District (NC-HD)



The red lines indicate the locations of required shopfront buildings (Main Street Building, Commercial Cottage, or Live-Work Sideyard). In addition to shopfront buildings, civic structures are allowed within these areas.



NC-HD Regulating Plan

Neighborhood Core Building Type Requirements:

	Front Build-to Zone	Lot Width	Frontage Requirement	Rear Setback (from rear property line)	Side Setback (from side property lines)	Height (in stories)
Main Street Building	0'-10'	30'-100'	70% - 90%	25'	5'	2-3
Commercial Cottage	5'-15'	30'-75'	40% - 70%	25'	8'	1-1.5
Live-Work Sideyard	0'-5'	35'-65'	50% - 75%	25'	5'	2-2.5
Duplex	5'-15'	55'-70'	N/A	25'	5'	2-3
Triples	5'-15'	70'-100'	N/A	25'	5'	2-3
Mansion Apartment House	5'-15'	60'-80'	N/A	25'	5'	2-2.5
Civic Building	5'-25'	N/A	N/A	N/A	5'	2.5

Carriage House	One Carriage House may be built per primary structure and may have a maximum footprint of 800 sq. ft. Carriage Houses must be located behind the primary structure see 5.15.8.F for a full description of this type.	5'	5'	1-2
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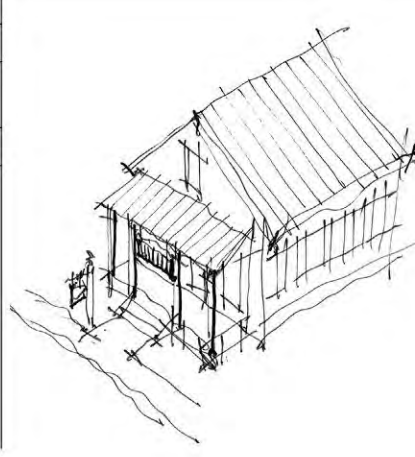
Additional Building Types						
As approved by the Town Architect, additional building types may be allowed in the Neighborhood Core Transect Zone. Building types not specifically listed shall be regulated by the following general requirements:						
	0'-25'	30'-100'	to be determined by UDO Admin.	25'	5'	2 - 3

B. Commercial Cottage

General: Detached Mixed Use Building.
Size Range: 600 – 1,800 sq. ft.
Maximum Footprint (not including porches): 1,500 sq. ft.
Height: 1 – 1.5 stories.

Notes:

A shopfront building.
Similar to the historic Peeples' Store on Calhoun Street.
May contain a living unit in the attic story.
Typically 18' - 30' wide, but may vary.



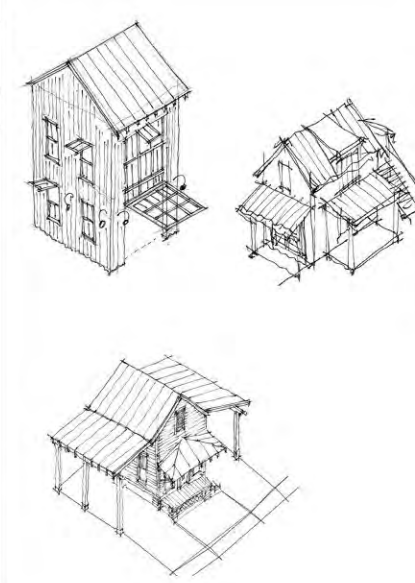
- CORE
- CENTER
- GENERAL
- CONSERVE
- RIVER EDGE

F. Carriage House

General: Accessory Structure.
Size Range: 200 – 1,200 sq. ft. (per unit).
Maximum Footprint (not including porches): 800 sq. ft.
Height: 1 – 2 stories.

Notes:

Must be an accessory structure.
Only one permitted per lot, unless otherwise noted.
May be used as a garage, living unit or home business (or combination).
May function as a small-scale shop, studio or workshop.
Garages are limited to 2 cars, with maximum garage door widths of 12' each.
Must be of same general character as primary structure.
Must be placed behind the primary structure and towards the back of the lot



- CORE
- CENTER
- GENERAL
- CONSERVE
- RIVER EDGE

C. Parking Requirements

- The minimum parking count requirement shall be in accordance with the following parking standard in Table 5.15.7.C.1.a:

Use	Parking Standard
Residential	2 spaces per dwelling unit 1 space per accessory dwelling unit
Lodging	1 space per room for rent plus 2 spaces per 1000 sf of ancillary office use
Office	2 spaces per 1000 sf
Health/Human Care	2 spaces per 1000 sf
Commercial Services	2 spaces per 1000 sf
Restaurants	6 spaces per 1000 sf
Restaurant – Carry Out Only	2 spaces per 1000 sf
Civic/Institutional	2 spaces per 1000 sf
Religious Assembly	1 space per 6 seats
School	1 space per instructor
Recreation/Entertainment	Number of spaces shown to be necessary and reasonable by data submitted by the Applicant and as approved by the UDO Administrator

- Credit shall be given for on-street parking spaces located within the public or private right-of-way that are directly in front of or adjacent to a property (except for restaurant uses).
When an on-street parking space is shared between two properties, the following methods shall determine how that parking space will be allocated.
 - If the on-street parking space is demarcated, project the property line or, in the absence of a property line separating the subject building or use from the adjacent building, use a line determined by the midpoint between the closest points of the subject and adjacent buildings or uses, perpendicular to the to the edge of parking pavement. From this point measure the distance along the pavement edge to each parking space marking. The use or parcel having the majority of this distance may count the space towards the required parking.
 - If the on-street parking space is not demarcated, project the property line or, in the absence of a property line separating the subject building or use from the adjacent building, use a line determined by the midpoint between the closest points of the subject and adjacent buildings or uses, perpendicular to the to the edge of parking pavement. From this point measure the total distance along the pavement edge between each property line or adjacent building or use. For parallel parking divide the

OPEN SPACE DIAGRAM

SCALE: 1" = 20'-0"

LOTS 1-4	AREA (SF)	PERCENT OF TOTAL SITE (%)
TOTAL SITE AREA	41,608 SF	
GENERAL OPEN SPACE	±5,410 SF	13.00%
MISC. OPEN SPACE	±9,741 SF	23.41%

DEVELOPMENT SUMMARY

Lot 1-4 Building Square Footage and Parking Summary					ZONE: NEIGHBORHOOD CORE - HD		TABLE 01
Lot Number	Building Type	Proposed Building Footprint*	Maximum Building Square Footage*	Actual Building Square Footage*	Assumed Building Uses	Required Parking	Notes
Lot 1	Main Street or Additional Building Type TBD	2,100 SF	Per UDO	6,300 SF (3 stories)	1st Floor: 2,100 S.F. Retail / Office Use 2nd / 3rd Floor: 2,100 S.F. Retail / Office Use Alternate: 2 Residential units per floor (6 max)	13	Parking based on 2/1,000 S.F. Retail + Office Use or Takeout Restaurant. Alternate: Residential 2 spaces per unit
Lot 1-A	Carriage House	600 SF	1,200 SF	1,200 SF (2 stories)	Residential or Office Use	3	3 spaces assures one Residential unit (600 S.F.) and one office space at 600 S.F.
Lot 2	Main Street or Additional Building Type TBD	2,500 SF	Per UDO	7,500 SF (3 stories)	1st Floor: 2,500 S.F. Retail / Office Use 2nd / 3rd Floor: 2500 S.F. Retail / Office Use Alternate: 2 Residential units per floor (6 max)	15	Parking based on 2/1,000 S.F. Retail + Office Use or Takeout Restaurant. Alternate: Residential 2 spaces per unit
Lot 3	Main Street or Additional Building Type TBD	2,200 S.F.	Per UDO	4,400 S.F. (1.5 -2.5 stories)	1st Floor: 1,000 S.F. Restaurant (6 spaces on lot) and 1,200 S.F. Retail / Office Use 2nd Floor: 2,200 S.F. Retail / Office Use; Alternate: 2 Residential units per floor (4 max) Alternate: 3,400 S.F. Retail 1st and 2nd Floor = 7 spaces required	13	Parking based on 6/1,000 S.F. Restaurant, 2/1,000 S.F. Retail + Office Use, or Takeout Restaurant. Alternate: Residential 2 spaces per unit
Lot 4	Existing Cottage (Joiner House)	-	-	-	Residential	2	
Lot 4-A	Carriage House on Joiner House lot	700 S.F.	1,200 S.F.	1,200 S.F. (1.5 stories)	Accessory Dwelling Unit	1	Residential
* Square footage does not include porches. ** Building square footage and parking calculations subject to change pending final building uses. Parking will be allocated based on total provided for all uses.					Total Required Parking	47	Shared parking for Retail / Office Use Buildings
					Total Parking Provided	47	Includes 3 spaces on Bluffton Road and 9 golf cart / compact spaces



28 Promenade Street, Suite 801 | Bluffton, South Carolina 29910 | ph. 843.257.7411

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SITE DEVELOPMENT PLANS
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9 BRUIN ROAD
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DATE: MAY 29, 2024
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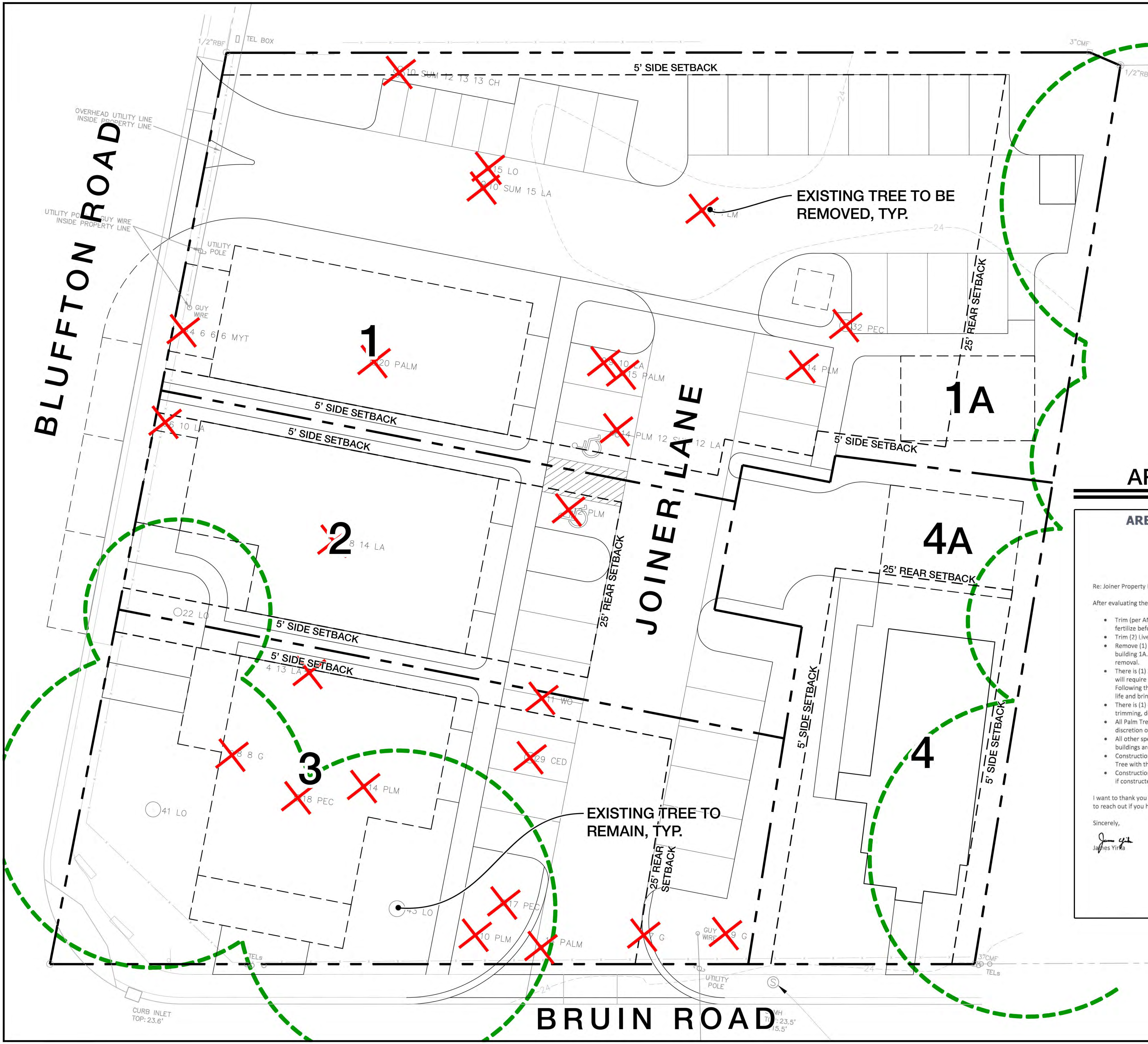


REVISIONS:

DRAWING TITLE
TREE CANOPY AND TREE REMOVAL PLAN

DRAWING NUMBER

D



ARBORIST REPORT

ARBORCARE TREE EXPERTS INC

March 22, 2024

Re: Joiner Property Inspection Letter

After evaluating the property located downtown Bluffton, I recommend the following:

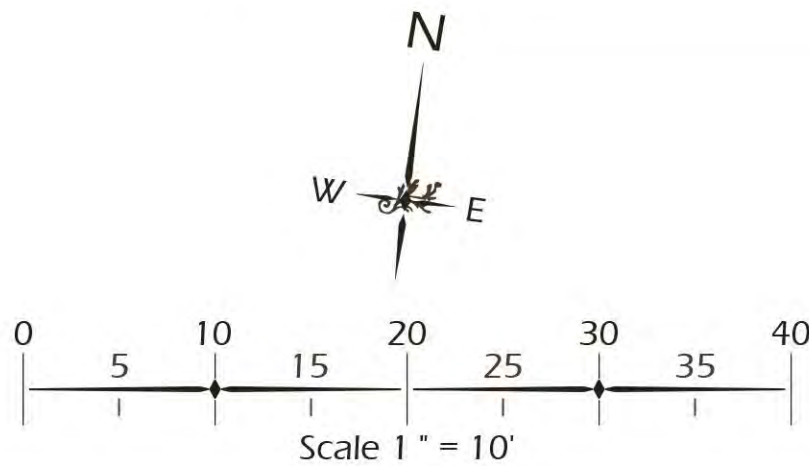
- Trim (per ANSI 300 standards) (1) Live Oak Tree hanging over future parking area and fertilize before construction is performed.
- Trim (2) Live Oak Trees on neighbor's property hanging over the existing Joiner house.
- Remove (1) 32" Pecan Tree located behind the existing Joiner house, behind proposed building 1A. There is significant root damage and health is declining, I recommend removal.
- There is (1) 22" Live Oak Tree located along Bluffton Road that is declining in health. This will require injecting the root system and fertilizing with root growth enhancer. Following this protocol will maximize the opportunity for the tree to continue a healthy life and bring it back to a good standing condition.
- There is (1) 43" Live Oak Tree and (1) 41" Live Oak Tree that require fertilization, trimming, dead wooding and elevation to maximize the best health results.
- All Palm Trees located on the property are to either be removed or transplanted at the discretion of the property owner.
- All other species of trees located around the property slated for removal for future buildings are non-protected species.
- Construction of building #2 should have no negative impacts on the existing Live Oak Tree with the proper proposed fertilization.
- Construction of building #3 should not impede the health of the existing Live Oak Trees if constructed on pilings vs solid foundation.

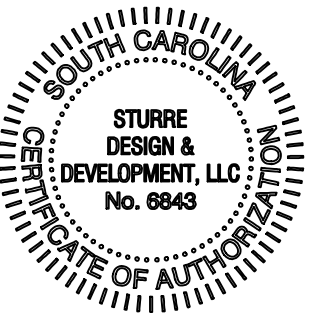
I want to thank you for the opportunity to evaluate the Joiner property. Please do not hesitate to reach out if you have any questions or concerns.

Sincerely,

James Yirka
James Yirka

PO Box 7766
Hilton Head, SC
PHONE 843-816-6278
CELL 410-984-0072
EMAIL Arborcare.sc@gmail.com
LTE#: 000626



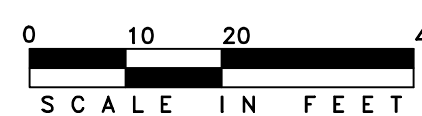
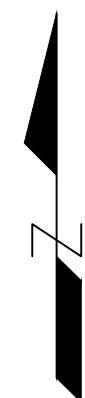


PREPARED FOR:

JOHA, LLC

PROJECT:

9 BRUIN ROAD



PLAN

HORIZONTAL SCALE 1"=20'



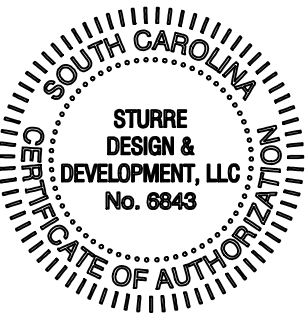
REV #	DATE	DESCRIPTION
	DATE	05/29/20

SHEET NAME

UTILITY EXHIBIT

SHEET NO. _____

1 OF 3



PREPARED FOR:

JOHA, LLC

PROJECT:

9 BRUIN ROAD



0 15 30 60
SCALE IN FEET
PLAN
HORIZONTAL SCALE 1" = 30'

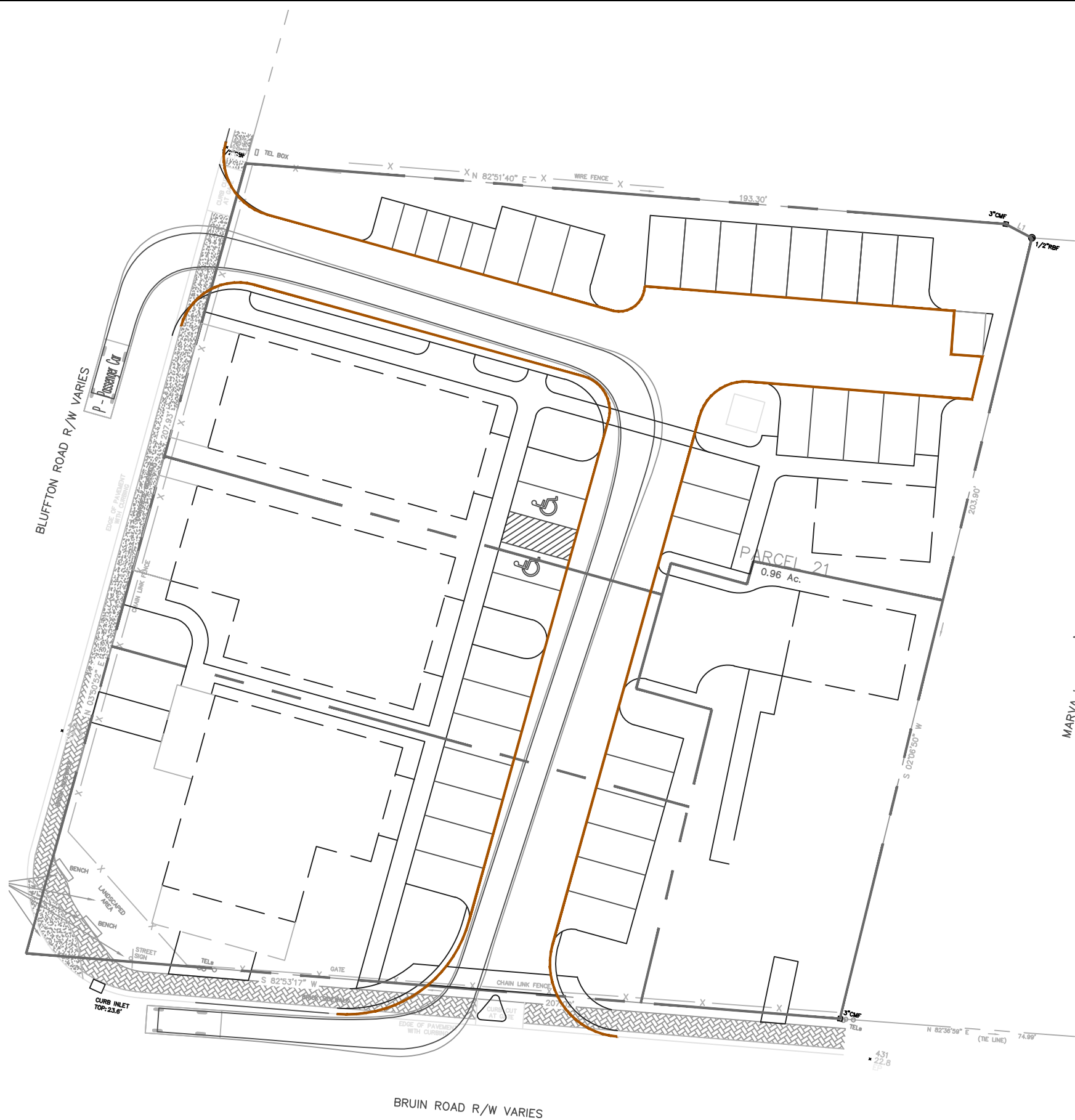


REV #	DATE	DESCRIPTION

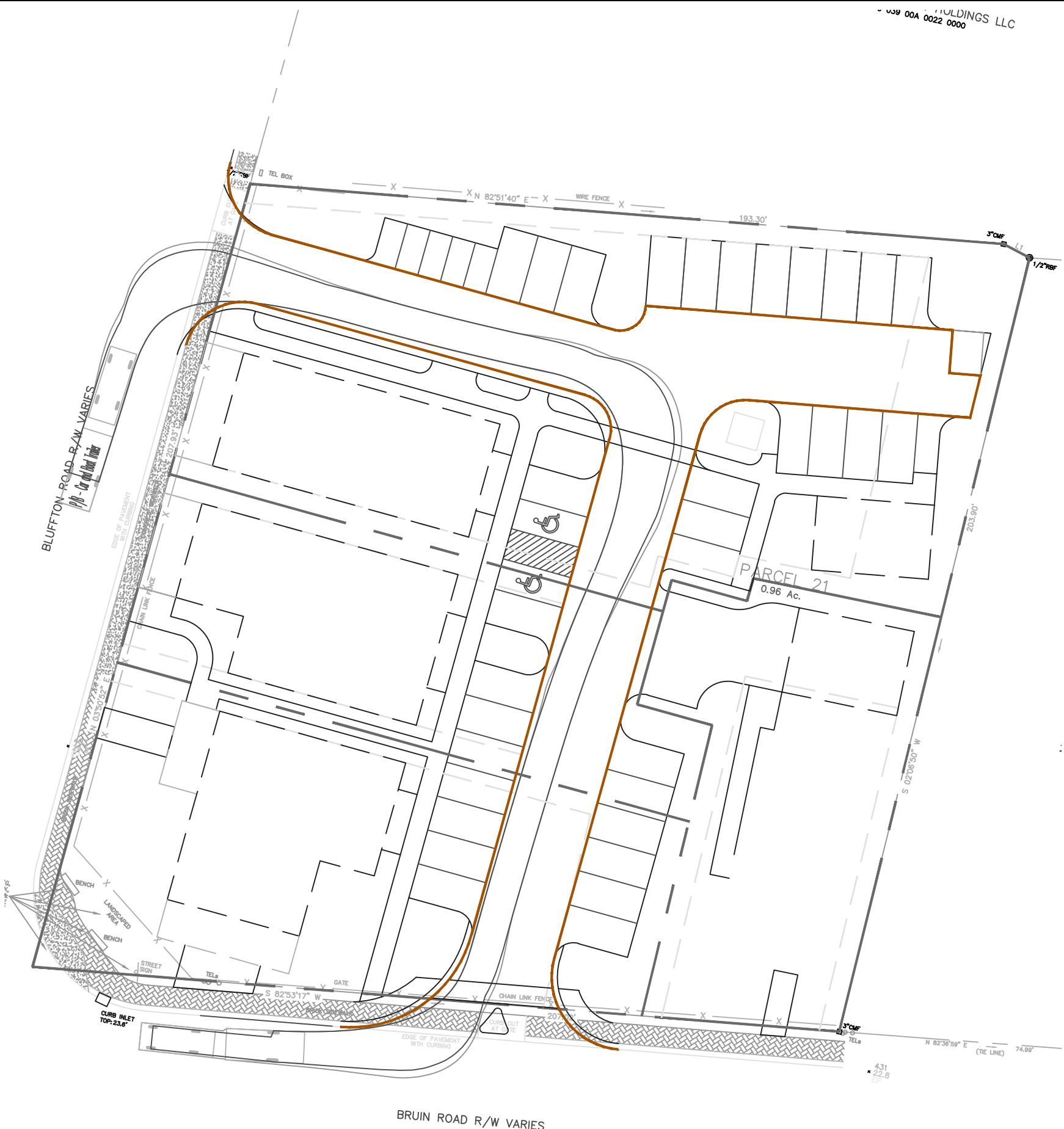
SHEET NAME

AUTOTURN EXHIBITS

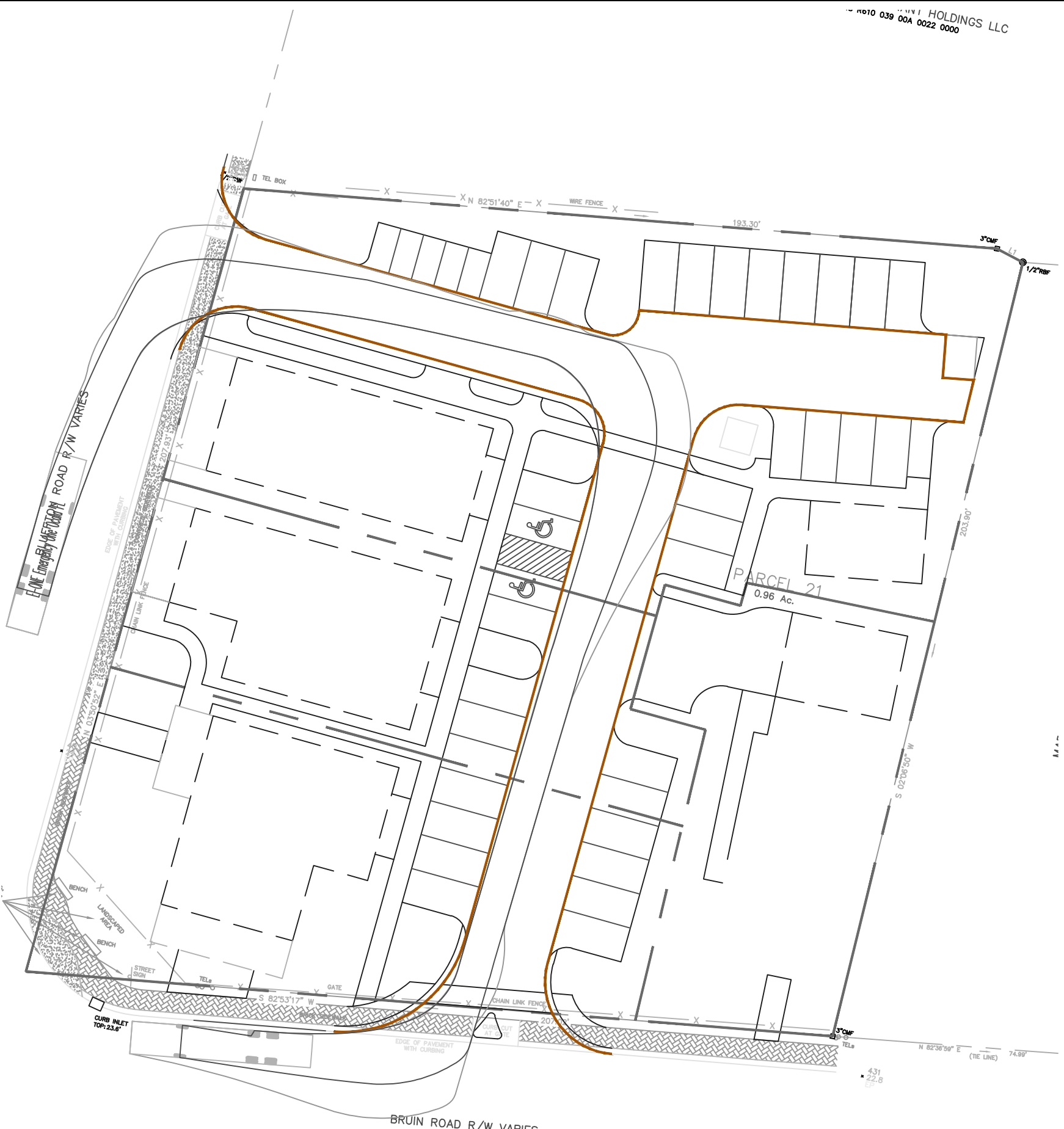
SHEET NO.



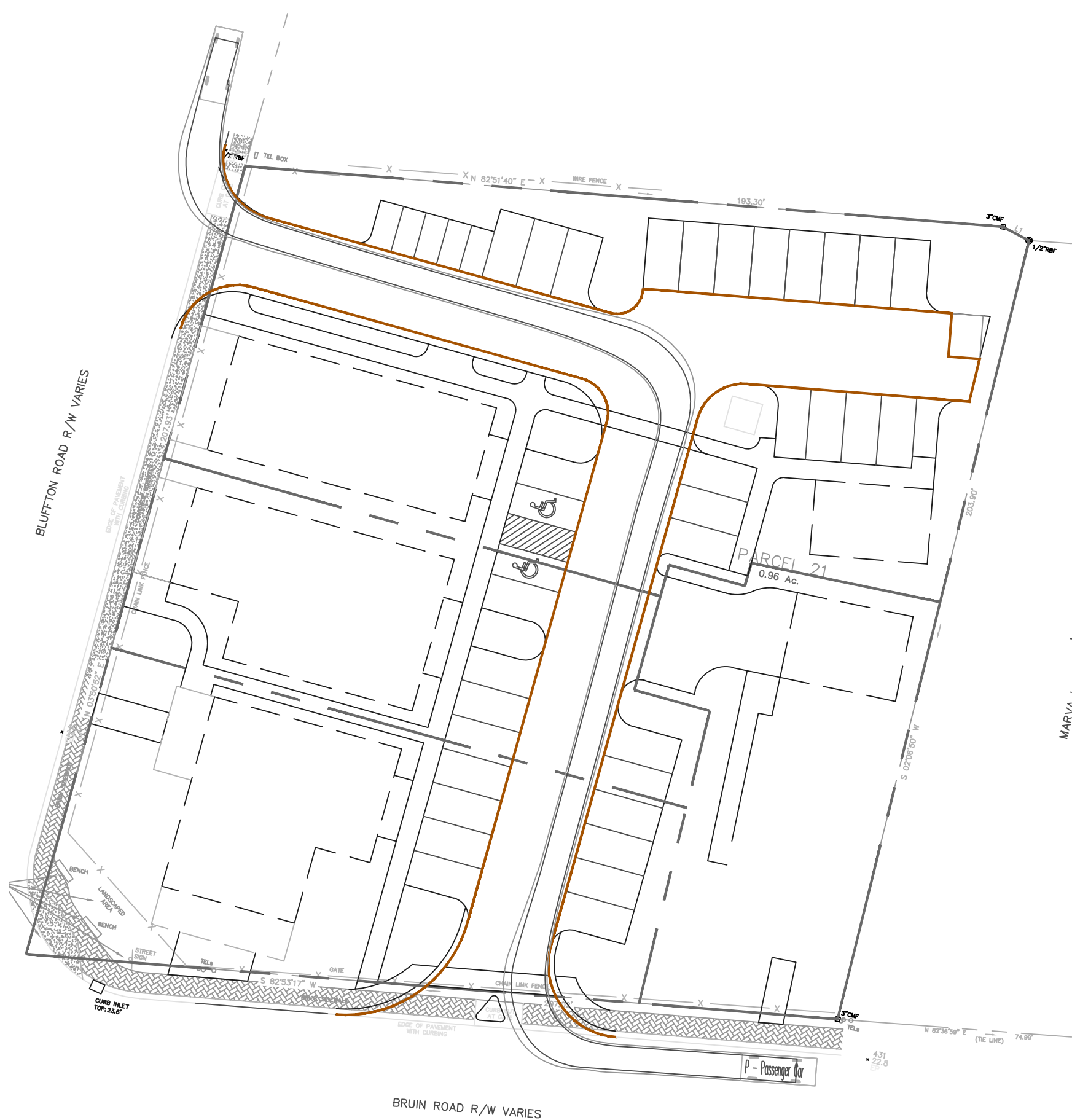
DESIGN VEHICLE
PASSENGER CAR



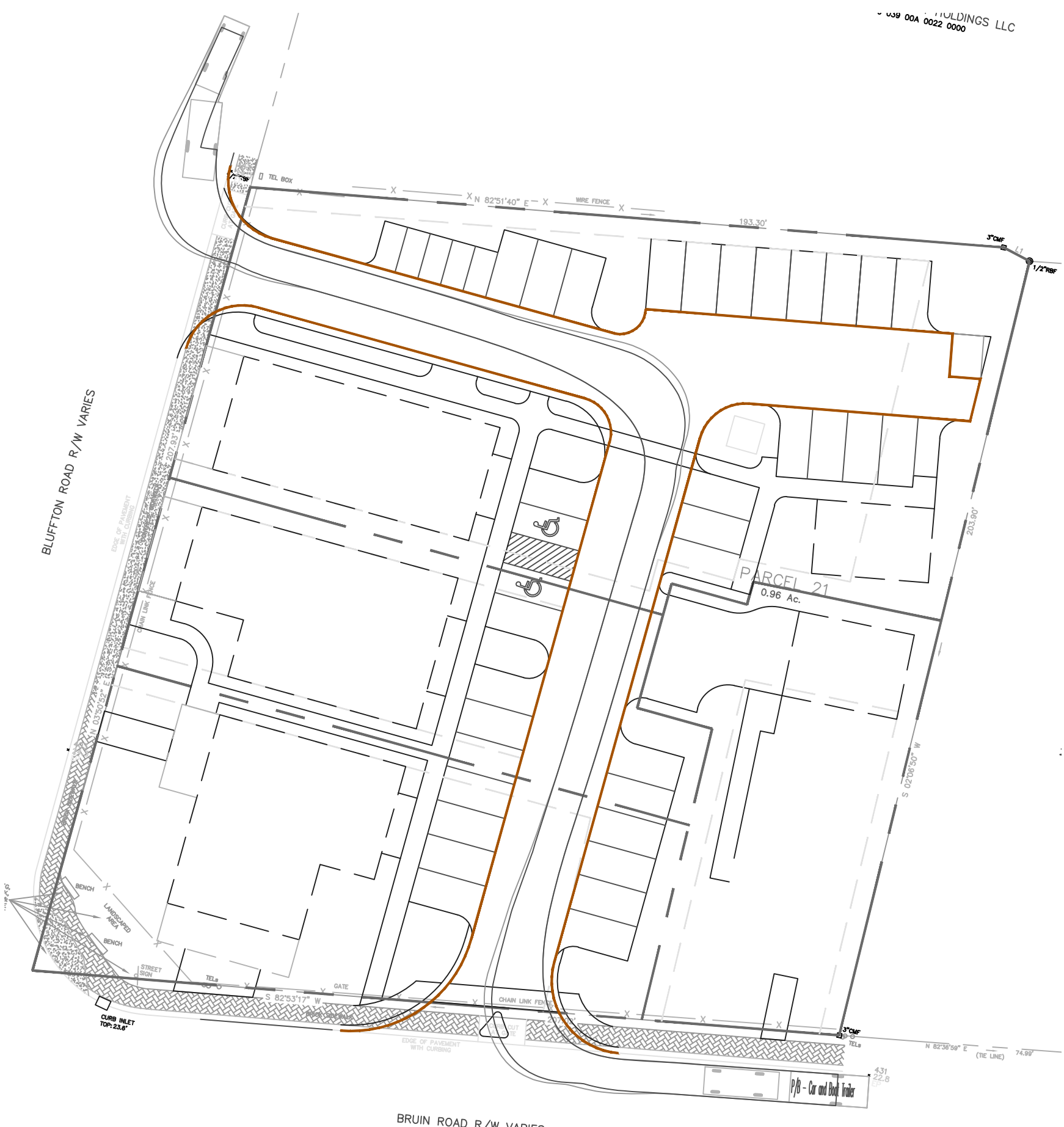
DESIGN VEHICLE
CAR W/ BOAT TRAILER



DESIGN VEHICLE
FIRE TRUCK - E-ONE CYCLONE 11 CHASSIS
WIDTH = 8.33'
LENGTH = 46.33'
W/W RADIUS = 44.27'



DESIGN VEHICLE
PASSENGER CAR

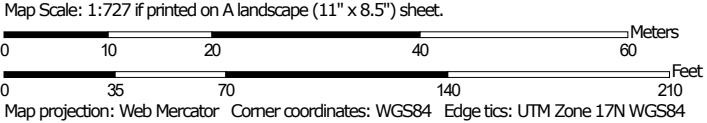
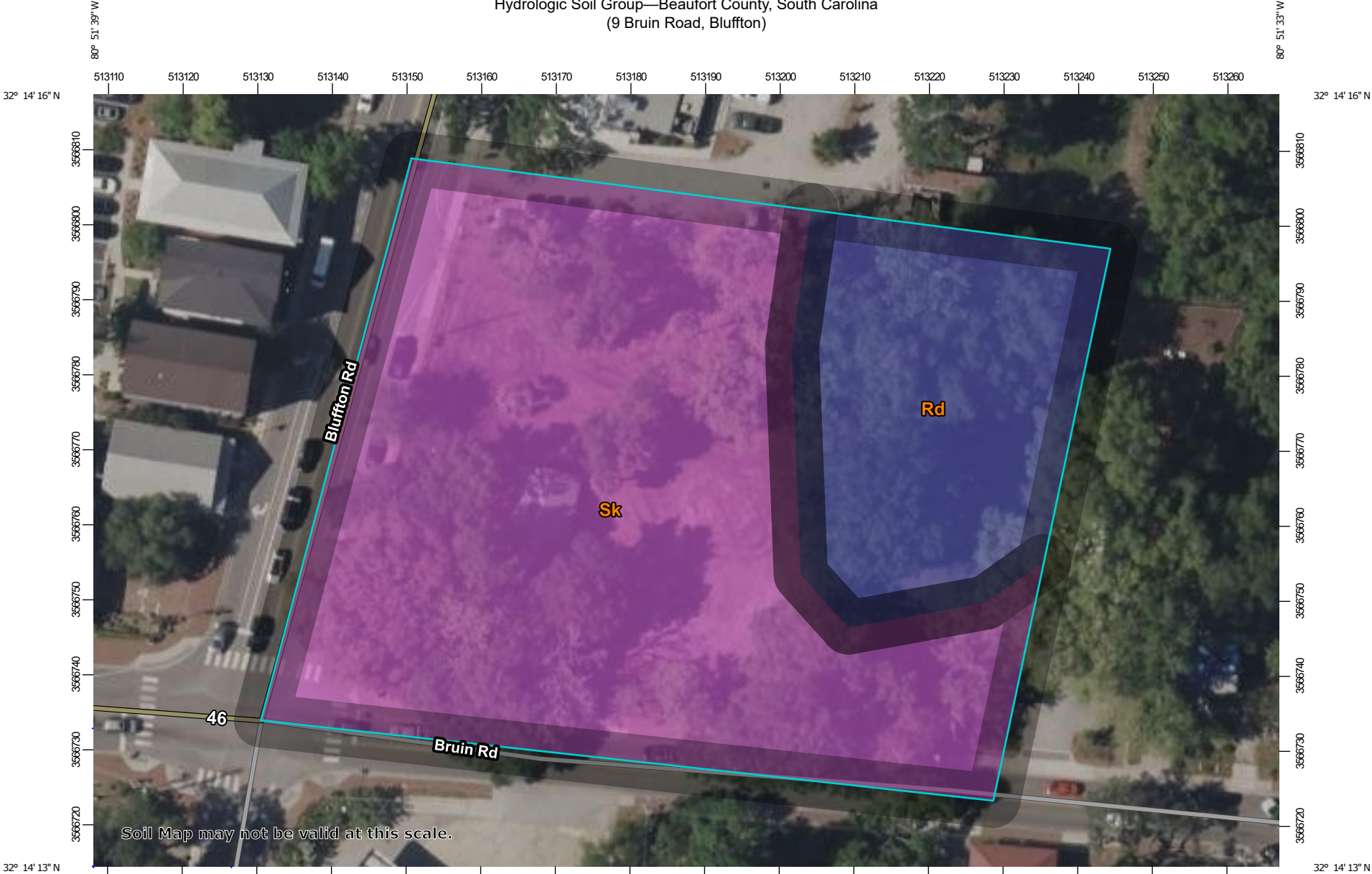


DESIGN VEHICLE
CAR W/ BOAT TRAILER



DESIGN VEHICLE
FIRE TRUCK - E-ONE CYCLONE 11 CHASSIS
WIDTH = 8.33'
LENGTH = 46.33'
W/W RADIUS = 44.27'


Hydrologic Soil Group—Beaufort County, South Carolina
(9 Bruin Road, Bluffton)



Hydrologic Soil Group—Beaufort County, South Carolina
(9 Bruin Road, Bluffton)

MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Lines


-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

Soil Rating Points






-  A
-  A/D
-  B
-  B/D

-  C
-  C/D
-  D
-  Not rated or not available

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Beaufort County, South Carolina
Survey Area Data: Version 19, Aug 29, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 15, 2022—Jun 2, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Rd	Ridgeland fine sand	B	0.5	25.4%
Sk	Seabrook fine sand	A	1.4	74.6%
Totals for Area of Interest			1.8	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500.
- 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 CLASSIFICATION 45x76 DESIGNATION SS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE 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 LRFD 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, TESTED 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 DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT². THE ASB 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 SEALED 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 LRFD 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 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

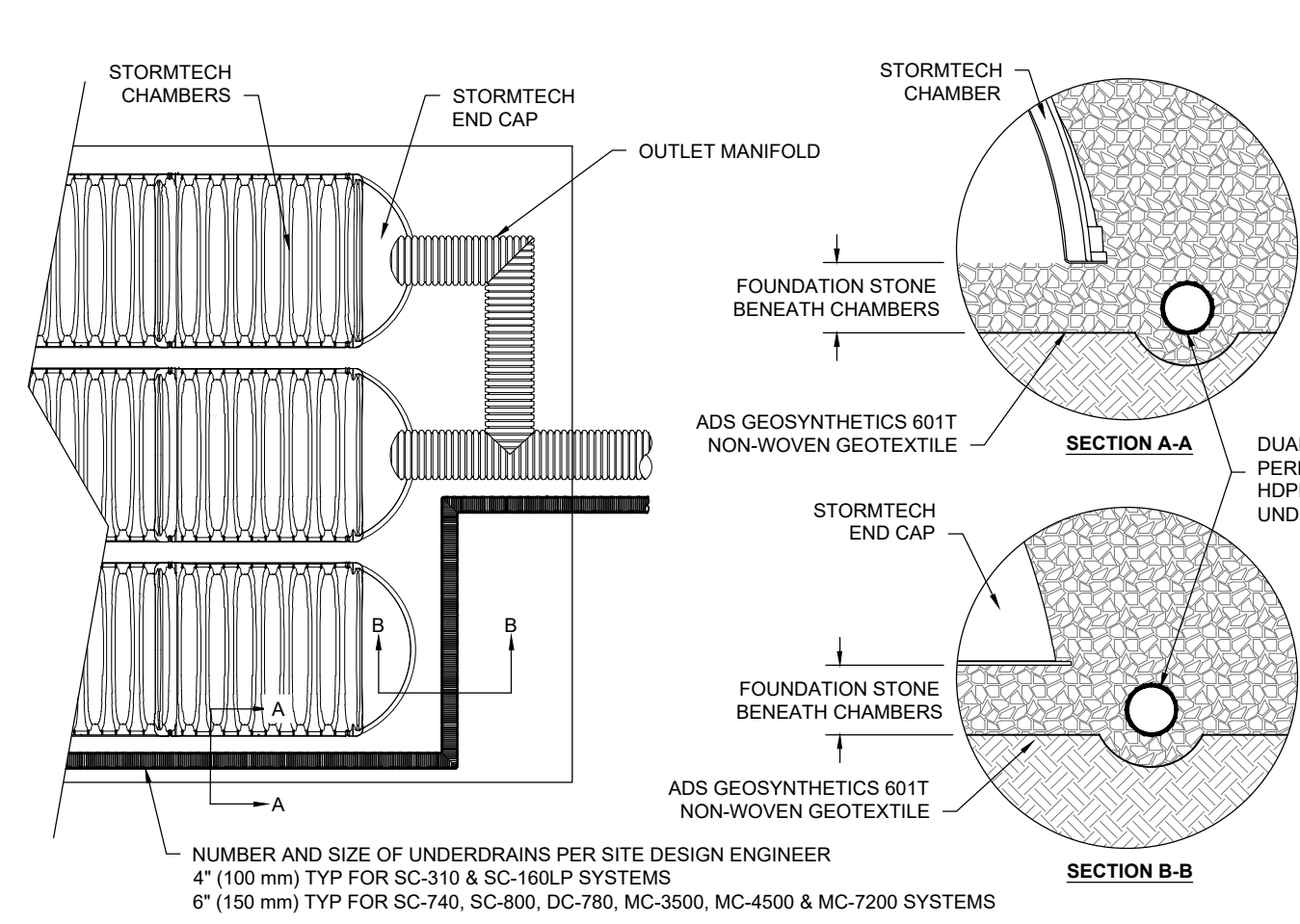
- STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOTTER 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 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- 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

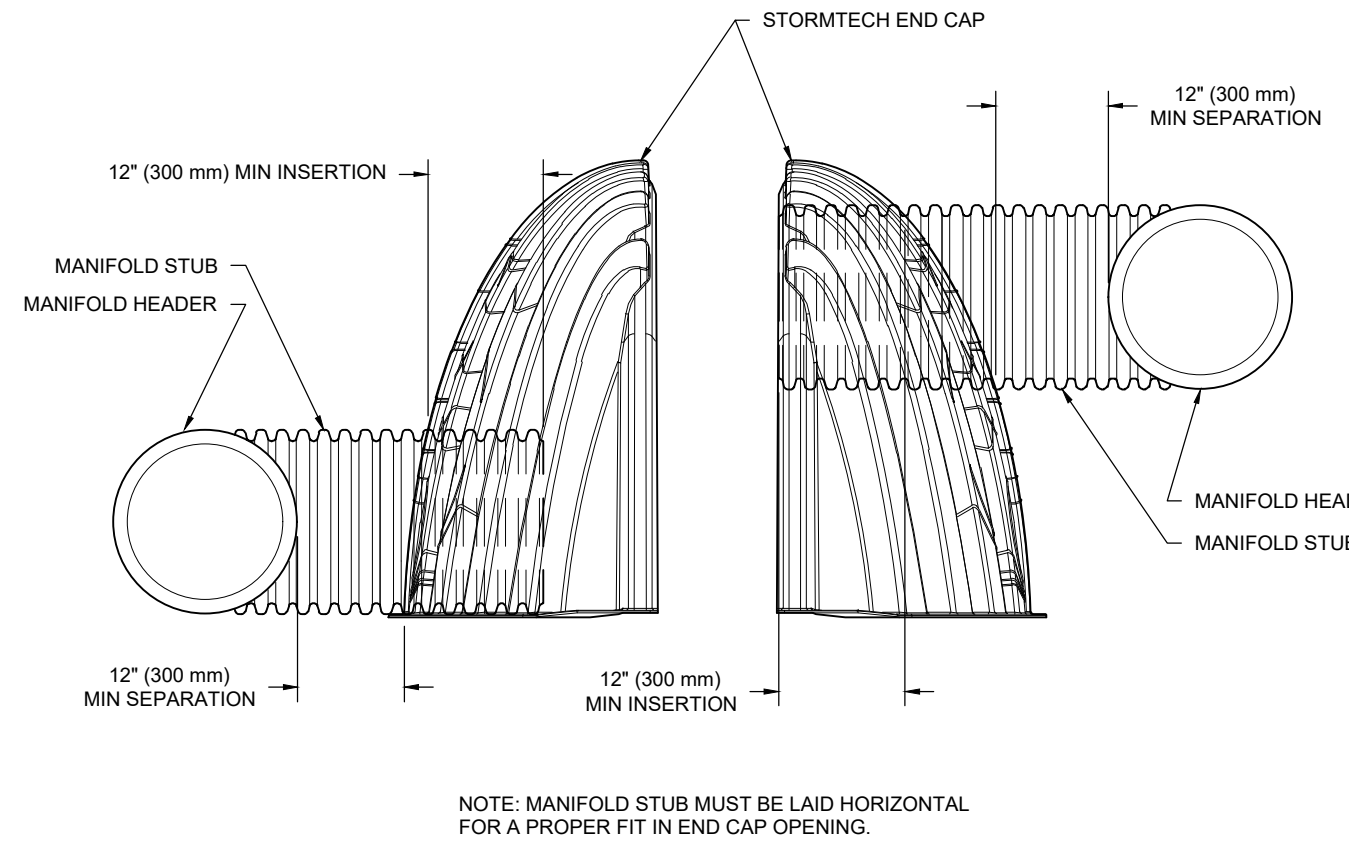
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER Tired LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 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 CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

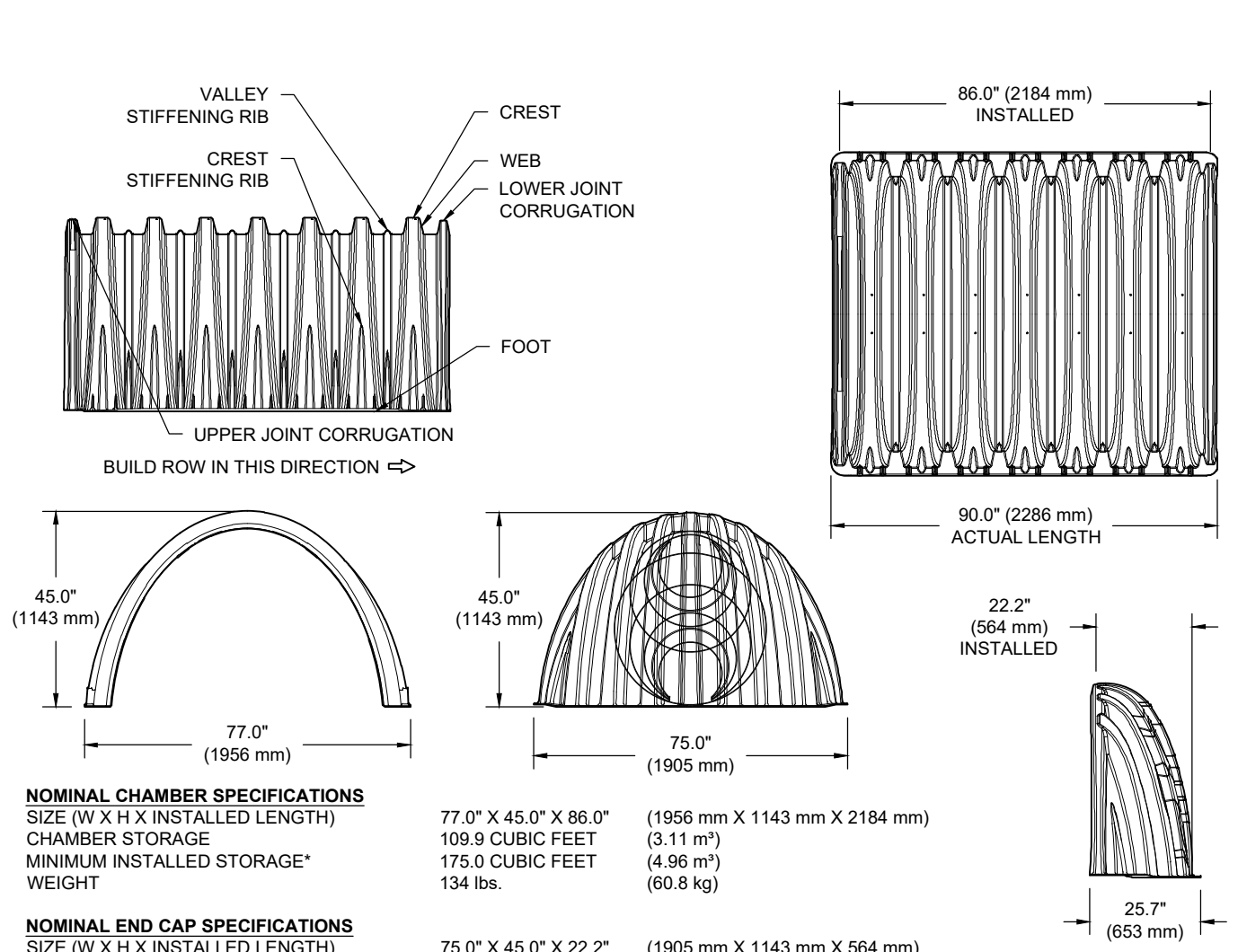
CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



5 UNDERDRAIN DETAIL



6 MC-SERIES END CAP INSERTION DETAIL



PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B	---	---	0.86" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	0.81" (21 mm)
MC3500IEPP08B	---	---	---
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B	---	---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B	---	---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B	---	---	1.50" (38 mm)
MC3500IEPP18TC	---	20.03" (509 mm)	---
MC3500IEPP18TW	18" (450 mm)	---	1.77" (45 mm)
MC3500IEPP18BC	---	---	---
MC3500IEPP24TC	---	14.48" (368 mm)	---
MC3500IEPP24TW	24" (600 mm)	---	---
MC3500IEPP24BC	---	---	2.06" (52 mm)
MC3500IEPP24BW	---	---	---
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

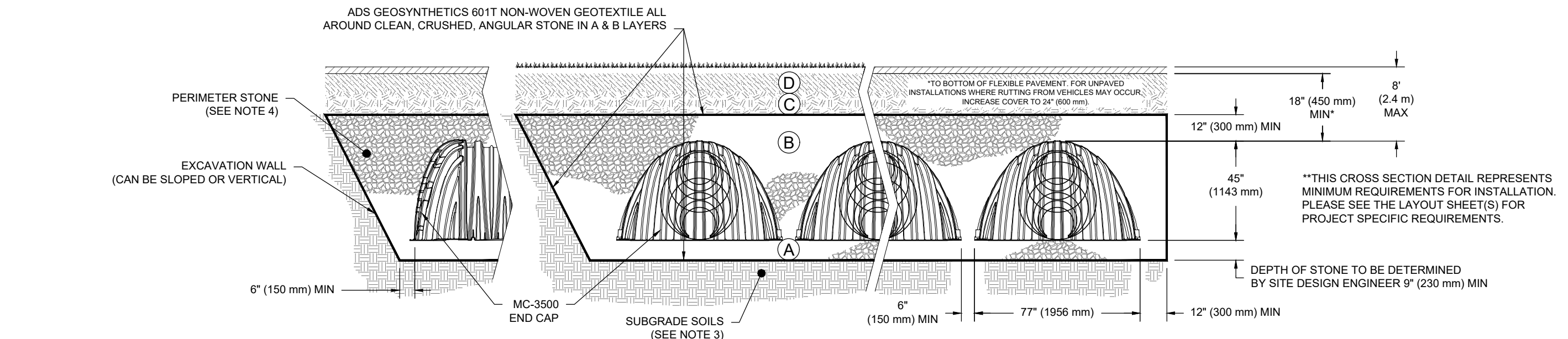
NOTE: ALL DIMENSIONS ARE NOMINAL

2 MC-3500 TECHNICAL SPECIFICATIONS

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: 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: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2.4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 18" (450 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 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 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

- PLEASE NOTE:
- 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".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION 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.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL/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.
 - WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".

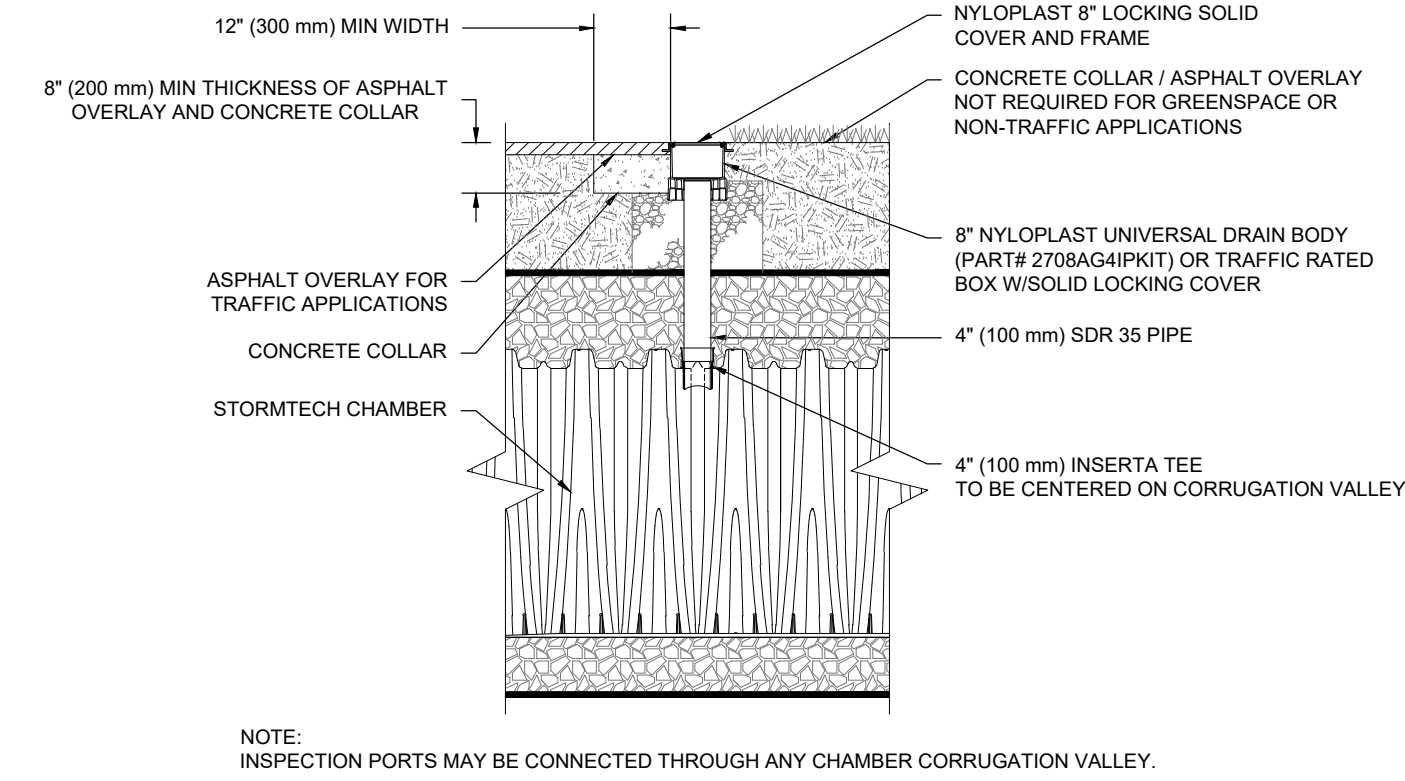


NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- MC-3500 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.
- PERIMETER 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, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT². 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.

MC-3500 CROSS SECTION DETAIL

3 MC-3500 ISOLATOR ROW PLUS DETAIL



INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT).
 - 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.
- B. ALL ISOLATOR ROW PLUS ROWS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS.
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE.
 - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY.
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE.
 - 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 CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (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.

4 4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)

MC-3500 STANDARD DETAILS

StormTech®
Chamber System
888-892-2694 | WWW.STORMTECH.COM

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