

TOWN OF BLUFFTON



STAFF REPORT

Department of Growth Management

MEETING DATE:	June 28, 2023
PROJECT:	Refuel 1062 Bluffton: Landscaping, Lighting and Architecture Certificate of Appropriateness Highway Corridor Overlay
PROJECT MANAGER:	Katie Peterson, AICP Senior Planner

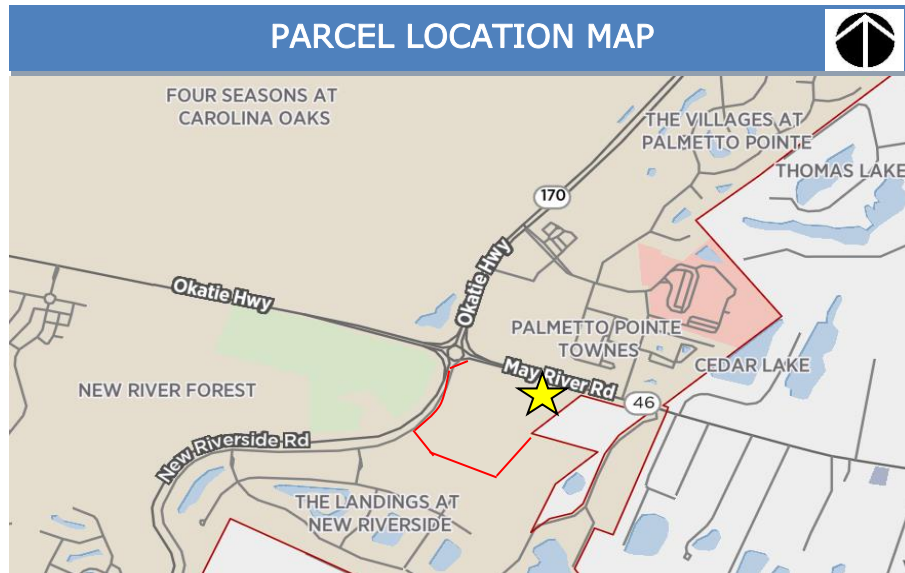
APPLICATION REQUEST: The Applicant, Narciso Lira of Odyssey Services Group, on behalf of the owner, Ian Bowers of Refuel Operating Company, LLC, requests that the Planning Commission approve the following application:

1. **COFA-04-23-017905.** A Certificate of Appropriateness to permit the landscape, lighting and architecture for Refuel convenience store and gas station, located along SC Highway 46 across from the May River Xing intersection. It is zoned PUD within the New Riverside PUD and New Riverside Village Master Plan.

INTRODUCTION: The conceptual plan for the New Riverside PUD was approved by Bluffton Town Council in June of 2004. The Concept Plan and Development Agreement define the allowed land uses in the various areas of the New Riverside Planning Area. The documents also define the development standards, which govern all development activity within the Concept Plan, including Parcels 4B-2 and 4B-3, which are the subject of this application. These negotiated land uses, and development standards are binding upon the Town and this Applicant.

The New Riverside Village Master Plan was approved with conditions in February 2020 by the Town of Bluffton Council. A Preliminary Development Plan for Refuel (DP-02-22-016354) was approved with conditions by the Planning Commission at the July 27, 2022 meeting. A Final Development Plan was heard at the May 10, 2023 Development Review Committee meeting where comments were provided to the Applicant (Attachment 5). Staff is working with the Applicant to review revised drawings and ensure all conditions have been met.

The Applicant has requested the approval of a Certificate of Appropriateness – Highway Corridor Overlay application which is subject to review by the Planning Commission providing authority over the architectural, landscaping, and lighting design only.



PLANNING COMMISSION ACTIONS: As granted by the powers and duties set forth in Section 2.2.6.C.6. of the Unified Development Ordinance, the Planning Commission has the authority to take the following actions with respect to this application:

1. Approve the application as submitted by the Applicant;
2. Approve the application with conditions; or
3. Deny the application as submitted by the Applicant.

REVIEW CRITERIA & ANALYSIS: Town Staff and the Planning Commission are required to consider the criteria set forth in Section 3.17.3 of the Unified Development Ordinance in assessing an application for a Certificate of Appropriateness- HCO. These criteria are provided below followed by a Staff Finding based upon review of the application submittals to date.

1. Section 3.17.3.A. The proposed development must be in conformance with applicable landscaping, lighting, and architectural provisions provided in Article 5, Design Standards.
 - a) *Finding.* The project is located in the New Riverside PUD and is part of the New Riverside Village Master Plan. There are specific design standards established by the PUD via the Beaufort County 1990/3 Zoning and Highway Corridor Overlay District (HCO) within of the Town of Bluffton Zoning and Development Standards Ordinance (BZDSO), approved September 1999, modified June 2000, (Attachment 6) which are attached to the PUD through Appendix 1.3 of the Concept Plan. In addition to these standards, as a result of the adoption the Town of Bluffton's Stormwater Design Manual (SWDM) in September of 2021, the landscaping design criteria of Article 5 of the current Unified Development Ordinance are applicable to review of this application.

2. Section 3.17.3.B. The proposed development shall be in conformance with any approved Development Agreement, PUD Concept Plan, PUD Master Plan, Subdivision Plan, or any other agreements or plans that are applicable.

The property is in the New Riverside PUD and is identified on the New Riverside Village Master Plan as a General Store. As a result, the property is subject to the Beaufort County 1990/3 Zoning and Highway Corridor Overlay District (HCOD) within of the Town of Bluffton Zoning and Development Standards Ordinance (BZDSO) Zoning and Development Standards Ordinance and Design Guidelines contain architectural, landscaping, and lighting design standards for properties located in the Highway Corridor Overlay District (HCOD).

A. New Riverside PUD/PUD CONCEPT PLAN

The New Riverside PUD refers to the Beaufort County 1990/3 Zoning and Development Standards Ordinance (ZDSO) and The Town of Bluffton Zoning and Development Standards Ordinance (BZDSO) Highway Corridor Overlay District (HCOD) for development standards.

Landscape

- 1) *Finding – Foundation Buffer.* Per Section 5.15.8.D.(2) of the BZDSO, a landscaped buffer of at least eight (8) feet wide shall be maintained between any structure and any parking or driving areas, except for loading areas and areas where drive-through facilities are utilized. This space is to be reserved for plant material, either existing or planted. No such space is required at the rear of the building but is encouraged. Sidewalks and handicap ramps may be placed adjacent to the buffer on either side. The buffer may be penetrated to provide access to the buildings and is not required in loading areas. As proposed, the east side of the Refuel building does not meet this minimum requirement. The Landscape Plan must be updated to include additional plantings to create an eight (8) foundation buffer along the east side.
- 2) *Finding – Landscaped Peninsula.* Per Section 5.15.8.D.(5) of the BZDSO Each Landscaped Peninsula shall contain one (1) broad-leaf overstory tree with a minimum size of two and one half (2 ½”) caliper inches dbh and a minimum height of ten (10’) feet. The Washington Hawthorns used as Landscaped Peninsula trees are proposed at 1 ½” caliper dbh and must be increased.

Architecture

- 1) *Finding –Appropriate Exterior Materials.* Per Section 5.15.9.(C)(3) of the BZDSO, accessory structures should be architecturally compatible with primary structures. No elevations or details have been provided for the proposed screening for the propane enclosure and ice/outdoor coolers. Additional information on the proposed screening must be provided for review. It should be noted that exposed metal caging is not appropriate as this elevation faces towards Highway 46.

- 2) *Finding* – Appropriate Exterior Materials. Per Section 5.15.9.(D)(2) pitched roofs are defined as 4 and 12 pitch or greater. The carwash proposes the use of a 2 and 12 pitched roof. The roof pitch must be increased to meet this requirement. Further, a determination on the appropriateness of the curved gas canopies must be made, as they are not a typical roof type to the Lowcountry.
- 3) *Finding. Other Requirements.* Per Section 5.15.12(A) of the BZDSO, heating, ventilating, and air conditioning equipment, duct work, air compressors, and other fixed operating machinery shall be either screened from view or located so that such items are not visible from the highway. Additional information must be provided regarding the location of proposed service yards and utilities. Should they be located on the roof, a roof plan must be provided as not enough information has been provided to ensure they will be screened from view.

B. PUD MASTER PLAN

The New Riverside Village Master Plan document refers to the New Riverside PUD for design standards.

- 1) *Finding. New Riverside Village Master Plan.* As there are no design guidelines established in the New Riverside Village Master Plan for the site, no additional design review was performed.

C. DECLARATION OF COVENANTS, CONDITIONS, AND RESTRICTIONS

The Declaration of Covenants, Conditions, and Restrictions for the New Riverside Village Master Plan.

- 1) *Finding. Declaration of Covenants, Conditions, and Restrictions for New Riverside Village.* The applicant must provide a letter of approval from the Declarant for the covenants and restriction which are recorded with the New Riverside Village Master Plan.
3. Section 3.17.3.C. The application must comply with applicable requirements in the Application Manual.
 - a. *Finding.* The application has been reviewed by Town Staff and has been determined to be complete and that it meets all requirements of the Applications Manual. It should be noted that any proposed signage is reviewed through a Sign Permit process separate from this review. Any proposed signage will need to submit Sign Permits for review and approval prior to installation.

TOWN STAFF RECOMMENDATION: Town Staff finds that with the conditions noted below, the requirements of Section 3.17.3 of the Unified Development Ordinance will be met and recommends that the Planning Commission approve the application with the following conditions:

1. Landscape.

- a. Per Section 5.15.8.D.(2) of the BZDSO, the Landscape Plan must be updated to include additional plantings to create an eight (8) foundation buffer along the east side.
 - b. Per Section 5.15.8.D.(5) of the BZDSO, the 1 ½" caliper dbh Washington Hawthorns used as Landscaped Peninsula trees must be increased to a minimum of 2" calipers.
2. Architecture
 - a. Per Section 5.15.9.(C)(3), elevations showing the proposed propane enclosure and ice/outdoor coolers must be provided to ensure the design meets the requirements of the design standards.
 - b. Per Section 5.15.9.(D)(2), the 2 and 12 pitched roof must be revised to a minimum of 4 and 12.
 - c. Per Section 5.15.9.(D)(2), a determination on the appropriateness of the curved gas canopies must be made, as they are not a typical roof type to the Lowcountry.
 - d. Per Section 5.15.12(A), additional information must be provided regarding the location of proposed service yards and utilities, and if proposed on the roof, a roof plan provided as not enough information has been provided to ensure they will be screened from view.
3. Additional Requirements
 - a. A letter of approval from the Declarant for the covenants and restriction which are recorded with the New Riverside Village Master Plan.
 - b. All comments must be addressed, and a Final Development Plan must be approved prior to issuance of the Certificate of Appropriateness – HCO.
 - c. Signage Permits must be submitted to the Town of Bluffton for review and approval for the signage proposed at each site in the proposed development.

ATTACHMENTS:

1. Application and Narrative
2. Site Plan, Elevations and Materials
3. Landscape Plans
4. Lighting Plan and Details
5. DRC Comments, May 10, 2023

Katie Peterson, AICP
Senior Planner
Town of. Bluffton
20 Bridge Street
Bluffton, SC 29910

March 28, 2023

RE: Refuel 1062
Certificate of Appropriateness HCO

Ms. Peterson,

We are submitted our application for certificate of appropriateness for Highway Corridor Overlay for a proposed Refuel Convenience Store. The project consists of a 4,958 SF convenience store with 6 dispensers. There is also a proposed car wash onsite. The proposed development is located within the New Riverside approved Conceptual Master Plan. The site layout is in line with the lot's Conceptual Master Plan incorporating the required buffers which helps create/protect open spaces.

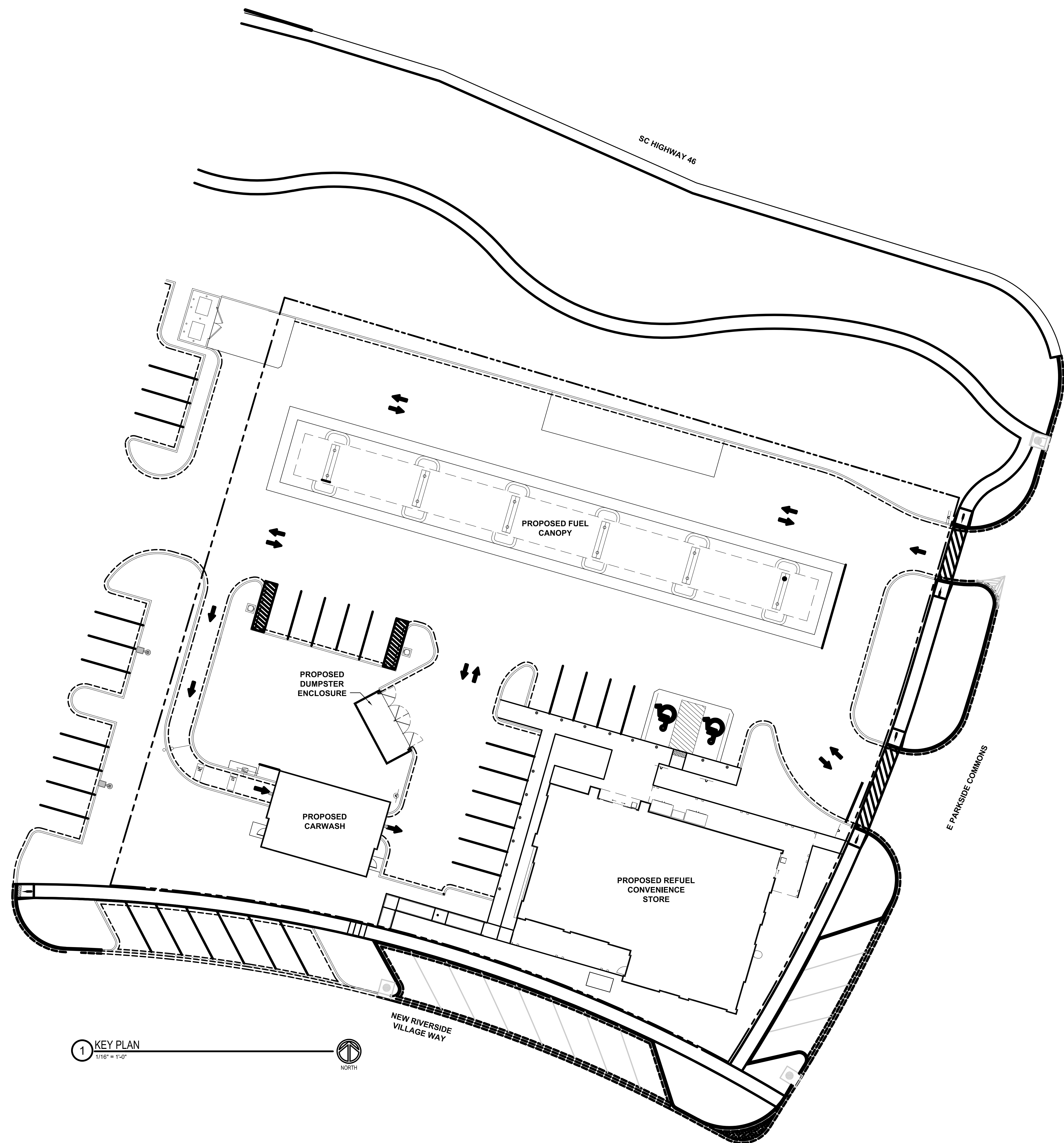
The proposed design promotes the requirements outlined within HCO Districts requirements. The design promotes protection of architectural and historical heritage of the Town of Bluffton through it's Low-Country design elements. The design enhances the cultural image and character of the Town of Bluffton's historical charm.

Refuel's sense of community involvement embraces community unity and enhancement of the Town's cultural image.

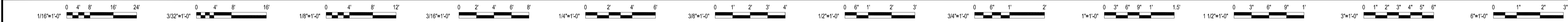
Upon review of the provided documents, do not hesitate to contact me with any questions you may have.

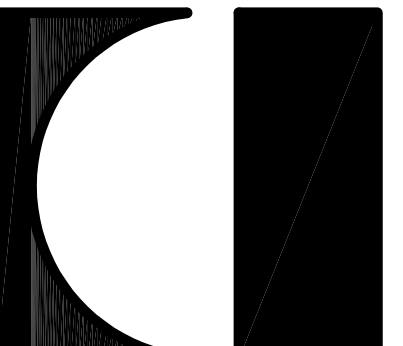

Sincerely,

Narciso Lira
Odyssey Services Group



1 KEY PLAN
1/16" = 1'-0"



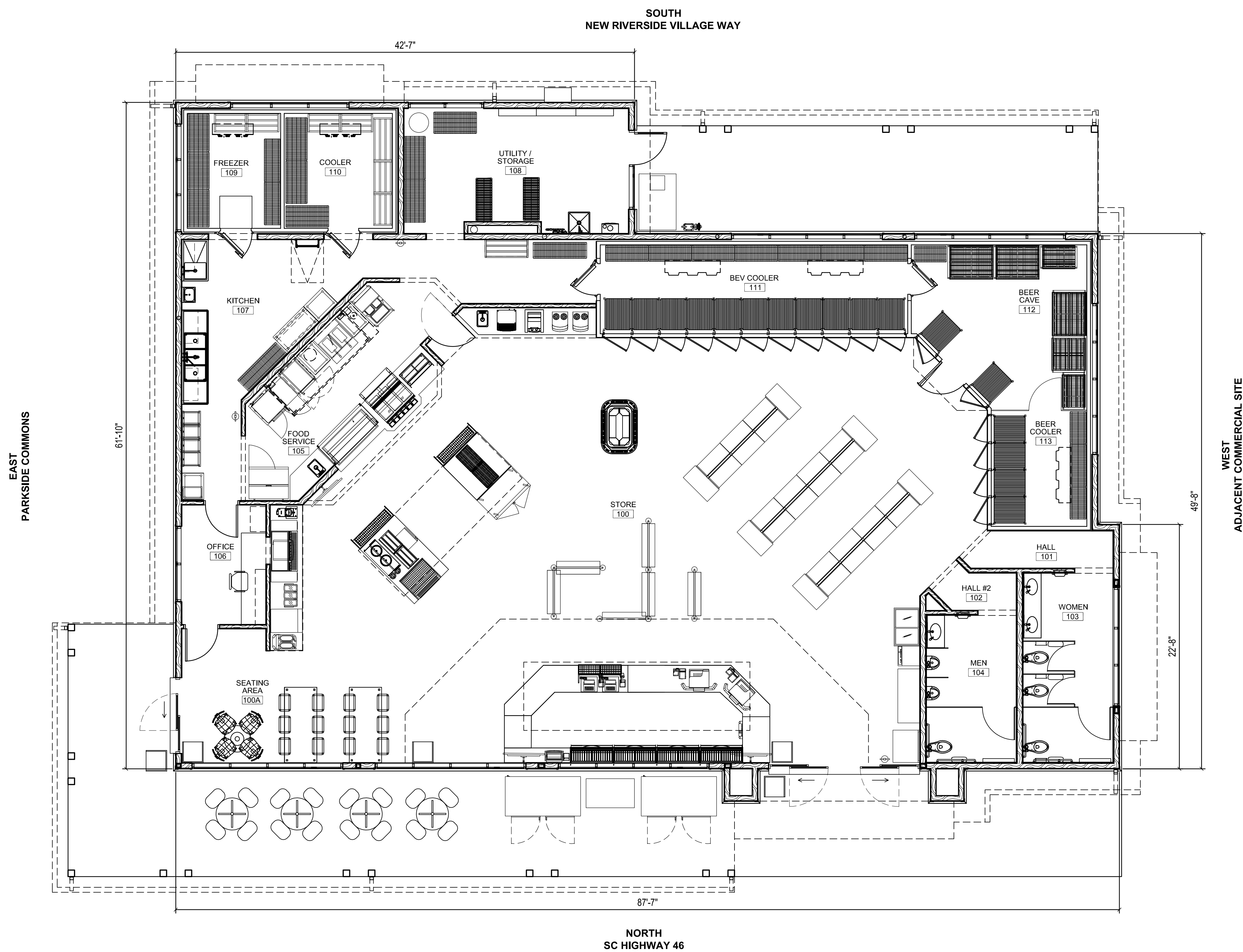
 RRMM ARCHITECTS, PC 1317 Executive Blvd, Suite 200 Chesapeake, VA 23320 (757) 622-2828 / fax (757) 622-6883		CIVIL REVISIONS	
		SMB	TOWN COMMENTS
date		by	description
03/24/2023	21105-06	SMB	DAE
project	designed	drawn	checked
KEY PLAN			
NEW RIVERSIDE - STORE # 1062			
SC HIGHWAY 46 & E PARKSIDE COMMONS			
BLUFFTON, SOUTH CAROLINA			
			
sheet			
1			



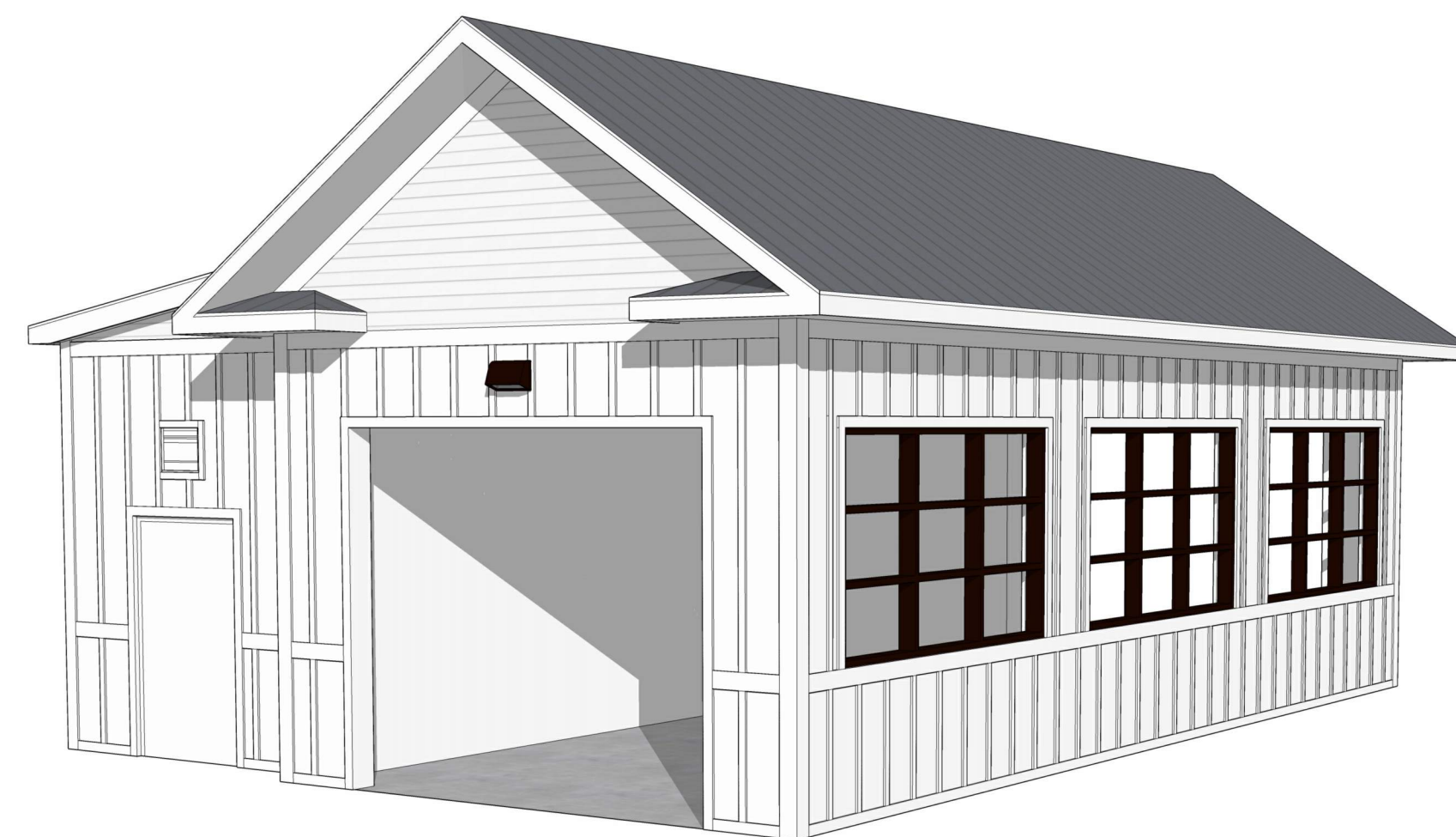
3 PERSPECTIVE FROM NORTHWEST



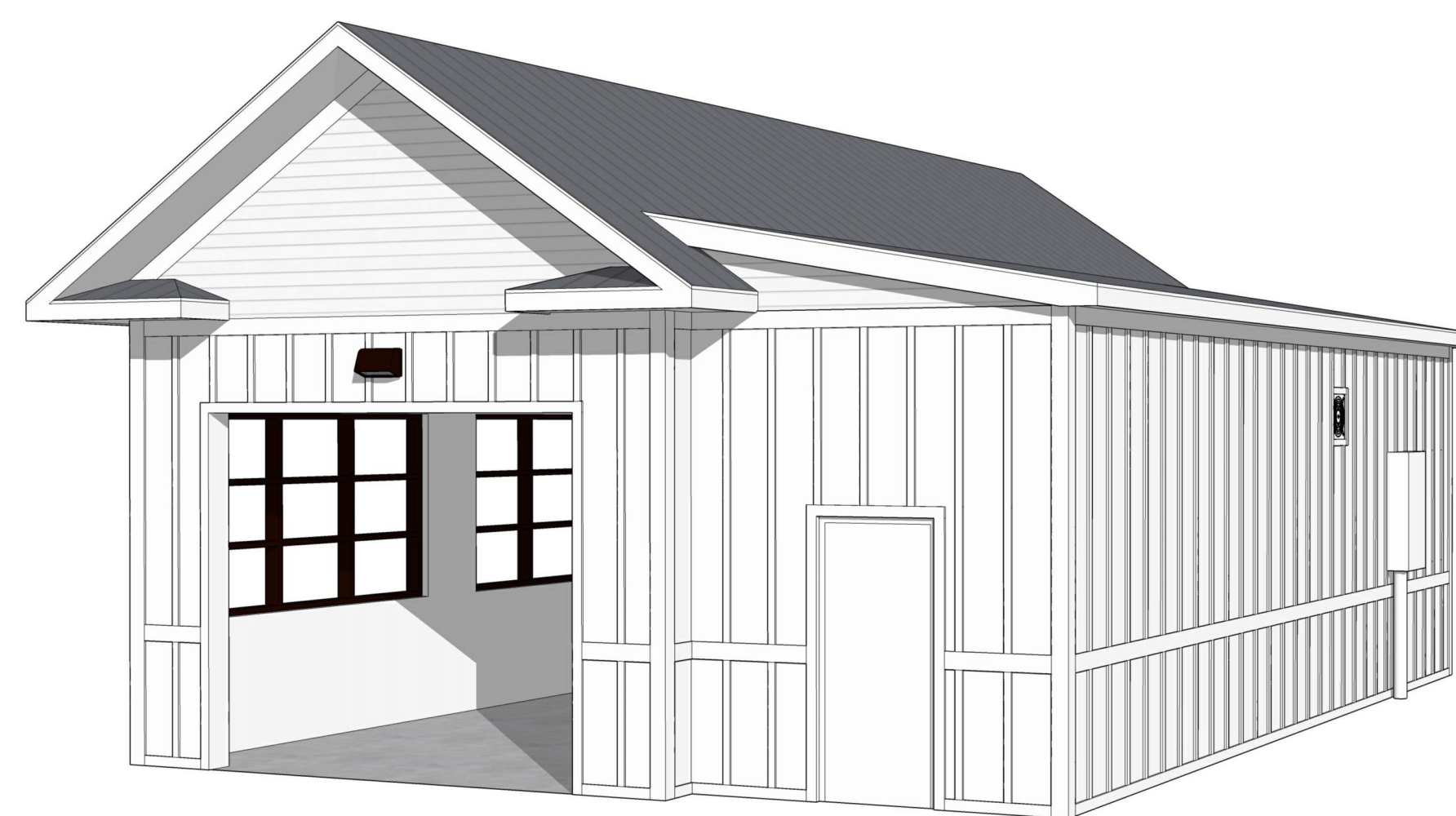
2 PERSPECTIVE FROM SOUTHEAST



1 FLOOR PLAN
3/16" = 1'-0"



3 CAR WASH PERSPECTIVE FROM NORTHEAST



4 CAR WASH PERSPECTIVE FROM SOUTHWEST

CIVIL REVISIONS		TOWN COMMENTS	
SMB	by	SMB	description
05/06/2023	04/12/2023		
2	1	mark	revisions

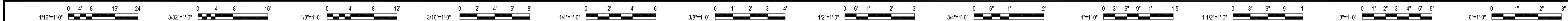
date	project	designed	drawn	checked
03/24/2023	21105-06	SMB	SMB	DAE

RRMM
ARCHITECTS, PC
1317 Executive Blvd, Suite 200
Chesapeake, VA 23320
(757) 622-2828 / fax (757) 622-6883

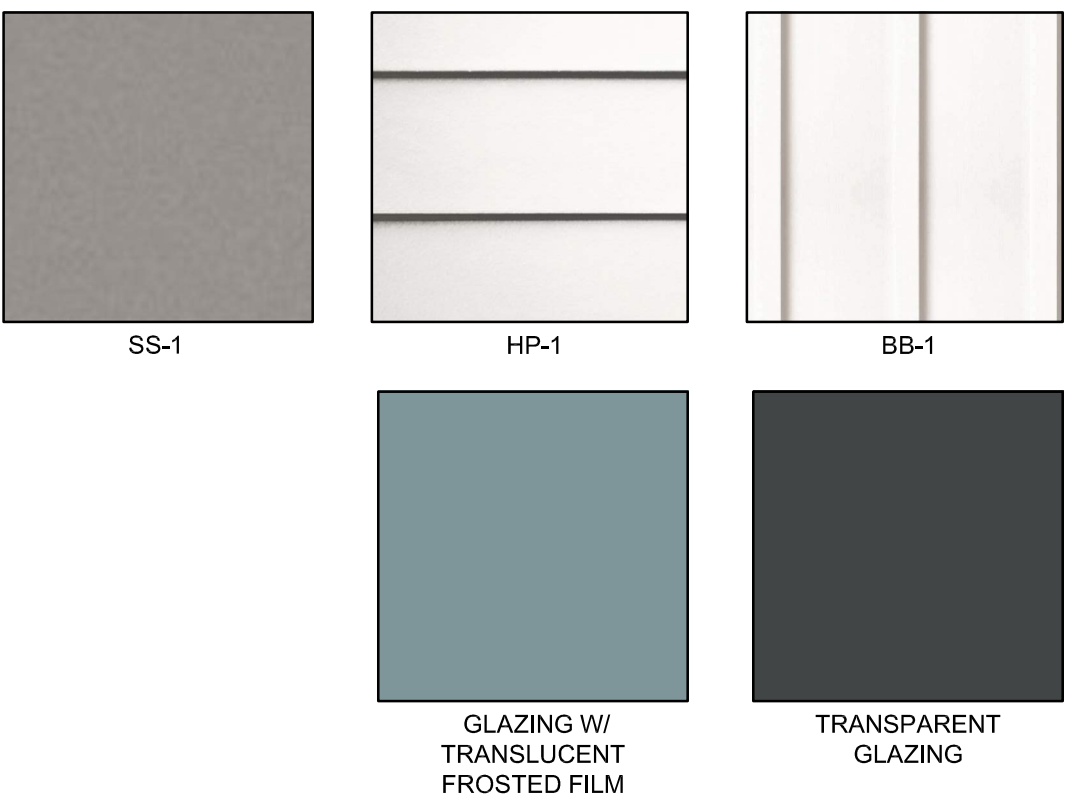
STORE FLOOR PLAN AND PERSPECTIVE VIEWS
NEW RIVERSIDE - STORE # 1062
SC HIGHWAY 46 & E PARKSIDE COMMONS
BLUFFTON, SOUTH CAROLINA



sheet



EXTERIOR MATERIALS SCHEDULE			
(NOT ALL MATERIALS IN SCHEDULE ARE USED)			
NO.	MATERIAL	MANUFACTURER	COLOR
BB-1	BOARD & BATTEN SIDING	JAMES HARDIE	WHITE
HP-1	HARDIE PLANK SIDING	JAMES HARDIE	WHITE
SS-1	STANDING SEAM METAL ROOF	METAL ROOFING SYSTEMS	MRS SYSTEM 2000 PRE-WEATHERED GALVALUME
S-1	ALUMINUM STOREFRONT GLAZING	KAWNEER	#29 BLACK FINISH



CIVIL REVISIONS

SNB

SNB

05/26/2023

04/12/2023

2

1

mark

revisions

TOWN COMMENTS

by

date

description

03/24/2023

210506

SNB

SNB

DAC

date

project

designed

drawn

checked

CONVENIENCE STORE ELEVATIONS

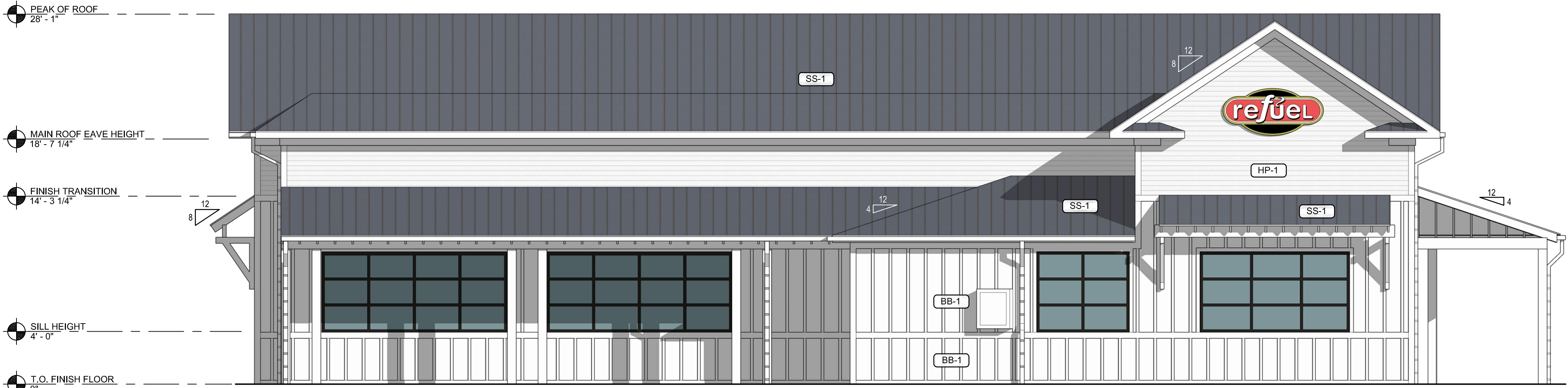
NEW RIVERSIDE - STORE # 1062

SC HIGHWAY 46 & E PARKSIDE COMMONS

BLUFFTON, SOUTH CAROLINA

sheet

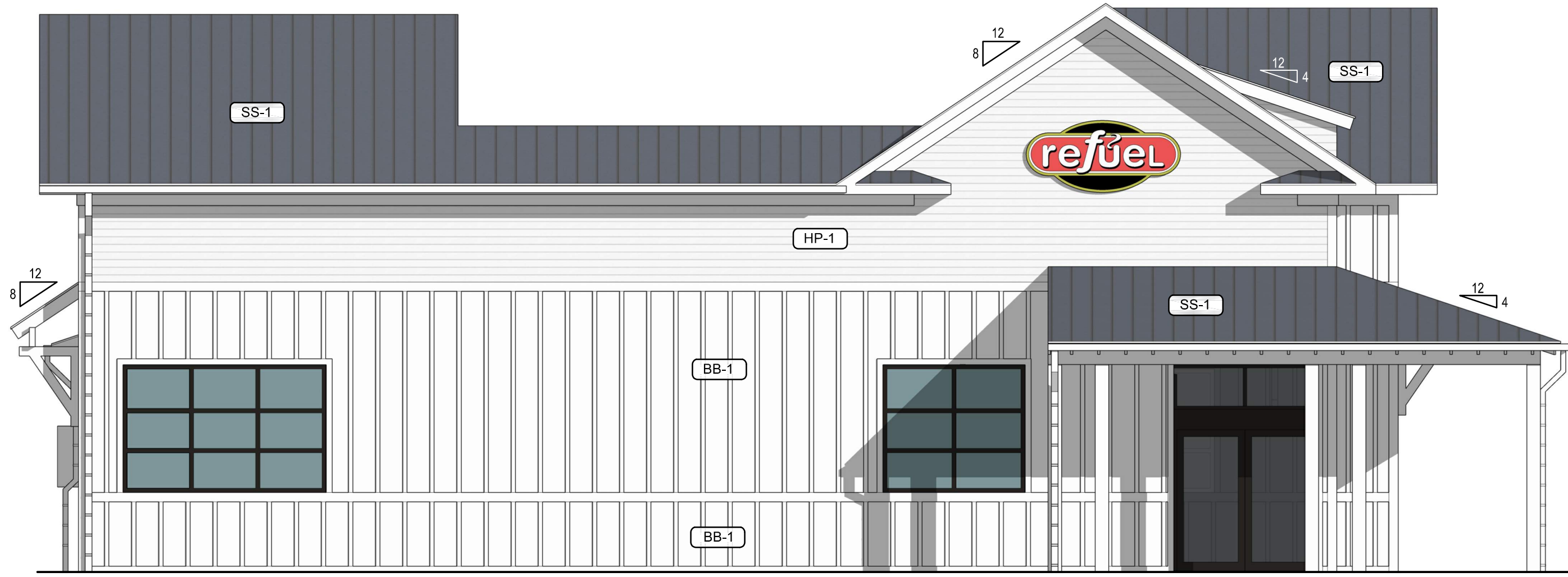
3



4 ELEVATION - REAR (SOUTH FACE - NEW RIVERSIDE VILLAGE WAY)
3/16" = 1'-0"



3 ELEVATION - RIGHT (WEST FACE)
3/16" = 1'-0"



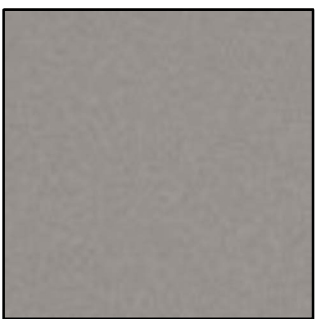
2 ELEVATION - LEFT (EAST FACE - PARKSIDE COMMONS)
3/16" = 1'-0"



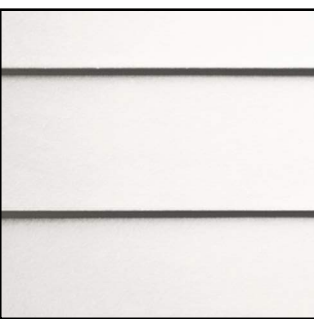
1 ELEVATION - FRONT (NORTH FACE - SC HIGHWAY 46)
3/16" = 1'-0"



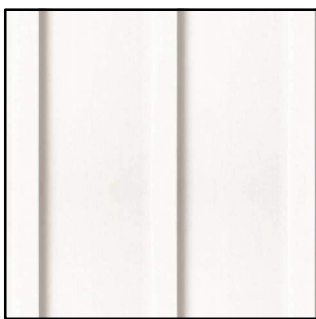
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(NOT ALL MATERIALS IN SCHEDULE ARE USED)			
NO.	MATERIAL	MANUFACTURER	COLOR
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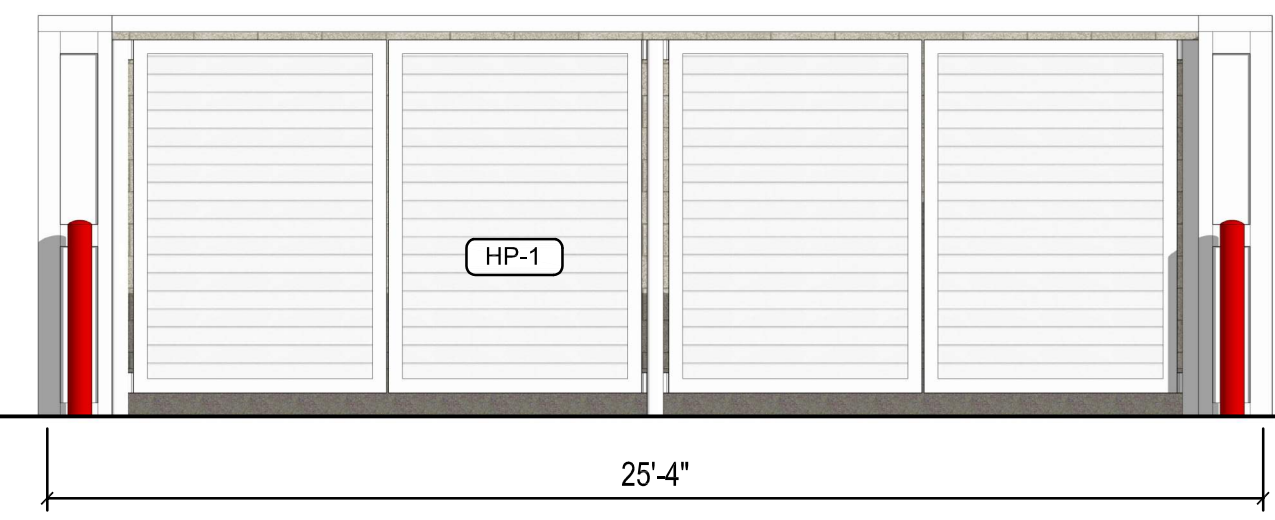
SS-1



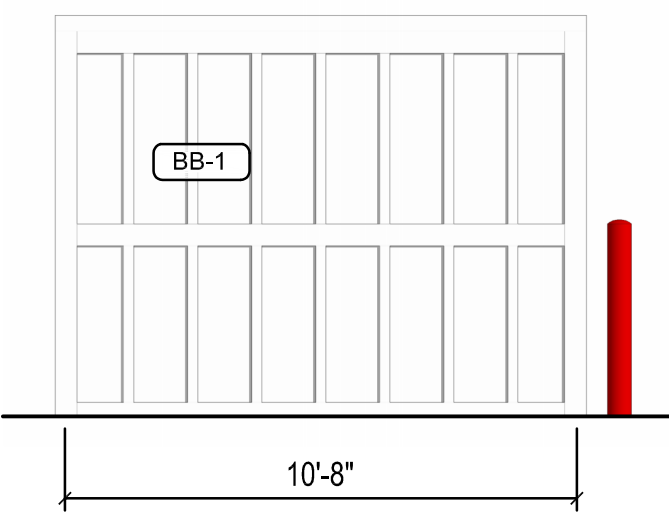
HP-1



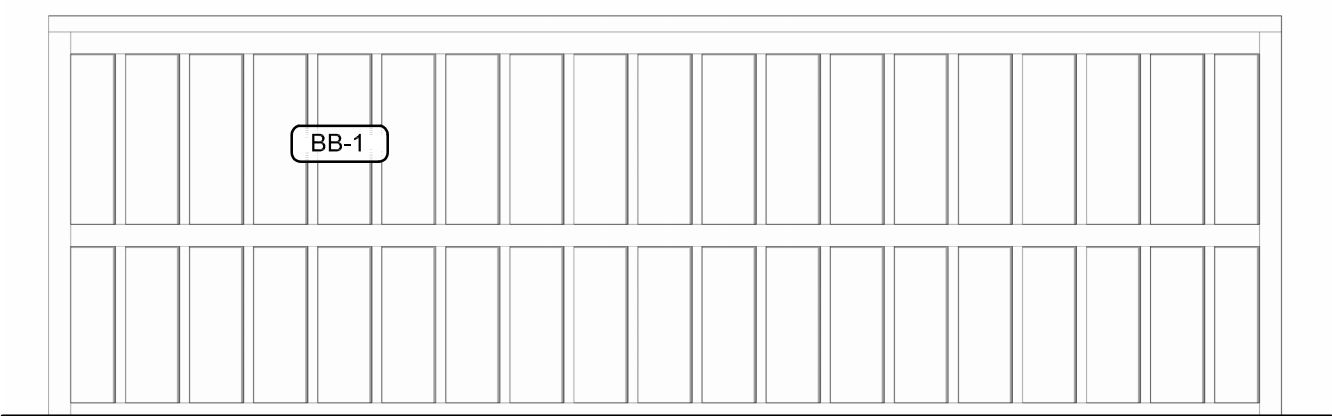
BB-1



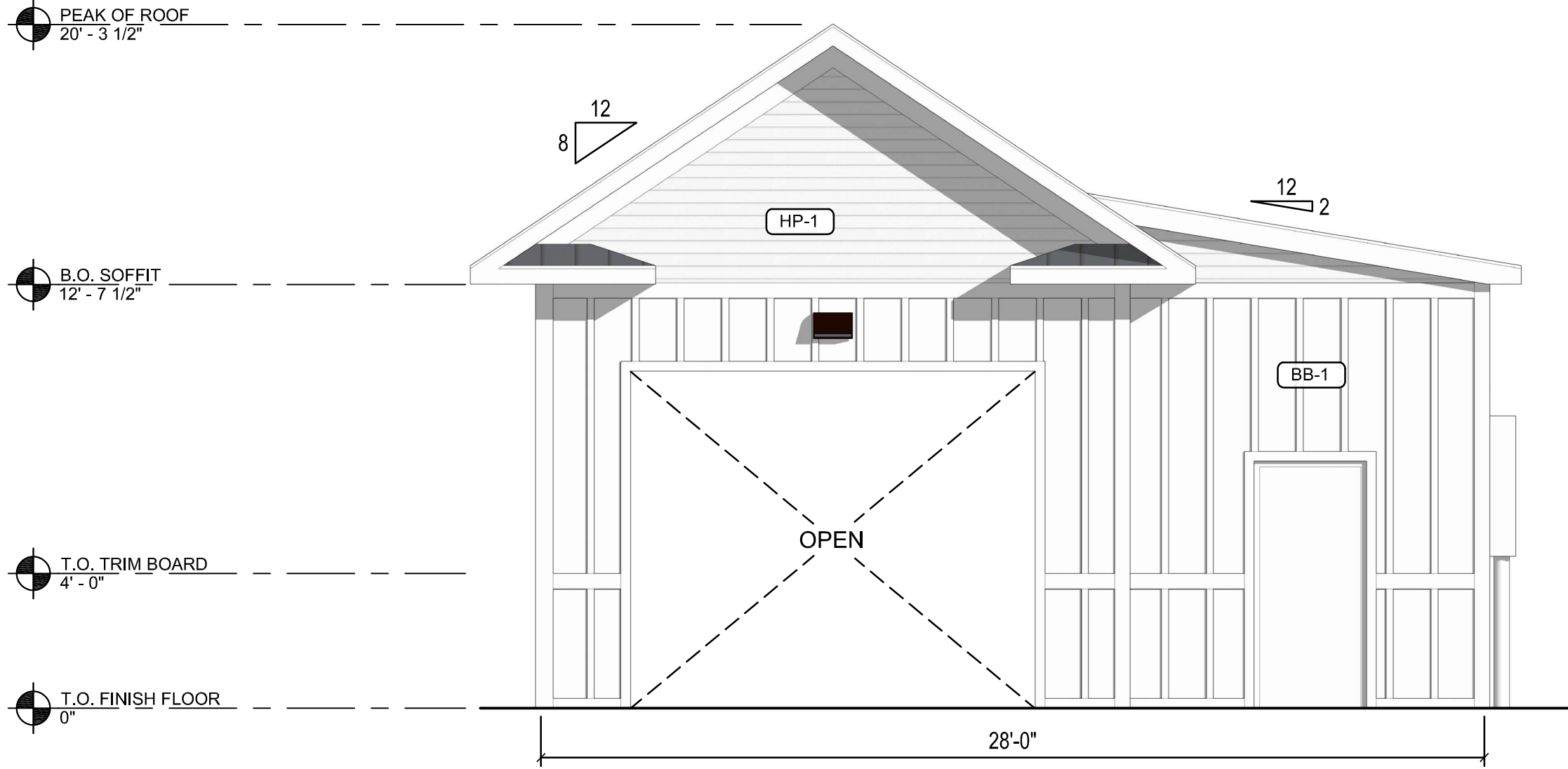
1 DUMPSTER ENCLOSURE ELEVATION - FRONT
1/4" = 1'-0"



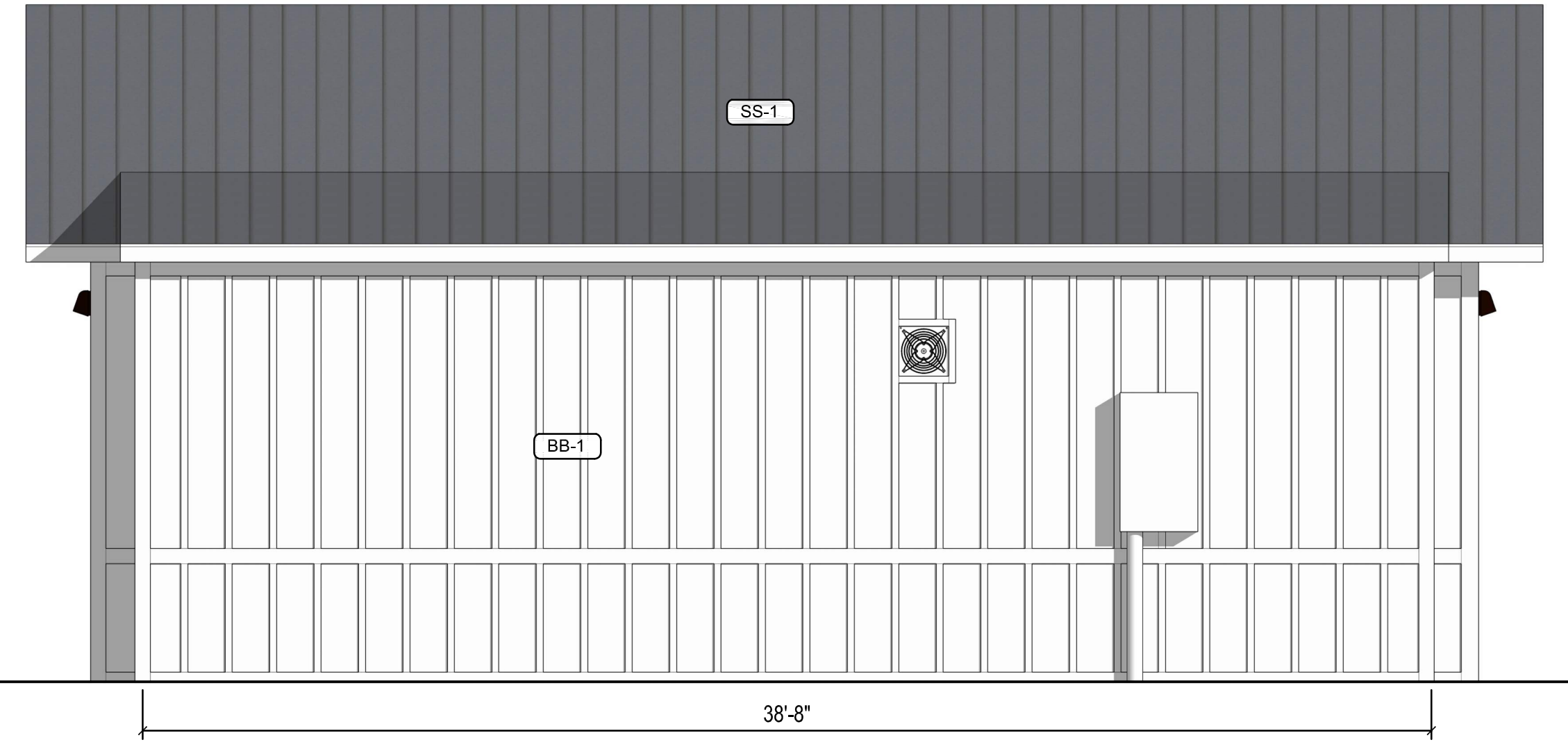
2 DUMPSTER ENCLOSURE ELEVATION - LEFT
1/4" = 1'-0"



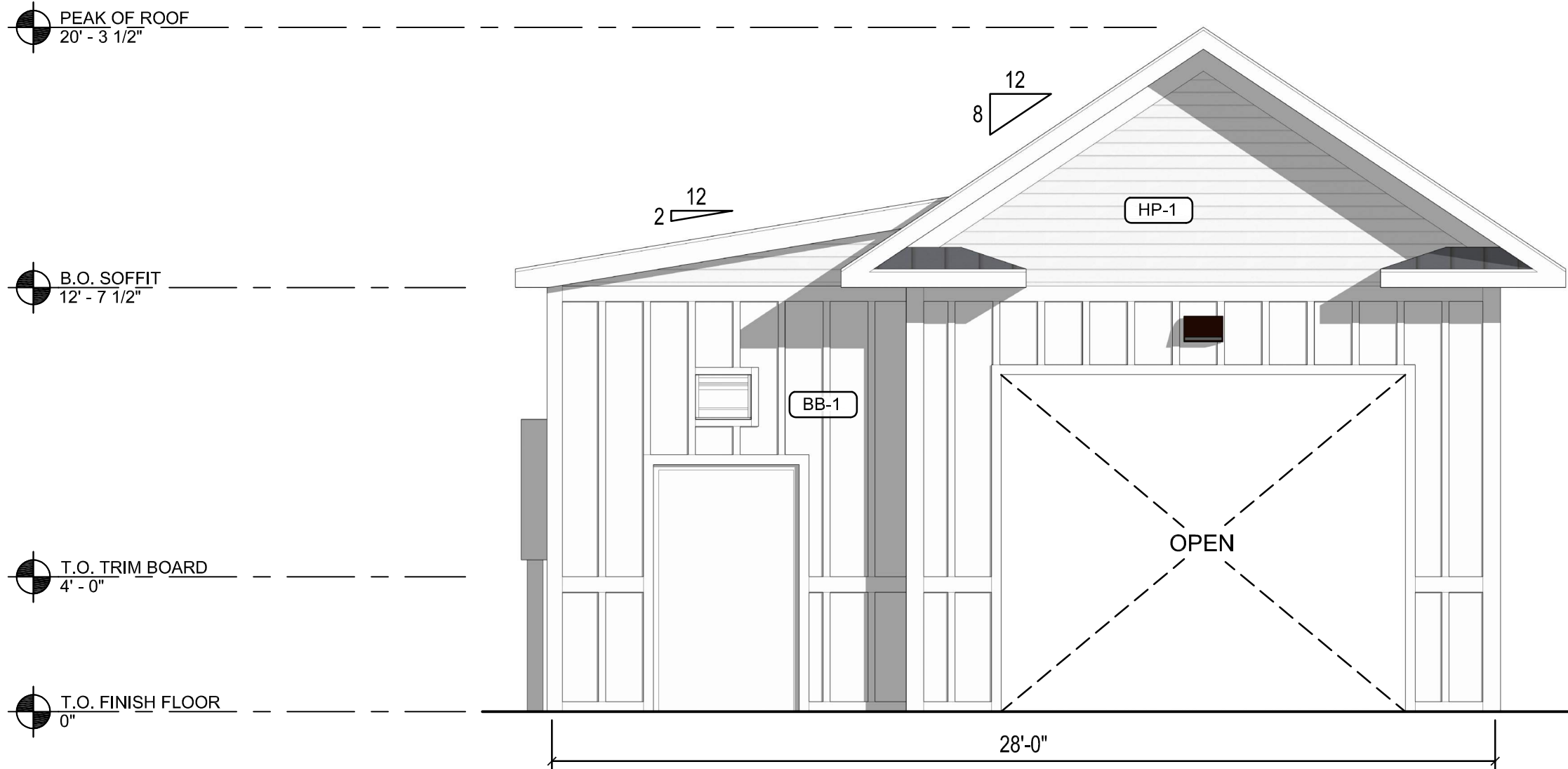
3 DUMPSTER ENCLOSURE ELEVATION - REAR
1/4" = 1'-0"



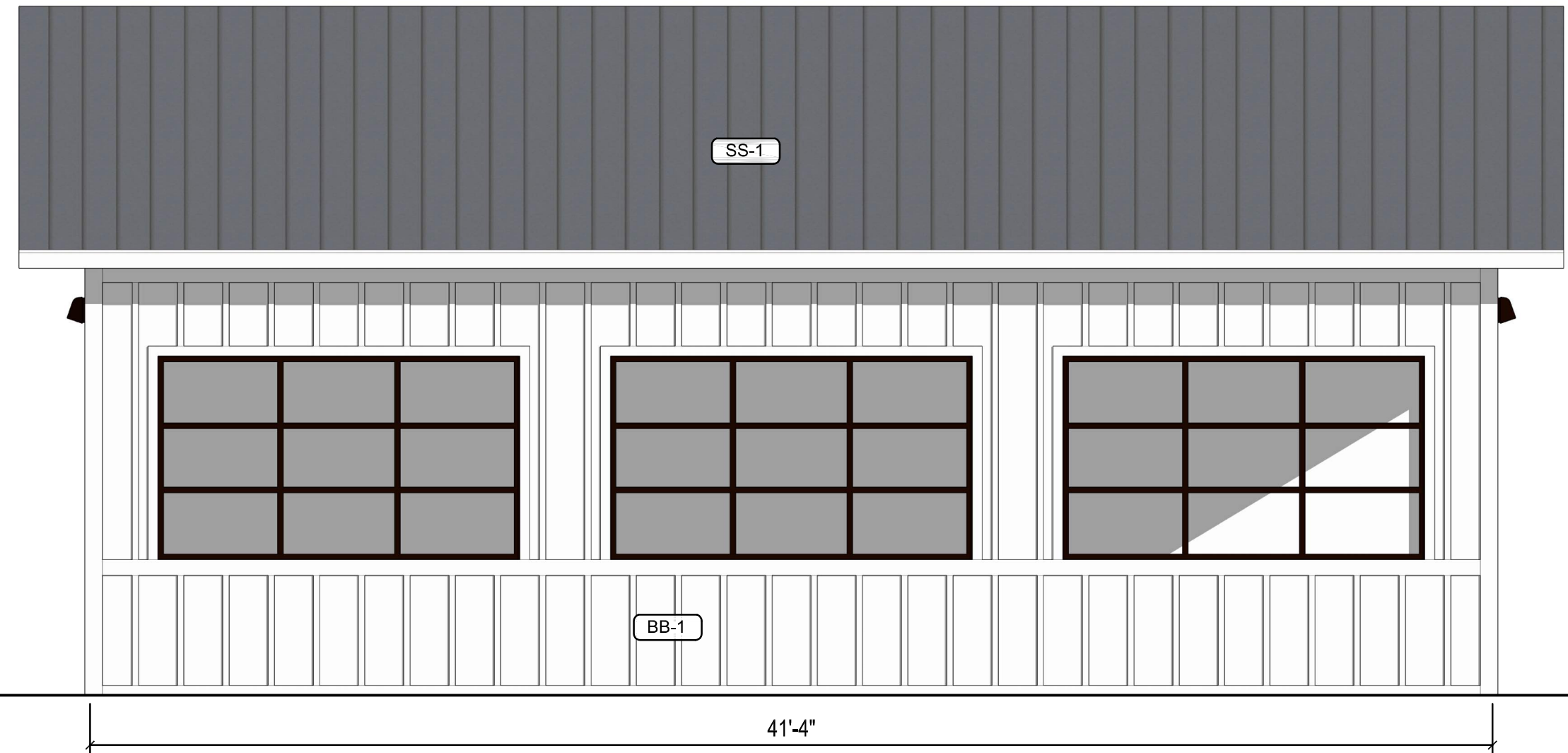
4 CAR WASH ELEVATION - FRONT
1/4" = 1'-0"



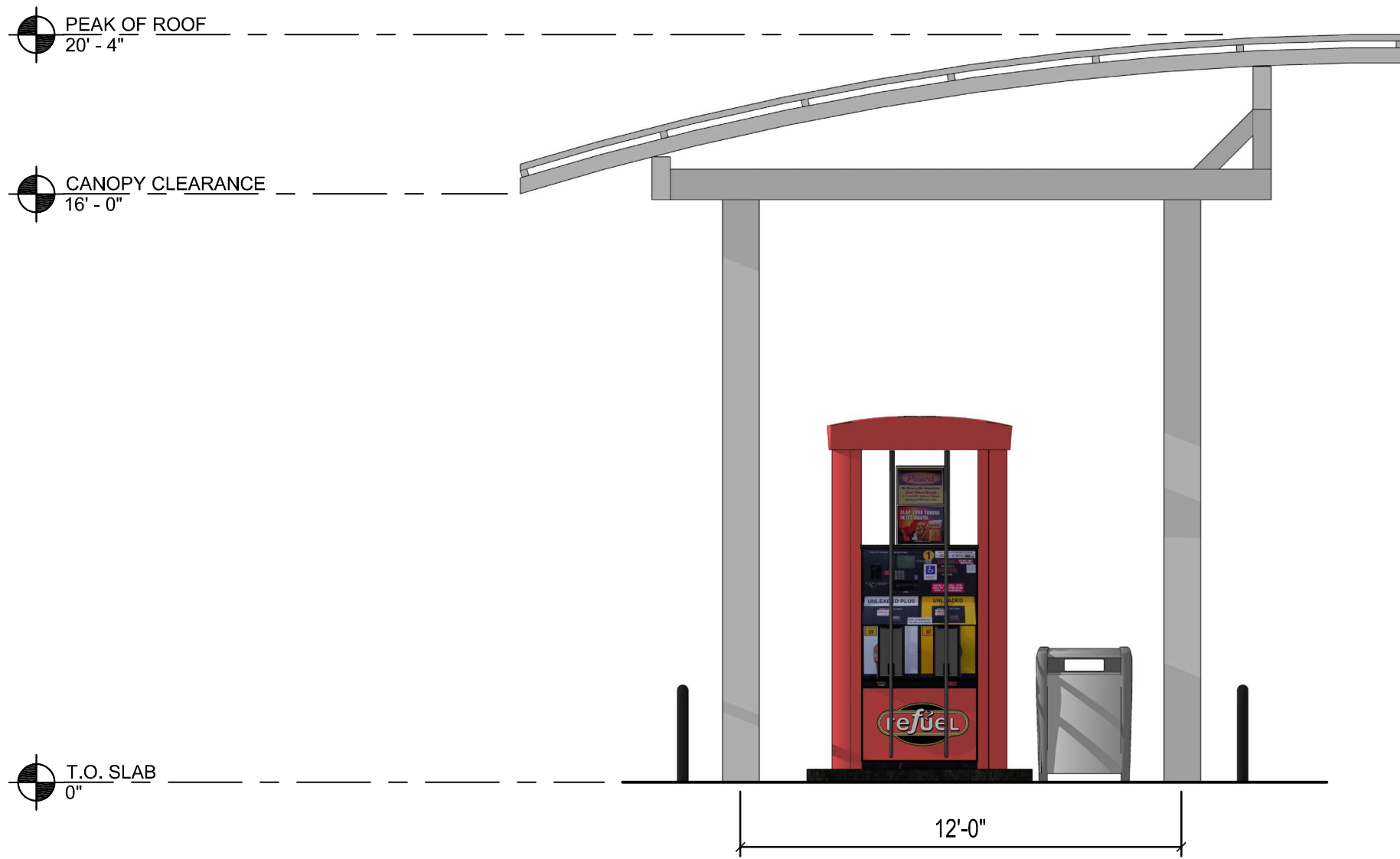
5 CAR WASH ELEVATION - RIGHT
1/4" = 1'-0"



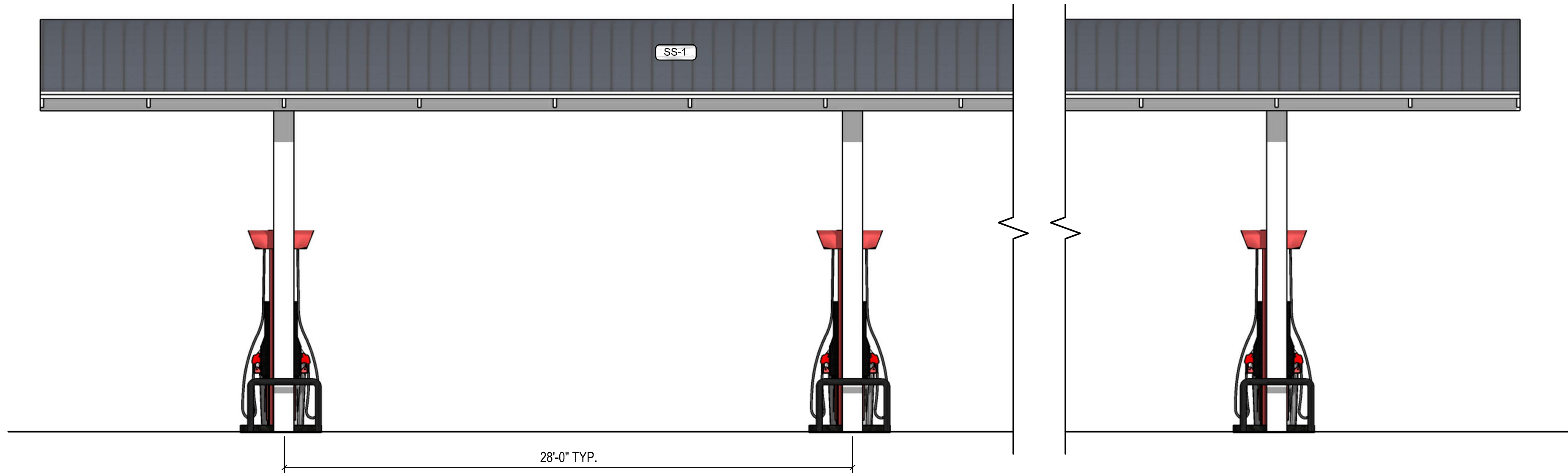
6 CAR WASH ELEVATION - REAR
1/4" = 1'-0"



7 CAR WASH ELEVATION - LEFT
1/4" = 1'-0"



8 FUELING CANOPY ELEVATION - SHORT
1/4" = 1'-0"



9 FUELING CANOPY ELEVATION - LONG
1/4" = 1'-0"

CIVIL REVISIONS

NO.	DATE	BY	DESCRIPTION
1	05/06/2023	SMB	DATE
2	04/12/2023	SMB	DATE

TOWN COMMENTS

NO.	DATE	BY	DESCRIPTION
1	05/06/2023	SMB	DATE
2	04/12/2023	SMB	DATE

PROJECT

DATE	PROJECT	DESIGNED	DRAWN	CHECKED
03/24/2023	211056	SMB	SMB	DAE

CAR WASH AND DUMPSTER ENCLOSURE ELEVATIONS

NEW RIVERSIDE - STORE # 1062

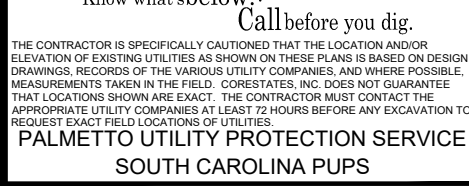
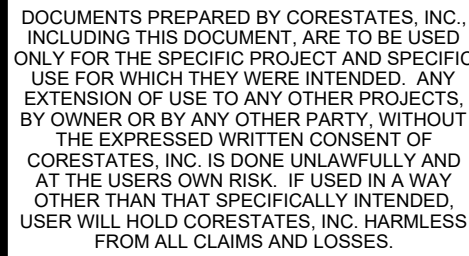
SC HIGHWAY 46 & E PARKSIDE COMMONS

BLUFFTON, SOUTH CAROLINA

refuel

sheet

4

[illegible]

SITE LOCATION

NEW RIVERSIDE VILLAGE,
BLUFFTON, SC 29910

BRIAN SEARCY, PE
PROFESSIONAL ENGINEER
SC LICENSE #10107

CONSTRUCTION DETAILS

JOB #:	RFL35149
DATE:	05/25/2022
SCALE:	
DRAWN BY:	KB
CHECKED BY:	BS

C13

ATTACHMENT 1 - Previous Submittal



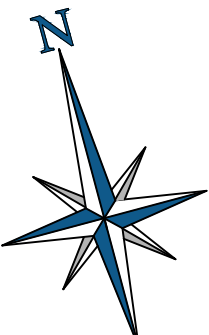


LEGEND															
EDGE	METAL EDGE: SEE LANDSCAPE SPECIFICATIONS														
<table border="1"> <tr> <th colspan="2">CANOPY COVERAGE TABLE</th></tr> <tr> <td>LOT COVERAGE AREA OF EXISTING CANOPY</td><td>14,796 SF</td></tr> <tr> <td>LOT COVERAGE AREA OF PROPOSED CANOPY</td><td>12,031 SF</td></tr> <tr> <td>TOTAL CANOPY COVERAGE AREA</td><td>26,827 SF</td></tr> <tr> <td>TOTAL LOT AREA</td><td>68,784 SF</td></tr> <tr> <td>LOT AREA NOT COVERED BY TREE CANOPY</td><td>41,957 SF</td></tr> <tr> <td>TREE CANOPY AS % OF LOT COVERAGE</td><td>39.0%</td></tr> </table>		CANOPY COVERAGE TABLE		LOT COVERAGE AREA OF EXISTING CANOPY	14,796 SF	LOT COVERAGE AREA OF PROPOSED CANOPY	12,031 SF	TOTAL CANOPY COVERAGE AREA	26,827 SF	TOTAL LOT AREA	68,784 SF	LOT AREA NOT COVERED BY TREE CANOPY	41,957 SF	TREE CANOPY AS % OF LOT COVERAGE	39.0%
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LOT AREA NOT COVERED BY TREE CANOPY	41,957 SF														
TREE CANOPY AS % OF LOT COVERAGE	39.0%														

- 1) BUFFER AT RIGHT-OF-WAY: THE EXISTING VEGETATION IS LEFT UNTOUCHED.
LENGTH OF RIGHT-OF-WAY: 256 LF
OVERSTORY TREES REQUIRED: 16 TREES (6 PER 100 LF)
OVERSTORY TREES PROVIDED: 32 TREES (EXISTING TREES)
UNDERSTORY TREES REQUIRED: 18 TREES (7 PER 100 LF)
UNDERSTORY TREES PROVIDED: 18 TREES
SHRUBS REQUIRED: 77 SHRUBS (30 PER LF)
SHRUBS PROVIDED: 77 SHRUBS
- 2) PARKING LOT SCREENING: 17 SHRUBS HAVE BEEN PLANTED AROUND THE EDGES OF THE PROPERTY TO SCREEN THE PARKING LOT FROM VIEW.
- 3) PARKING LOT PLANTING: THE PARKING LOT ISLANDS HAVE BEEN PLANTED WITH SHRUBS AND 1 TREE PER ISLAND.
- 4) FOUNDATION PLANTING: A MIX OF TREES, SHRUBS, VINES, AND GROUND COVER ARE SHOWN AROUND THE FOUNDATION OF THE BUILDING.
- 5) TREE MITIGATION: TEN PROPOSED SHADE TREES ARE SHOWN ON THE PLAN. THEY ARE NOTED TO BE PLANTED AT 6" CALIPER TO MAXIMIZE MITIGATION. THIS IS THE MAXIMUM NUMBER OF SHADE TREES THAT CAN BE PLANTED DUE TO CONFLICTS WITH UTILITIES. ONE EXISTING TREE IS EXPECTED TO BE RETAINED WITHIN THE DEVELOPED AREA AND CAN COUNT TOWARD MITIGATION. THE PLAN ALSO INCLUDES 21 SMALL TREES.

- 1) SOIL TYPE PER NRCS SOIL SURVEY: WANDO FINE SAND & SEABROOK FINE SAND
- 2) THERE IS 1 EXISTING TREE ON SITE THAT WILL BE USED FOR LANDSCAPE REQUIREMENTS.
- 3) SINCE THE PROPOSED SHADE TREES ARE SIZED AT 6" CALIPER, THE PROPOSED TREES ACCOUNTS FOR 18 MITIGATION TREES; TOTAL OF 19 MITIGATION TREES INCLUDING THE EXISTING TREE TO BE RETAINED.
- 4) FOR THE GROUNDCOVER MIX, THE ENTIRE AREA IS TO BE PLANTED WITH THE CHASMANTHIUM, AND THE OTHER THREE SPECIES ARE TO BE RANDOMLY INTERMINGLED.

THE CONTRACTOR SHALL INSTALL ROOT BARRIERS NEAR ALL NEWLY-PLANTED TREES THAT ARE LOCATED WITHIN FIVE (5) FEET OF PAVING OR CURBS. ROOT BARRIERS SHALL BE "CENTURY" OR "DEEP-ROOT" 24" DEEP PANELS (OR EQUAL). BARRIERS SHALL BE LOCATED IMMEDIATELY ADJACENT TO HARDSCAPE. INSTALL PANELS PER MANUFACTURER'S RECOMMENDATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR USE ROOT BARRIERS OF A TYPE THAT COMPLETELY ENCIRCLE THE ROOTBALL.

[illegible]

PLANTING SPECIFICATIONS

GENERAL

A. QUALIFICATIONS OF LANDSCAPE CONTRACTOR

1. ALL LANDSCAPE WORK SHOWN ON THESE PLANS SHALL BE PERFORMED BY A SINGLE FIRM SPECIALIZING IN LANDSCAPE PLANTING.
2. A LIST OF SUCCESSFULLY COMPLETED PROJECTS OF THIS TYPE, SIZE AND NATURE MAY BE REQUESTED BY THE OWNER FOR FURTHER QUALIFICATION MEASURES.
3. THE LANDSCAPE CONTRACTOR SHALL HOLD A VALID CONTRACTOR'S LICENSE ISSUED BY THE APPROPRIATE LOCAL JURISDICTION.

B. SCOPE OF WORK

1. WORK COVERED BY THESE SECTIONS INCLUDES THE FURNISHING AND PAYMENT OF ALL MATERIALS, LABOR, SERVICES, EQUIPMENT, LICENSES, TAXES AND ANY OTHER ITEMS THAT ARE NECESSARY FOR THE EXECUTION, INSTALLATION AND COMPLETION OF ALL WORK, SPECIFIED HEREIN AND / OR SHOWN ON THE LANDSCAPE PLANS, NOTES, AND DETAILS.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER SUCH WORK, INCLUDING ALL INSPECTIONS AND PERMITS REQUIRED BY FEDERAL, STATE AND LOCAL AUTHORITIES IN SUPPLY, TRANSPORTATION AND INSTALLATION OF MATERIALS.
3. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES (WATER, SEWER, ELECTRICAL, TELEPHONE, GAS, CABLE, TELEVISION, ETC.) PRIOR TO THE START OF ANY WORK.

PRODUCTS

A. ALL MANUFACTURED PRODUCTS SHALL BE NEW.

B. CONTAINER AND BALLED-AND-BURLAPPED PLANTS:

1. FURNISH NURSERY-GROWN PLANTS COMPLYING WITH ANSI Z60.1-2014. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK FREE OF DISEASE, INSECTS, EGGS, LARVAE AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT. ALL PLANTS WITHIN A SPECIES SHALL HAVE SIMILAR SIZE, AND SHALL BE OF A FORM TYPICAL FOR THE SPECIES. ALL TREES SHALL BE OBTAINED FROM SOURCES WITHIN 200 MILES OF THE PROJECT SITE, AND WITH SIMILAR CLIMATIC CONDITIONS.
2. ROOT SYSTEMS SHALL BE HEALTHY, DENSELY BRANCHED ROOT SYSTEMS, NON-POT-BOUND, FREE FROM ENCIRCLING AND/OR GIRDLING ROOTS, AND FREE FROM ANY OTHER ROOT DEFECTS (SUCH AS J-SHAPED ROOTS).
3. TREES MAY BE PLANTED FROM CONTAINERS OR BALLED-AND-BURLAPPED (B&B), UNLESS SPECIFIED ON THE PLANTING LEGEND. BARE-ROOT TREES ARE NOT ACCEPTABLE.
4. ANY PLANT DEEMED UNACCEPTABLE BY THE LANDSCAPE ARCHITECT OR OWNER SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND SHALL BE REPLACED WITH AN ACCEPTABLE PLANT OF LIKE TYPE AND SIZE AT THE CONTRACTOR'S OWN EXPENSE. ANY PLANTS APPEARING TO BE UNHEALTHY, EVEN IF DETERMINED TO STILL BE ALIVE, SHALL NOT BE ACCEPTED. THE LANDSCAPE ARCHITECT AND OWNER SHALL BE THE SOLE JUDGES AS TO THE ACCEPTABILITY OF PLANT MATERIAL.
5. ALL TREES SHALL BE STANDARD IN FORM, UNLESS OTHERWISE SPECIFIED. TREES WITH CENTRAL LEADERS WILL NOT BE ACCEPTED IF LEADER IS DAMAGED OR REMOVED. PRUNE ALL DAMAGED TWIGS AFTER PLANTING.
6. CALIPER MEASUREMENTS FOR STANDARD (SINGLE TRUNK) TREES SHALL BE AS FOLLOWS: SIX INCHES ABOVE THE ROOT FLARE FOR TREES EXCEEDING FOUR INCHES IN CALIPER, AND TWELVE INCHES ABOVE THE ROOT FLARE FOR TREES EXCEEDING FOUR INCHES IN CALIPER.
7. MULTI-TRUNK TREES SHALL BE MEASURED BY THEIR OVERALL HEIGHT, MEASURED FROM THE TOP OF THE ROOT BALL, WHERE CALIPER MEASUREMENTS ARE USED. THE CALIPER SHALL BE CALCULATED AS ONE-HALF OF THE SUM OF THE CALIPER OF THE THREE LARGEST TRUNKS.
8. ANY TREE OR SHRUB SHOWN TO HAVE EXCESS SOIL PLACED ON TOP OF THE ROOT BALL, SO THAT THE ROOT FLARE HAS BEEN COMPLETELY COVERED, SHALL BE REJECTED.
9. SOD: PROVIDE WELL-ROOTED SOD OF THE VARIETY NOTED ON THE PLANS. SOD SHALL BE CUT FROM HEALTHY, MATURE TURF WITH SOIL THICKNESS OF 3/4" TO 1". EACH Pallet OF SOD SHALL BE ACCOMPANIED BY A CERTIFICATE FROM SUPPLIER STATING THE SOURCE OF THE SOD.
10. TOPSOIL: SANDY TO CLAY LOAM TOPSOIL, FREE OF STONES LARGER THAN 1/2 INCH, FOREIGN MATTER, PLANTS, ROOTS, AND SEEDS.
11. COMPOST: WELL-COMPOSTED, STABLE, AND WEED-FREE ORGANIC MATTER, pH RANGE OF 5.5 TO 8. MOISTURE CONTENT IS TO 65 PERCENT BY WEIGHT; 100 PERCENT PASSING THROUGH 3/4-INCH SIEVE; SOLUBLE SALT CONTENT OF 5 TO 10 DECISEMENS/M; NOT EXCEEDING 0.5 PERCENT INERT CONTAMINANTS AND FREE OF SUBSTANCES TOXIC TO PLANTINGS. NO MANURE OR ANIMAL-BASED PRODUCTS SHALL BE USED.
12. FERTILIZER: GRANULAR FERTILIZER CONSISTING OF NITROGEN, PHOSPHORUS, POTASSIUM, AND OTHER NUTRIENTS IN PROPORTIONS, AMOUNTS, AND RELEASE RATES RECOMMENDED IN A SOIL REPORT FROM A QUALIFIED SOIL-TESTING AGENCY (SEE BELOW).
13. MULCH: SIZE AND TYPE AS INDICATED ON PLANS, FREE FROM DELETERIOUS MATERIALS AND SUITABLE AS A TOP DRESSING OF TREES AND SHRUBS.
14. TREE STAKING AND GUYING:
 1. STAKES: 6' LONG GREEN METAL T-POSTS.
 2. GUY AND TIE WIRE: ASTM A 641, CLASS 1, GALVANIZED-STEEL WIRE, 2-STRAND, TWISTED, 0.106 INCH DIAMETER.
 3. STRAP CHAFING GUARD: REINFORCED NYLON OR CANVAS AT LEAST 1-1/2 INCH WIDE, WITH GROMMETS TO PROTECT TREE TRUNKS FROM DAMAGE.
15. STEEL EDGING: PROFESSIONAL STEEL EDGING, 14 GAUGE THICK X 4 INCHES WIDE. FACTORY PAINTED DARK GREEN. ACCEPTABLE MANUFACTURERS INCLUDE COL-MET OR APPROVED EQUAL.
16. PRE-EMERGENT HERBICIDES: ANY GRANULAR, NON-STAINING PRE-EMERGENT HERBICIDE THAT IS LABELED FOR THE SPECIFIC ORNAMENTALS OR TURF ON WHICH IT WILL BE UTILIZED. PRE-EMERGENT HERBICIDES SHALL BE APPLIED PER THE MANUFACTURER'S LABELED RATES.

METHODS

A. SOIL PREPARATION

1. BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE GRADE OF ALL LANDSCAPE AREAS ARE WITHIN +0.1' OF FINISH GRADE. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY SHOULD ANY DISCREPANCIES EXIST.
2. SOIL TESTING:
 - a. AFTER FINISH GRADES HAVE BEEN ESTABLISHED, CONTRACTOR SHALL HAVE SOIL SAMPLES FROM THE PROJECT'S LANDSCAPE AREAS TESTED BY AN ESTABLISHED SOIL TESTING LABORATORY. EACH SAMPLE SUBMITTED TO THE LAB SHALL CONTAIN NO LESS THAN ONE QUART OF SOIL, TAKEN FROM BETWEEN THE SOIL SURFACE AND 6" DEPTH. IF NO SAMPLE LOCATIONS ARE INDICATED ON THE PLANS, THE CONTRACTOR SHALL TAKE A MINIMUM OF THREE SAMPLES FROM VARIOUS REPRESENTATIVE LOCATIONS FOR TESTING.
 - b. THE CONTRACTOR SHALL HAVE THE SOIL TESTING LABORATORY PROVIDE RESULTS FOR THE FOLLOWING: SOIL TEXTURE, CLASS, GENERAL SOIL FERTILITY, pH, ORGANIC MATTER CONTENT, SALT (CEC), LIME, SODIUM ADSORPTION RATIO (SAR) AND BORON CONTENT.
 - c. THE CONTRACTOR SHALL ALSO SUBMIT THE PROJECT'S PLANT LIST TO THE LABORATORY ALONG WITH THE SOIL SAMPLES.
 - d. THE SOIL REPORT PRODUCED BY THE LABORATORY SHALL CONTAIN RECOMMENDATIONS FOR THE FOLLOWING (AS APPROPRIATE): SEPARATE SOIL PREPARATION AND BACKFILL MIX RECOMMENDATIONS FOR GENERAL ORNAMENTAL PLANTINGS, PERENNIALS, TREES, AND NATIVE SEED, AS WELL AS PRE-PLANT FERTILIZER APPLICATIONS AND RECOMMENDATIONS FOR ANY OTHER SOIL RELATED ISSUES. THE REPORT SHALL ALSO PROVIDE A FERTILIZER PROGRAM FOR THE ESTABLISHMENT PERIOD AND FOR LONG-TERM MAINTENANCE.
3. THE CONTRACTOR SHALL INSTALL SOIL AMENDMENTS AND FERTILIZERS PER THE SOILS REPORT RECOMMENDATIONS. ANY CHANGE IN COST DUE TO THE SOIL REPORT RECOMMENDATIONS, EITHER INCREASE OR DECREASE, SHALL BE SUBMITTED TO THE OWNER WITH THE REPORT.
4. FOR BIDDING PURPOSES ONLY, THE SOIL PREPARATION SHALL CONSIST OF THE FOLLOWING:
 - a. TURF: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF ROTOTILLING AFTER CROSS-PRIPPING:
 - i. NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
 - ii. PREPLANT TURF FERTILIZER (10-20-10 OR SIMILAR, SLOW RELEASE, ORGANIC) - 15 LBS PER 1,000 S.F.
 - iii. "CLAY BUSTER" OR EQUAL - USE MANUFACTURER'S RECOMMENDED RATE
 - iv. TREES, SHRUBS, AND PERENNIALS: INCORPORATE THE FOLLOWING AMENDMENTS INTO THE TOP 8" OF SOIL BY MEANS OF ROTOTILLING AFTER CROSS-PRIPPING:
 - i. NITROGEN STABILIZED ORGANIC AMENDMENT - 4 CU. YDS. PER 1,000 S.F.
 - ii. 12-12-12 FERTILIZER (OR SIMILAR, ORGANIC, SLOW RELEASE) - 10 LBS. PER CU. YD.
 - iii. "CLAY BUSTER" OR EQUAL - USE MANUFACTURER'S RECOMMENDED RATE
 - iv. IRON SULPHATE - 2 LBS. PER CU. YD.
5. IN THE CONTEXT OF THESE PLANS, NOTES, AND SPECIFICATIONS, "FINISH GRADE" REFERS TO THE FINAL ELEVATION OF THE SOIL SURFACE (NOT TOP OF MULCH) AS INDICATED ON THE GRADING PLANS.
 - a. BEFORE STARTING WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE ROUGH GRADES OF ALL LANDSCAPE AREAS ARE WITHIN +0.1' OF FINISH GRADE. SEE SPECIFICATIONS FOR MORE DETAILED INSTRUCTION ON TURF AREA AND PLANTING BED PREPARATION.
 - b. CONSTRUCT AND MAINTAIN FINISH GRADES AS SHOWN ON GRADING PLANS, AND CONSTRUCT AND MAINTAIN SLOPES AS RECOMMENDED BY THE GEOTECHNICAL REPORT. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM STRUCTURES AT THE MINIMUM SLOPE SPECIFIED IN THE REPORT AND ON THE GRADING PLANS, AND AREAS OF POTENTIAL PONDING SHALL BE REGRADED TO BLEND IN WITH THE SURROUNDING GRADES AND ELIMINATE PONDING POTENTIAL.
 - c. THE LANDSCAPE CONTRACTOR SHALL DETERMINE WHETHER OR NOT THE EXPORT OF ANY SOIL WILL BE NEEDED, TAKING INTO ACCOUNT THE ROUGH GRADE PROVIDED, THE AMOUNT OF SOIL AMENDMENTS TO BE ADDED (BASED ON A SOIL TEST PER SPECIFICATIONS), AND THE FINISH GRADES TO BE ESTABLISHED.
 - d. ENSURE THAT THE FINISH GRADE IN SHRUB AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 3" BELOW THE ADJACENT FINISH SURFACE, IN ORDER TO ALLOW FOR PROPER MULCH DEPTH. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, AT APPROXIMATELY 18" AWAY FROM THE WALKS.
 - e. ENSURE THAT THE FINISH GRADE IN TURF AREAS IMMEDIATELY ADJACENT TO WALKS AND OTHER WALKING SURFACES, AFTER INSTALLING SOIL AMENDMENTS, IS 1" BELOW THE FINISH SURFACE OF THE WALKS. TAPER THE SOIL SURFACE TO MEET FINISH GRADE, AS SPECIFIED ON THE GRADING PLANS, 18" AWAY FROM THE WALKS.
 - f. SHOULD ANY CONFLICTS AND/OR DISCREPANCIES ARISE BETWEEN THE GRADING PLANS, GEOTECHNICAL REPORT, THESE NOTES AND PLANS, AND ACTUAL CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY BRING SUCH ITEMS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT, GENERAL CONTRACTOR, AND OWNER.
6. ONCE SOIL PREPARATION IS COMPLETE, THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT THERE ARE NO DEBRIS, TRASH, OR STONES LARGER THAN 1" REMAINING IN THE TOP 6" OF SOIL.

SUBMITTALS

1. THE CONTRACTOR SHALL PROVIDE SUBMITTALS AND SAMPLES, IF REQUIRED, TO THE LANDSCAPE ARCHITECT, AND RECEIVE APPROVAL IN WRITING FOR SUCH SUBMITTALS BEFORE WORK COMMENCES.
 2. SUBMITTALS SHALL INCLUDE PHOTOS OF PLANTS WITH A RULER OR MEASURING STICK FOR SCALE, PHOTOS OR SAMPLES OF ANY REQUIRED MULCHES, AND SOIL TEST RESULTS AND PREPARATION RECOMMENDATIONS FROM THE TESTING LAB INCLUDING COMPOST AND FERTILIZER RATES AND TYPES, AND OTHER AMENDMENTS FOR TREE/SHRUB, TURF, AND SEED AREAS AS MAY BE APPROPRIATE).
 3. SUBMITTALS SHALL ALSO INCLUDE MANUFACTURER CUT SHEETS FOR PLANTING ACCESSORIES SUCH AS TREE STAKES AND TIES, EDGING, AND LANDSCAPE FABRICS (IF ANY).
 4. WHERE MULTIPLE ITEMS ARE SHOWN ON A PAGE, THE CONTRACTOR SHALL CLEARLY INDICATE THE ITEM BEING CONSIDERED.
- C. GENERAL PLANTING
1. REMOVE ALL NURSERY TAGS AND STAKES FROM PLANTS.
 2. EXCEPT IN AREAS TO BE PLANTED WITH ORNAMENTAL GRASSES, APPLY PRE-EMERGENT HERBICIDES AT THE MANUFACTURER'S RECOMMENDED RATE.
 3. TRENCING NEAR EXISTING TREES:
 - a. CONTRACTOR SHALL NOT DISTURB ROOTS 1-1/2" AND LARGER IN DIAMETER WITHIN THE CRITICAL ROOT ZONE (CRZ) OF EXISTING TREES, AND SHALL EXERCISE ALL POSSIBLE CARE AND PRECAUTIONS TO AVOID INJURY TO TREE ROOTS, TRUNKS, AND BRANCHES. THE CRZ IS DEFINED AS A CIRCULAR AREA EXTENDING OUTWARD FROM THE TREE TRUNK WITH A RADIUS EQUAL TO 1" FOR EVERY 1" OF TRUNK DIAMETER-AT-BREAST-HEIGHT (4.5' ABOVE THE AVERAGE GRADE AT THE TRUNK).
 - b. ALL EXCAVATION WITHIN THE CRZ SHALL BE PERFORMED USING HAND TOOLS. NO MACHINE EXCAVATION OR TRENCING OF ANY KIND SHALL BE ALLOWED WITHIN THE CRZ.
 - c. ALTER ALIGNMENT OF PIPE TO AVOID TREE ROOTS 1-1/2" AND LARGER IN DIAMETER. WHERE TREE ROOTS 1-1/2" AND LARGER IN DIAMETER ARE ENCOUNTERED IN THE FIELD, TUNNEL UNDER SUCH ROOTS. WRAP EXPOSED ROOTS WITH SEVERAL LAYERS OF BURLAP AND KEEP MOIST. CLOSE ALL TRENCHES WITHIN THE CANOPY DRIP LINES WITHIN 24 HOURS.
 - d. EXPOSED ROOTS SHALL BE HAND PRUNED WITH SHARP TOOLS AND ALLOWED TO AIR-DRY. DO NOT USE ANY SORT OF SEALERS OR WOUND PAINTS.

D. TREE PLANTING

1. TREE PLANTING HOLES SHALL BE EXCAVATED TO MINIMUM WIDTH OF TWO TIMES THE WIDTH OF THE ROOTBALL, AND TO A DEPTH EQUAL TO THE DEPTH OF THE ROOTBALL LESS TWO TO FOUR INCHES.
2. SCARIFY THE SIDES AND BOTTOM OF THE PLANTING HOLE PRIOR TO THE PLACEMENT OF THE TREE.
3. REMOVE ANY GLAZING OR MAY HAVE BEEN CAUSED DURING THE EXCAVATION OF THE HOLE.
4. FOR CONTAINER AND BOX TREES, TO REMOVE ANY POTENTIALLY GIRDLING ROOTS AND OTHER ROOT DEFECTS, THE CONTRACTOR SHALL SHAVE A 1" LAYER OFF OF THE SIDES AND BOTTOM OF THE ROOTBALL OR ALL TRUNKS BEFORE PLACING INTO THE PLANTING PIT. DO NOT "TEASE" ROOTS OUT FROM THE ROOTBALL.
5. INSTALL THE TREE ON UNDISTURBED SUBGRADE SO THAT THE TOP OF THE ROOTBALL IS TWO TO FOUR INCHES ABOVE FINISH GRADE.
6. BACKFILL THE TREE HOLE UTILIZING THE EXISTING TOPSOIL FROM ON-SITE. ROCKS LARGER THAN 1" DIA. AND ALL OTHER DEBRIS SHALL BE REMOVED FROM THE SOIL PRIOR TO THE BACKFILL. SHOULD ADDITIONAL SOIL BE REQUIRED TO ACCOMPLISH THIS TASK, SOIL STORED FROM ON-SITE OR IMPORT ADDITIONAL TOPSOIL FROM OFF-SITE AT NO ADDITIONAL COST TO THE OWNER. IMPORTED TOPSOIL SHALL BE OF SIMILAR TEXTURAL CLASS AND COMPOSITION IN THE ON-SITE SOIL.
7. NEED TO STABILIZE THE TREE:
 - a. 1-1/2" TREES: TWO STAKES PER TREE
 - b. 2-1/2" - 4" TREES: THREE STAKES PER TREE
 - c. TREES OVER 4" CALIPER: GUY AS NEEDED
 - d. MULTI-TRUNK TREES: THREE STAKES PER TREE MINIMUM. QUANTITY AND POSITIONS AS RECOMMENDED BY THE TREE MANUFACTURER.
8. UPON COMPLETION OF PLANTING, CONSTRUCT AN EARTH WATERING BASIN AROUND THE TREE. COVER THE INTERIOR OF THE TREE RING WITH MULCH (TYPE AND DEPTH PER PLANS).

E. SHRUB, PERENNIAL, AND GROUND COVER PLANTING

1. DIG THE PLANTING HOLES TWICE AS WIDE AND 2" DEEP DEEP THAN EACH PLANT'S ROOTBALL. INSTALL THE PLANT IN THE HOLE. BACKFILL AROUND THE PLANT WITH SOIL AMENDED PER SOIL TEST RECOMMENDATIONS.
 2. WHEN PLANTING IS COMPLETE, INSTALL MULCH (TYPE AND DEPTH PER PLANS) OVER ALL PLANTING BEDS, COVERING THE ENTIRE PLANTING AREA.
- F. SODDING
1. SOD VARIETY TO BE AS SPECIFIED ON THE LANDSCAPE PLAN.
 2. LAY SOD WITHIN 24 HOURS FROM THE TIME OF STRIPPING. DO NOT LAY IF THE GROUND IS FROZEN.
 3. LAY THE SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD STRIPS - DO NOT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES.
 4. ROLL THE SOD TO ENSURE GOOD CONTACT OF THE SOD'S ROOT SYSTEM WITH THE SOIL UNDERNEATH.
 5. WATER THE SOD THOROUGHLY WITH A FINE SPRAY IMMEDIATELY AFTER PLANTING TO OBTAIN AT LEAST SIX INCHES OF PENETRATION INTO THE SOIL BELOW THE SOD.

G. MULCH

1. INSTALL MULCH TOPDRESSING, TYPE AND DEPTH PER MULCH NOTE, IN ALL PLANTING AREAS AND TREE RINGS.
 2. DO NOT INSTALL MULCH WITHIN 8" OF TREE ROOT FLARE AND WITHIN 24" OF HABITABLE STRUCTURES, EXCEPT AS MAY BE NOTED ON THESE PLANS. MULCH COVER WITHIN 6" OF CONCRETE WALKS AND CURBS SHALL NOT PROTRUDE ABOVE THE FINISH SURFACE OF THE WALKS AND CURBS. MULCH COVER WITHIN 12" OF WALLS SHALL BE AT LEAST 3" LOWER THAN THE TOP OF WALL.
- H. CLEAN UP
1. DURING LANDSCAPE PREPARATION AND PLANTING, KEEP ALL PAVEMENT CLEAN AND ALL WORK AREAS IN A NEAT, ORDERLY CONDITION.
 2. LEGALLY DISPOSE ALL EXCAVATED MATERIALS OFF THE PROJECT SITE.
- I. INSPECTION AND ACCEPTANCE
1. UPON COMPLETION OF THE WORK, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE SITE CLEAN, FREE OF DEBRIS AND TRASH, AND SUITABLE FOR USE AS INTENDED. THE LANDSCAPE CONTRACTOR SHALL THEN REQUEST AN INSPECTION BY THE OWNER TO DETERMINE FINAL ACCEPTABILITY.
 2. WHEN THE INSPECTED PLANTING WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, THE LANDSCAPE CONTRACTOR SHALL REPLACE AND/OR REPAIR THE REJECTED WORK TO THE OWNER'S SATISFACTION WITHIN 24 HOURS.
 3. THE LANDSCAPE MAINTENANCE PERIOD WILL NOT COMMENCE UNTIL THE LANDSCAPE WORK HAS BEEN RE-INSPECTED BY THE OWNER AND FOUND TO BE ACCEPTABLE. AT THAT TIME, A WRITTEN NOTICE OF FINAL ACCEPTANCE WILL BE ISSUED BY THE OWNER, AND THE MAINTENANCE AND GUARANTEE PERIODS WILL COMMENCE.

J. LANDSCAPE MAINTENANCE

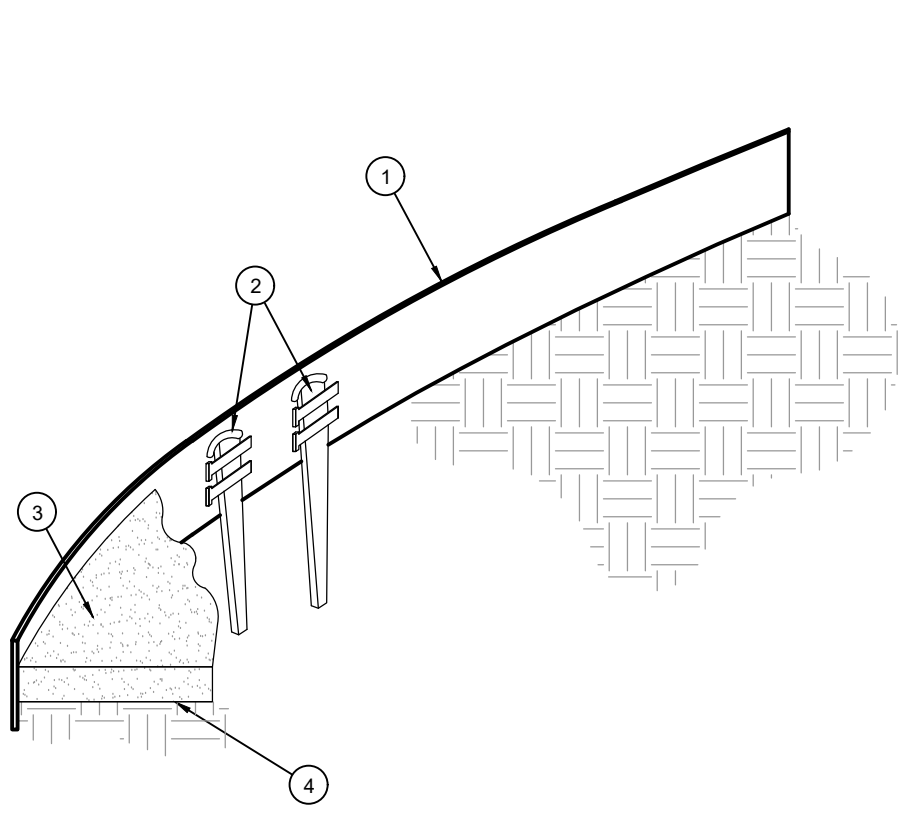
1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK SHOWN ON THESE PLANS FOR 90 DAYS BEYOND FINAL ACCEPTANCE OF ALL LANDSCAPE WORK BY THE OWNER. LANDSCAPE MAINTENANCE SHALL INCLUDE WEEKLY SITE VISITS FOR THE FOLLOWING ACTIONS (AS APPROPRIATE): PROPER PRUNING, RESTAKING OF TREES, RESETTling OF PLANTS THAT HAVE SETTLED, MOWING AND AERATION OF LAWNS, WEEDING, RESEEDING AREAS WHICH HAVE NOT GERMINATED WELL, TREATING FOR INSECTS AND DISEASES, REPLACEMENT OF MULCH, REMOVAL OF LITTER, REPAIRS TO THE IRRIGATION SYSTEM DUE TO FAULTY PARTS AND/OR WORKMANSHIP, AND THE APPROPRIATE WATERING OF ALL PLANTINGS. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN PROPER WORKING ORDER, WITH SCHEDULING ADJUSTMENTS BY SEASON TO MAXIMIZE WATER CONSERVATION.
2. SHOULD SEEDING AND/OR SODDING AREAS NOT BE COVERED BY AN AUTOMATIC IRRIGATION SYSTEM, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING THESE AREAS AND OBTAINING A FULL, HEALTHY STAND OF PLANTS AT NO ADDITIONAL COST TO THE OWNER.
3. TO ACHIEVE FINAL ACCEPTANCE AT THE END OF THE MAINTENANCE PERIOD, ALL OF THE FOLLOWING CONDITIONS MUST OCCUR:
 - a. THE LANDSCAPE SHALL SHOW ACTIVE, HEALTHY GROWTH (WITH EXCEPTIONS MADE FOR SEASONAL DORMANCY). ALL PLANTS NOT MEETING THIS CONDITION SHALL BE REJECTED AND REPLACED BY HEALTHY PLANT MATERIAL, PRIOR TO FINAL ACCEPTANCE.
 - b. ALL HARDSCAPE SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE.
 - c. HYDROMULCHED AREAS SHALL SHOW ACTIVE, HEALTHY GROWTH. BARE AREAS LARGER THAN TWELVE SQUARE INCHES MUST BE RESEED OR RESEED (AS APPROPRIATE) PRIOR TO FINAL ACCEPTANCE.

K. WARRANTY PERIOD, PLANT GUARANTEE AND REPLACEMENTS

1. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL TREES, SHRUBS, PERENNIALS, SEEDING/HYDROMULCHED AREAS, AND IRRIGATION SYSTEMS FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE OWNER'S FINAL ACCEPTANCE (90 DAYS FOR ANNUAL PLANTS). THE CONTRACTOR SHALL REPLACE, AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER, ANY PLANTS WHICH DIE IN THAT TIME, OR REPAIR ANY PORTIONS OF THE IRRIGATION SYSTEM WHICH OPERATE IMPROPERLY.
2. AFTER THE INITIAL MAINTENANCE PERIOD AND DURING THE GUARANTEE PERIOD, THE LANDSCAPE CONTRACTOR SHALL ONLY BE RESPONSIBLE FOR REPLACEMENT OF PLANTS WHEN PLANT DEATH CANNOT BE ATTRIBUTED DIRECTLY TO OVERWATERING OR OTHER DAMAGE BY HUMAN ACTIONS.

L. RECORD DRAWINGS

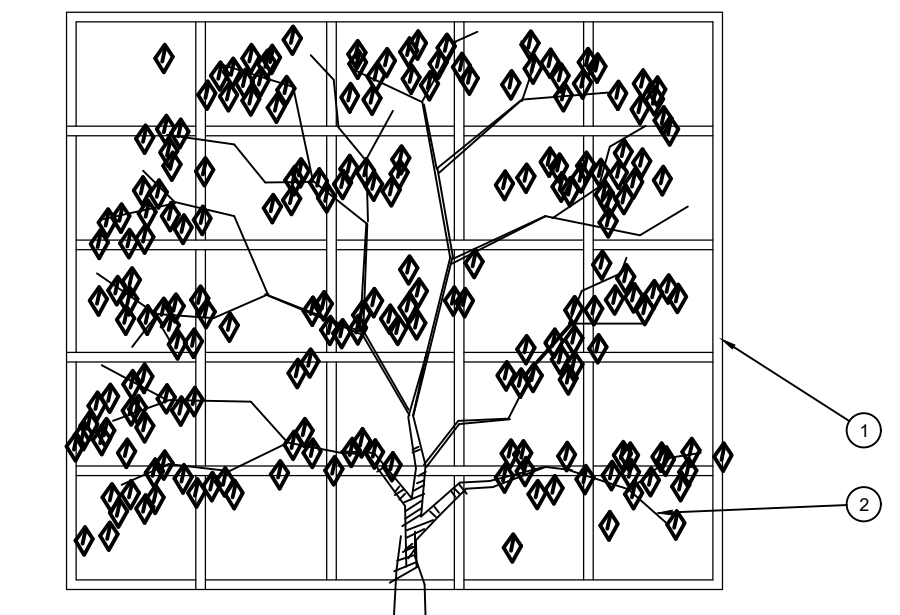
1. PROVIDE A MINIMUM OF (2) COPIES OF RECORD DRAWINGS TO THE OWNER UPON COMPLETION OF WORK. A RECORD DRAWING IS A RECORD OF ALL CHANGES THAT OCCURRED IN FIELD AND THAT ARE DOCUMENTED THROUGH CHANGE ORDERS, ADDENDA, OR CONTRACTOR/CONSULTANT DRAWING MARKUPS.



1. ROLLED-TOP STEEL EDGING PER PLANS.
2. TAPERED STEEL STAKES.
3. MULCH, TYPE AND DEPTH PER PLANS.
4. FINISH GRADE.

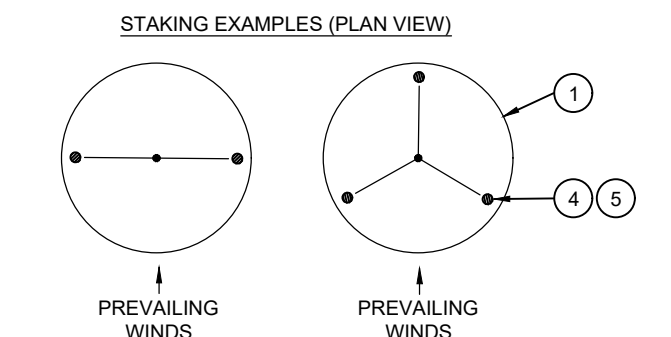
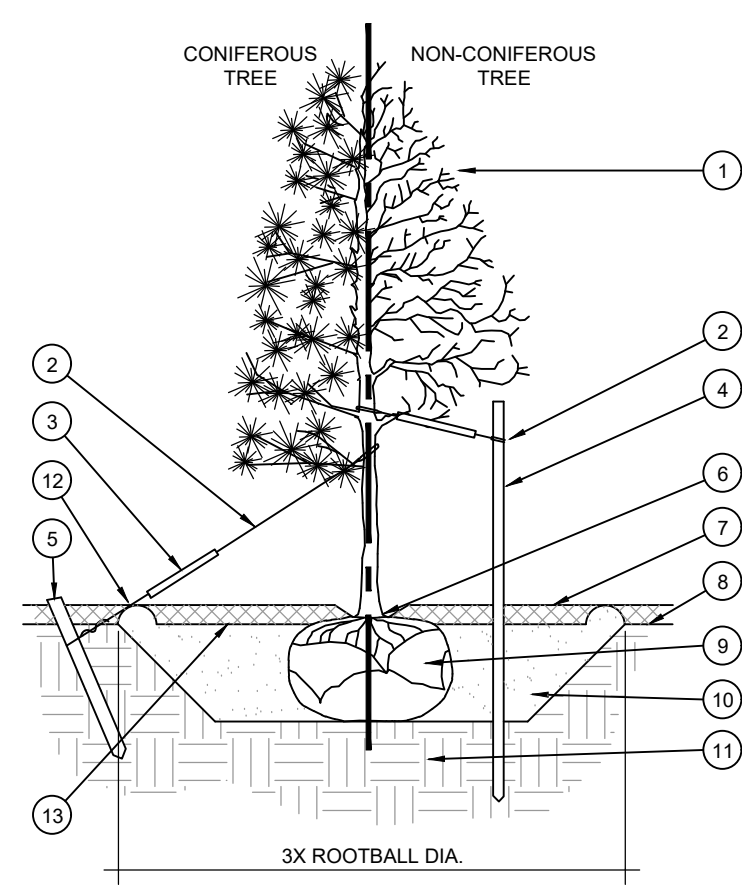
- NOTES:
1. INSTALL EDGING SO THAT STAKES WILL BE ON INSIDE OF PLANTING BED.
 2. BOTTOM OF EDGING SHALL BE BURIED A MINIMUM OF 1" BELOW FINISH GRADE.
 3. TOP OF MULCH SHALL BE 1" LOWER THAN TOP OF EDGING.

C STEEL EDGING
SCALE: NOT TO SCALE



1. TRELLIS PER PLAN
2. VINE: REMOVE NURSERY STAKES AND SECURE TO TRELLIS WITH VINE TIES. ARRANGE VINE STEMS EVENLY ACROSS TRELLIS.

D VINE PLANTING ON TRELLIS
SCALE: NTS



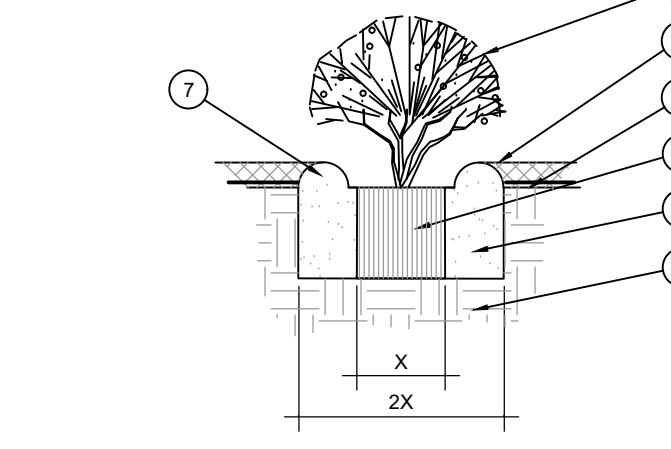
A TREE PLANTING
SCALE: NOT TO SCALE

1. TREE CANOPY.
2. CINCH-TIES (24" BOX2" CAL. TREES AND SMALLER) OR 12 GAUGE GALVANIZED WIRE WITH NYLON TREE STRAPS AT TREE AND STAKE (36" BOX2.5" CAL. TREES AND LARGER). SECURE TIES OR STRAPS TO TRUNK JUST ABOVE LOWEST MAJOR BRANCHES.
3. 24" X 3/4" P.V.C. MARKERS OVER WIRES.
4. GREEN STEEL T-POSTS. EXTEND POSTS 12" MIN. INTO UNDISTURBED SOIL.
5. PRESSURE-TREATED WOOD DEADMAN, TWO PER TREE (MIN.). BURY OUTSIDE OF PLANTING PIT AND 18" MIN. INTO UNDISTURBED SOIL.
6. TRUNK FLARE.
7. MULCH, TYPE AND DEPTH PER PLANS. DO NOT PLACE MULCH WITHIN 6" OF TRUNK.
8. FINISH GRADE.
9. ROOT BALL.
10. BACKFILL. AMEND AND FERTILIZE ONLY AS RECOMMENDED IN SOIL FERTILITY ANALYSIS.
11. UNDISTURBED NATIVE SOIL.
12. 4" HIGH EARTHEN WATERING BASIN.
13. FINISH GRADE.

- NOTES:
1. SCARIFY SIDES OF PLANTING PIT PRIOR TO SETTING TREE.
 2. REMOVE EXCESS SOIL APPLIED TO THE ROOTBALL THAT COVERS THE ROOT FLARE. THE PLANTING HOLE DEPTH SHALL BE SUCH THAT THE ROOTBALL RESTS ON UNDISTURBED SOIL, AND THE ROOT FLARE IS 2-4" ABOVE FINISH GRADE.
 3. FOR B&B TREES, CUT OFF BOTTOM 1/3 OF WIRE BASKET BEFORE PLACING TREE IN HOLE. CUT OFF AND REMOVE REMAINDER OF BASKET AFTER TREE IS SET IN HOLE. REMOVE ALL NYLON TIES, TWINE, ROPE, AND OTHER PACKING MATERIAL. REMOVE AS MUCH BURLAP FROM AROUND ROOTBALL AS IS PRACTICAL.
 4. REMOVE ALL NURSERY STAKES AFTER PLANTING.
 5. FOR TREES 36" BOX2" CAL. AND LARGER, USE THREE STAKES OR DEADMEN (AS APPROPRIATE), SPACED EVENLY AROUND TREE.
 6. STAKING SHALL BE TIGHT ENOUGH TO PREVENT TRUNK FROM BENDING, BUT LOOSE ENOUGH TO ALLOW SOME TRUNK MOVEMENT IN WIND.

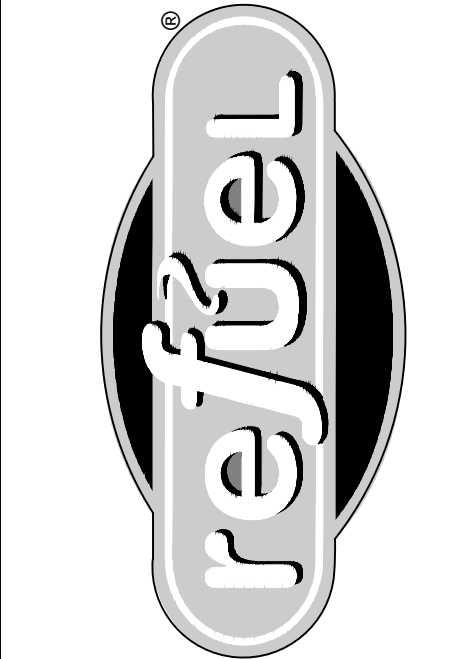
1. SHRUB, PERENNIAL, OR ORNAMENTAL GRASS.
2. MULCH, TYPE AND DEPTH PER PLANS. PLACE NO MORE THAN 1" OF MULCH WITHIN 6" OF PLANT CENTER.
3. FINISH GRADE.
4. ROOT BALL.
5. BACKFILL. AMEND AND FERTILIZE ONLY AS RECOMMENDED IN SOIL FERTILITY ANALYSIS.
6. UNDISTURBED NATIVE SOIL.
7. 3" HIGH EARTHEN WATERING BASIN.

B SHRUB AND PERENNIAL PLANTING
SCALE: NTS



DOCUMENTS PREPARED BY CORESTATES, INC., INCLUDING THIS DOCUMENT, ARE TO BE USED ONLY FOR THE SPECIFIC PROJECT AND SPECIFIC LOCATION FOR WHICH THEY WERE INTENDED. ANY EXTENSION OF USE TO ANY OTHER PROJECTS, BY OWNER OR BY ANY OTHER PARTY, WITHOUT THE EXPRESSED WRITTEN CONSENT OF CORESTATES, INC. IS DONE UNLAWFULLY AND AT THE USER'S OWN RISK. IT IS USED IN A WAY OTHER THAN THAT SPECIFICALLY INTENDED. USER WILL HOLD CORESTATES, INC. HARMLESS FROM ALL CLAIMS AND LOSSES.

CLIENT



Know what's below. Call before you dig.

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND DEPTH OF ANY UTILITIES SHOWN ON THESE PLANS ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY DATA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ANY UTILITIES PRIOR TO ANY EXCAVATION WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY UTILITY COORDINATES AT LEAST 14 DAYS BEFORE ANY EXCAVATION TO PREVENT ANY DAMAGE TO UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY UTILITY COORDINATES AT LEAST 14 DAYS BEFORE ANY EXCAVATION TO PREVENT ANY DAMAGE TO UTILITIES.

SOUTH CAROLINA PLUM SERVICE

REVISIONS

REV	DATE	COMMENT	BY

DOCUMENT
PRELIMINARY
DEVELOPMENT PLAN

SITE LOCATION
NEW RIVERSIDE VILLAGE,
BLUFFTON, SC 29910

CERTIFICATE OF AUTHORIZATION

ENGINEER SEAL



SHEET TITLE
LANDSCAPE
SPECIFICATIONS &
DETAILS

JOB #:	RFL 35149
DATE:	12/13/2022
SCALE:	AS SHOWN
DRAWN BY:	KCB
CHECKED BY:	BCB

SHEET NO.

LP-2



Protected Tree DBH Removed	Number of Replacement Trees
Significant Trees ≥24 inches; any tree listed on the America's Historic Tree Register maintained by American Forests; all trees, regardless of size, located within regulated wetland buffers	5 trees or 3 trees with a 6-inch caliper at time of planting
18 inches < 24 inches	3 trees
12 inches < 18 inches	2 trees
8 inches < 12 inches	1 tree
≥4 inches for the following trees: American holly, dogwood, redbud, southern magnolia, and red buckeye	1 tree

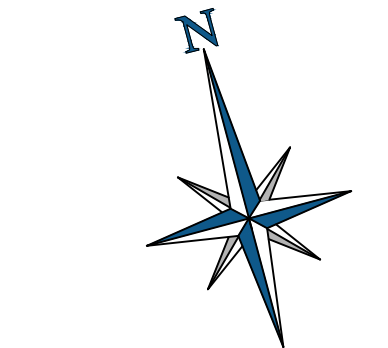
TREE DISPOSITION SCHEDULE

 LAO 9	TREE TO BE REMOVED
• LO 9	TREE TO BE RETAINED
	TREE PROTECTION FENCE

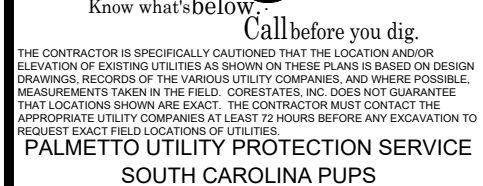
MATERIALS

-
- The diagram illustrates a tree with its canopy and root system. A horizontal line represents the ground surface. Below this line, a shaded rectangular area represents the Root Protection Zone (RPZ). The text "MINIMUM 5' FROM THE TRUNK RPZ" is centered within this shaded area, with arrows indicating the distance from the trunk to the zone boundaries. Below the RPZ, a larger rectangular area is labeled "LEVEL I". At the very bottom, a horizontal line is labeled "(ROOT PROTECTION ZONE)".

A



(IN FEET)
1 inch = 20 ft.

[illegible]

PRELIMINARY DEVELOPMENT PLAN

NEW RIVERSIDE VILLAGE,
BLUFFTON, SC 29910

ENGINEER SEAL











SHEET NO.

TD-1

1. ALL LIGHTING WAS DESIGNED WITH A LIGHT LOSS FACTOR OF 0.85. LIGHTING ANALYSIS WAS MEASURED AT GROUND ELEVATION.
2. ALL PROPOSED FIXTURES ON TIMER TO OPERATE DURING NIGHT TIME HOURS, 30 MINUTES AFTER SUNSET AND 30 MINUTES BEFORE SUNRISE.
3. CONTRACTOR TO INSTALL FIXTURE ON COPPER LIGHTING POLE SSS-6-7-24-CW-BS-XXXX-C-BK. MOUNT HEIGHTS ARE BASED ON HEIGHT ABOVE FINISHED ASPHALT GRADE.

1. SITE IS IDENTIFIED AS OUTPARCEL K AND J IN THE NEW RIVERSIDE VILLAGE.
2. SOUNDY AND TOPOGRAPHICAL SURVEYING BY THOMAS AND HUTTON, INC.
3. THE SITE IS LOCATED IN PARCEL 4B-2, A PORTION OF PARCEL 4B-2. THE SITE IS
4. PORTION OF PARCEL 4B-2 (RE#10 036 000 1258 000).
5. THE SITE IS LOCATED IN BEAUFORT COUNTY, SOUTH CAROLINA.
6. THE PROPOSED DEVELOPMENT IS A REFUEL SERVICE STATION FACILITY
7. (PARCEL 6).
8. THE SITE IS PRESENTLY UNDEVELOPED.
9. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
10. REFER TO PARKING SUMMARY FOR ALL SIZES AND COUNT.
11. THE SITE CONTAINER IS RESPONSIBLE FOR DETERMINING THE LOCATION OF
12. ALL UTILITIES PRIOR TO CONSTRUCTION.
13. ACCORDING TO FIRM MAP 45013C0405G DATED MARCH 23, 2021 (INDEX DATE
14. MARCH 23, 2021 THE PROPERTY IS LOCATED IN ZONE X.)

SYMBOL	MANUFACTURER	MODEL	CATALOG	QTY	DISTRIBUTION	MOUNT HT.
	CREE LIGHTING	OSQ™ LED AREA/FLOOD LUMINAIRE	OSQM-B-6L-40K7-3M-UL-NM-BK	3	TYPE 3	16'-0"
	CREE LIGHTING	OSQ™ LED AREA/FLOOD LUMINAIRE	OSQM-B-6L-40K7-4M-UL-NM-BK-BLSMF	1	TYPE 4	16'-0"
	CREE LIGHTING	OSQ™ LED AREA/FLOOD LUMINAIRE	OSQM-B-6L-40K7-4M-UL-NM-BK	2	TYPE 4	16'-0"
	CREE LIGHTING	OSQ™ LED AREA/FLOOD LUMINAIRE	OSQM-B-6L-40K7-4M-UL-NM-BK-BLSMF	3	TYPE 4	16'-0"
	CREE LIGHTING	CUTOFF LED WALL PACK	C-WP-B-RDC-6L-40K-DB	7	-	10'-0"
	CREE LIGHTING	CPY250® LED CANOPY/SOFFIT LUMINAIRE	CPY250-B-DM-F-B-UL-BK-40K	2	-	16'-0"
	CREE INC.	CR6T LED DOWNLIGHT - 6" (152MM)	CR6T-1600L-40K-12-E26GU24	2	-	12'-3"
	BARN LIGHT ELECTRIC CO.	PENDANT LED DOWNLIGHT	BLE-S-WHB13-105-ST712-105-HSC-LED27-2700K-FL	12	-	10'-10"

CALCULATION SUMMARY (FULL SITE)			
AREA	AVERAGE	MAX	MIN
LIGHTING ANALYSIS MEASURED AT GROUND ELEVATION	1.82 fc	14.8 fc	0.0 fc

CALCULATION SUMMARY (COMMERCIAL PARKING)			
AREA	AVERAGE	MAX	MIN
LIGHTING ANALYSIS MEASURED AT GROUND ELEVATION	1.73 fc	3.3 fc	0.6 fc





CALCULATION SUMMARY (LANDSCAPE AND DECORATIVE)			
AREA	AVERAGE	MAX	MIN
LIGHTING ANALYSIS MEASURED AT GROUND ELEVATION	0.48 fc	1.8 fc	0.0 fc

CALCULATION SUMMARY (WALKWAYS AND STREETS)			
AREA	AVERAGE	MAX	MIN
LIGHTING ANALYSIS MEASURED AT GROUND ELEVATION	0.82 fc	2.1 fc	0.2 fc





CALCULATION SUMMARY (AREAS FOR DISPLAY OF OUTDOOR MERCHANDISE)			
AREA	AVERAGE	MAX	MIN
LIGHTING ANALYSIS MEASURED AT GROUND ELEVATION	4.77 fc	14.8 fc	1.0 fc

*AREAS BEING ILLUMINATED BY SITE AND BUILDING LIGHTING FOR PUBLIC USE WHICH IMPACT THE CALCULATIVE AVERAGES OF THE SPECIFIC CALCULATIVE AREAS PROVIDED IN THE TABLES ABOVE HAVE BEEN OMITTED FROM THE CALCULATION SUMMARY TABLES TO PREVENT OBSCURING PHOTOMETRIC VALUES.

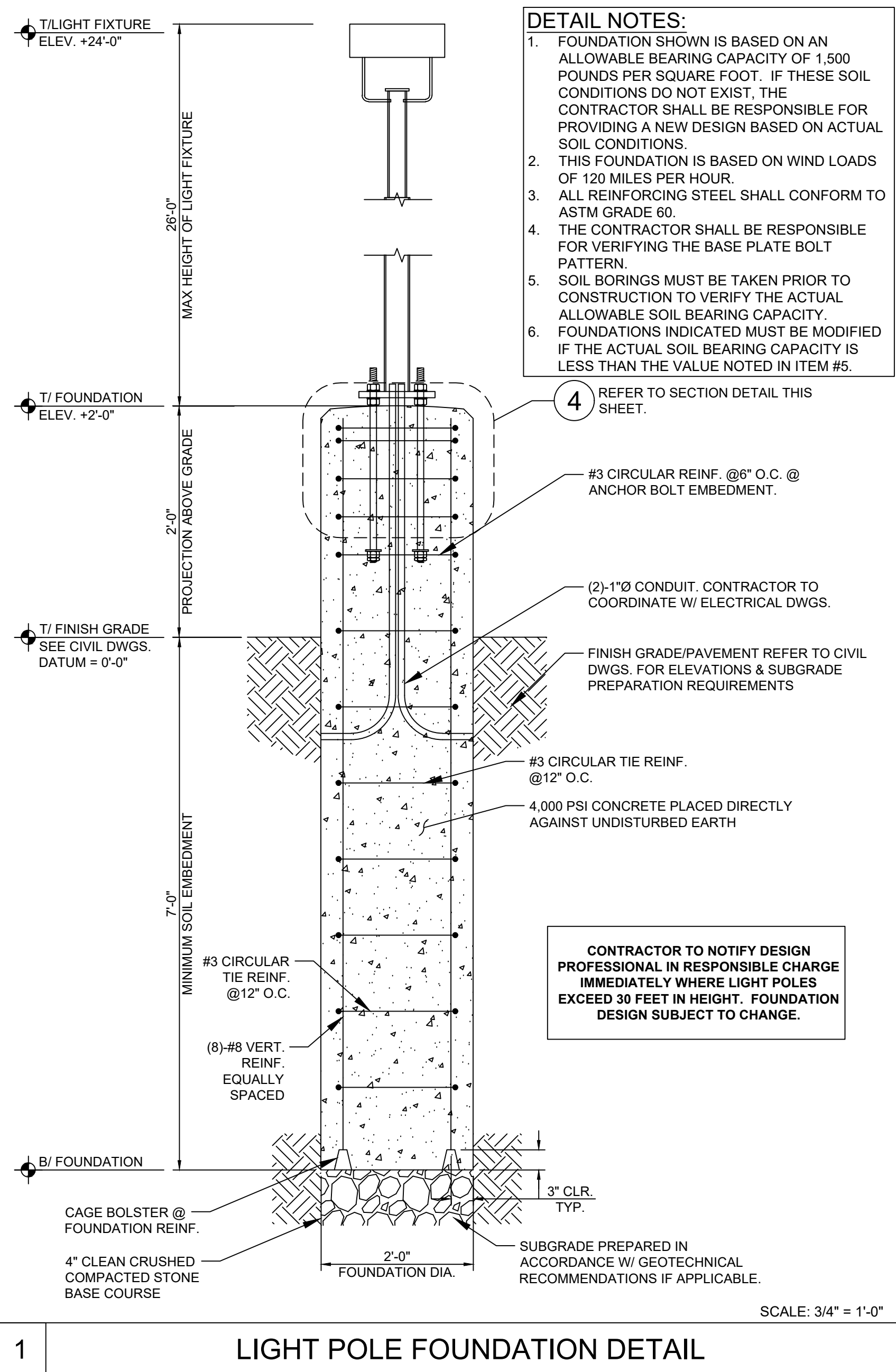
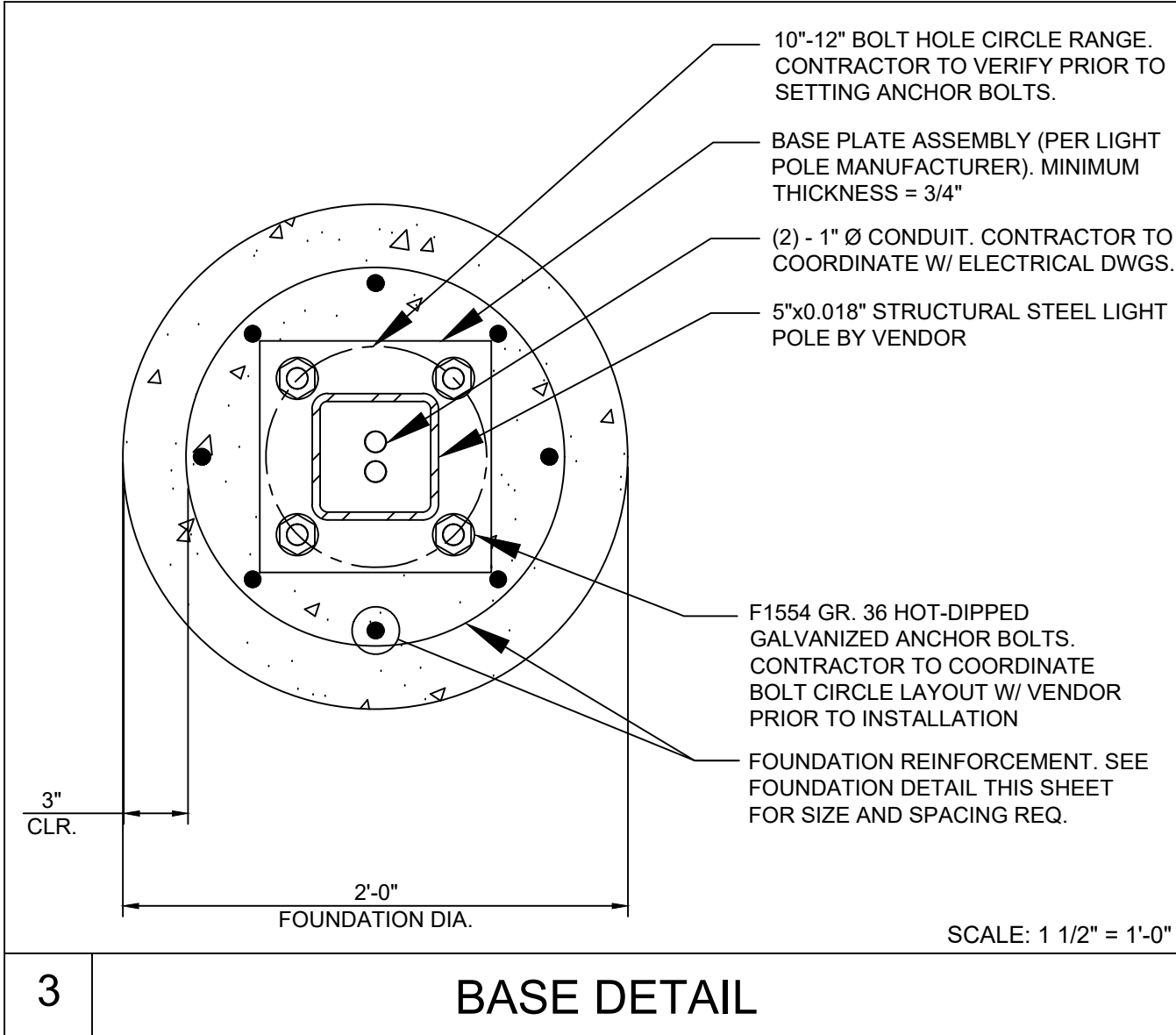
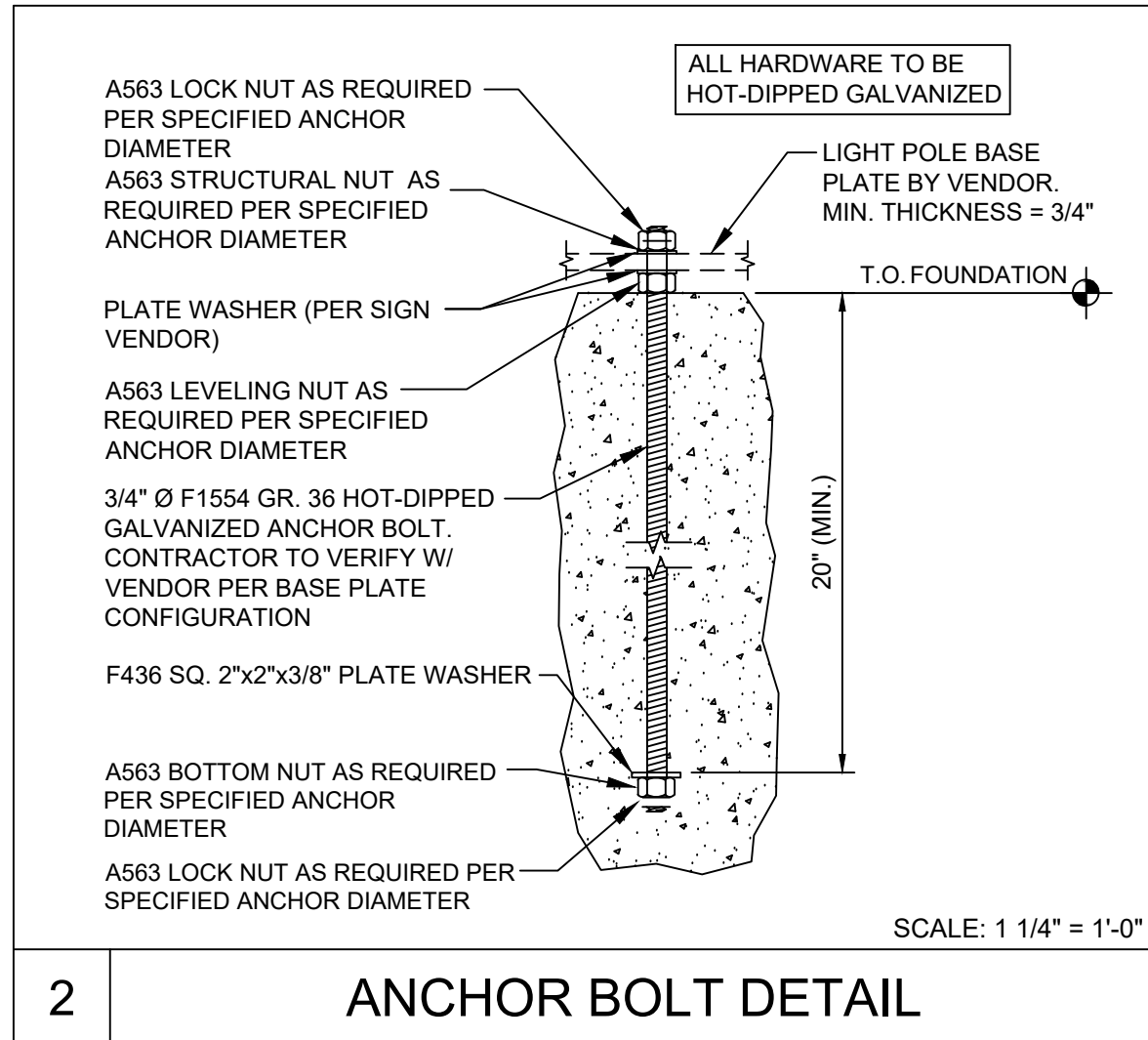
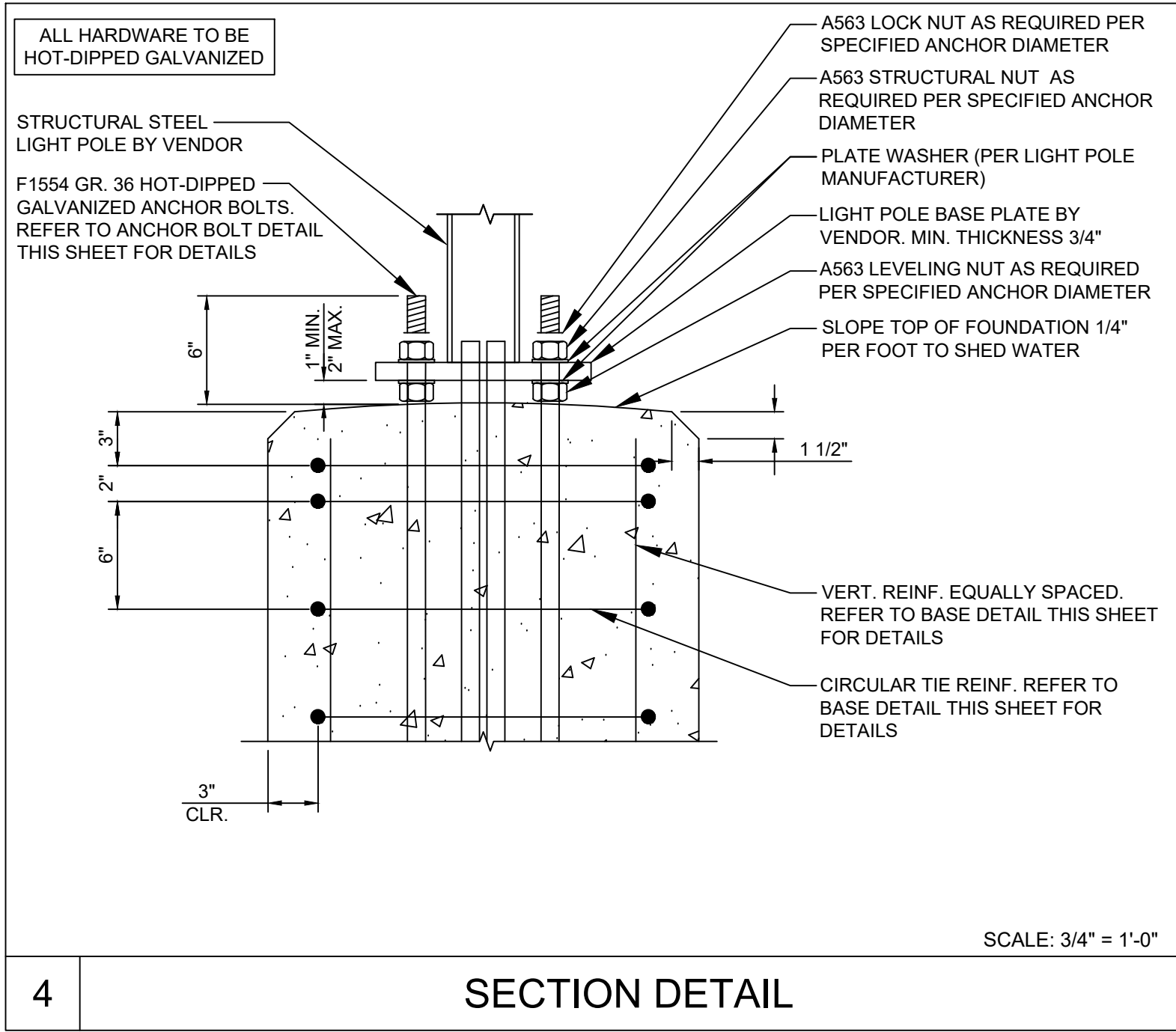
SITE LEGEND:





	EXISTING PROPERTY BOUNDARY LINE
	EXISTING ADJOINING PROPERTY LINE
	EXISTING ROAD CENTERLINE
	PROPOSED ROAD CENTERLINE
	EXISTING CURB
	PROPOSED CURB
	PROPOSED BUILDING

LIGHTING LEGEND:

			FOOTCANDLE CALCULATION POINT
			PROPOSED SITE LIGHT FIXTURE

[illegible]



	CORE STATES GROUP CORESTATES INC. FIRM CERTIFICATION NO. C-2880																				
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<p align="center">REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">REV</th> <th style="width: 15%;">DATE</th> <th style="width: 60%;">COMMENT</th> <th style="width: 15%;">BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		REV	DATE	COMMENT	BY																
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<p align="center">ENGINEER SEAL</p> <div style="text-align: center;">  </div>																					
<p align="right;">BRIAN SEARCAY, PE PROFESSIONAL ENGINEER SC LICENSE #B40407</p>																					
<p align="center">SHEET TITLE</p> <p align="center">LIGHTING DETAILS</p>																					
<table style="width: 100%;"> <tr> <td>JOB #:</td> <td>RFL-35149</td> </tr> <tr> <td>DATE:</td> <td>05/25/2022</td> </tr> <tr> <td>DRAWN BY:</td> <td>KB</td> </tr> <tr> <td>CHECKED BY:</td> <td>BS</td> </tr> </table> <p align="center">SHEET NO.</p> <h1 align="center">C18</h1>		JOB #:	RFL-35149	DATE:	05/25/2022	DRAWN BY:	KB	CHECKED BY:	BS												
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C-WP-B-RDC Series

Cutoff LED Wall Pack

Replaces up to 400W PSMH

C-LITE
LED LIGHTING

OFF THE WALL SAVINGS

Our cULus listed C-Lite Cutoff LED Wall Pack delivers up to 21,100 lumens and is available in 4000K and 5000K. It's dimmable, for maximum energy savings, and comes with a 5-year limited warranty. It also comes with a DLC Premium 5.1 Listing.



PRODUCT SPECIFICATIONS

OVERVIEW

- Initial Delivered Lumens: 1500 - 21,000 Lumens
- CRI: ≥ 70
- CCT: 4000K, 5000K
- Mounting height: 12 - 25 feet
- Input Power: 12W/22W/47W/77W/144W
- Dimmable: Yes, 0-10V
- Operating Temperature Range: 40°F to 104°F (40°C to 40°C)
- Estimated L70 Lifetime @ 25°C: > 100,000 hours
- Power Factor: > 0.9
- Total Harmonic Distortion: < 20%
- Limited Warranty: 5 Years*
- Replaces up to 400 PSMH

FEATURES	RECOMMENDED USE	INPUT VOLTAGE
<ul style="list-style-type: none"> Replaces up to 400W PSMH 4kV Surge suppression Contractor friendly install 	<ul style="list-style-type: none"> Security Perimeter Commercial 	<ul style="list-style-type: none"> Universal (120V through 277V Operation)

ORDERING INFORMATION

Example: C-WP-B-RDC-IL-40K-DB

C-WP	B	RDC			DB
PRODUCT	SERIES	TYPE	LUMEN PACKAGE	CCT	COLOR
C-WP	B	RDC Round Cutoff	1L 1500L 12W 3L 3000L (4000K), 3100L (5000K) 22W 6L 6000L (4000K), 6300L (5000K) 47W	40K 4000K (Neutral White) 50K 5000K (Cool White)	DB Dark Bronze

CERTIFICATIONS



Rev. Date: 05/02/2022

For informational purposes only. Content is subject to change. *See lighting.cree.com/warranty for details

CRT Series

CR61 LED Downlight - 6" (152mm)

Product Description

The new CR61 LED downlight delivers up to 1,650 lumens while achieving over 84 lumens per watt. This breakthrough performance is achieved by combining the high efficacy and high-quality 90 CRI light. The CR61 is available in warm and cool color temperatures, and easily installs into most standard five-inch or six-inch recessed IC or non-IC housings.

Applications: New construction or upgrade for residential and commercial lighting

Performance Summary

Initial Delivered Lumens: 825 Lumens - 1,650 Lumens

Input Power: 11 watts, 14.5 watts, 21 watts, 19.5 watts

CRI: 90+

CCT: 2700K, 3000K, 3500K, 4000K

Limited Warranty*: 5 years

Lifetime: Designed to last 50,000 hours

Dimming: Dimmable to 5% (At 120V Only)

Rated for Dry, Damp, and Wet Locations

*See <http://www.lighting.cree.com/warranty> for warranty terms

Accessories

Field-Installed

Trims

CR61-TIMBER-1

CR61-TIMBER-2

CR61-TIMBER-3

CR61-TIMBER-4

CR61-TIMBER-5

CR61-TIMBER-6

CR61-TIMBER-7

CR61-TIMBER-8

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