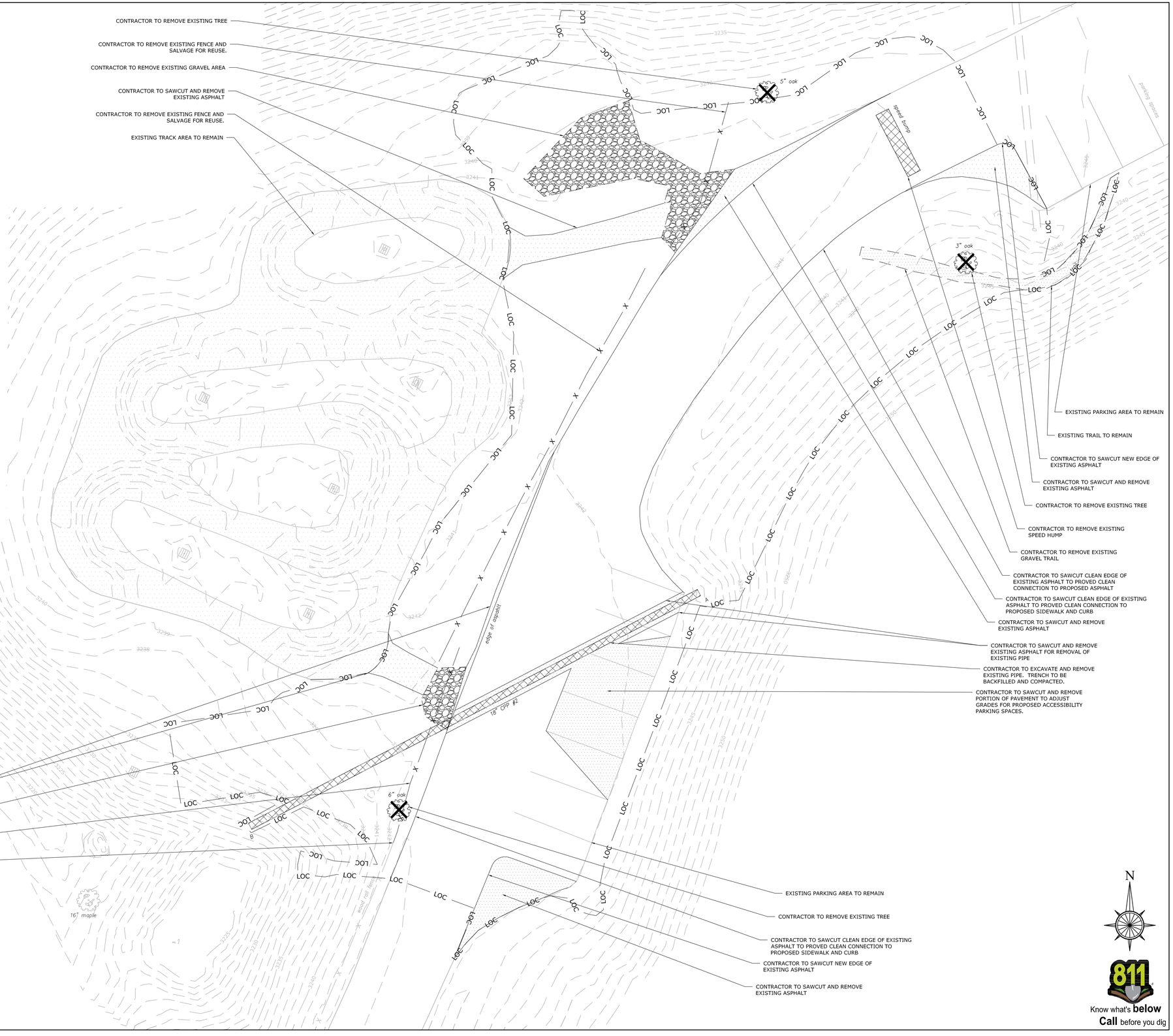
DEMOLITION NOTES:

1.) THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE DEMOLITION PERMIT AND COORDINATING WITH THE MUNICIPALITY FOR DEMOLITION AND CONSTRUCTION ACTIVITIES.
2.) THE CONTRACTOR SHALL NOT DEVIATE FROM THESE PLANS AND SPECIFICATIONS WITHOUT THE PRIOR WRITTEN CONSENT OF THE ENGINEER.
3.) ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY WORK INCLUDING DEMOLITION.
4.) ALL CONSTRUCTION RELATED PERMITS DURING THE CONSTRUCTION PHASE OF THIS PROJECT ARE THE RESPONSIBILITY OF THE CONTRACTOR.
5.) REMOVE SHRUBS AND TREES AS NOTED. GRUB OUT ROOTS AND STUMPS AND LEGALLY DISPOSE OF DEBRIS.
6.) ALL NEW WORK SHOWN IN THESE SHEETS SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL BUILDING AND UTILITY INSTALLATION CODES.
7.) ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES EXCEPT IN CASES WHERE, WITHIN THE MUNICIPALITY JURISDICTION, THE TOWN'S STANDARD SPECIFICATIONS ARE MORE STRINGENT.
8.) THE CONTRACTOR SHALL CONTACT THE UTILITIES PROTECTION CENTER PRIOR TO ANY EXCAVATION, AS THERE MAY BE ADDITIONAL UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR LOCATIONS SHOWN, AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND TO NOTIFY THE OWNER IN CASE OF DISCREPANCIES THAT AFFECT THE CONSTRUCTION PROJECT.
9.) THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE MUNICIPALITY AND ALL EXISTING UTILITY PROVIDERS BEFORE REMOVING AND/OR RELOCATING ANY/ALL UTILITIES FROM THEIR EXISTING LOCATIONS ON THE SITE. THE CONTRACTOR SHALL PERFORM ALL UTILITY DEMOLITION OR RELOCATION ACTIVITIES IN ACCORDANCE WITH THE EXISTING UTILITIES SPECIFICATIONS, MATERIALS, AND REQUIREMENTS.
10.) CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR TO ANY ADJACENT STRUCTURES OR PROPERTY, OR ANY EXISTING STRUCTURES WITHIN LIMITS OF CONSTRUCTION THAT ARE DESIGNATED ON THE PLANS TO REMAIN, AND SHALL REPAIR OR REPLACE SUCH DAMAGED PROPERTY TO THE PROPERTY OWNER'S SATISFACTION AT NO COST TO THE OWNER.
11.) THE CONTRACTOR SHALL SEQUENCE THE WORK AND PROVIDE TEMPORARY MEASURES AS NECESSARY TO MAINTAIN ACCESS TO THE SITE THROUGH ALL ENTRANCES AT ALL TIMES DURING CONSTRUCTION. TEMPORARY PROVISIONS MAY INCLUDE, BUT ARE NOT LIMITED TO: BARRICADES, FLASHING LIGHTS, FLAGMAN, TEMPORARY PAVEMENT, AND DIRECTIONAL SIGNAGE AS NECESSARY TO ACCOMPLISH THE WORK.
12.) CONTRACTOR SHALL CONSIDER COORDINATION ASPECTS OF CRANES AND CONSTRUCTION EQUIPMENT OPERATIONS DURING DEMOLITION ACTIVITY.
13.) CONTRACTOR EQUIPMENT SHALL NOT BE PARKED IN COUNTY, CITY OR STATE RIGHT-OF-WAY, AND MUST BE STORED WITHIN SITE.
14.) APPROVAL OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY THE MUNICIPALITY OF ANY LAND DISTURBING ACTIVITIES WITHIN WETLAND AREAS. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONTACT THE APPROPRIATE REGULATORY AGENCY FOR APPROVAL OF ANY WETLAND AREA DISTURBANCE.
15.) ALL BUFFERS AND SAVE AREAS SHALL BE CLEARLY IDENTIFIED BY FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.
16.) THE CONTRACTOR SHALL DISPOSE OF ANY HAZARDOUS MATERIALS IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS.

LEGEND

- UTILITIES/FENCE TO BE REMOVED
- BUILDING/CURB & GUTTER TO BE REMOVED
- ASPHALT/GRAVEL/CONCRETE TO BE REMOVED
- EXISTING FENCE
- TREE PROTECTION FENCE
- LIMITS OF CLEARING



Know what's **below**
Call before you dig

PROJECT:

ROCKY KNOB PARK EXPANSION

ADDRESS: 285 MOUNTAIN BIKE WAY | BOONE | WATAUGA COUNTY | NC | 28607

CLIENT:

WATAUGA CO. TDA

CONTACT: L. WRIGHT TILLEY, EXECUTIVE DIRECTOR

ADDRESS: 331 QUEEN STREET, SUITE 101 | BOONE | WATAUGA COUNTY | NC | 28607

CIVIL ENGINEER:

DESTINATION BY DESIGN

DESTINATION BY DESIGN ENGINEERING

ADDRESS: 136 FURMAN RD., STE. 6
BOONE | NC |28607

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 035238 ENGINEER JASON GASTON
04/28/23

REVISIONS	DATE

PROJECT MANAGER:	CAG
DRAWING BY:	JEG
JURISDICTION:	WATAUGA COUNTY
DATE:	04/28/23
SHEET TITLE:	

DEMOLITION PLAN

SHEET NUMBER: C-0

SCALE: 1" = 10'

10 5 0 10 20
SCALE IN FEET

GENERAL NOTES:

1.) ALL PROPOSED DIMENSIONS USED TO SHOW THE GEOMETRIC LAYOUT OF THE PROPOSED PARKING LOT ARE SHOWN AT THE FACE OF CURB. ALL PROPOSED DIMENSIONS USED TO SHOW THE GEOMETRIC LAYOUT OF THE PROPOSED BUILDING LOCATION ARE GIVEN AT THE OUTSIDE FACE OF THE BUILDING CORNERS, ALL CURB RADII ARE GIVEN AT THE FACE OF CURB.

2.) CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN THE EXISTING CONDITIONS IN THE FIELD AND THE SURVEY SHOWN ON THE PLANS BEFORE PROCEEDING WITH ANY NEW CONSTRUCTION.

3.) CONTRACTOR IS RESPONSIBLE FOR CORRECT HORIZONTAL AND VERTICAL ALIGNMENT OF ALL TIES BETWEEN PROPOSED AND EXISTING PAVEMENTS, CURB AND GUTTER, SIDEWALKS, WALLS, AND UTILITIES.

SITE NOTES:

1.) SEE ARCHITECTURAL PLANS FOR BUILDING FLOOR PLAN DIMENSIONS, DOOR LOCATIONS, AND OTHER ARCHITECTURAL DETAILS.

2.) NO CERTIFICATE OF OCCUPANCY WILL BE ISSUED UNTIL ALL SITE IMPROVEMENTS HAVE BEEN COMPLETED ON THE SITE.

3.) HIGH INTENSITY LIGHTING FACILITIES SHALL BE SO ARRANGED THAT THE SOURCE OF ANY LIGHT IS CONCEALED FROM THE PUBLIC VIEW AND DOES NOT INTERFERE WITH TRAFFIC. (SEE PHOTOMETRICS PLAN IN ARCH. PLANS).

4.) ALL BUFFERS, TREE SAVE AREAS, AND UNDISTURBED AREAS SHALL BE CLEARLY IDENTIFIED BY FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.

5.) SIGNS (LOCATION, NUMBER, AND SIZE) ARE NOT APPROVED UNDER THIS DEVELOPMENT PERMIT. A SEPARATE PERMIT IS REQUIRED FOR ON-SITE SIGNAGE.

6.) ALL PAVEMENT MARKING WITHIN R/W SHALL BE CONSTRUCTED ACCORDING TO MUNICIPALITY SPECIFICATIONS.

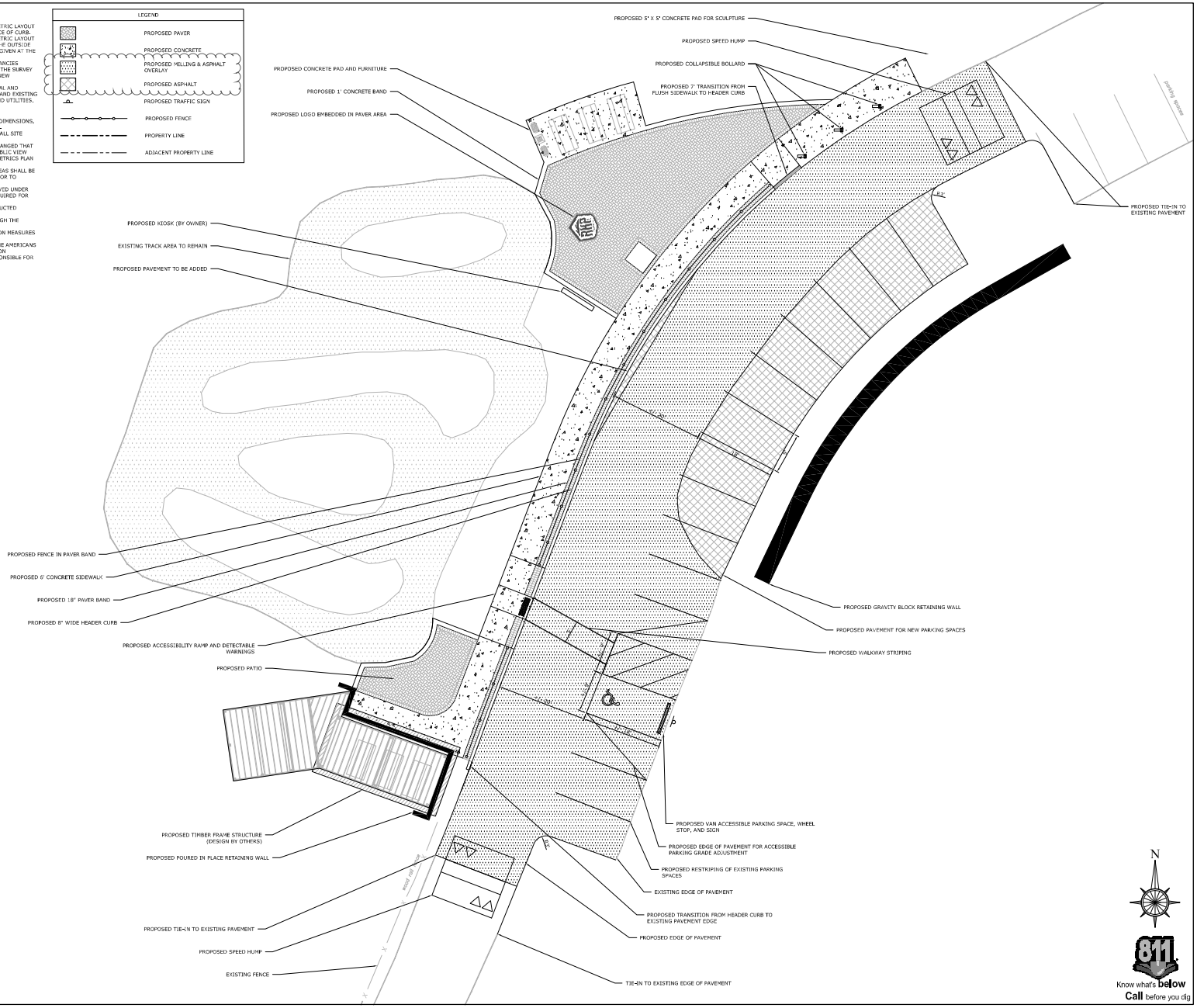
7.) CONSTRUCTION TRAILERS ARE TO BE PERMITTED THROUGH THE ZONING DIVISION OF PLANNING & INSPECTIONS.

8.) ALL EROSION, SEDIMENT CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING.

9.) THE JURISDICTION ACCEPTS NO RESPONSIBILITY FOR THE AMERICANS WITH DISABILITIES ACT (ADA), EXCEPT FOR NOTIFICATION REQUIREMENT. THE OWNER/DEVELOPER IS SOLELY RESPONSIBLE FOR COMPLIANCE FOR SAID ACT.

LEGEND

- PROPOSED PAVER
- PROPOSED CONCRETE
- PROPOSED MILLING & ASPHALT OVERLAY
- PROPOSED ASPHALT
- PROPOSED TRAFFIC SIGN
- PROPOSED FENCE
- PROPERTY LINE
- ADJACENT PROPERTY LINE



PROJECT:

ROCKY KNOB PARK EXPANSION

ADDRESS: 285 MOUNTAIN BIKE WAY | BOONE | WATAUGA COUNTY | NC | 28607

CLIENT:

WATAUGA CO. TDA

CONTACT: L. WRIGHT TILLEY, EXECUTIVE DIRECTOR

ADDRESS: 331 QUEEN STREET, SUITE 101 | BOONE | WATAUGA COUNTY | NC | 28607

CIVIL ENGINEER:

DESTINATION BY DESIGN

DESTINATION BY DESIGN ENGINEERING

ADDRESS: 136 FURMAN RD., STE. 6 BOONE | NC |28607

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 035233 ENGINEER JASON GASTON

09/25/23

REVISIONS	DATE
Addendum #3	10/6/23

PROJECT MANAGER:	CAG
DRAWING BY:	JEG
JURISDICTION:	WATAUGA COUNTY
DATE:	09/25/23
SHEET TITLE:	SITE PLAN
SHEET NUMBER:	C-1

SCALE: 1" = 10'

10 5 0 10 20

SCALE IN FEET

EARTHWORK CALCULATIONS			
REQ'D CUT =	+	200	CY
REQ'D FILL =	-	100	CY
ADDITIONAL REQ'D FILL FOR SHRINKAGE, ETC. =	-	20	CY
ADDITIONAL CUT FROM PAVEMENT BASE =	+	10	CY
ADDITIONAL CUT FROM HARDSCAPE	+	10	CY
BALANCE:	+	100	CY

EARTHWORK NOTES:

1.) A SHRINKAGE OF 15% WAS TO ACCOUNT FOR REMOVAL OF TOPSOIL, COMPACTION, ETC.

2.) REQ'D CUT IS IN SITU CUT.

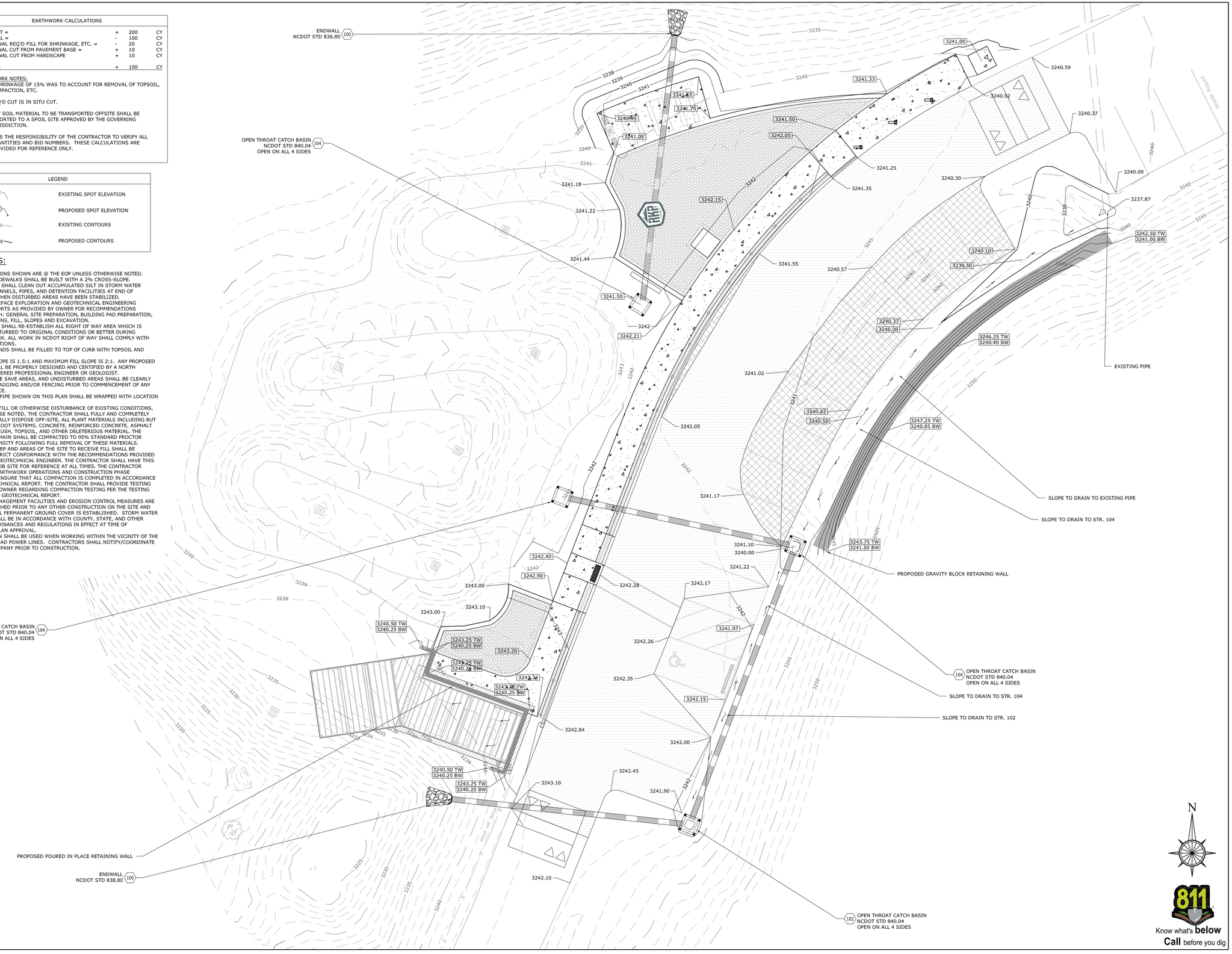
3.) ANY SOIL MATERIAL TO BE TRANSPORTED OFFSITE SHALL BE EXPORTED TO A SPOIL SITE APPROVED BY THE GOVERNING JURISDICTION.

4.) IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL QUANTITIES AND BID NUMBERS. THESE CALCULATIONS ARE PROVIDED FOR REFERENCE ONLY.

LEGEND	
XXX.XX	EXISTING SPOT ELEVATION
XXX.XX	PROPOSED SPOT ELEVATION
XXXX	EXISTING CONTOURS
XXXX	PROPOSED CONTOURS

GRADING NOTES:

1.) ALL SPOT ELEVATIONS SHOWN ARE @ THE EOP UNLESS OTHERWISE NOTED.
2.) ALL PROPOSED SIDEWALKS SHALL BE BUILT WITH A 2% CROSS-SLOPE.
3.) THE CONTRACTOR SHALL CLEAN OUT ACCUMULATED SILT IN STORM WATER CONVEYANCE CHANNELS, PIPES, AND DETENTION FACILITIES AT END OF CONSTRUCTION WHEN DISTURBED AREAS HAVE BEEN STABILIZED.
4.) REFER TO SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION REPORTS AS PROVIDED BY OWNER FOR RECOMMENDATIONS ASSOCIATED WITH: GENERAL SITE PREPARATION, BUILDING PAD PREPARATION, PAVEMENT SECTIONS, FILL, SLOPES AND EXCAVATION.
5.) THE CONTRACTOR SHALL RE-ESTABLISH ALL RIGHT OF WAY AREA WHICH IS DAMAGED OR DISTURBED TO ORIGINAL CONDITIONS OR BETTER DURING AUTHORIZED WORK. ALL WORK IN NCDOT RIGHT OF WAY SHALL COMPLY WITH NCDOT SPECIFICATIONS.
6.) ALL CURBED ISLANDS SHALL BE FILLED TO TOP OF CURB WITH TOPSOIL AND SEEDED.
7.) MAXIMUM CUT SLOPE IS 1.5:1 AND MAXIMUM FILL SLOPE IS 2:1. ANY PROPOSED SLOPE > 2:1 SHALL BE PROPERLY DESIGNED AND CERTIFIED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER OR GEOLOGIST.
8.) ALL BUFFERS, TREE SAVE AREAS, AND UNDISTURBED AREAS SHALL BE CLEARLY IDENTIFIED BY FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.
9.) ALL HDPE STORM PIPE SHOWN ON THIS PLAN SHALL BE WRAPPED WITH LOCATION WIRE AND TAPE.
10.) IN ALL AREAS OF FILL OR OTHERWISE DISTURBANCE OF EXISTING CONDITIONS, UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL FULLY AND COMPLETELY REMOVE AND LEGALLY DISPOSE OFF-SITE, ALL PLANT MATERIALS INCLUDING BUT NOT LIMITED TO ROOT SYSTEMS, CONCRETE, REINFORCED CONCRETE, ASPHALT DEBRIS, UNDERBRUSH, TOPSOIL, AND OTHER DELETERIOUS MATERIAL. THE SUBGRADE TO REMAIN SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY FOLLOWING FULL REMOVAL OF THESE MATERIALS.
11.) ALL SUBGRADE PREP AND AREAS OF THE SITE TO RECEIVE FILL SHALL BE COMPLETED IN STRICT CONFORMANCE WITH THE RECOMMENDATIONS PROVIDED BY THE PROJECT GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL HAVE THIS REPORT ON THE JOB SITE FOR REFERENCE AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE EARTHWORK OPERATIONS AND CONSTRUCTION PHASE MONITORING TO ENSURE THAT ALL COMPACTION IS COMPLETED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. THE CONTRACTOR SHALL PROVIDE TESTING REPORTS TO THE OWNER REGARDING COMPACTION TESTING PER THE TESTING PROTOCOL IN THE GEOTECHNICAL REPORT.
12.) STORMWATER MANAGEMENT FACILITIES AND EROSION CONTROL MEASURES ARE TO BE ACCOMPLISHED PRIOR TO ANY OTHER CONSTRUCTION ON THE SITE AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. STORM WATER MANAGEMENT SHALL BE IN ACCORDANCE WITH COUNTY, STATE, AND OTHER APPROPRIATE ORDINANCES AND REGULATIONS IN EFFECT AT TIME OF CONSTRUCTION PLAN APPROVAL.
13.) EXTREME CAUTION SHALL BE USED WHEN WORKING WITHIN THE VICINITY OF THE EXISTING OVERHEAD POWER LINES. CONTRACTORS SHALL NOTIFY/COORDINATE WITH POWER COMPANY PRIOR TO CONSTRUCTION.



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811 Know what's **below** **Call** before you dig

PROJECT:

ROCKY KNOB PARK EXPANSION

ADDRESS: 285 MOUNTAIN BIKE WAY | BOONE | WATAUGA COUNTY | NC | 28607

CLIENT:

WATAUGA CO. TDA

CONTACT: L. WRIGHT TILLEY, EXECUTIVE DIRECTOR

ADDRESS: 331 QUEEN STREET, SUITE 101 | BOONE | WATAUGA COUNTY | NC | 28607

CIVIL ENGINEER:

DESTINATION BY DESIGN

DESTINATION BY DESIGN ENGINEERING

ADDRESS: 136 FURMAN RD., STE. 6
BOONE | NC |28607

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 035233 ENGINEER JASON GASTON
04/28/23

REVISIONS	DATE

PROJECT MANAGER:	CAG
DRAWING BY:	JEG
JURISDICTION:	WATAUGA COUNTY
DATE:	04/28/23
SHEET TITLE:	

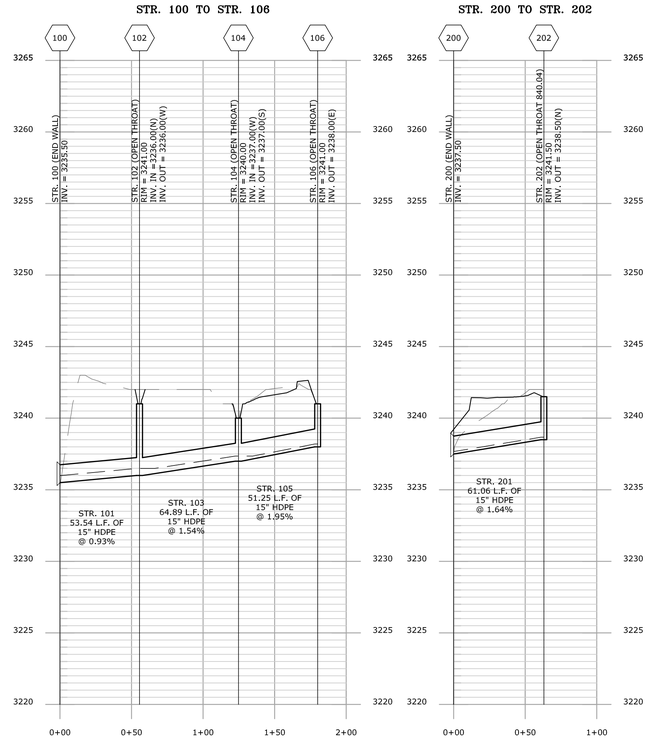
GRADING & DRAINAGE PLAN

SHEET NUMBER: C-2

SCALE: 1" = 10'

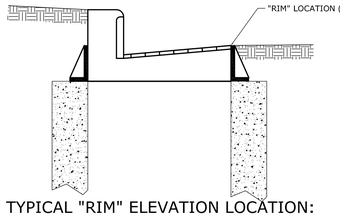
10 5 0 10 20

SCALE IN FEET

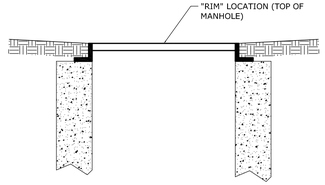


25-YR PIPE CHART

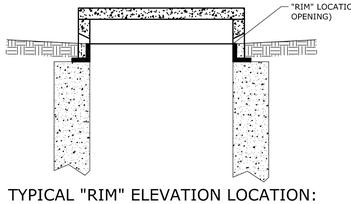
PIPE ID	UPSTREAM ID	DOWNSTREAM ID	PIPE LENGTH (ft)	PIPE SIZE (in)	Material	Slope (%)	TotalFlow (cfs)
101	102	100	53.54	15	HDPE	0.93	1.98
103	104	102	64.89	15	HDPE	1.54	1.4
105	106	104	51.25	15	HDPE	1.95	0.47
201	202	200	61.06	15	HDPE	1.64	0.32



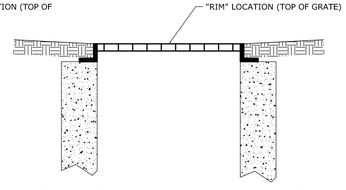
TYPICAL "RIM" ELEVATION LOCATION:
FRAME, GRATE, & HOOD



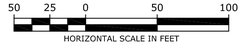
TYPICAL "RIM" ELEVATION LOCATION:
JUNCTION BOX



TYPICAL "RIM" ELEVATION LOCATION:
OPEN THROAT INLET



TYPICAL "RIM" ELEVATION LOCATION:
GRATE



LEGEND	
	PROPOSED GRADE
	EXISTING GRADE
	HYDRAULIC GRADE LINE (25-YR)

NOTES:
1) ALL CONVEYANCE HDPE IS TO BE SMOOTH INTERIOR HDPE N-12 PIPE PER ASTM F2468 WITH SOIL TIGHT GASKET AND BELL AND SPIGOT CONNECTION BY ADS OR APPROVED EQUAL.
2) "FGH" = FRAME, GRATE AND HOOD.
3) "JB" = JUNCTION BOX
4) ALL FGH IN LOW POINTS SHALL HAVE "TYPE E" GRATES.

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ROCKY KNOB PARK EXPANSION

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CLIENT:

WATAUGA CO. TDA

CONTACT: L. WRIGHT TILLEY, EXECUTIVE DIRECTOR

ADDRESS: 331 QUEEN STREET, SUITE 101 | BOONE | WATAUGA COUNTY | NC | 28607

CIVIL ENGINEER:

DESTINATION BY DESIGN

DESTINATION BY DESIGN ENGINEERING

ADDRESS: 136 FURMAN RD., STE. 6
BOONE | NC |28607

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 035233 ENGINEER JASON GASTON
04/28/23

REVISIONS	DATE

PROJECT MANAGER:	CAG
DRAWING BY:	JEG
JURISDICTION:	WATAUGA COUNTY
DATE:	04/28/23
SHEET TITLE:	

DRAINAGE PROFILES

SHEET NUMBER: C-2.1

SCALE: AS SHOWN

EROSION AND SEDIMENT CONTROL LEGEND

PRACTICE	DETAIL	MAP SYMBOL
CONSTRUCTION EXIT		Co
SEDIMENT FENCE		
DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)		PS
MATTING AND BLANKETING		RECP RECP
DUST CONTROL ON DISTURBED AREAS		DC
SILT SACK INLET PROTECTION		
LIMITS OF DISTURBANCE		LOC

NPDES STABILIZATION TABLE:

1) Ground Stabilization*

Site Area Description	Stabilization Time Frame	Stabilization Time Frame Exceptions
• Perimeter dikes, swales, ditches and slopes	7 days	None
• High Quality Water (HQW) Zones	7 days	None
• Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
• Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50 feet in length
• All other areas with slopes flatter than 4:1	14 days	None (except for perimeters and HQW Zones)

* "Extensions of time may be approved by the permitting authority based on weather or other site-specific conditions that make compliance unpracticable." (Section II.B(2)(b))

ANTICIPATED ACTIVITY SCHEDULE

BEGIN CONSTRUCTION - MAY 15, 2023
END CONSTRUCTION - NOVEMBER 15, 2023

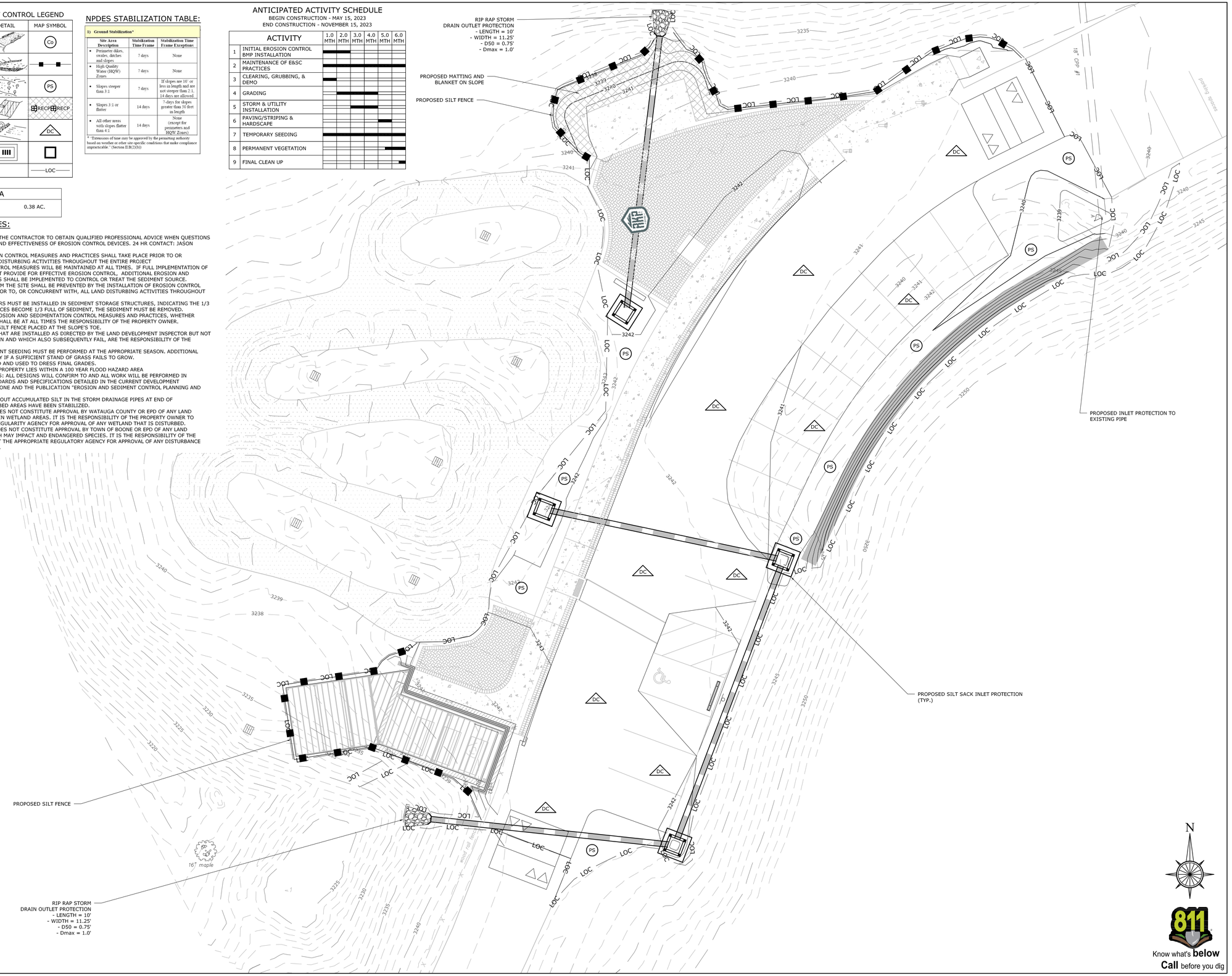
	ACTIVITY	1.0 MTH	2.0 MTH	3.0 MTH	4.0 MTH	5.0 MTH	6.0 MTH
1	INITIAL EROSION CONTROL BMP INSTALLATION						
2	MAINTENANCE OF E&SC PRACTICES						
3	CLEARING, GRUBBING, & DEMO						
4	GRADING						
5	STORM & UTILITY INSTALLATION						
6	PAVING/STRIPING & HARDSCAPE						
7	TEMPORARY SEEDING						
8	PERMANENT VEGETATION						
9	FINAL CLEAN UP						

SITE DATA

TOTAL DISTURBED AREA =	0.38 AC.

EROSION CONTROL NOTES:

1.) IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN QUALIFIED PROFESSIONAL ADVICE WHEN QUESTIONS ARISE CONCERNING DESIGN AND EFFECTIVENESS OF EROSION CONTROL DEVICES. 24 HR CONTACT: JASON GASTON, P.E. 770-722-9178.
2.) THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL TAKE PLACE PRIOR TO OR CONCURRENT WITH ALL LAND DISTURBING ACTIVITIES THROUGHOUT THE ENTIRE PROJECT
3.) EROSION AND SEDIMENT CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
4.) THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, ALL LAND DISTURBING ACTIVITIES THROUGHOUT THE ENTIRE PROJECT.
5.) SEDIMENT STORAGE INDICATORS MUST BE INSTALLED IN SEDIMENT STORAGE STRUCTURES, INDICATING THE 1/3 FULL VOLUME. WHEN SILT FENCES BECOME 1/3 FULL OF SEDIMENT, THE SEDIMENT MUST BE REMOVED.
6.) MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE PROPERTY OWNER.
7.) ALL FILL SLOPES SHALL HAVE SILT FENCE PLACED AT THE SLOPE'S TOE.
8.) EROSION CONTROL DEVICES THAT ARE INSTALLED AS DIRECTED BY THE LAND DEVELOPMENT INSPECTOR BUT NOT SHOWN ON THE APPROVED PLAN AND WHICH ALSO SUBSEQUENTLY FAIL, ARE THE RESPONSIBILITY OF THE CONTRACTOR.
9.) ALL TEMPORARY AND PERMANENT SEEDING MUST BE PERFORMED AT THE APPROPRIATE SEASON. ADDITIONAL PLANTINGS WILL BE NECESSARY IF A SUFFICIENT STAND OF GRASS FAILS TO GROW.
10.) TOPSOIL SHALL BE STOCKPILED AND USED TO DRESS FINAL GRADES.
11.) NO PORTION OF THE SUBJECT PROPERTY LIES WITHIN A 100 YEAR FLOOD HAZARD AREA
12.) STANDARDS & SPECIFICATIONS: ALL DESIGNS WILL CONFIRM TO AND ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS DETAILED IN THE CURRENT DEVELOPMENT REGULATIONS OF TOWN OF BOONE AND THE PUBLICATION "EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL".
13.) THE CONTRACTOR WILL CLEAN OUT ACCUMULATED SILT IN THE STORM DRAINAGE PIPES AT END OF CONSTRUCTION WHEN DISTURBED AREAS HAVE BEEN STABILIZED.
14.) APPROVAL OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY WATAUGA COUNTY OR EPD OF ANY LAND DISTURBING ACTIVITIES WITHIN WETLAND AREAS. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONTACT THE APPROPRIATE REGULARITY AGENCY FOR APPROVAL OF ANY WETLAND THAT IS DISTURBED.
15.) APPROVAL OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY TOWN OF BOONE OR EPD OF ANY LAND DISTURBING ACTIVITIES WHICH MAY IMPACT AND ENDANGERED SPECIES. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONTACT THE APPROPRIATE REGULATORY AGENCY FOR APPROVAL OF ANY DISTURBANCE WHICH MAY HAVE THIS EFFECT.



N

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CLIENT:

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CIVIL ENGINEER:

DESTINATION BY DESIGN

DESTINATION BY DESIGN ENGINEERING

ADDRESS: 136 FURMAN RD., STE. 6
BOONE | NC |28607

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 035233 ENGINEER JASON GASTON
04/28/23

REVISIONS	DATE

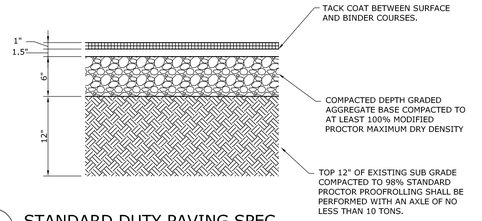
PROJECT MANAGER:	CAG
DRAWING BY:	JEG
JURISDICTION:	WATAUGA COUNTY
DATE:	04/28/23
SHEET TITLE:	

EROSION CONTROL PLAN

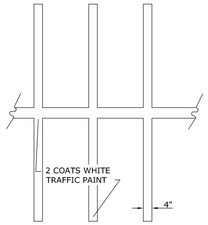
SHEET NUMBER: C-3

SCALE: 1" = 10'

10 5 0 10 20
SCALE IN FEET

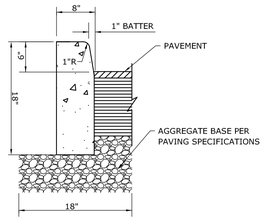


1 STANDARD DUTY PAVING SPEC
NOT TO SCALE



NOTE: SEE SITE DEVELOPMENT PLAN FOR PARKING DIMENSIONS & LAYOUT

2 PAVEMENT STRIPING DETAIL
NOT TO SCALE

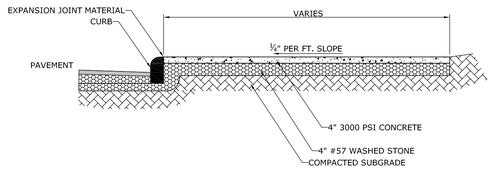


1.) 1/2 " PRE FORMED EXPANSION JOINTS REQUIRED AT ALL STRUCTURES AND RADIUS POINTS.

2.) MAXIMUM DISTANCE BETWEEN EXPANSION JOINTS = 40.0'

3.) CONCRETE STRENGTH = 3000 P.S.I., SLOPE = 2" MAX. FINISH SHALL BE SMOOTHED AND EVENED WITH WOODEN FLOAT.

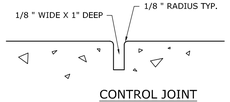
3 CONCRETE HEADER CURB
NOT TO SCALE



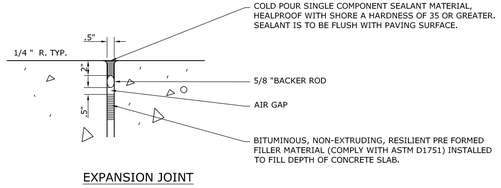
1.) EXPANSION JOINT WILL BE REQUIRED AT ALL CONSTRUCTION JOINTS, CURBS, & SIDEWALKS.

2.) CONTROL JOINTS TO BE AT 6' (OR WIDTH OF SIDEWALK) INTERVALS.

4 CONCRETE SIDEWALK DETAIL
NOT TO SCALE

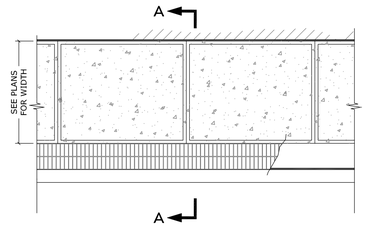


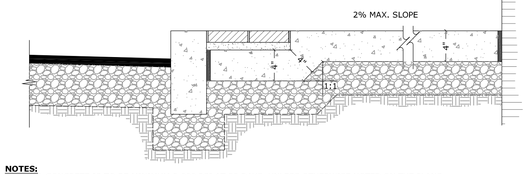
CONTROL JOINT



EXPANSION JOINT

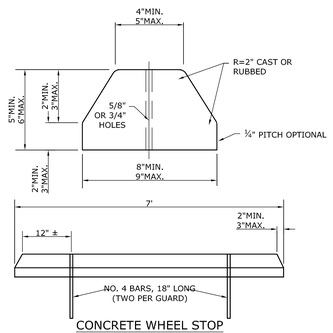
5 CONTROL AND EXPANSION JOINTS FOR SIDEWALK
NOT TO SCALE



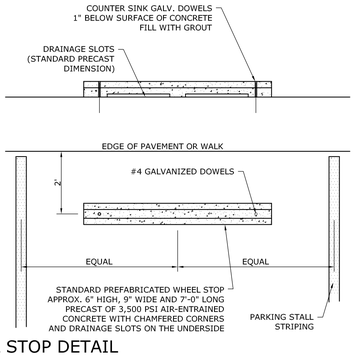


NOTES:
1. ALL CONCRETE IS TO BE MINIMUM 3,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED ON THE PLANS.
2. DOUBLE SOLDIER COURSE PAVERS TO BE BELGARD CAMBRIDGE COBBLE ACCENT PAVER (6"X9"). COLOR TO BE COBBLE BLEND.
3. BEDDING SAND SHOULD BE WASHED FREE FROM DELETRIOUS OR DOREIGN MATERIALS, WELL GRADED, ANGULAR, CONCRETE SAND CONFORMING TO ASTM C33. SPACES BETWEEN PAVERS SHALL BE FILLED WITH WASHED JOINTING SAND WITH CEMENT OR POLYMER SAND PER ASTM C144.

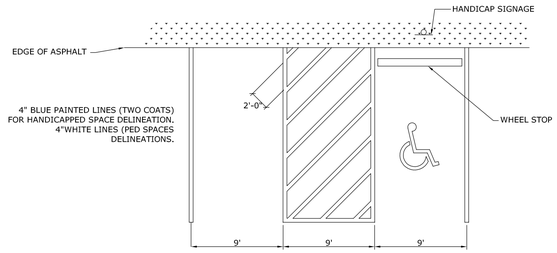
6 SIDEWALK PAVER BAND
NOT TO SCALE



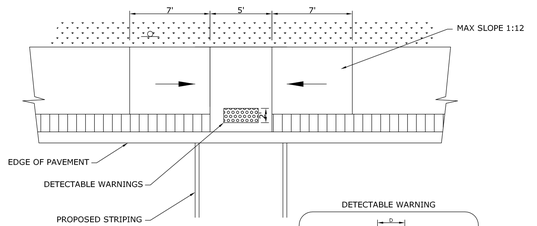
CONCRETE WHEEL STOP

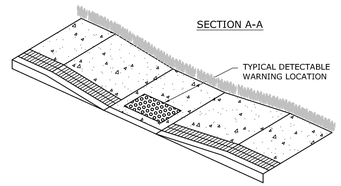


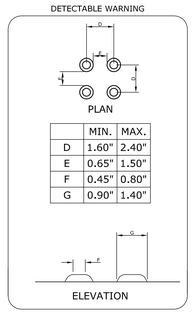
5 WHEEL STOP DETAIL
NOT TO SCALE



9 ACCESSIBLE PARKING AREA
NOT TO SCALE

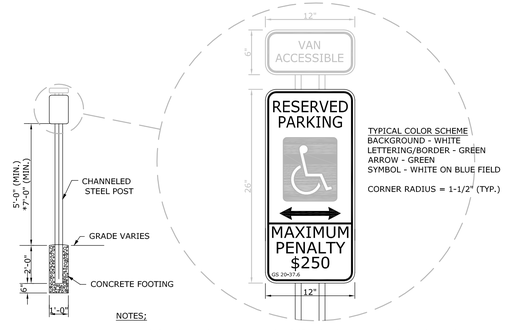






	MIN.	MAX.
D	1.60"	2.40"
E	0.65"	1.50"
F	0.45"	0.80"
G	0.90"	1.40"

10 ACCESSIBLE RAMP
NOT TO SCALE



NOTES;

1) * SIGN TO BE MOUNTED A MIN. OF 7'-0" FROM GRADE IF ADJACENT TO PEDESTRIAN PATH.

2) WHEN SIGN IS TO BE MOUNTED ON THE SIDE OF A BLDG., HEIGHTS ARE REGULATED AS STATED ABOVE.

11 POLE/WALL MOUNTED ACCESSIBLE PARKING SIGN (R7-8E)
NOT TO SCALE

811 Know what's **below** **Call** before you dig

PROJECT:

ROCKY KNOB PARK EXPANSION

ADDRESS: 285 MOUNTAIN BIKE WAY | BOONE | WATAUGA COUNTY | NC | 28607

CLIENT:

WATAUGA CO. TDA

CONTACT: L. WRIGHT TILLEY, EXECUTIVE DIRECTOR

ADDRESS: 331 QUEEN STREET, SUITE 101 | BOONE | WATAUGA COUNTY | NC | 28607

CIVIL ENGINEER:

DESTINATION BY DESIGN

DESTINATION BY DESIGN ENGINEERING

ADDRESS: 136 FURMAN RD., STE. 6 BOONE | NC |28607

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 035233 ENGINEER JASON GASTON 04/28/23

REVISIONS	DATE

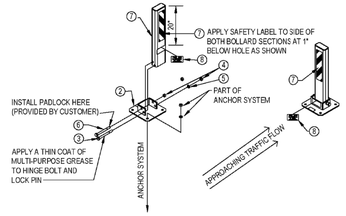
PROJECT MANAGER:	CAG
DRAWING BY:	JEG
JURISDICTION:	WATAUGA COUNTY
DATE:	04/28/23
SHEET TITLE:	

MISC. CONSTRUCTION DETAILS

SHEET NUMBER: C-4

SCALE: NTS

TRAFFICGUARD, INC.
P.O. BOX 201
GENEVA, IL 60134-9956
TOLL FREE: 1-877-727-7347
FAX: (800) 814-7194
www.trafficguard.net



BILL OF MATERIAL

ITEM	PART #	DESCRIPTION	QTY.
1	LPHDHBSF1	LPHDHB POST	1
2	LPHDHBSF2	LPHDHB BASE	1
3	0019	Ø 3/4" x 9" HEX HEAD HINGE BOLT-18-8 SS	1
4	0008	Ø 3/4" HEX NUT-18-8 SS	2
5	0009	Ø 3/4" FLAT WASHER-TYPE A NARROW-18-8 SS	1
6	2007	Ø 3/4" x 9" HEX HEAD LOCKING PIN-18-8 SS	1
7	0107	SAFETY LABEL 3" x 12"	2
8	0102	FOUR INCH CLEARANCE LABEL	2

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. ALL DIMENSIONS ARE CONSIDERED TRUE AND REFLECT MANUFACTURER'S SPECIFICATIONS.
3. DO NOT SCALE DRAWING.
4. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 4209-001.

SINGLE POST
MODEL LPHDHB - TRAFFICGUARD® SINGLE POST, ASSEMBLY DETAILS

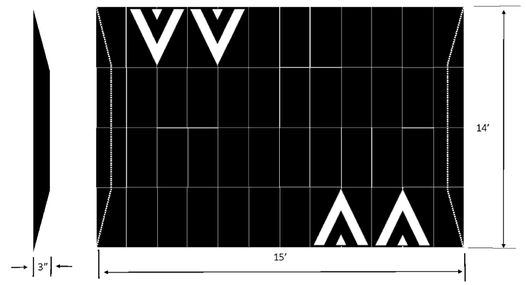
4209-001 REVISION DATE 06/10/2021

APPROVED EQUAL MAY ALSO BE USED.

1 COLLAPSIBLE BOLLARD
NOT TO SCALE

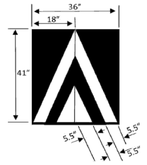
SPEED HUMPS

Speed humps are raised devices, with a flat top, placed across the road to slow traffic. The flat top design over a 14 foot length of space encourages cars to slow down without coming to a halt. Often considered the most traditional physical traffic calming solutions, speed humps calm traffic more gradually then speed bumps. They are ideal for residential roads and at 14' are designed to bring speeds to between 20-25 mph. Speed humps should ideally be installed in a series to create ongoing traffic calming.



As Shown: 14' L x 15' W with MUTCD Markings

Part Number ST-141503-4M



SPECIFICATIONS

Dimensions of the modules:
Width: 18" (+/- 1/16")
Length: 42" (+/- 1/8")
Thickness: 3" (+/- 1/8")

Dimensions of the Speed Humps, Speed Cushions or Speed Tables: (widths and lengths are adjustable)
Width: from 6' and up by 1.5' increments
Length: from 7' and up by 3.5' increments
Height: 3"

Standard dimensions of the Speed Humps, Speed Cushions or Speed Tables:
Width: according to a street width
Length: 7', 10.5', 14'
Height: 3"

Entrance and exit gradient: 1:15
Side gradient: 1:3

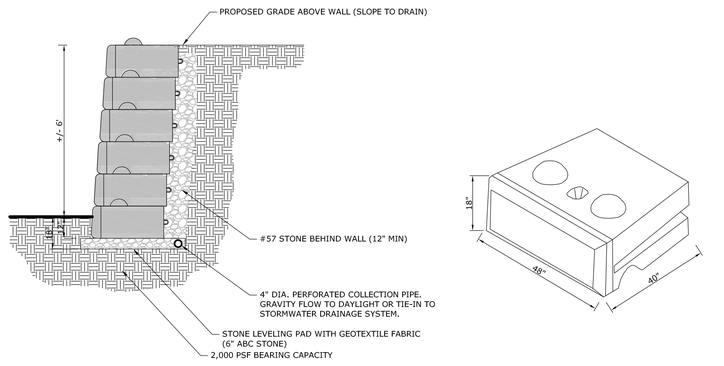
TRAFFIC CALMING SOLUTIONS
3 HARRIET LANE SPRING VALLEY, NY 10977

Physical properties:

Material: 100% recycled synthetic and natural rubber composite
Tensile strength: minimum 500 psi
Shore hardness: minimum 70A
Specific gravity: 1.1
Markings: rubber modules are available in all black, black with yellow or white reflective square markings, or with white reflective arrow chevrons. And, are embedded into the rubber.

APPROVED EQUAL MAY ALSO BE USED.

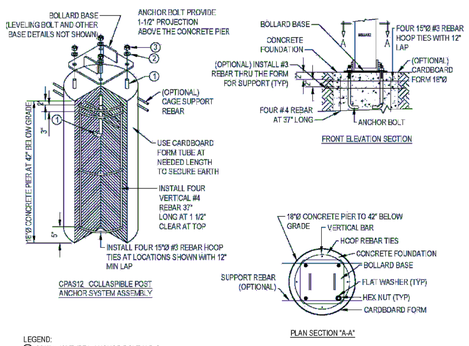
2 SPEED HUMP
NOT TO SCALE



** SEE RETAINING WALL REPORT FOR FURTHER DESIGN INFORMATION**

3 GRAVITY WALL TYPICAL DETAIL
NOT TO SCALE

TRAFFICGUARD, INC.
P.O. BOX 201
GENEVA, IL 60134-9956
TOLL FREE: 1-877-727-7347
FAX: (800) 814-7194
www.trafficguard.net



LEGEND:
1. Ø3/4" x 12" TYPE L ANCHOR BOLT-H.D.G.
2. Ø3/4" TYPE A FLAT NARROW WASHER GALVANIZED STEEL
3. Ø3/4" HEX NUT GALVANIZED STEEL

NOTES:
1. THIS IS A GUIDELINE FOR ESTIMATING, SITE SPECIFIC CONDITIONS SHOULD BE VERIFIED.
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. ALL DIMENSIONS ARE CONSIDERED TRUE AND REFLECT MANUFACTURER'S SPECIFICATIONS.
4. DO NOT SCALE DRAWING.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 4209-001A.

SINGLE POST
MODEL LPHDHB - TRAFFICGUARD® SINGLE POST, FOOTING / ANCHOR SYSTEM DETAILS

4209-001A REVISION DATE 06/10/2021

APPROVED EQUAL MAY ALSO BE USED.

1 COLLAPSIBLE BOLLARD
NOT TO SCALE

PROJECT:

ROCKY KNOB PARK EXPANSION

ADDRESS: 285 MOUNTAIN BIKE WAY | BOONE | WATAUGA COUNTY | NC | 28607

CLIENT:

WATAUGA CO. TDA

CONTACT: L. WRIGHT TILLEY, EXECUTIVE DIRECTOR

ADDRESS: 331 QUEEN STREET, SUITE 101 | BOONE | WATAUGA COUNTY | NC | 28607

CIVIL ENGINEER:

DESTINATION BY DESIGN

DESTINATION BY DESIGN ENGINEERING

ADDRESS: 136 FURMAN RD., STE. 6
BOONE | NC |28607

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 035233 ENGINEER JASON GASTON 04/28/23

REVISIONS	DATE

PROJECT MANAGER:	CAG
DRAWING BY:	JEG
JURISDICTION:	WATAUGA COUNTY
DATE:	04/28/23

SHEET TITLE:

MISC. CONSTRUCTION DETAILS

SHEET NUMBER: C-4.1

SCALE: NTS

811 Know what's **below** **Call** before you dig

Seeding mixture

Species	Rate (lb/acre)
Rye (grain)	120
Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

Seeding dates
Mountains—Above 2500 feet: Feb. 15 - May 15
Below 2500 feet: Feb. 1- May 1
Piedmont—Jan. 1 - May 1
Coastal Plain—Dec. 1 - Apr. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

TS WINTER/EARLY SPRING
NOT TO SCALE

Seeding mixture

Species	Rate (lb/acre)
Rye (grain)	120

Seeding dates
Mountains—Aug. 15 - Dec. 15
Coastal Plain and Piedmont—Aug. 15 - Dec. 30

Soil amendments
Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Repair and refertiize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extent temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

TS FALL
NOT TO SCALE

Seeding mixture

Species	Rate (lb/acre)
German millet	40

In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.

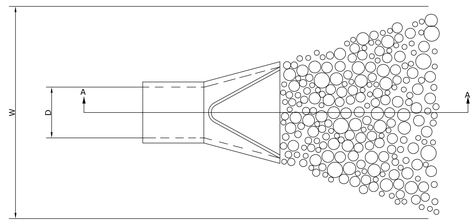
Seeding dates
Mountains—May 15 - Aug. 15
Piedmont—May 1 - Aug. 15
Coastal Plain—Apr. 15 - Aug. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

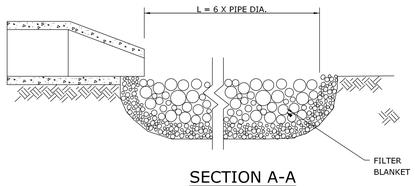
Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

TS SUMMER
NOT TO SCALE



PLAN



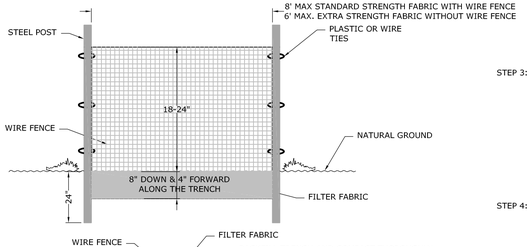
SECTION A-A

NOTES:
1. L IS THE LENGTH OF THE RIPRAP APRON.
2. D= 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE TOP OF PIPE OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHELL BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.
5. GRADED RIPRAP STONE (MIN. 50 LB. STONE) NSA. NO. R-4 - 12" mix. 6" ave
6. FILTER STONE NO. FS-2

Rip-Rap Apron Summary

Headwall ID	Pipe Diameter, Do (in.)	25-year Q (cfs)	Rip-Rap Size (d50)	Initial Apron Width (ft)	Apron Length, La (ft)	Apron Width, W (ft)
100	15	1.98	0.5	3.75	10	11.25
200	15	0.32	0.5	3.75	10	11.25

RR RIP RAP
NOT TO SCALE



SF SILT FENCE DETAIL
NOT TO SCALE

TABLE 1.
SPRAY-ON ADHESIVE APPLICATION REQUIREMENTS

ADHESIVE	WATER DILUTION	NOZZLE TYPE	APPLICATION (GAL/ACRE)
ANIONIC ASPHALT EMULSION	7:1*	COURSE SPRAY	1,200
LATEX EMULSION	12.5:1*	FINE SPRAY	235
RESIN-IN-WATER EMULSION	4:1*	FINE SPRAY	300

* USE MANUFACTURER'S RECOMMENDATIONS WHEN AVAILABLE

1.) APPLY ACCORDING TO APPROVED PLAN, IF SHOWN.

2.) MULCH DISTURBED AREAS AND TACKIFY WITH RESINS SUCH AS ASPHALT, CURASOL, OR TERRATACK ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

3.) STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT VEGETATION.

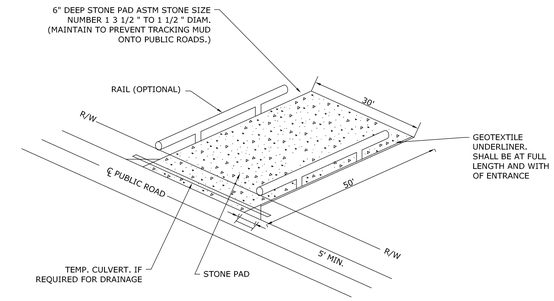
4.) IRRIGATE DISTURBED AREAS UNTIL SURFACE IS WET.

5.) COVER SURFACES WITH CRUSHED STONE OR GRAVEL.

6.) APPLY CALCIUM CHLORIDE AT A RATE TO KEEP SURFACES MOIST.

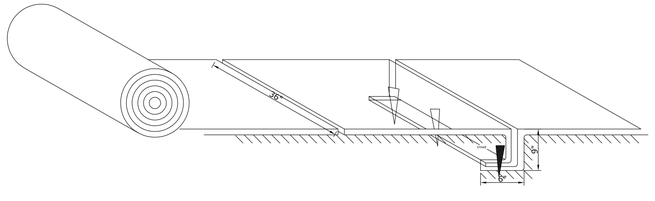
7.) APPLY SPRAY-ON ADHESIVES TO MINERAL SOILS (NOT MUCK SOILS) AS DESCRIBED IN TABLE 1.

DC DUST CONTROL ON DISTURBED AREAS



NOTE: THE CONSTRUCTION EXIT PAD SHALL BE AT LEAST 50 FEET IN LENGTH, SHALL OCCUPY THE FULL WIDTH OF VEHICLE EGRESS, AND SHALL BE COMPLETELY UNDERLAIN BY SUITABLE GEOTEXTTILE.

CO TEMPORARY CONSTRUCTION ENTRANCE
NOT TO SCALE

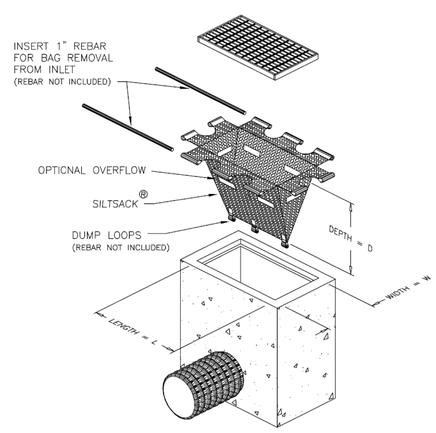


PICTORAL VIEW OF TRANSVERSE SLOT

1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND FIRST ROLL. USE CENTER ROLL FOR ALIGNMENT TO CHANNEL CENTER.
4. WORK OUTWARDS FROM CHANNEL CENTER TO EDGE.
5. USE 3' OVERLAP AND STAKE AT 5' INTERVAL ALONG SEAMS.
6. USE 3' OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT LINING AT ROLL ENDS.

RECP MATTING AND BLANKETS
NOT TO SCALE

Type A



SS SILT SACK
NOTE TO SCALE

Know what's **below** **Call** before you dig

PROJECT:

ROCKY KNOB PARK EXPANSION

ADDRESS: 285 MOUNTAIN BIKE WAY | BOONE | WATAUGA COUNTY | NC | 28607

CLIENT:

WATAUGA CO. TDA

CONTACT: L. WRIGHT TILLEY, EXECUTIVE DIRECTOR

ADDRESS: 331 QUEEN STREET, SUITE 101 | BOONE | WATAUGA COUNTY | NC | 28607

CIVIL ENGINEER:

DESTINATION BY DESIGN

DESTINATION BY DESIGN ENGINEERING

ADDRESS: 136 FURMAN RD., STE. 6 BOONE | NC |28607

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 035233 ENGINEER JASON GASTON 04/28/23

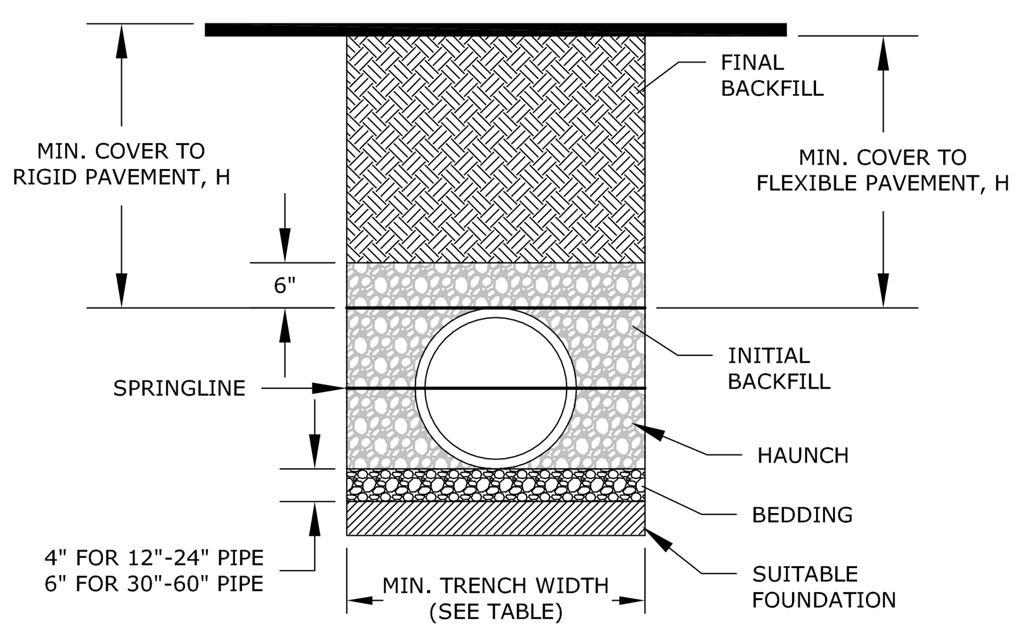
REVISIONS	DATE

PROJECT MANAGER:	CAG
DRAWING BY:	JEG
JURISDICTION:	WATAUGA COUNTY
DATE:	04/28/23
SHEET TITLE:	

EROSION CONTROL DETAILS

SHEET NUMBER: C-5

SCALE: NTS



MINIMUM RECOMMENDED COVER BASED ON LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION: H-25	SURFACE LIVE LOADING CONDITION: HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
54" - 60"	24"	60"

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

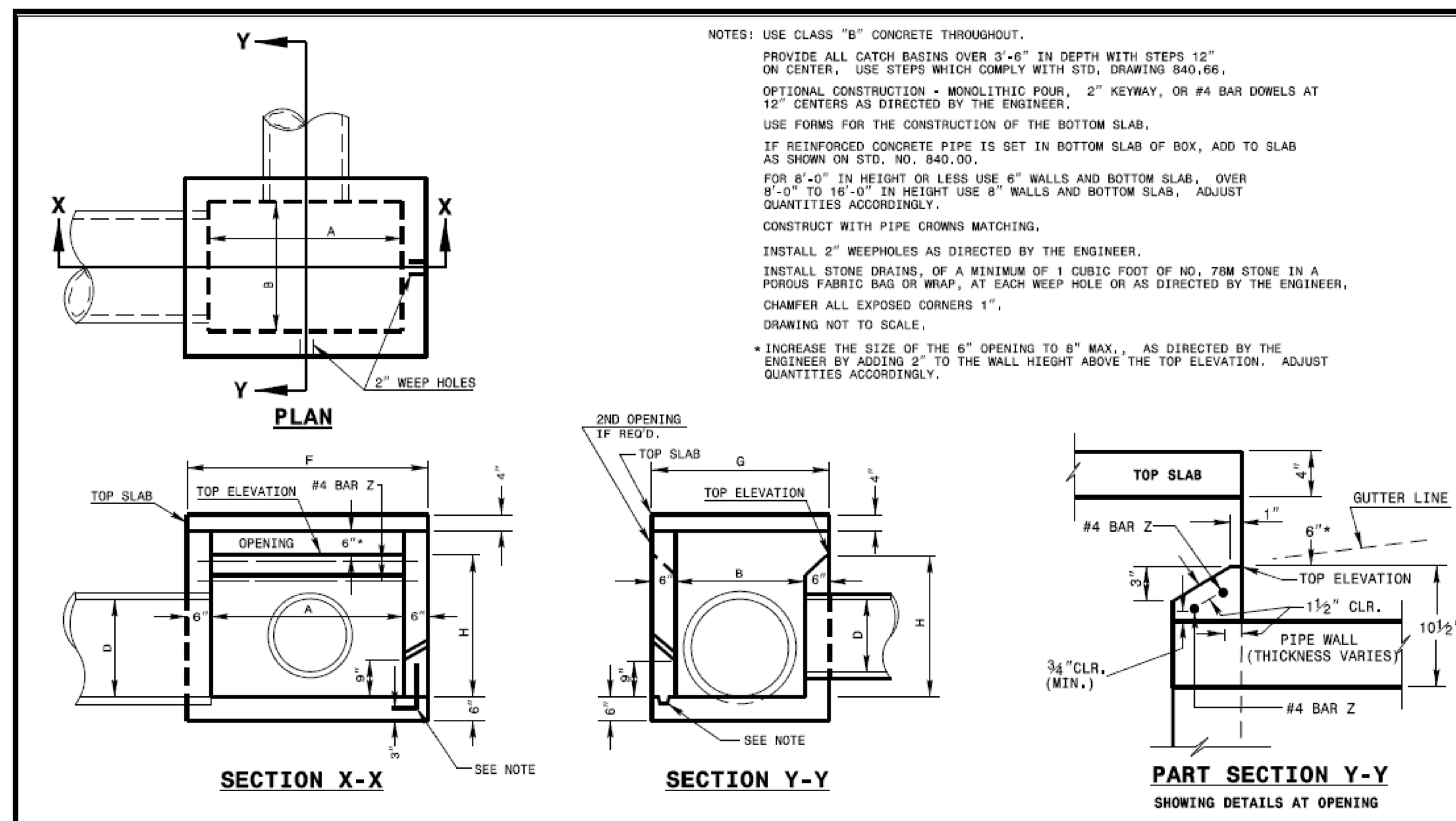
RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
54"	88"
60"	96"

NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-900mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

1 HDPE PIPE INSTALLATION
NOT TO SCALE



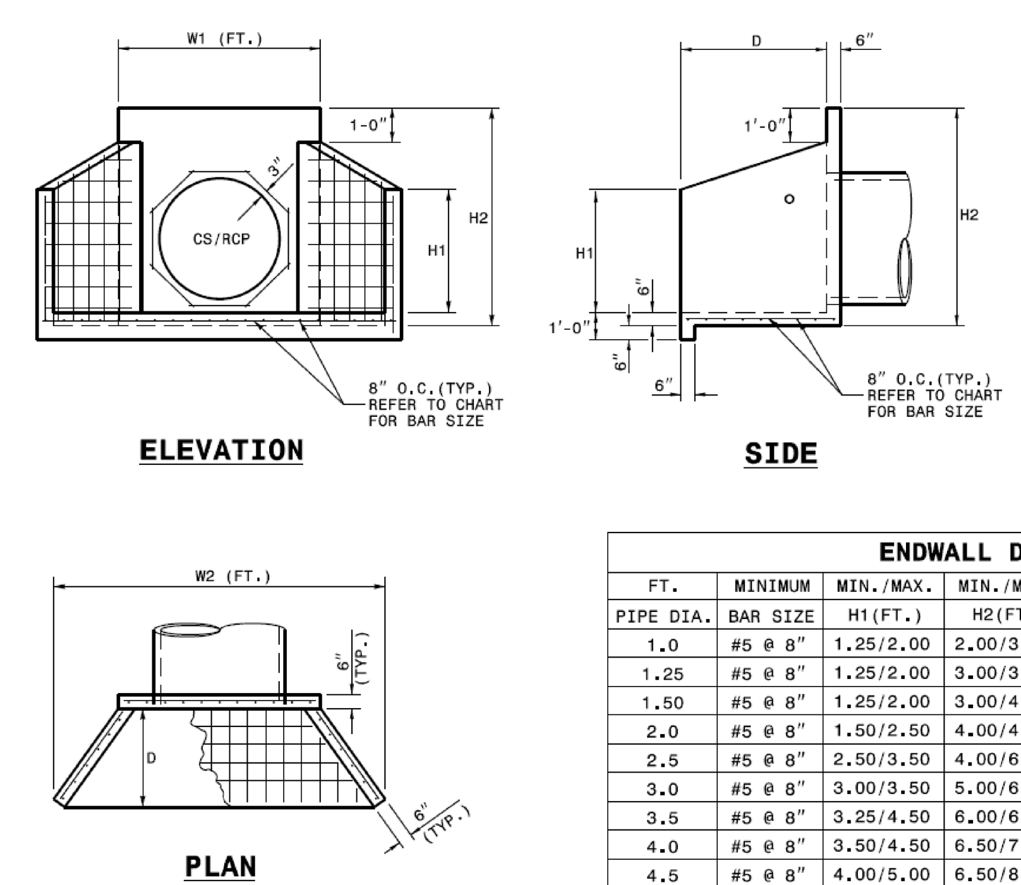
NOTES: USE CLASS "B" CONCRETE THROUGHOUT.
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.
CONSTRUCT WITH PIPE CROWNS MATCHING.
INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.
* INCREASE THE SIZE OF THE 6" OPENING TO 8" MAX., AS DIRECTED BY THE ENGINEER BY ADDING 2" TO THE WALL HIEGHT ABOVE THE TOP ELEVATION. ADJUST QUANTITIES ACCORDINGLY.

MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H)

PIPE D	SPAN A	WIDTH B	HEIGHT H	BARS - X NO.	BARS - X LENGTH	BARS - Y NO.	BARS - Y LENGTH	BARS - Z NO.	BARS - Z LENGTH	SLAB F	SLAB G	TOP SLAB	BOT. SLAB	WALL/FT. HT.	LBS. REINF.	YD³ (MIN H)	C.S.	R.C.	DED. ONE 6" THROAT OPENING YD³
12"	3'-6"	2'-3"	1'-10"	4	3'-0"	6	4'-3"	2	4'-3"	4'-6"	3'-3"	0.181	0.271	0.250	27	1.046	0.015	0.032	0.046
15"	3'-6"	2'-3"	2'-1"	4	3'-0"	6	4'-3"	2	4'-3"	4'-6"	3'-3"	0.181	0.271	0.250	27	1.108	0.023	0.036	0.046
18"	4'-0"	2'-8"	2'-4"	5	3'-5"	7	4'-9"	2	4'-9"	5'-0"	3'-8"	0.226	0.340	0.284	35	1.379	0.033	0.049	0.053
24"	4'-0"	2'-8"	2'-10"	5	3'-5"	7	4'-9"	2	4'-9"	5'-0"	3'-8"	0,226	0.340	0.284	35	1.521	0.059	0.085	0.053
30"	4'-0"	3'-6"	3'-4"	5	4'-3"	9	4'-9"	2	4'-9"	5'-0"	4'-6"	0.278	0.417	0.315	43	1.916	0.092	0.127	0,053
36"	4'-6"	4'-0"	3'-10"	5	4'-9"	10	5'-3"	2	5'-3"	5'-6"	5'-0"	0.340	0.510	0.352	51	2.390	0.132	0.178	0.059
42"	5'-0"	4'-6"	4'-4"	5	5'-3"	12	5'-9"	2	5'-9"	6'-0"	5'-6"	0.407	0.611	0.389	64	2.914	0.180	0.243	0,066
48"	5'-0"	5'-0"	4'-10"	5	5'-9"	13	5'-9"	2	5'-9"	6'-0"	6'-0"	0.444	0.666	0.407	68	3.298	0.235	0.317	0.066

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
1-18
ROADWAY STANDARD DRAWING FOR CONCRETE OPEN THROAT CATCH BASIN 12" THRU 48" PIPE
SHEET 1 OF 2
840.04

2 OPEN THROAT CATCH BASIN (NCDOT STD. 840.04)
NOT TO SCALE



NOTES:
- * THIS PRECAST ENDWALL MAY BE USED FOR THE FOLLOWING STANDARDS: 838.01, 838.11, 838.21, 838.27, 838.33, 838.39, 838.51, 838.57, 838.63 AND 838.69.
- * INSTALL PRECAST ENDWALLS WITH WINGS AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 838.
- * USE 4000 PSI CONCRETE.
- * PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A185 WITH 2" MIN. CLEARANCE.
- * PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
- * PIPE TO BE GROUTED INTO HEADWALL AT JOB SITE BY CONTRACTOR
- * ALL ELEMENTS PRECAST TO MEET ASTM C913.
- * WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
- * CHAMFER ALL CORNERS 1" OR HAVE A RADIUS OF 1".

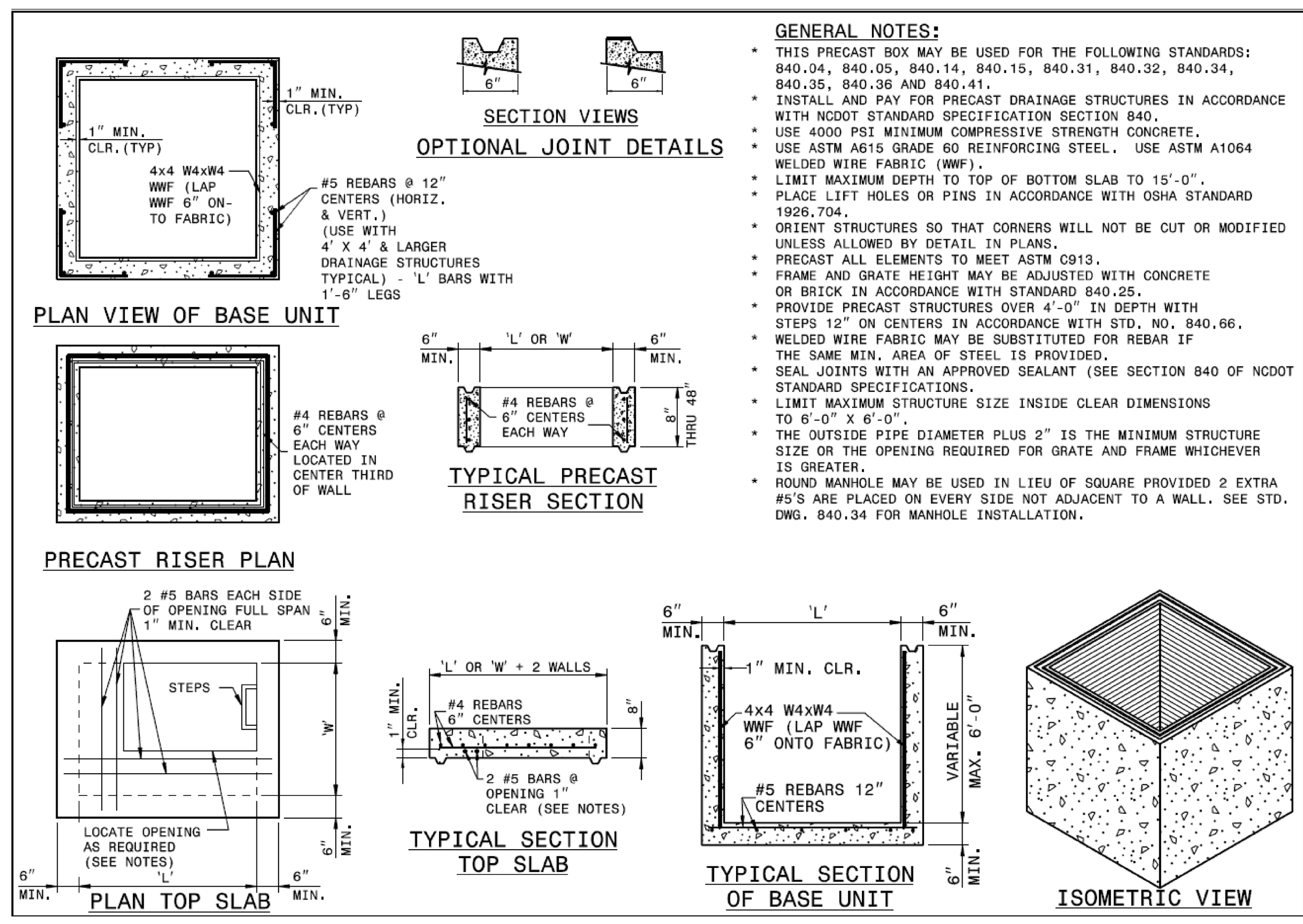
NOTE: THE MINIMUM BAR SIZE SHALL BE #5 BARS AT 8" CTS.THE CONTRACTOR WILL HAVE THE OPTION TO INCREASE THIS BAR SIZE AS NEEDED.

ENDWALL DIMENSIONS

FT. PIPE DIA.	MINIMUM BAR SIZE	MIN./MAX. H1(FT.)	MIN./MAX. H2(FT.)	MIN./MAX. D (FT.)	MIN./MAX. W1	MIN./MAX. W2
1.0	#5 @ 8"	1.25/2.00	2.00/3.75	1.25/1.75	3.00/3.75	5.50/6.00
1.25	#5 @ 8"	1.25/2.00	3.00/3.75	1.25/2.00	3.50/3.75	6.50/6.75
1.50	#5 @ 8"	1.25/2.00	3.00/4.25	1.50/2.50	3.50/3.75	6.50/6.75
2.0	#5 @ 8"	1.50/2.50	4.00/4.75	1.75/2.50	4.00/4.25	7.50/8.25
2.5	#5 @ 8"	2.50/3.50	4.00/6.00	2.00/3.00	4.50/5.50	10.00/11.50
3.0	#5 @ 8"	3.00/3.50	5.00/6.00	2.75/3.50	5.25/5.75	11.50/11.75
3.5	#5 @ 8"	3.25/4.50	6.00/6.75	3.25/3.50	6.00/6.75	12.00/13.25
4.0	#5 @ 8"	3.50/4.50	6.50/7.00	3.25/3.50	6.50/6.75	13.00/13.25
4.5	#5 @ 8"	4.00/5.00	6.50/8.50	3.25/4.00	7.00/9.25	13.50/15.75
5.0	#5 @ 8"	4.50/5.00	7.00/8.50	3.25/4.00	7.25/9.25	13.75/15.75
5.5	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.25/9.25	14.00/15.75
6.0	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.75/9.25	14.75/16.75

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
1-18
ROADWAY STANDARD DRAWING FOR PRECAST CONCRETE ENDWALL FOR SINGLE 12" THRU 72" PIPE - 90° SKEW
SHEET 1 OF 1
838.80

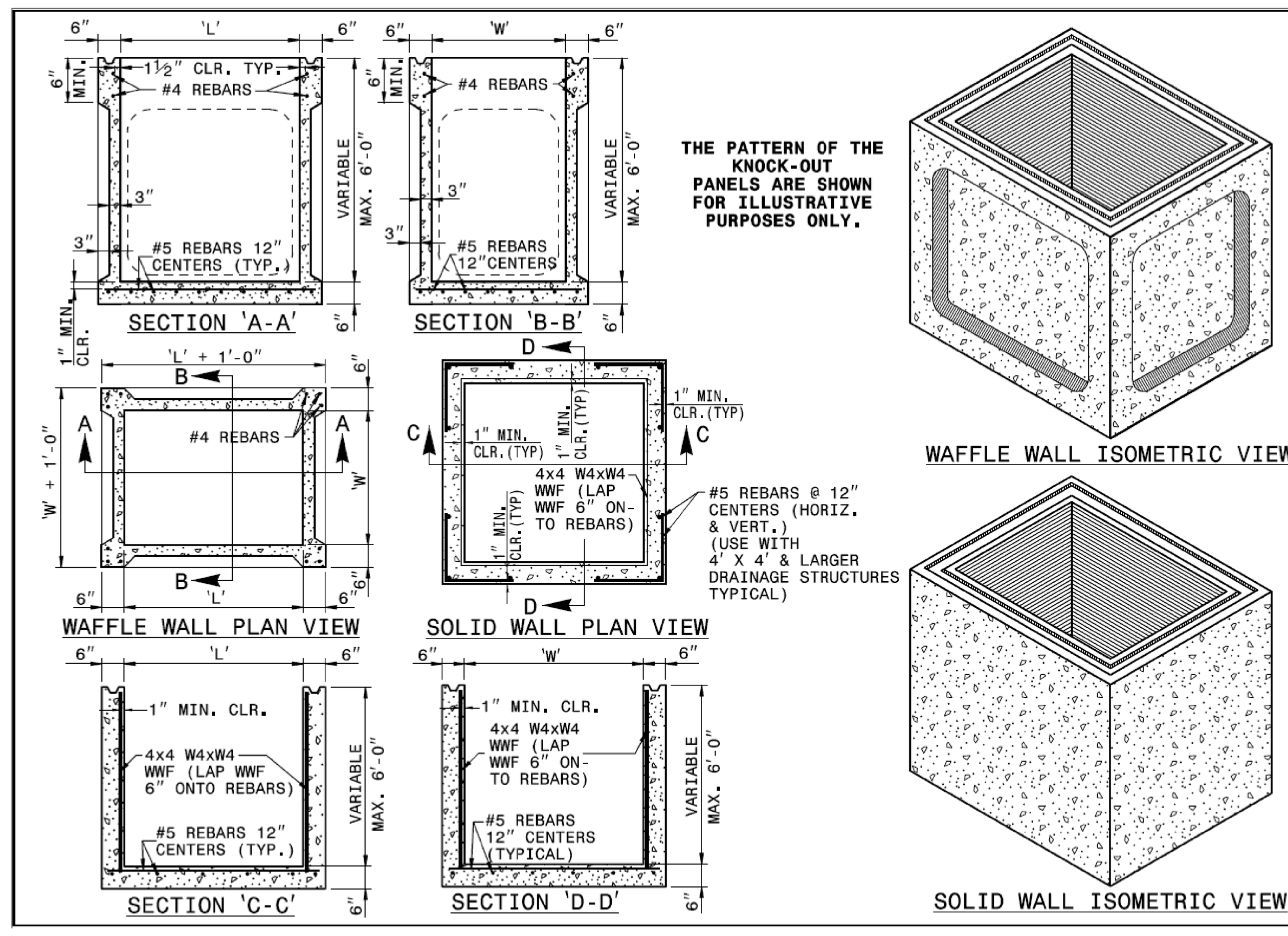
3 ENDWALL (NCDOT STD. 838.80)
NOT TO SCALE



GENERAL NOTES:
- * THIS PRECAST BOX MAY BE USED FOR THE FOLLOWING STANDARDS: 840.04, 840.05, 840.14, 840.15, 840.31, 840.32, 840.34, 840.35, 840.36 AND 840.41.
- * INSTALL AND PAY FOR PRECAST DRAINAGE STRUCTURES IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATION SECTION 840.
- * USE 4000 PSI MINIMUM COMPRESSIVE STRENGTH CONCRETE.
- * USE ASTM A615 GRADE 60 REINFORCING STEEL. USE ASTM A1064 WELDED WIRE FABRIC (WWF).
- * LIMIT MAXIMUM DEPTH TO TOP OF BOTTOM SLAB TO 15'-0".
- * PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
- * ORIENT STRUCTURES SO THAT CORNERS WILL NOT BE CUT OR MODIFIED UNLESS ALLOWED BY DETAIL IN PLANS.
- * PRECAST ALL ELEMENTS TO MEET ASTM C913.
- * FRAME AND GRATE HEIGHT MAY BE ADJUSTED WITH CONCRETE OR BRICK IN ACCORDANCE WITH STANDARD 840.25.
- * PROVIDE PRECAST STRUCTURES OVER 4'-0" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.
- * WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR IF THE SAME MIN. AREA OF STEEL IS PROVIDED.
- * SEAL JOINTS WITH AN APPROVED SEALANT (SEE SECTION 840 OF NCDOT STANDARD SPECIFICATIONS.
- * LIMIT MAXIMUM STRUCTURE SIZE INSIDE CLEAR DIMENSIONS TO 6'-0" X 6'-0".
- * THE OUTSIDE PIPE DIAMETER PLUS 2" IS THE MINIMUM STRUCTURE SIZE OR THE OPENING REQUIRED FOR GRATE AND FRAME WHICHEVER IS GREATER.
- * ROUND MANHOLE MAY BE USED IN LIEU OF SQUARE PROVIDED 2 EXTRA #5'S ARE PLACED ON EVERY SIDE NOT ADJACENT TO A WALL. SEE STD. DWG. 840.34 FOR MANHOLE INSTALLATION.

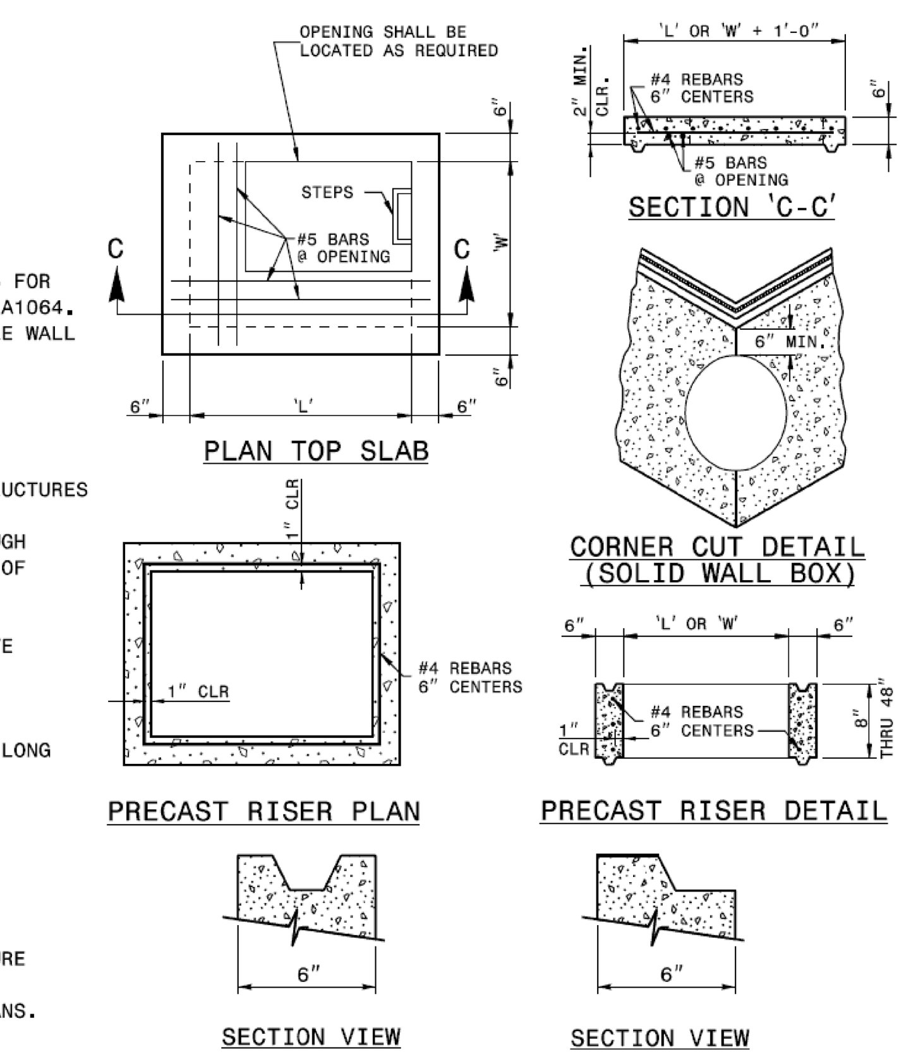
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
1-18
ROADWAY STANDARD DRAWING FOR TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE
SHEET 1 OF 1
840.46

4 PRECAST DRAINAGE BOX (TRAFFIC BEARING)
NOT TO SCALE



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
1-18
ROADWAY STANDARD DRAWING FOR PRECAST DRAINAGE STRUCTURE (SOLID AND WAFFLE WALL)
SHEET 1 OF 2
840.45

GENERAL NOTES:
- * THIS PRECAST BOX MAY BE USED FOR THE FOLLOWING STANDARDS: 840.01, 840.02, 840.04, 840.05, 840.13, 840.14, 840.15, 840.17, 840.18, 840.19, 840.26, 840.27, 840.28, 840.31, 840.32 AND 840.41.
- * INSTALL PRECAST DRAINAGE STRUCTURES AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 840.
- * DO NOT PLACE PRECAST DRAINAGE STRUCTURES UNDER TRAFFIC OR WHERE TRAFFIC WILL BE DETOURED.
- * USE 4000 PSI CONCRETE.
- * PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A1064.
- * LIMIT MAXIMUM DEPTH TO TOP OF BOTTOM SLAB FOR WAFFLE WALL STRUCTURE TO 10'-0"; LIMIT SOLID WALL STRUCTURE TO 15'-0".
- * PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
- * CUT OR FORM OPENINGS FOR PIPE TO PROVIDE REQUIRED SIZE AND LOCATION. ORIENT WAFFLE WALL STRUCTURES SO THAT PIPES ENTER THROUGH THE KNOCKOUT/WAFFLE PANELS ONLY. PIPES MAY ENTER THROUGH THE CORNERS OF SOLID WALL BOXES IF A MINIMUM OF 6" OF WALL IS PROVIDED ABOVE THE HOLE.
- * ALL ELEMENTS PRECAST TO MEET ASTM C913.
- * FRAME AND GRATE HEIGHT MAY BE ADJUSTED WITH CONCRETE OR BRICK IN ACCORDANCE WITH STANDARD 840.25.
- * PROVIDE PRECAST STRUCTURES OVER 4'-0" IN DEPTH WITH STEPS AS DIRECTED BY THE ENGINEER.
- * WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
- * SEAL JOINTS WITH A FLEXIBLE BUTYL RUBBER BASE CONFORMING TO FEDERAL SPECIFICATION SS-S-21A, AASHTO M-198, TYPE B - BUTYL RUBBER.
- * LIMIT MAXIMUM STRUCTURE SIZE TO INSIDE CLEAR DIMENSIONS OF 5'-0" X 5'-0".
- * THE OUTSIDE PIPE DIAMETER PLUS 2" OR THE OPENING REQUIRED FOR FRAME AND GRATE IS THE MINIMUM STRUCTURE SIZE WHICHEVER IS GREATER.
- * USE MANHOLE FRAME AND COVER AS INDICATED ON THE PLANS. REINFORCE OPENING AS SHOWN ON THIS SHEET.



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
1-18
ROADWAY STANDARD DRAWING FOR PRECAST DRAINAGE STRUCTURE (GENERAL NOTES AND DETAILS)
SHEET 2 OF 2
840.45

5 PRECAST DRAINAGE BOX
NOT TO SCALE

Know what's **below**
Call before you dig

PROJECT:

ROCKY KNOB PARK EXPANSION

ADDRESS: 285 MOUNTAIN BIKE WAY | BOONE | WATAUGA COUNTY | NC | 28607

CLIENT:

WATAUGA CO. TDA

CONTACT: L. WRIGHT TILLEY, EXECUTIVE DIRECTOR
ADDRESS: 331 QUEEN STREET, SUITE 101 | BOONE | WATAUGA COUNTY | NC | 28607

CIVIL ENGINEER:

DESTINATION BY DESIGN ENGINEERING

ADDRESS: 136 FURMAN RD., STE. 6
BOONE | NC |28607

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 035233 ENGINEER JASON GASTON
[illegible]
04/28/23

REVISIONS	DATE

PROJECT MANAGER: CAG
DRAWING BY: JEG
JURISDICTION: WATAUGA COUNTY
DATE: 04/28/23
SHEET TITLE:

DRAINAGE DETAILS

SHEET NUMBER: C-6
SCALE: NTS

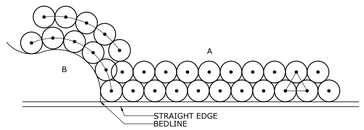
LANDSCAPE NOTES:

GENERAL NOTES

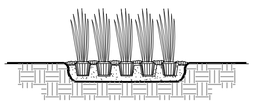
1. CONTRACTOR IS EXPECTED TO CARRY OUT ALL RESPONSIBILITIES SET FORTH IN THESE LANDSCAPE NOTES AND IN THE LANDSCAPE SPECIFICATIONS. THEY WILL BE STRICTLY ENFORCED BY THE OWNER/LANDSCAPE ARCHITECT.
2. CONTRACTOR SHALL BE RESPONSIBLE TO RECEIVE THE LANDSCAPE ARCHITECT'S APPROVAL OF ALL PLANT BED LAYOUTS AND TREE LOCATIONS PRIOR TO INSTALLATION. IF PLANT MATERIAL IS INSTALLED PRIOR TO LANDSCAPE ARCHITECT'S APPROVAL, CONTRACTOR WILL BE SUBJECT TO RELOCATING THE MATERIAL AT THE LANDSCAPE ARCHITECT'S REQUEST AND THE CONTRACTOR'S OWN EXPENSE.
3. SOIL TESTING SHALL BE PERFORMED IN AN ADEQUATE TIME FRAME TO RECEIVE RESULTS PRIOR TO SOIL AMENDMENT PROCESS BEGINNING.
   SOIL TEST SHALL:
   1) DETERMINE NUTRIENT STATUS AND PH OF SOIL
   2) DETERMINE THE SOIL TEXTURE IN THE TOP 6" - 12" OF SOIL, AND THEN AMEND THE SOIL BASED ON THE RESULTS OF THE TESTS.
4. LANDSCAPE CONTRACTOR SHALL ACCEPT FIELD CONDITIONS OF SITE AND PERFORM THE WORK SPECIFIED INCLUDING CONSTRUCTION DEBRIS REMOVAL, FINE GRADING, AND INCORPORATION OF SOIL AMENDMENTS, WITHOUT ADDITIONAL COMPENSATION FOR POSSIBLE VARIATION FROM GRADES AND CONDITIONS SHOWN, WHETHER SURFACE OR SUBSURFACE, EXCEPT AS APPROVED FOR IN CONTRACT DOCUMENTS.
5. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING. FINE GRADING INCLUDES THE REMOVAL OF ALL CONSTRUCTION DEBRIS, INCLUDING EXCESS GRAVEL LARGER THAN 1" DIAMETER, AND RAKING THE SURFACE SMOOTH. FINE GRADING SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN TAKE OFFS AND QUANTITIES. THIS INCLUDES SOD AND MULCH QUANTITIES OF WHICH THE CONTRACTOR SHALL BE HELD TO BID QUANTITIES. THE QUANTITIES ON THE PLANT LIST SERVE ONLY AS A GUIDE. LANDSCAPE PLANS DEPICTING PLANTS SHALL BE THE FINAL SOURCE FOR PLANT QUANTITIES. IF THERE IS A DISCREPANCY IN PLANT QUANTITY BETWEEN THE PLANS AND THE PLANT SCHEDULE THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED.
7. CONRTACTOR SHALL PROCURE ALL MATERIALS IMMEDIATELY AFTER CONTRACT ASSIGNMENT. PLANTS SHALL BE HELD DURING THE PERIOD FROM CONTRACT TO INSTALLATION TO ALLOW ADDITIONAL GROWTH. ALL PLANTS WILL BE REQUIRED TO BE FULL AND HEALTHY. CONTRACTOR SHALL ARRANGE FOR PLANT APPROVAL PRIOR TO DELIVERY, EITHER BY SAMPLES, PHOTOS, OR NURSERY VISITS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PLANT HEALTH IN ON-SITE SOILS. IF, DURING DIGGING, CONTRACTOR DISCOVERS WATER-LOGGED, CLAYEY, COMPACTED OR SIMILARLY POORLY DRAINED SOILS, OR OTHER POOR CONDITIONS, IT SHOULD BE BROUGHT TO THE ATTENTION OF OWNER/LANDSCAPE ARCHITECT FOR REMEDIAL ACTION.
9. LANDSCAPE MATERIAL IS TO BE MAINTAINED BY THE LANDSCAPE CONTRACTOR (INCLUDING, BUT NOT LIMITED TO, WATERING, MOWING, PRUNING, AND WEEDING) UNTIL PROJECT HAS ENTERED SUBSTANTIAL COMPLETION.
10. THE LANDSCAPE CONTRACTOR MUST PROVIDE A WARRANTY ON ALL PLANT MATERIAL FOR A PERIOD OF (1) ONE YEAR FROM PROJECT SUBSTANTIAL COMPLETION.
11. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF THESE UTILITIES DURING INSTALLATION, AND SHALL PROMPTLY REPAIR AND RESTORE AT NO ADDITIONAL COST TOT HE OWNER IF DAMAGE OCCURS DURING INSTALLATION. CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH THE FULL SET OF CONSTRUCTION DRAWINGS AND SPECIFICATIONS FOR COORDINATION WITH UTILITIES, ARCHITECTURE, FEATURES, ETC.
12. ALL UNPAVED DISTURBED SURFACES ARE TO BE COVERED IN PLANTS, MULCH, OR GRASS.

PLANTING NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN PLANT MATERIAL TAKE OFFS AND QUANTITIES. THE QUANTITIES ON THE PLANT SCHEDULE SERVE ONLY AS A GUIDE. LANDSCAPE PLANS DEPICTING PLANTS SHALL BE THE FINAL SOURCE FOR PLANT QUANTITIES. IF THERE IS A DISCREPANCY IN PLANT QUANTITY BETWEEN THE PLANS AND THE PLANT SCHEDULE THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED.
2. ALL PLANT MATERIAL SHALL MEET OR EXCEED THE AMERICAN STANDARD FOR NURSERY STOCK.
3. ALL PLANT MATERIAL SHALL MEET OR EXCEED MINIMUM SIZE AND SPACING SPECIFICATIONS NOTES ON THE PLANT SCHEDULE. CONTAINER SIZE NOTED ON THE PLANT SCHEDULE SERVE AS A GUIDE ONLY. ANY MATERIAL NOT MEETING SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
4. IN THE EVENT, AFTER EXHAUSTING ALL RESOURCES, CONTRACTOR IS UNABLE TO PROCURE PLANT MATERIAL QUANTITIES SPECIFIED A SUBSTITUTION MAY BE EVALUATED. CONTRACTOR IS TO NOTIFY LANDSCAPE ARCHITECT AND PROVIDE SUBSTITUTIONS THAT ARE CURRENTLY COMMERCIALLY AVAILABLE.
5. PLANT BED DEFINED - AN AREA THAT PLANT MATERIAL SHALL BE INSTALLED, INCLUDING PARKING LOT ISLANDS. THE ENTIRE PARKING LOT ISLAND IS CONSIDERED A PLANT BED, NOT JUST THE AREA WHERE A SINGLE TREE MAY BE PLANTED.
6. CONTRACTOR SHALL ASSUME ALL PLANT BEDS WILL BE COMPACTED FROM THE CONSTRUCTION PROCESS AND WILL NEED TO BE RIPPED, TILLED OR OTHER MEANS OF MECHANICAL CULTIVATION TO BREAK UP COMPACTED SOILS TO A DEPTH OF 18 INCHES.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR AMENDING SOIL PER SOIL TEST RESULTS.
8. CONTRACTOR SHALL INCORPORATE 1 CUBIC YARD OF COMPOST PER 100 SQUARE FEET OF PLANT BED. COMPOST SHALL BE INCORPORATED INTO THE TOP 8 INCHES OF SOIL. COMPOST SHALL BE CERTIFIED BY THE US COMPOSTING COUNCIL'S SEAL OF TESTING ASSURANCE PROGRAM AND OMRI LISTED.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING ALL PLANT BEDS. FINE GRADING SHALL INCLUDE REMOVING ALL CONSTRUCTION DEBRIS INCLUDING EXCESS GRAVEL 1" DIAMETER AND LARGER AND THEN RAKING THE SURFACE SMOOTH TO ALLOW FOR POSITIVE DRAINAGE AWAY FROM STRUCTURES AND DIRECTED TOWARDS ANY STORM DRAIN INLETS THAT MAY BE PRESENT.
10. PLANT MATERIAL SHALL BE INSTALLED PER PROVIDED PLANTING DETAILS AND NOTES.
11. PLANT MATERIAL SHALL BE INSTALLED VERTICALLY / PLUMB REGARDLESS OF GROUND SLOPE.
12. 3" OF TRIPLE SHREDDED HARDWOOD MULCH SHALL BE INSTALLED ON ALL PLANT BEDS. MULCH SHALL BE NATURAL IN COLOR. PLANT BEDS SHALL BE FREE OF WEEDS PRIOR TO PLACING OF MULCH. MULCH SHALL NOT BE MOUNDED AS TO FORM A "MULCH VOLCANO" AGAINST THE STEM OF ANY PLANT MATERIAL. MULCH SHALL NOT BE IN CONTACT WITH THE STEM OF ANY PLANT MATERIAL.
13. PLANT BEDS EDGES SHALL BE INSTALLED TO RETAIN MULCH AND KEEP IT FROM WASHING. BED EDGES ALONG HARDSCAPE SHALL HAVE A TURN DOWN EDGE SO MULCH SHALL NOT WASH OVER THE HARDSCAPE EDGE. WHERE PLANT BEDS ABUT LAWN AREA AN EDGE MUST BE PREPARED MECHANICALLY WITH A BED EDGING MACHINE TO ENSURE MULCH REMAINS IN PLACE AND DOES NOT WASH.
14. AFTER MULCH IS PLACED ALL PLANT BEDS SHALL RECEIVE A PRE-EMERGENT HERBICIDE APPLICATION. CONTRACTOR TO ENSURE PRE-EMERGENT HERBICIDE IS SUITABLE FOR PLANT MATERIAL AND TO FOLLOW APPLICATION INSTRUCTIONS LISTED ON THE LABEL.
15. TREES LOCATED IN GRASS AREAS SHALL RECEIVE A (6) SIX FEET DIAMETER MULCH RING.

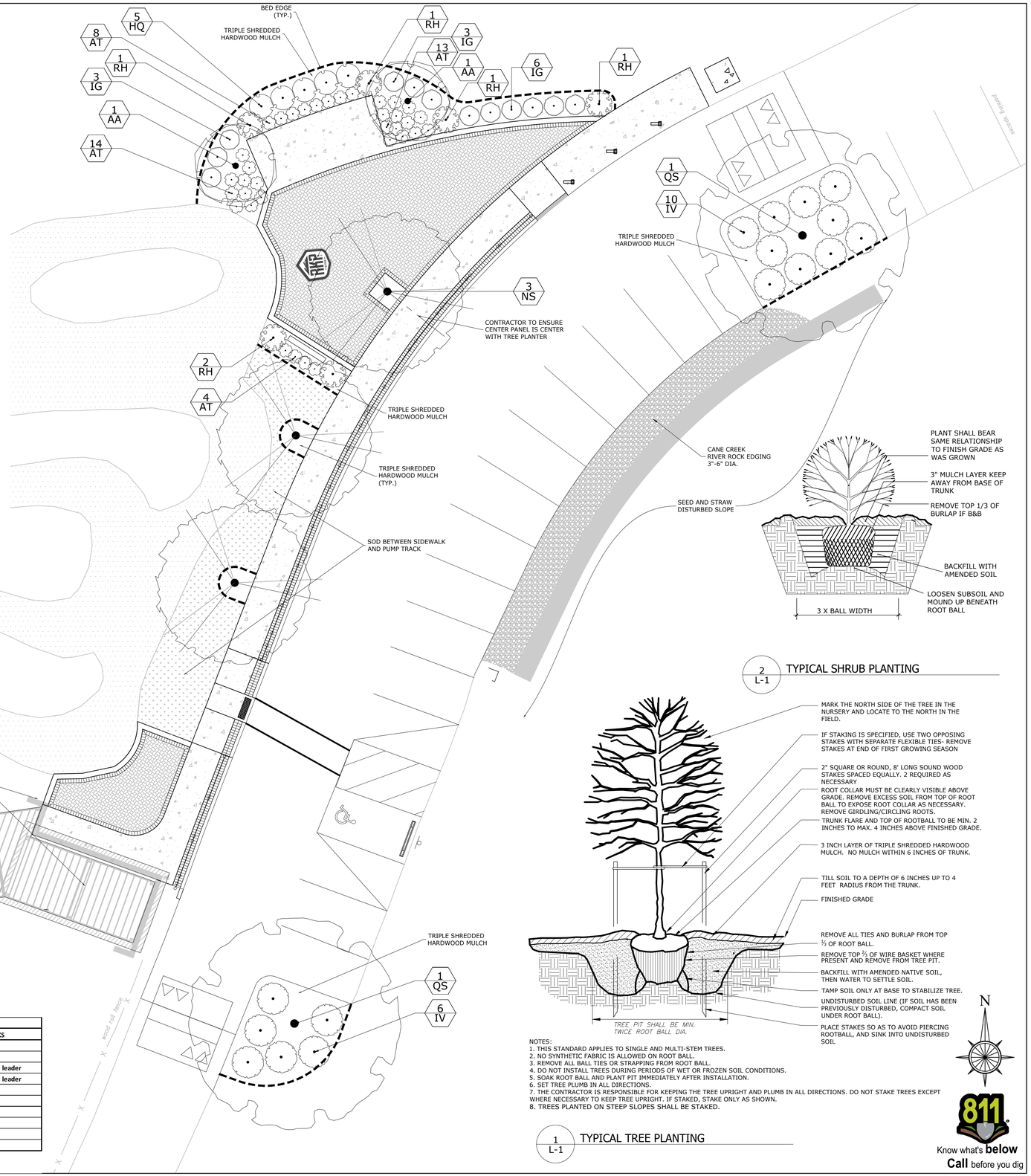


A. SHRUBS AND GROUNDCOVER ADJACENT TO STRAIGHT EDGES SHALL BE TRIANGULAR - SPACED IN ROWS PARALLEL TO STRAIGHT EDGE
B. SHRUBS AND GROUNDCOVER ADJACENT TO CURVED EDGES SHALL BE PLANTED IN ROWS PARALLEL TO THE CURVED EDGE. CURVED EDGES TO BE SMOOTH RADII



12" MINIMUM DEPTH OF AMENDED SOIL MIX TO BE INCORPORATED IN GROUNDCOVER PLANTING BEDS. PROVIDE APPROPRIATE TIME-RELEASE FERTILIZER PER MANUFACTURER'S RECOMMENDATIONS.

3 L-1 TYPICAL PLANT SPACING LAYOUT



2 L-1 TYPICAL SHRUB PLANTING

NOTES:
1. THIS STANDARD APPLIES TO SINGLE AND MULTI-STEM TREES.
2. NO SYNTHETIC FABRIC IS ALLOWED ON ROOT BALL.
3. REMOVE ALL BALL TIES OR STRAPPING FROM ROOT BALL.
4. DO NOT INSTALL TREES DURING PERIODS OF WET OR FROZEN SOIL CONDITIONS.
5. SOAK ROOT BALL AND PLANT PIT IMMEDIATELY AFTER INSTALLATION.
6. SET TREE PLUMB IN ALL DIRECTIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE TREE UPRIGHT AND PLUMB IN ALL DIRECTIONS. DO NOT STAKE TREES EXCEPT WHERE NECESSARY TO KEEP TREE UPRIGHT. IF STAKED, STAKE ONLY AS SHOWN.
8. TREES PLANTED ON STEEP SLOPES SHALL BE STAKED.

1 L-1 TYPICAL TREE PLANTING

PLANT SCHEDULE

SPECIES MIXING	KEY	QTY.	BOTANICAL NAME	COMMON NAME	Cal*	HT*	ROOT	REMARKS
	TREES							
TOTAL NUMBER OF TREES 4	AA	2	*Amelanchier arborea*	Serviceberry	-	6'-8'	-	Full, Match
	NS	3	*Nyssa sylvatica*	Black Tupelo	2"	10'-12'	-	Full, Match , Straight leader
	QS	2	*Quercus shumard*	Shumard Oak	3"	12'-14'	-	Full, Match , Straight leader
	SHRUBS / GRASSES/PERNNIALS							
TOTAL NUMBER OF SHRUBS 78	AT	39	*Andropogon ternarius* 'Black Mountain'	Black Mountain Bluestem	3 gal.	-	Cont.	Full, Match
	HQ	5	*Hydrngea quercifolia* 'Snow Queen'	Snow Queen Oakleaf Hydrangea	3 gal.	15"	Cont.	Full, Match
	IG	12	*Ilex glabra* 'Shamrock'	Shamrock Inkberry Holly	3 gal.	15"	Cont.	Full, Match
	IV	16	*Itea virginica*	Virginia Sweetspire	3 gal.	15"	Cont.	Full, Match
	RH	6	*Rhododendrop spp.* 'PJM'	PJM Rhododendron	3 gal.	15"	Cont.	Full, Match

*CA. AND HT. REFERS TO SIZE OF PLANT MATERIAL AT TIME OF INSTALLATION.
* HT. TAKES PRECEDENT OVER CONTAINER SIZE. PLANTS MUST MEET SPECIFIED HT.

Know what's **below** **Call** before you dig

PROJECT:

ROCKY KNOB PARK EXPANSION

ADDRESS: 285 MOUNTAIN BIKE WAY | BOONE | WATAUGA COUNTY | NC | 28607

CLIENT:

WATAUGA CO. TDA

CONTACT: L. WRIGHT TILLEY, EXECUTIVE DIRECTOR

ADDRESS: 331 QUEEN STREET, SUITE 101 | BOONE | WATAUGA COUNTY | NC | 28607

LANDSCAPE ARCHITECT:

DESTINATION BY DESIGN

ADDRESS: 136 FURMAN ROAD, SUITE 6 | BOONE | WATAUGA COUNTY | NC | 28607

SEAL:

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT CHARLES A GOTHERMAN No. 2097

09/01/23

REVISIONS	DATE

PROJECT MANAGER:	CAG
DRAWING BY:	ED
JURISDICTION:	WATAUGA COUNTY
DATE:	09.01.2023
SHEET TITLE:	

LANDSCAPE PLAN

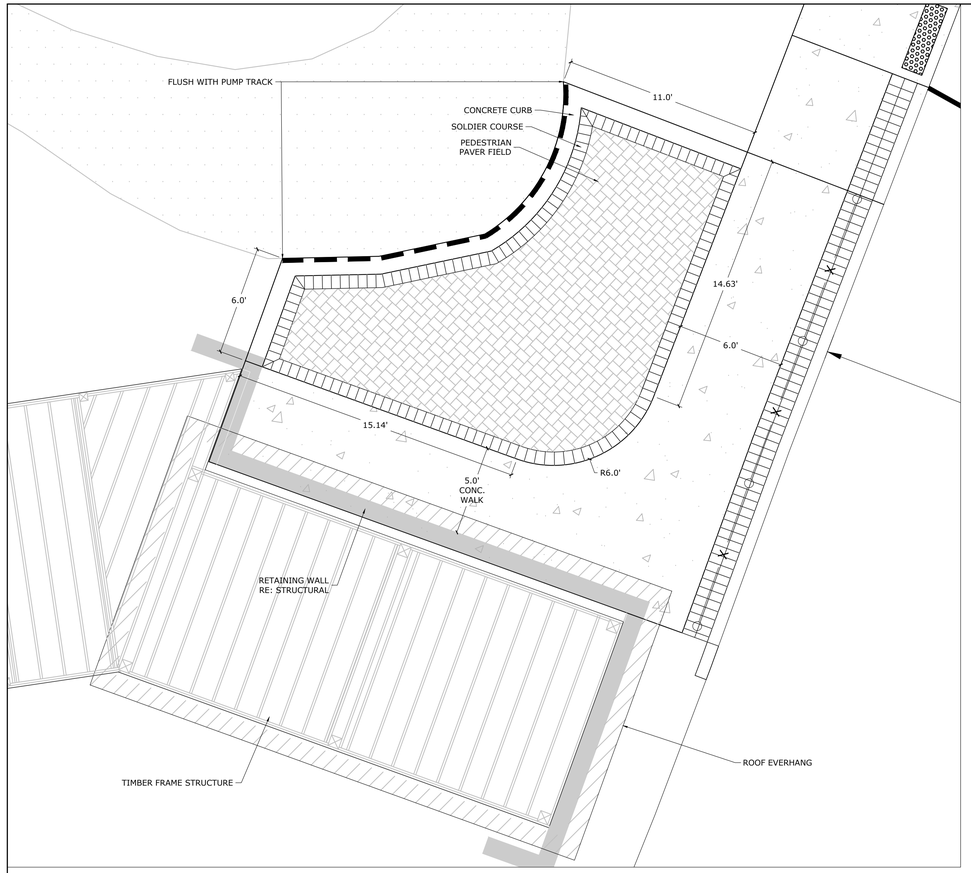
SHEET NUMBER: L-1

SCALE: 1" = 10'

10 5 0 10 20

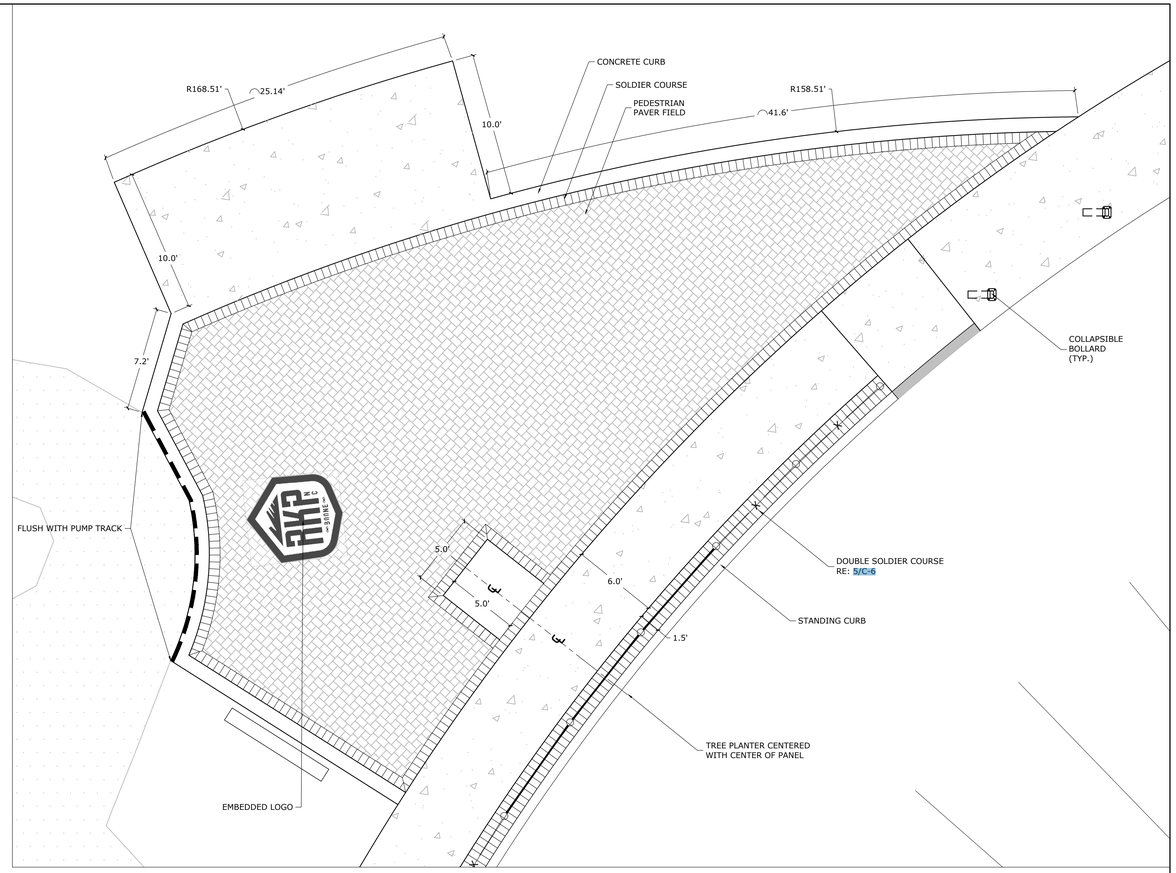
SCALE IN FEET

FILE NUMBER:



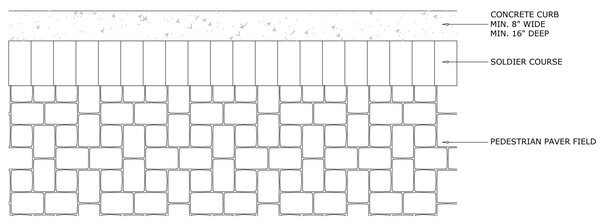
1 L-2 PAVER PATIO 1

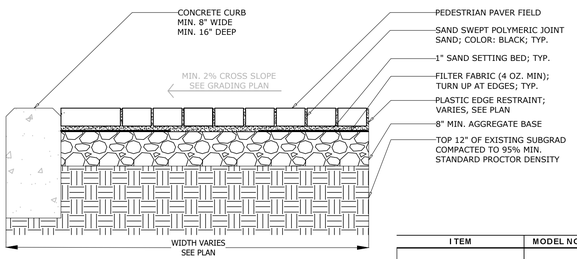
4 2 0 4 8
SCALE IN FEET



2 L-2 PAVER PATIO 2

5 2.5 0 5 10
SCALE IN FEET

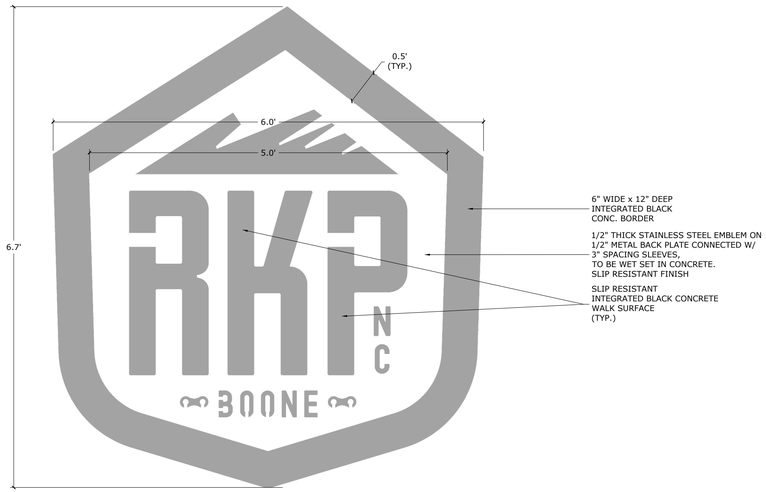




NOTES:
1.) USE PLASTIC WITH SPIKE EDGE RESTRAINT WHERE JOINING LANDSCAPE

3 L-2 PAVER DETAIL

ITEM	MODEL NO. OR DESCRIPTION	MANUFACTURER	COLOR(S)	COMMENTS
PEDESTRIAN PAVER FIELD	CAMBRIDGE COBBLE	BELGARD BELAGRD.COM (877) 235-4273 ** OR APPROVED EQUAL **	ARCTIC	PATTERN E
SOLDIER COURSE	CAMBRIDGE COBBLE	BELGARD BELAGRD.COM (877) 235-4273 ** OR APPROVED EQUAL **	COBBLE BLEND	SOLDIER & SAILOR COURSE



4 L-2 EMBEDDED LOGO

NOTES:
1. COLOR TO BE BLACK. CONTRACTOR TO PROVIDE COLOR SAMPLES TO LANDSCAPE ARCHITECT.
2. COLOR TO BE INTEGRATED WITHIN CONCRETE.
3. NON-SLIP SEALANT TO BE APPLIED TO BOTH CONCRETE AND STAINLESS STEEL EMBLEM.
4. PROJECT LANDSCAPE ARCHITECT TO PROVIDE DESIGN FILE FOR USE TO MANUFACTURE STAINLESS STEEL EMBLEM.
5. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR APPROVAL BY LANDSCAPE ARCHITECT.

N

811 Know what's **below** **Call** before you dig

PROJECT:

ROCKY KNOB PARK EXPANSION

ADDRESS: 285 MOUNTAIN BIKE WAY | BOONE | WATAUGA COUNTY | NC | 28607

CLIENT:

WATAUGA CO. TDA

CONTACT: L. WRIGHT TILLEY, EXECUTIVE DIRECTOR

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LANDSCAPE ARCHITECT:

DESTINATION BY DESIGN

ADDRESS: 136 FURMAN ROAD, SUITE 6 | BOONE | WATAUGA COUNTY | NC | 28607

SEAL:

NORTH CAROLINA LANDSCAPE ARCHITECT No. 2097 CHARLES A GOTHERMAN

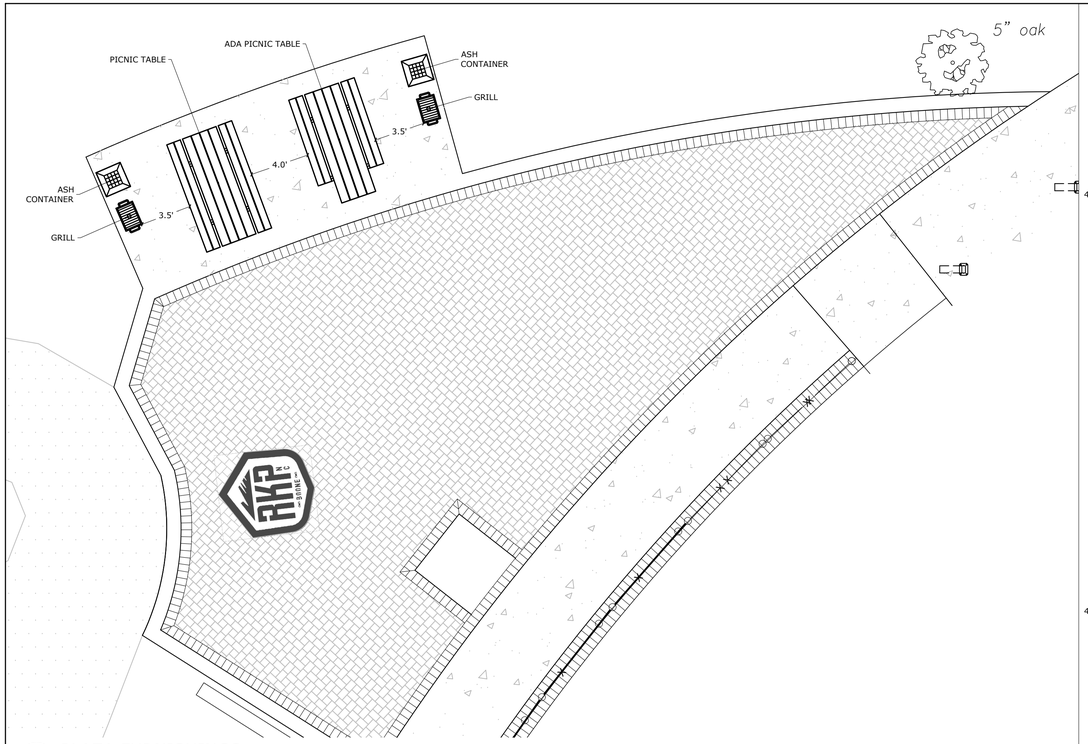
09/01/23

REVISIONS DATE

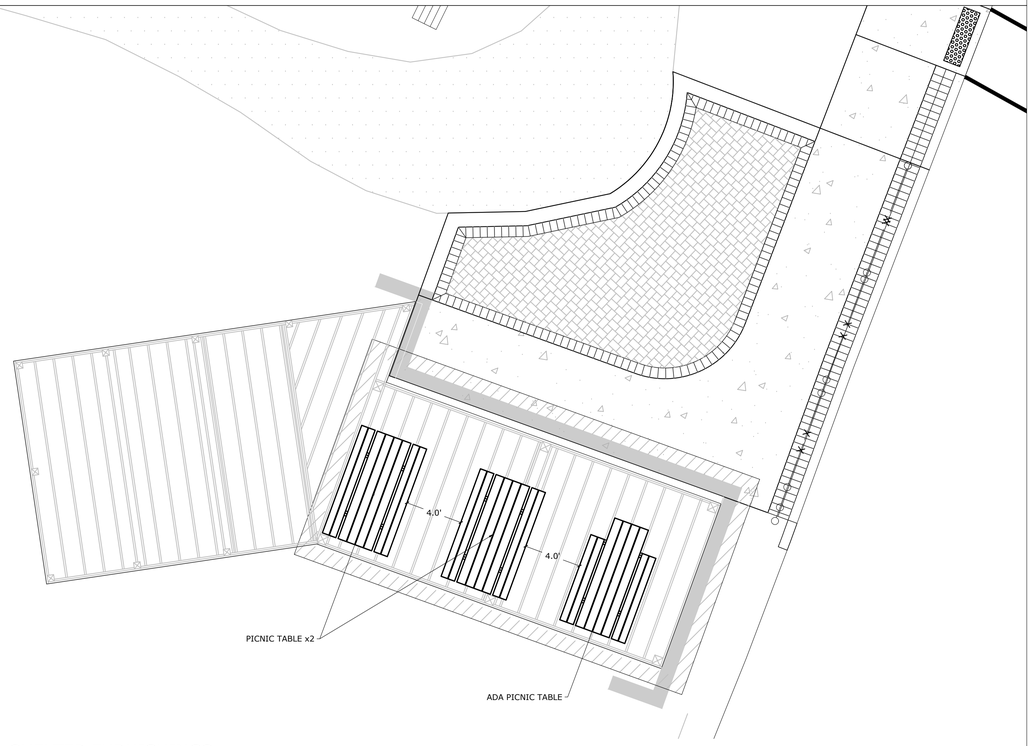
PROJECT MANAGER: CAG
DRAWING BY: ED
JURISDICTION: WATAUGA COUNTY
DATE: 09.01.2023
SHEET TITLE:

PAVER ENLARGEMENT

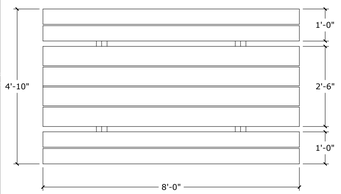
SHEET NUMBER: L-2
SCALE:
FILE NUMBER:



1 PLAZA FURNISHINGS
1"=5'

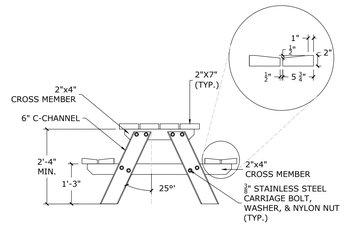


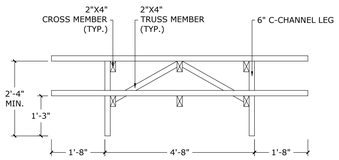
2 SHELTER FURNISHINGS
1"=5'

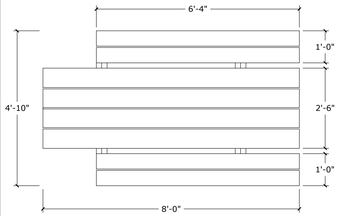


3 PICNIC TABLE
N.T.S.

NOTES:
1. ALL LUMBER TO BE WHITE OAK FINISHED WITH MIN. 2 COATS BOILED LINSEED OIL.
2. ALL FASTENERS TO BE STAINLESS STEEL.
3. FASTENERS USED TO ATTACH SEAT AND TABLE TOP TO BE HIDDEN. DO NOT FACE SCREW.
4. 6" C-CHANNEL TO BE POWDER COATED BLACK

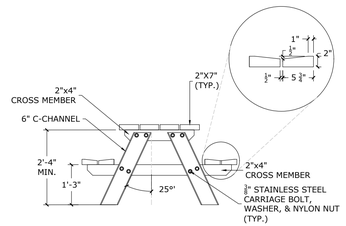


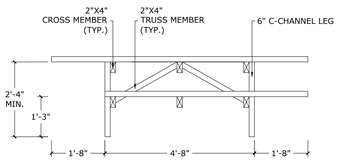


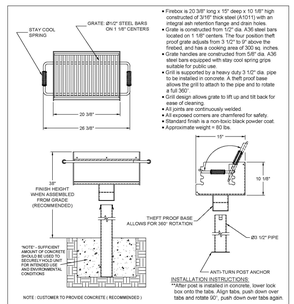


4 ADA PICNIC TABLE
N.T.S.

NOTES:
1. ALL LUMBER TO BE WHITE OAK FINISHED WITH MIN. 2 COATS BOILED LINSEED OIL.
2. ALL FASTENERS TO BE STAINLESS STEEL.
3. FASTENERS USED TO ATTACH SEAT AND TABLE TOP TO BE HIDDEN. DO NOT FACE SCREW.
4. 6" C-CHANNEL TO BE GALVANIZED.



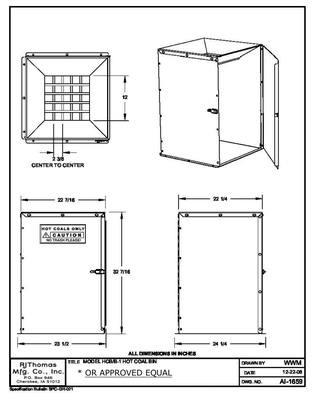




* OR APPROVED EQUAL

4 GRILL
N.T.S.

NOTES:
1. GRILL TO BE DIRECT BURY MOUNTED.



5 ASH CONTAINER

NOTES:
1. MOUNT PER MANUFACTURE'S INSTRUCTIONS.
2. OPTIONAL METAL LINER (TRASH CAN) TO BE ORDERED WITH UNIT.

PROJECT:

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LANDSCAPE ARCHITECT:

DESTINATION BY DESIGN

ADDRESS: 136 FURMAN ROAD, SUITE 6 | BOONE | WATAUGA COUNTY | NC | 28607

SEAL:

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT CHARLES A GOTHERMAN No. 2097

09/01/23

REVISIONS	DATE

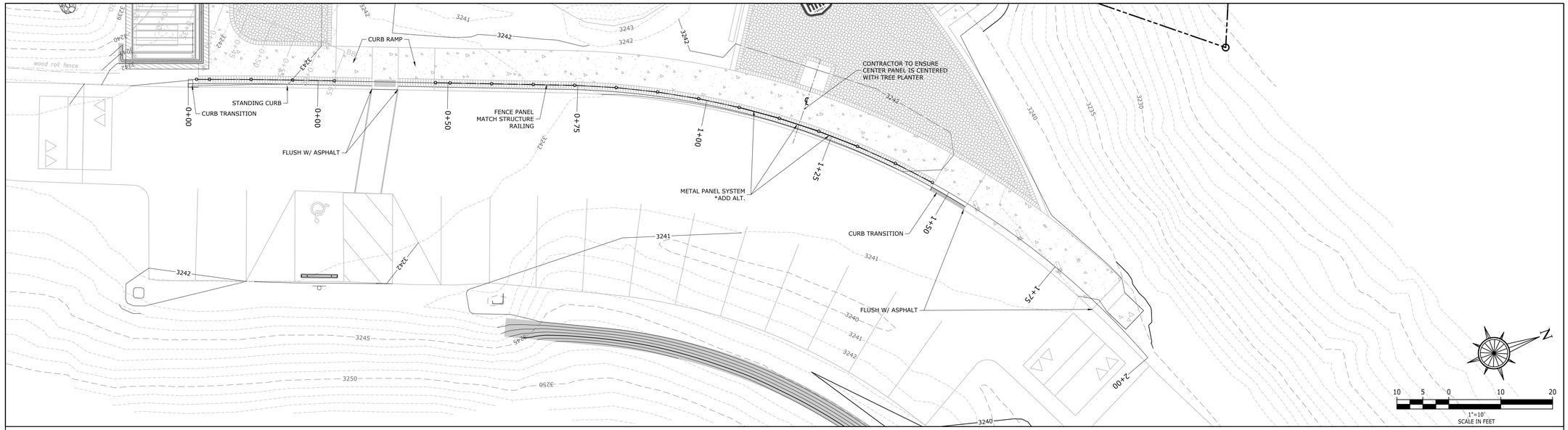
PROJECT MANAGER:	CAG
DRAWING BY:	ED
JURISDICTION:	WATAUGA COUNTY
DATE:	09.01.2023
SHEET TITLE:	

FURNISHINGS PLAN

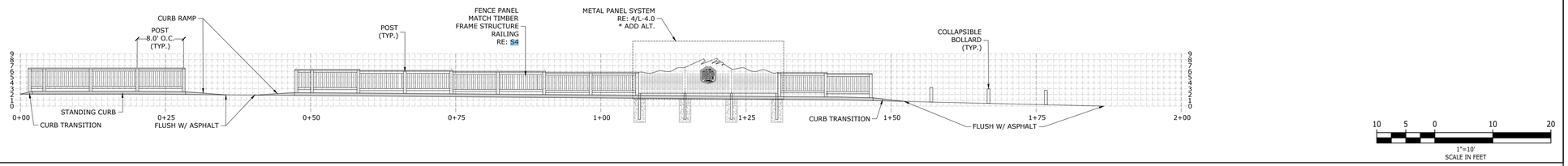
SHEET NUMBER: L-3

SCALE:

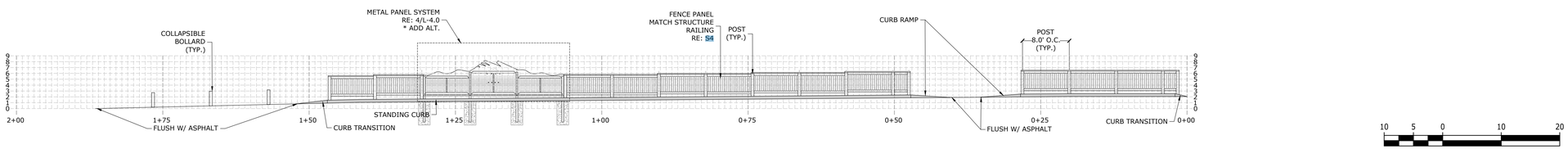
FILE NUMBER:



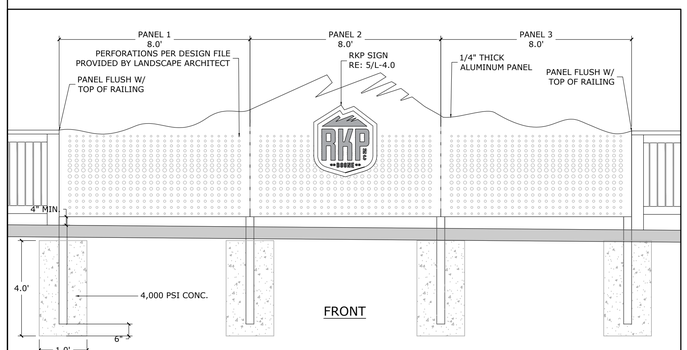
1 FENCE PLAN VIEW



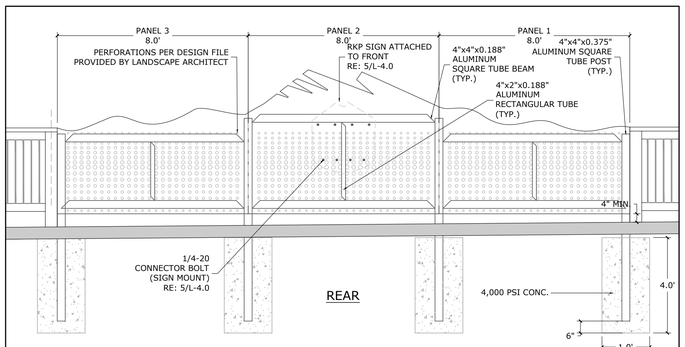
2 FENCE ELEVATION - FRONT

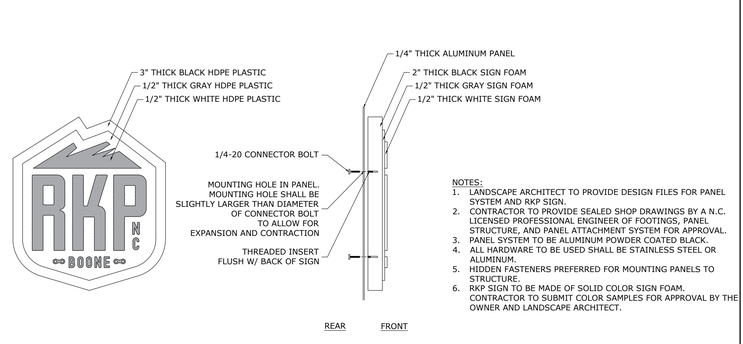


3 FENCE ELEVATION - REAR



4 METAL PANEL SYSTEM - ADD ALT.





NOTES:
1. LANDSCAPE ARCHITECT TO PROVIDE DESIGN FILES FOR PANEL SYSTEM AND RKP SIGN.
2. CONTRACTOR TO PROVIDE SEALED SHOP DRAWINGS BY A N.C. LICENSED PROFESSIONAL ENGINEER OF FOOTINGS, PANEL STRUCTURE, AND PANEL ATTACHMENT SYSTEM FOR APPROVAL.
3. PANEL SYSTEM TO BE ALUMINUM POWDER COATED BLACK.
4. ALL HARDWARE TO BE USED SHALL BE STAINLESS STEEL OR ALUMINUM.
5. HIDDEN FASTENERS PREFERRED FOR MOUNTING PANELS TO STRUCTURE.
6. RKP SIGN TO BE MADE OF SOLID COLOR SIGN FOAM. CONTRACTOR TO SUBMIT COLOR SAMPLES FOR APPROVAL BY THE OWNER AND LANDSCAPE ARCHITECT.

5 RKP SIGN - ADD ALT.

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LANDSCAPE ARCHITECT:

DESTINATION BY DESIGN

ADDRESS: 136 FURMAN ROAD, SUITE 6 | BOONE | WATAUGA COUNTY | NC | 28607

SEAL:

NORTH CAROLINA LANDSCAPE ARCHITECT
REGISTERED
CHARLES A GOTHERMAN
No. 2097

09/01/23

REVISIONS	DATE

PROJECT MANAGER:	CAG
DRAWING BY:	ED
JURISDICTION:	WATAUGA COUNTY
DATE:	09.01.2023
SHEET TITLE:	

FENCE DETAILS

SHEET NUMBER: L-4.0

SCALE:

FILE NUMBER:

DESIGN CRITERIA:

1. 2018 NORTH CAROLINA STATE BUILDING CODE: RESIDENTIAL
2. ASCE 7-10
3. DESIGN LOADS:
   a. LIVE LOAD – ROOF = 30 PSF
   b. LIVE LOAD – DECK = 100 PSF
   c. DEAD LOAD = 15 PSF
   d. GROUND SNOW LOAD = 30 PSF
   e. ULTIMATE WIND VELOCITY = 130 MPH
   f. BASE WIND VELOCITY = 104 MPH
   g. EXPOSURE CATEGORY = C
   h. ASSUMED GROUND BEARING CAPACITY 2-FT BELOW GRADE: 2,000 PSF
   i. ALL BOTTOM OF FOOTINGS SHALL BE CAST A MINIMUM OF 2-FEET BELOW ORIGINAL GROUND LINE. NO FOOTINGS SHALL BE CAST ON FILL MATERIAL UNLESS SUPPORTED BY A HELICAL PILE OR OTHER SUPPORTING MEMBER.

GENERAL NOTES:

4. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UNDERGROUND UTILITIES IN THE AREA OF CONSTRUCTION.
5. THE CONTRACTOR SHALL COORDINATE HIS WORK ACTIVITIES WITH THE OWNER. UNLESS SPECIFIED IN DRAWINGS, ALL WATERPROOFING SHALL BE BY OTHERS.
6. CONTRACTOR SHALL MAKE A CAREFUL INSPECTION OF THE SITE TO FAMILIARIZE HIM/HERSELF WITH THE ACTUAL CONDITIONS OF THE SITE.
7. CONTRACTOR SHALL CHECK AND VERIFY GIVEN DIMENSIONS, TAKE ADDITIONAL DIMENSIONS AS REQUIRED AND REPORT ANY INACCURACIES TO THE ENGINEER. DO NOT SCALE DRAWINGS FOR DIMENSIONS. IF ADDITIONAL DIMENSIONS ARE NEEDED, NOTIFY ENGINEER.
8. CONTRACTOR SHALL COORDINATE THESE STRUCTURAL DRAWINGS WITH DRAWINGS OF OTHER DISCIPLINES.
9. ALL WORK SHALL CONFORM TO THE CURRENT EDITIONS OF THE NORTH CAROLINA STATE BUILDING CODE, THE AISC CODE, THE ACI BUILDING CODE (ACI 318), THE AMERCAN WLEDING SCOIETY CODE AND ALL APPLICABLE ASTM STANDARDS. IN CASES OF CONFLICT, THE MOST STRINGENT REQUIREMENT SHALL GOVERN.
10. CONTRACTOR SHALL COORDINATE AND VERIFY SIZE, LOCATION, TYPE, AND DIRECTION OF ALL PADS, DEPRESSIONS, BOLTS, SLEEVES, ANCHORS, INSERTS, OPENINGS, ETC. TO BE SET OR CAST IN CONCRETE OR MASONRY PRIOR TO PLACEMENT.
11. CONTRACTOR SHALL COORDINATE ALL DIMENSIONS WITH ARCHTIECTURAL/DESIGN DRAWINGS PRIOR TO FOUNDATION LAYOUT AND FABRICATION OF ANY STRUCTURAL MEMBERS.
12. GENERAL CONTRACTOR SHALL DESIGN AND INSTALL ALL TEMPORARY SHORING REQUIRED TO STABILIZE NEW AND EXISTING STRUCTURES AND FOUNDATIONS UNTIL CONSTRUCTION IS COMPLETE.
13. OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, SPECIFICATIONS, NOTES AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
14. THE DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION.
15. APPLY TERMITE TREATMEANT TO GROUND SURFACES WITHIN THE DEFINED SCOPE OF WORK AS REQUIRED BY CODE AND LOCAL BUILDING INSPECTOR.
16. SECTIONS AND DETAILS SHOWN AT LOCATIONS INDICATED ON PLAN ARE TYPICAL FOR OTHER SIMILAR CONDITIONS OF BUILDING EVEN IF NO SECTION CUT IS INDICATED AT A SIMILAR CONDITION. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL DETAILS WITH OTHER TRADES, DISCIPLINES AND ALL SECTIONS AND DETAILS WITHIN STRUCTURAL DOCUMENTS. ALL SECTIONS AND DETAILS ARE NOT COMPLETE REPRESENTATIONS OF CONDITIONS BUT ARE SPECIFIC TO ITEMS INDICATED IN DETAIL. COORDINATION WITH VIEWS OF OTHER SECTIONS, PLANS AND DETAILS MAY REQUIRED TO COMPLETE ASSEMBLY.

SOIL EXCAVTION NOTES:

1. EXCAVATION OF THE FOOTINGS ARE TO THE DEPTHS REQUIRED AND INDICATED ON PLANS. ANY OVER-EXCAVATION OF UNSUITABLE MATERIALS MAY BE NECESSARY BELOW FOOTING DEPTH. BACKFILL USING NO.57 STONE IN UNIFORM LIFTS COMPACTED TO 95% OF THE DRY DENSITY TO RE-ESTABLISH FOOTING SUB-GRADE.
2. USE OF A SMOOTH EDGE BUCKET IS RECOMMENDED TO EXCAVATE FOR FOOTINGS. TOOTHED BUCKETS MAY ALLOW BEARING SOILS TO PERFORM INEFFECTIVELY AND ALLOW WATER TO SATURATE THE FOUNDATION SUB-GRADE.
3. SOILS SHALL BE DETERMINED TO HAVE 2,000-PSF NET ALLOWABLE BEARING CAPACITY.
4. FOOTINGS ARE TO BE PLACED WITH A MINIMUM DEPTH FROM FINISHED FRADE TO BEARING NOT LESS THAN 24-INCHES.
5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROTECTING FOUNDATION BEARING SOILS FROM DISTURBANCE AND DAMAGE DURING CONSTRUCTION FROM OVER-SATURATION. CARE IS TO BE TAKEN TO REMOVE AND REPLACE BEARING SOILS WITH UNIFORM LIFTS OF NO.57 STONE AS NEEDED, COMPACTED TO 95% OF THE DRY DENSITY.
6. ONCE THE FOOTINGS ARE ABLE TO HANDLE LATERAL LOADING, BACKFILL WITH ENGINEERED STONE OR NO.57 STNE IN UNIFORM LIFTS. EXTERIOR OF THE FOOTIN MAY BE BACKFILLED WITH UNIFORM LIFTS OF SUITABLE SOILS COMPACTED TO 95% OF THE DRY DENSITY BEYOND THE PLACEMENTOF THE FOOTING DRAIN.
7. A UNIFORM 8 IN. LIFT OF SUB-BASE, NO.57 STONE OR AN ENGINEERED APPROVED ALTERNATE STONE IS TO BE PLACED PRIOR TO ANY CONCRETE SLAB-ON-GRADE.
8. A 6 MIL. VAPOR BARRIER IS TO BE PLACED OVER THE ENTIRETY OF SUB-BASE, PRIOR TO PLACEMENT OF THE FLOOR INSULATION AND ANY CONCRETE SLAB-ON-GRADE.
9. AREAS OF EXCAVATION MAY BE NECESSARY TO REMOVE UNSUITABLE MATERALS PRIOR TO PLACING THE VAPOR BARRIER: EXCAVATE AND REPLACE UNSUITABLE SOILS WITH UNIFORM LIFTS OF NO.57 STONE COMPACTED TO 95% OF THE DRY DENSITY UP TO SUB-GRADE ELEVATION.

CONCRETE NOTES:

1. CONCRETE CONSTRUCTION SHALL COMPLY WITH ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (LATEST EDITION), ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (LATEST EDITION), AND ACI 302 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION" (LATEST EDITION).
2. REINFORCING STEEL SHALL BE FABRICATED AND PLACED IN COMPLIANCE WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (LATEST EDITION).
3. MIX DESIGN SHALL BE IN ACCORDANCE WITH ACI 318 (CURRENT EDITION).
4. MINIMUM CEMENT CONTENT = 500 LBS PER CUBIC YARD.
5. CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL DEVELOP A MINIMUM COMPESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.
6. MAXIMUM SLUMP = 4" PLUS OR MINUS 1".
7. THE MAX AGGREGATE SIZE SHALL BE ¾".
8. CONCRETE AGGREGATES SHALL COMPLY WITH ASTM C33 AND SHALL BE FREE OF CLAY, FOAM, LUMPS OR OTHER DELETERIOUS SUBSTANCES.
9. REINFORCING BARS SHALL BE DEFORMED AND CONFORMING TO ASTM A615, GRADE 60.
10. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064 AND BE SUPPLIED IN SHEETS, NOT ROLLS, UNO.
11. CONCRETE SHALL BE AIR ENTRAINED WITH 6% AVERAGE AIR CONENT WITH A 1.5% TOLERANCE. AIR ENTRAINMENT SHALL COMPLY WITH ASTM C260.
12. REINFORCEMENT LAP SPLICES SHALL BE 44 TIME THE BAR DIAMETER UNLESS OTHERWISE NOTED.
13. REINFORCEMENT COVER SHALL BE 3" WHEN POURED ADJACENT TO GROUND SURFACE AND 1.5" ELSEWHERE, UNO.
14. CONCRETE SHALL BE CONSOLIDATED USING CONCRETE VIBRATOR IN ACCORDANCE WITH 309R-05.

EPOXY ADHESIVE ANCHORS:

1. ALL EPOXY SHALL BE SIMPSON BRAND "SET" EPOXY SYSTEM, OR APPROVED EQUAL, UNLESS NOTED OTHERWISE.
2. EPOXY ADHESIVES TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.
3. ALL EPOXY ANCHOR BOLTS TO BE SIZED AS SHOWN IN NOTES/DETAILS AND SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:
   a. ANCHOR BOLTS INTO FOUNDATION
      i. ASTM F1554, GR 36
   b. ALL OTHER APPLICATIONS, UNO
      i. ASTM A307
4. ALL EPOXY ANCHOR BOLTS AND REBAR DOWELS SHOULD BE CLEAN AND OIL FREE.
5. CONCRETE DUST SHALL BE REMOVED FROM ALL DRILLED HOLES BY USE OF A MYLON BRUSH AND OIL FREE COMPRESSED AIR. CORRECT PROCEDURE INVOLVES BLOWING THE DUST OF THE HOLE, BRUSHING THE HOLE CLEAN, AND THEN BLOWING AGAIN.
6. DRILLED HOLES SHOULD BE KEPT DRY AND ANY STANDING WATER MUST BE BLOWN OUT WITH OIL FREE COMPRESSED AIR PRIOR TO EPOXY INSTALLATION.
7. EPOXY ADHESIVE SHOULD NOT BE INSTALLED IN CONCRETE WHICH IS LESS THAN 7 DAYS OLD.
8. EPOXY ADHESIVES MUST BE ALLOWED THE FULL CURE TIME AS SPECIFIED BY THE MANUFACTURER PRIOR TO APPLICATION OF ANY LOAD AND ANCHOR BOLTS OR REBAR DOWELS MUST REMAIN UNDISTURBED DURING THIS SETTING PERIOD.
9. EPOXY ADHESIVES ANCHORS ARE NOT TO BE USED EXCEPT WHERE SPECIFICALLY INDICATED ON PLANS.

GENERAL FRAMING DESIGN NOTES:

1. FRAMING STANDARD: COMPLY WITH AF&PA'S "DETAILS FOR CONVENTIONAL WOOD FRAME 1 CONSTRUCTION," UNLESS OTHERWISE INDICATED.
2. ALL EXTERIOR WALLS SHALL BE FRAMED WITH 2X6 STUDS SPACED AT 16" O/C, UNO.
3. USE SIMPSON A35 FRAMING ANGLES FOR TOP/SILL PLATE TO BLOCKING CONNECTION AT 16" O/C SPACING, UNO.
4. USE 5/8" DIAMETER ANCHOR BOLTS, 7" MIN. EMBEDMENT IN CONCRETE, 15" IN GROUTED CMU WITH SIMPSON BPSS/8-6 PLATE WASHER AT 16" O/C, UNO.
5. NAIL 2X BOTTOM PLATE TO RIM JOIST BELOW WITH 16D NAILS AT 4" O/C SPACING.
6. FRAMING WITH ENGINEERED WOOD PRODUCTS: INSTALL ENGINEERED WOOD PRODUCTS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
7. METAL FRAMING ANCHORS: INSTALL METAL FRAMING TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
8. DO NOT SPLICE BUILT-UP BEAM MEMBERS BETWEEN SUPPORTS UNLESS OTHERWISE INDICATED. IF SPLICE IS REQUIRED, SPLICE 1-PLY OF THE MULTI-PLY BEAM AT ALLOWABLE LOCATIONS. ALLOWABLE LOCATIONS ARE AS FOLLOWS:
   a. DIRECTLY CENTERED OVER SUPPORT
   b. AT 20% OF THE SPAN LENGTH FROM INTERIOR SUPPORTS (POINT OF INFLECTION).
9. WHERE BUILT-UP BEAMS OR GIRDERS OF 2-INCH DIMENSIONAL LUMBER ON EDGE ARE REQUIRED, FASEN TOGETHER WITH 2 ROWS OF 16D NAILS SPACED NOT LESS THAN 16-INCHES O/C. LOCATED ONE ROW 1.5" FROM TOP EDGE AND ONE ROW 1.5" FROM BOTTOM EDGE.
10. WHERE MULTI-PLY LVL BEAMS ARE REQUIRED, FASTEN TOGETHER WITH 2 ROWS OF FASTENMASTER FLATLOK STRUCTURAL WOOD SCREWS EACH ROW SPACED 16". USE 3.5" LONG FLATLOK SWS FOR 2-PLY LVL, USE 5" LONG FLATLOK SWS FOR 3-PLY LVL; USE 6.5" LONG FLATLOK SWS FOR 4-PLY LVL. LONGER SCREWS SHALL BE NECESSARY IF PLYWOOD OR OSB SPACERS ARE INSTALLED BETWEEN LVL PLIES.
11. FOR BUILT-UP (GANG) COLUMNS, USE FASTENMASTER FLATLOK SWS. SELECT LENGTH ADEQUATE TO FULLY PENETRATE EACH PLY IN A GANG COLUMN. SPACE VERTICALLY TWO ROWS OF FLATLOK SWS AT 8-INCH MAXIMUM.
12. FLOOR-TO-FLOOR TIES: LAP EXTERIOR SHEATHING PANELS AT LEAST 24" ABOVE BOTTOM PLATE OR BELOW TO PLATE.

DIMENSIONAL LUMBER FRAMING NOTES:

1. MAXIMUM MOISTURE CONTENT: 19 PERCENT.
2. NO.2 GRADE OR BETTER AND ANY OF THE FOLLOWING SPECIES:
   a. HEM-FIR (NORTH); NLGA.
   b. SOTHERN PINE; SPIB.
   c. DOUGLAS FIR-LARCH; WCLIB OR WWPA.
   d. MIXED SOUTHERN PINE; SPIB.
   e. SPRUCE-PINE-FIR; NLGA.
   f. DOUGLAS FIR-SOUTH; WWPA.
   g. DOUGLAS FIR-LARCH (NORTH); NLGA.
3. EXTERIOR AND LOAD-BEARING WALLS: ANY SPECIES AND GRADE WITH A MODULUS OF ELASTICITY OF AT LEAST 1,300,000 PSI AND AN EXTREME FIBER STRESS IN BENDING OF AT LEAST 850 PSI FOR 2-INCH NOMINAL THICKNESS AND 12 INCH NOMINAL WITH FOR A SINGLE-MEMBER USE.
4. JOIST RAFTERS, AND OTHER FRAMING NOT LISTED ABOVE: ANY SPECIES AND GRADE WITH A MODULUS OF AT LEAST 1,300,000 PSI AND EXTREME FIBER STRESS BENDING OF AT LEAST 850 PSI FOR 2 INCH NOMINAL THICKNESS AND 12 INCH NOMINAL WIDTH FOR SINGLE MEMBER.

FASTENERS NOTES:

1. PROVIDE FASTENERS OF SIZE AND TYPE INDICATED THAT COMPLY WITH REQUIREMENTS, SPECIFIED IN THIS ARTICLE FOR MATERIAL AND MANUFACTURER.
2. WHERE ROUGH CARPENTRY IS EXPOSED TO WEATHER, IN GROUND CONTACT, OR IN AREA OF HIGH RELATIVE HUMIDITY, PROVIDE FASTENERS WITH HOT-DIP ZINC COATING COMPLYING WITH ASTM A153 A153M.
3. POWER DRIVEN FASTENERS: CABO-NER-272.
   a. WOOD SCREWS: ASTM B18.6.1.
   b. LAG BOLTS: ASME B18.2.1
   c. BOLTS: STEEL BOLTS COMPLYING WITH ASTM A-307, GRADE A (ASTM F568M, PROPERTY CLASS 4.6"; WITH ASTM A563 (ASTM A563M) HEX NUTS AND, WHERE INDICATED, FLAT WASHERS.
4. EXPANSION ANCHORS: ANCHOR BOLTS AND SLEEVE ASSEMBLY OF MATERIAL INDICATED BELOW WITH CAPABILITY TO SUSTAIN, WITHOUT FAILURE, A LOAD EQUAL TO 6 TIMES THE LOAD IMPOSED WHEN INSTALLED IN UNIT MASONRY ASSEMBLIES AND EQUAL TO 4 TIMES THE LOAD IMPOSED WHEN INSTALLED IN CONCRETE AS DETERMINED BY TESTING PER ASTM E488 CONDUCTED BY A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY.
5. MATERIAL: CARBON-STEEL COMPONENTS, ZINC PLATED TO COMPLY WITH ASTM B622, CASS FE/ZN 5.

ENGINEERED WOOD PRODUCTS NOTES:

1. LAMINATED-VENEER LUMBER: STRUCTURAL COMPOSITE LUMBER MADE FROM WOOD VENEERS WITH GRAIN PRIMARILY PARALLEL TO MEMBER LENGTHS, EVALUATED AND MONITORED ACCORDING TO ASTM D5456 AND MANUFACTURED WITH AN EXTERIOR-TYPE ADHESIVE COMPLYING WITH ASTM D2559 AND CONTAINING NO UREA FORMALDEHYDE.
   a. AVAILABLE MANUFACTURERS: SUBJECTS TO COMPLIANCE WITH REQUIREMENTS, MANUFACTRUERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
      i. BOISE CASCADE CORPORATION
      ii. GEORGIA-PACIFIC
      iii. LOUISIANA-PACIFIC CORPORATION
      iv. ROSEBURG FOREST PRODUCTS CO.
      v. WELD WOOD OF CANADA LIMITED; SUBSIDIARY OF INTERNATIONAL PAPER CORPORATION
      vi. WEYERHAUSER COMPANY.
   b. EXTREME FIBE STRESS IN BENDING, EDGEWISE: 2250 PSI FOR 12-INCH NOMINAL-DEPTH MEMBERS.
   c. MODULUS OF ELASTICITY, EDGEWISE: 2,000,000 PSI.
2. PARALLEL STRAND LUMBER: STRUCTURAL COMPOSITE LUMBER MADE FROM WOOD STRAND ELEMENTS WITH GRAIN PRIMARILY PARALLEL TO MEMBER LENGTHS, EVALUATED AND MONITORED ACCORDING TO ASTM D5456 AND MANUFACTURED WITH AN EXTERIOR-TYPE ADHESIVE COMPLYING WITH ASTM D2559 AND CONTAINING NO UREA FORMALDEHYEDE.
   a. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
      i. WYERHAUSER COMPANY.
   b. EXTREME FIBER STRESS IN BENDING, EDGEWISE: 2900 PSI FOR 12-INCH NOMINAL-DEPTH MEMBERS.
   c. MODULUS OF ELASTICITY, EDGEWISE: 2,200,000 PSI.

METAL FRAMING ANCHORS NOTES:

1. PROVIDE FRAMING ANCHORS OF STRUCTURAL CAPACITY, TYPE, AND SIZE INDICATED, AND MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC.
2. ALLOWABLE DESIGN LOADS: PROVIDE PRODUCTS WITH ALLOWABLE DESIGN LOADS, AS PUBLISHED BY MANUFACTURER THAT MEET OR EXCEED THOSE INDICATED. MANUFACTURER'S PUBLISHED VALUES SHALL BE DETERMINED FROM EMPIRICAL DATA OR BY RATIONAL ENGINEERING ANALYSIS AND DEMONSTRATED BY COMPREHENSIVE TESTING PERFORMED BY QUALIFIED INDEPENDENT TESTING AGENCY.
3. EXPOSED METAL FRAMING CONNECTORS SHALL BE HOT-DIP, ZINC-COATED STEEL SHEET COMPLYING WITH ASTM A653/A653M, G60 (Z180) COATING DESIGNATION.
4. BRIDGING: RIDGE, V-SECTION, NAILLESS TYPE, 0.062-INCH THICK, LENGTH TO SUIT JOISTS SIZE AND SPACING.
5. HOLD-DOWNS: BRACKETS FOR BOLTING TO WALL STUDS AND SECURING TO FOUNDATION WALLS WITH ANCHOR BOLTS OR TO OTHER HOLD-DOWNS WITH THREADED RODS AND DESIGNED WITH FIRST OF TWO BOLTS PLACED SEVEN BOLT DIAMETERS FROM REINFORCED BASE, UNLESS NOTED OTHERWISE ON DRAWINGS.

WOOD-PRESERVATIVE-TREATED MATERIALS NOTES:

1. PRESERVATIVE TREATMENT BY PRESSURE PROCESS: AWPA C2 (LUMBER) AND AWPA C9 (PLYWOOD), EXCEPT THAT LUMBER THAT IS NOT IN CONTACT WITH THE GROUND AND IS CONTINUOUSLY PROTECTED FROM LIQUID WATER MAY BE TREATED ACCORDING TO AWPA C31 WITH INORGANIC BORON (SBX).
2. PRESERVATIVE CHEMICALS: ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION AND ONE OF THE FOLLOWING:
   a. CHROMATED COPPER ARSENATED (CCA).
   b. AMMONIACAL COPPER ZINC ARSENATE (ACZA).
   c. AMMONIACAL, OR AMINE, COPPER QUAT (ACQ).
   d. AMMONIACAL COPPER CITRATE (CC).
   e. COPPER AZOLE, TYPE A (CBA-A).
3. FOR EXPOSED ITEMS INDICATED TO RECEIVE A STAINED OR NATURAL FINISH, USE CHEMICAL FORMULATIONS THAT DO NOT REQUIRE INCISING, CONTAIN COLORANTS, BLEED THROUGH, OR OTHERWISE ADVERSELY AFFECT FINISHES.
4. KIL-DRY MATERIAL AFTER TREATMENT TO A MAXIMUM MOISTURE CONTENT OF 19 PECENT FOR LUMBER AND 15 PERCENT FOR PLYWOOD. DO NOT USE MATERIAL THAT IS WARPED OR DOES NOT COMPLY WITH REQUIREMENTS FOR UNTREATED MATERIAL.
5. MARK EACH TREATED ITEM WITH THE TREATMENT QUALITY MARK OF AN INSPECTION AGENCY APPROVED BY THE AMERICAN LUMBER STANDARDS COMMITTEE BOARD OF REVIEW.
6. FOR EXPOSED LUMBER INDICATED TO RECEIVE A STAIND OR NATURAL FINISH, MARK END OR BEACK OF EACH PIECE.
7. APPLICATION: TREAT ITEMS INDICATED ON DRAWINGS, AND THE FOLLOWING:
   a. WOOD CANTS, NAILEDS, CURBS, EQUIPMENT SUPPORT BASES, BLOCKING, STRIPPING, AND SIMILAR MEMBERS IN CONNECTION WITH ROOFING, FLASHING, VAPOR BARRIES, AND WATERPROOFING.
   b. WOOD SILLS, SLEEPERS, BLOCKING, FURRING, STRIPPING, AND SIMILAR CONCEALED MEMBERS IN CONTACT WITH MASONRY OR CONCRETE.
   c. WOOD FRAMING MEMBERS LESS THAN 18 INCHES ABOVE GRADE.
   d. WOOD FLOOR PLATES THAT ARE INSTALLED OVER CONCRETE SLABS DIRECTLY IN CONTACT WITH EARTH.

Areté ENGINEERS

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NORTH CAROLINA PROFESSIONAL SEAL 056645 ENGINEER MASON G. BUMGARNER 10/6/23

REV 3

Engineer:

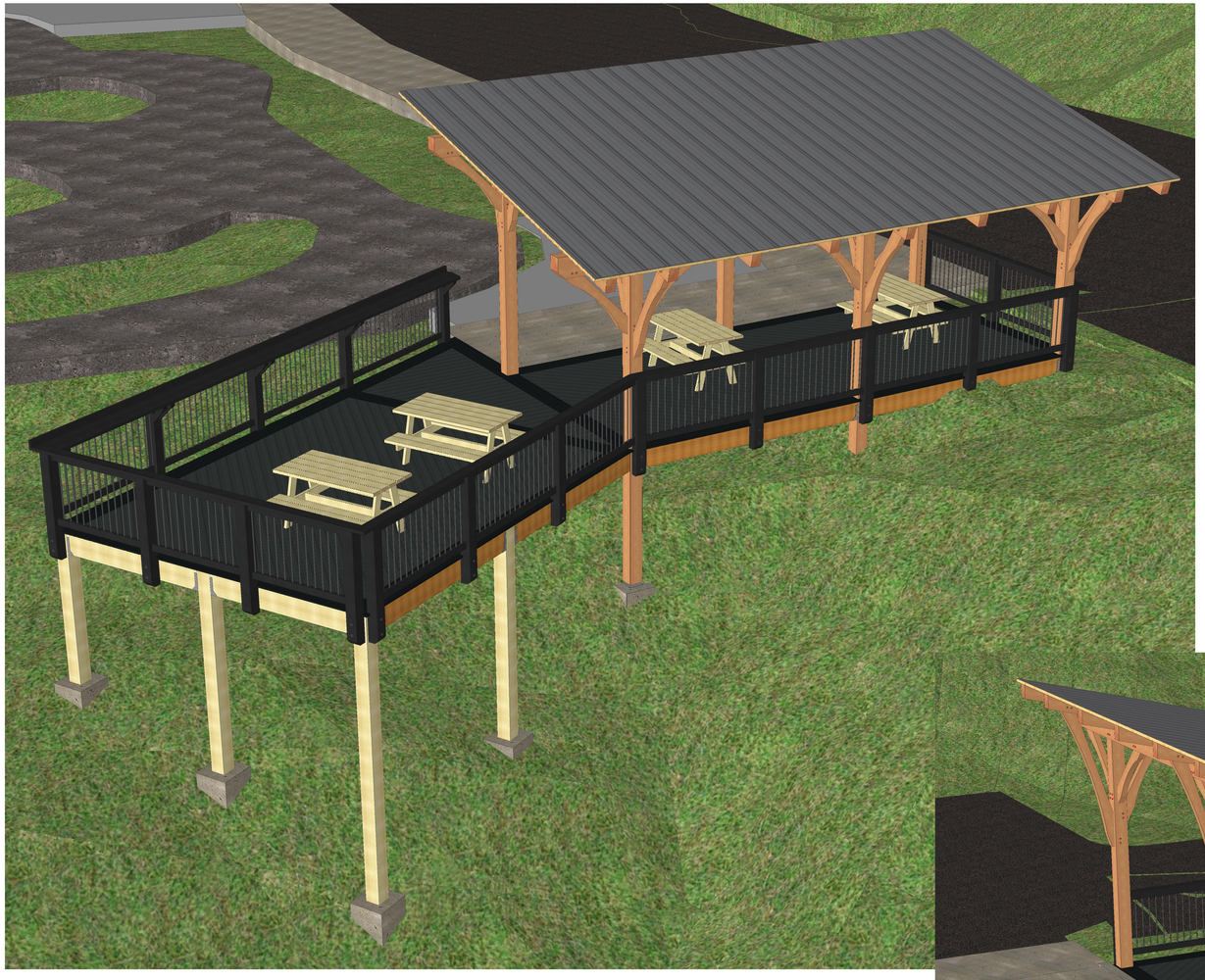
ROCKY KNOB SHELTER

Location: 285 Mountain Bike Way
Blowing Rock, NC 28605

Drawn By:	DMK	Date: 2-20-23
Review:		
Review		4-26-23
Review		6-7-23
Review		6-9-23
Review		6-16-23
Rev 1		7-21-23
Rev 2		9-12-23
Rev 3		10-6-23

Scale: Not to Scale

Sheet **S1**



Areté ENGINEERS

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605 W. King Street
Boone, NC 28607

NORTH CAROLINA PROFESSIONAL SEAL 050888 7/21/2023 ENGINEER TRISTAN SARREMEJANE

REV 1 : 7.21.2023

Engineer:

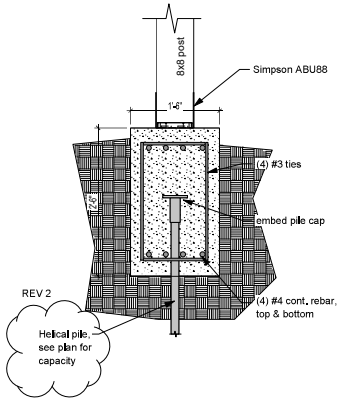
ROCKY KNOB SHELTER

Location: 285 Mountain Bike Way
Boone, NC 28607

Drawn By:	DMK	Date:	2-20-23
Review:			
Review			4-26-23
Review			6-7-23
Review			6-9-23
Review			6-16-23

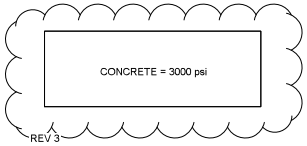
Scale: Not to Scale

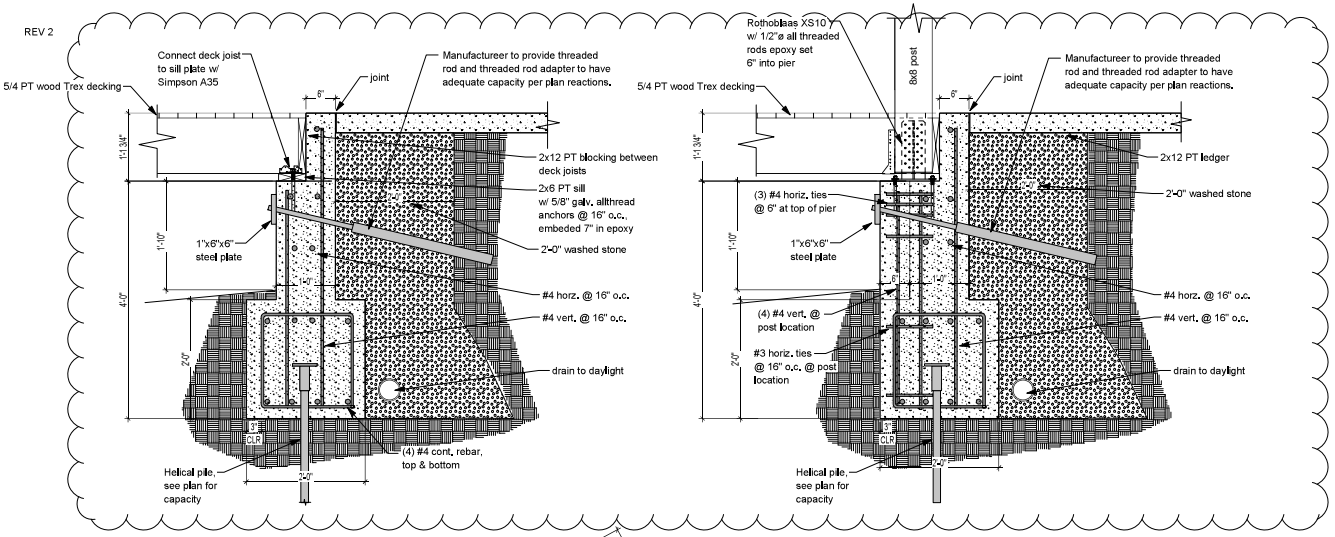
Sheet **S2**



1 FOUNDATION DETAIL

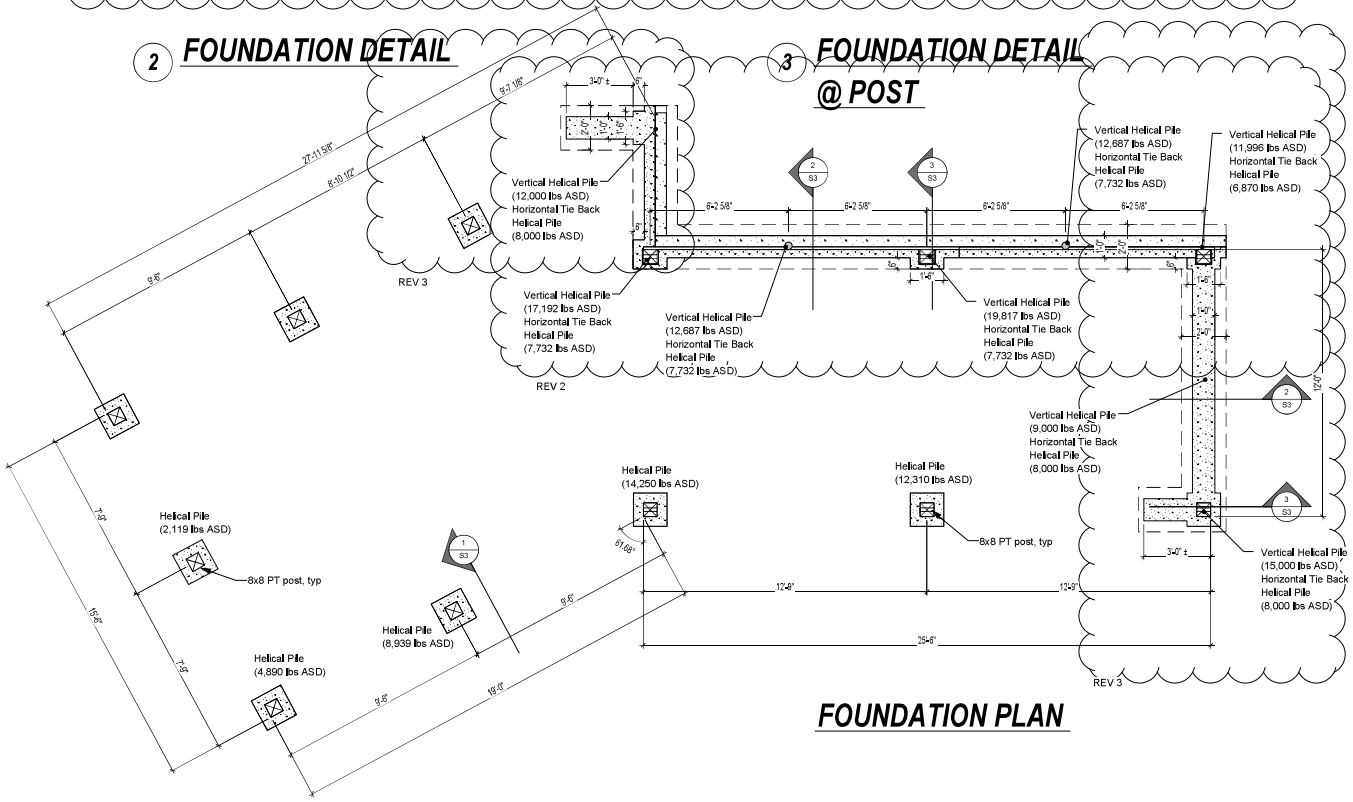
1" = 1'-0"





2 FOUNDATION DETAIL

3 FOUNDATION DETAIL @ POST



FOUNDATION PLAN

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NORTH CAROLINA PROFESSIONAL SEAL 056645 ENGINEER MASON G. BUMGARNER
REV 3

Engineer:

ROCKY KNOB SHELTER

Location: 285 Mountain Bike Way
Blowing Rock, NC 28605

Drawn By:	DMK	Date: 2-20-23
Review:		
Review		4-26-23
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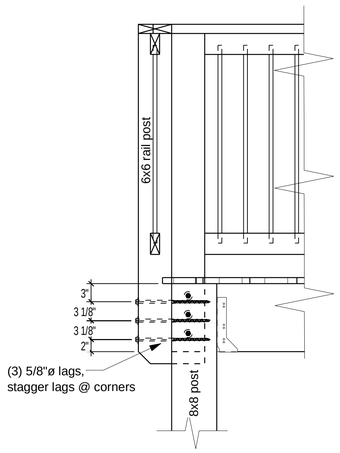
Review		6-9-23
Review		6-16-23
Rev 1		7-21-23
Rev 2		9-12-23
Rev 3		10-6-23

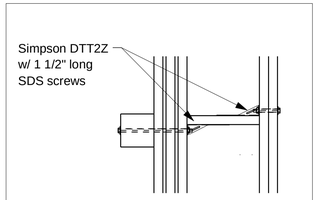
Scale: 3/8" = 1'-0"

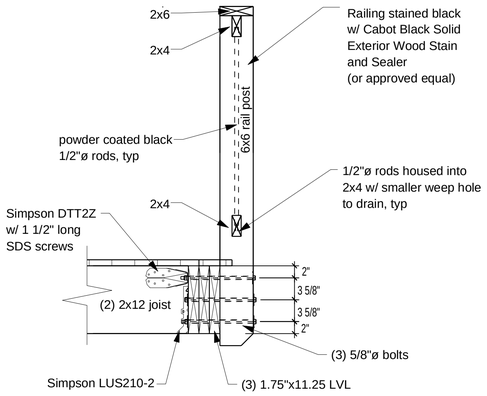
Sheet S3



4 DECK FRAMING DETAIL

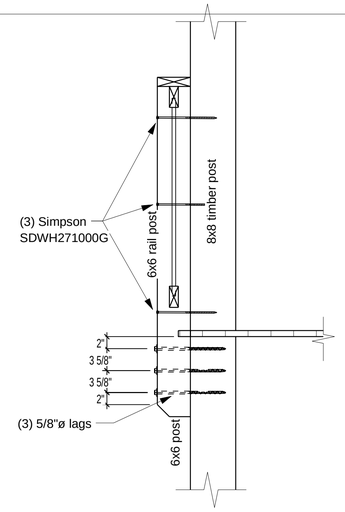
1" = 1'-0"





5 DECK FRAMING DETAIL

1" = 1'-0"

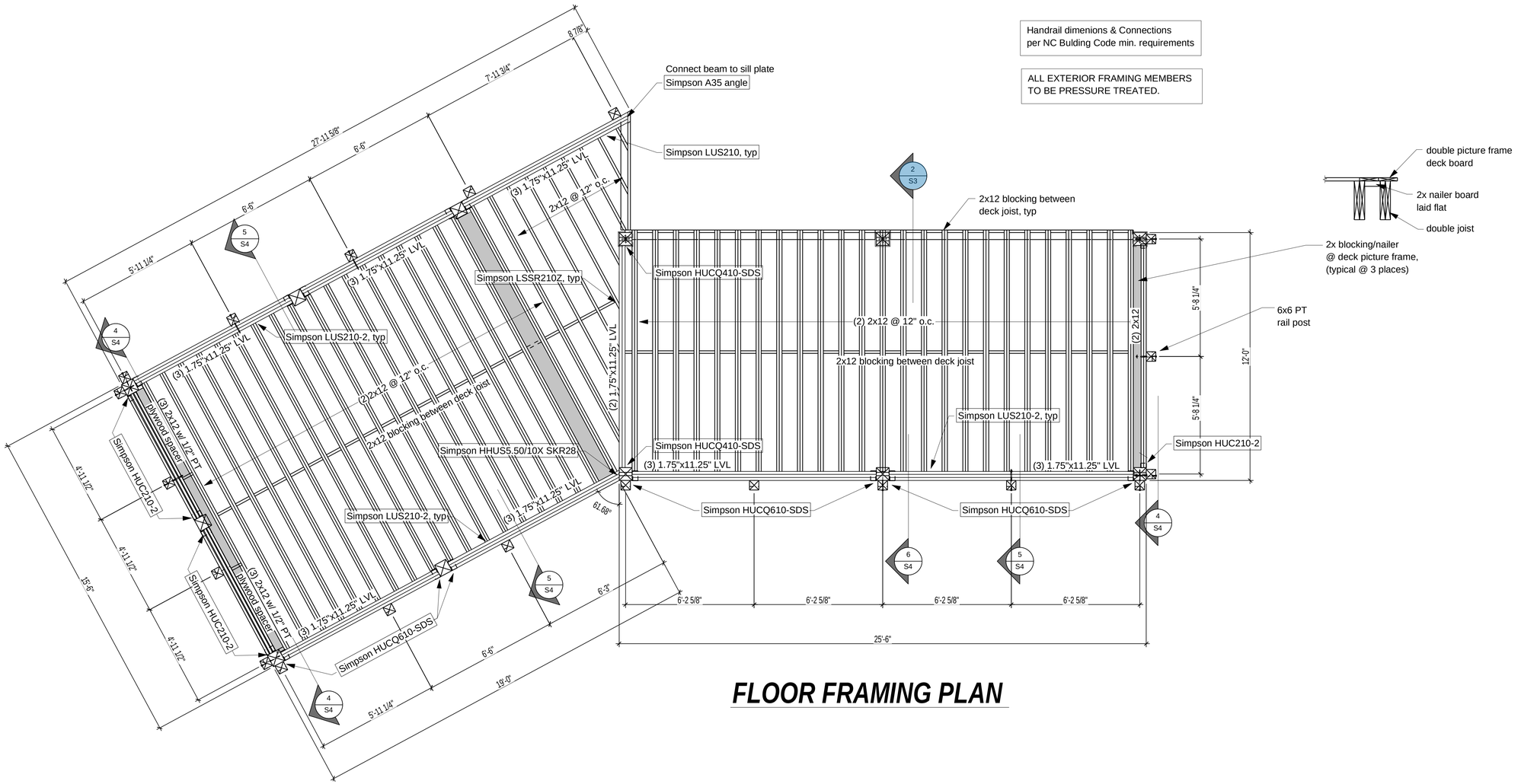


6 DECK FRAMING DETAIL

1" = 1'-0"

Handrail dimenions & Connections
per NC Bulding Code min. requirements

ALL EXTERIOR FRAMING MEMBERS
TO BE PRESSURE TREATED.



FLOOR FRAMING PLAN

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NORTH CAROLINA PROFESSIONAL SEAL 050888 7/21/2023 ENGINEER TRISTAN SARREMEJANE

REV 1 : 7.21.2023

Engineer:

ROCKY KNOB SHELTER

Location: 285 Mountain Bike Way
Boone, NC 28607

Drawn By:	DMK	Date: 2-20-23
Review:		
Review		4-26-23
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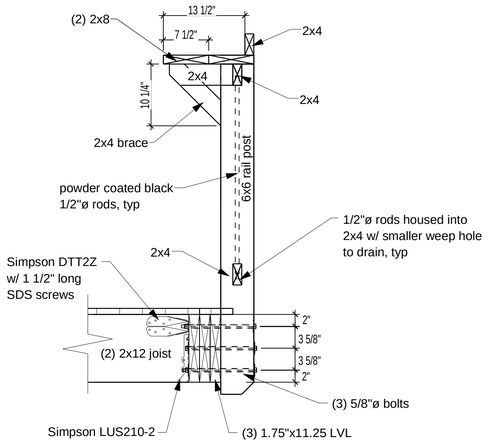
Review		6-9-23
Review		6-16-23

Scale: 3/8" = 1'-0"

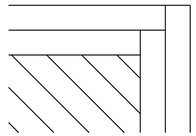
Sheet **S4**

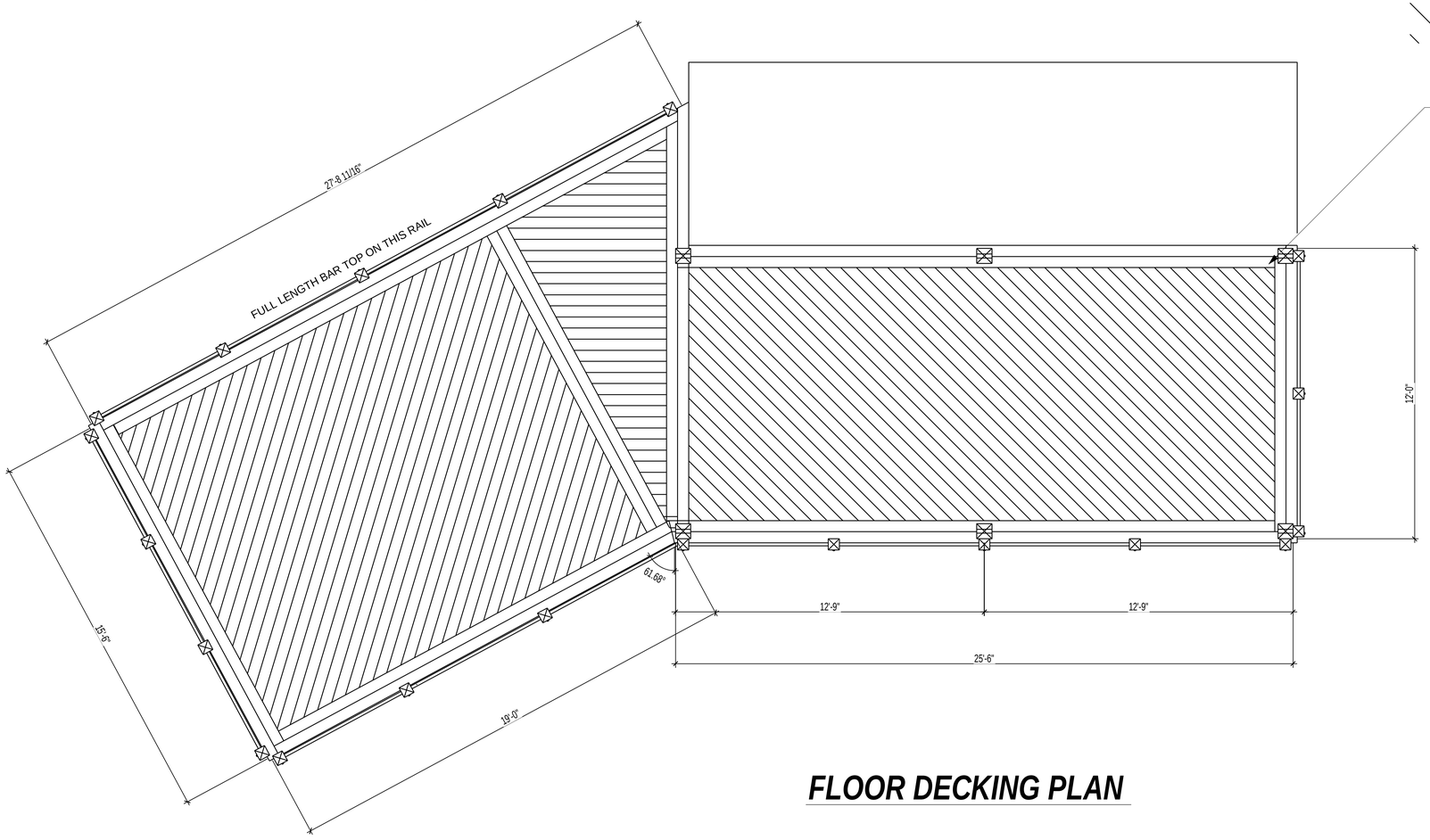


7 DECK FRAMING BAR TOP DETAIL

1" = 1'-0"

NOTES:
- BAND BOARD/PICTURE FRAME = TREX SELECT WINCHESTER GREY
- DECKING = TREX SELECT PEBBLE GREY
- DECK BOARDS TO BE SECURED W/ HIDDEN FASTENERS
- WHEN HIDDEN FASTENERS ARE NOT ABLE TO BE USED, SECURE DECKING BY FACE SCREWING. COUNTER SINK AND PLUG FACE SCREWS.





FLOOR DECKING PLAN

Areté ENGINEERS
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605 W. King Street
Boone, NC 28607

NORTH CAROLINA PROFESSIONAL SEAL 050888 ENGINEER TRISTAN SARREMEJANE 7/21/2023

REV 1 : 7.21.2023

Engineer:

ROCKY KNOB SHELTER

Location: 285 Mountain Bike Way
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Drawn By:	DMK	Date: 2-20-23
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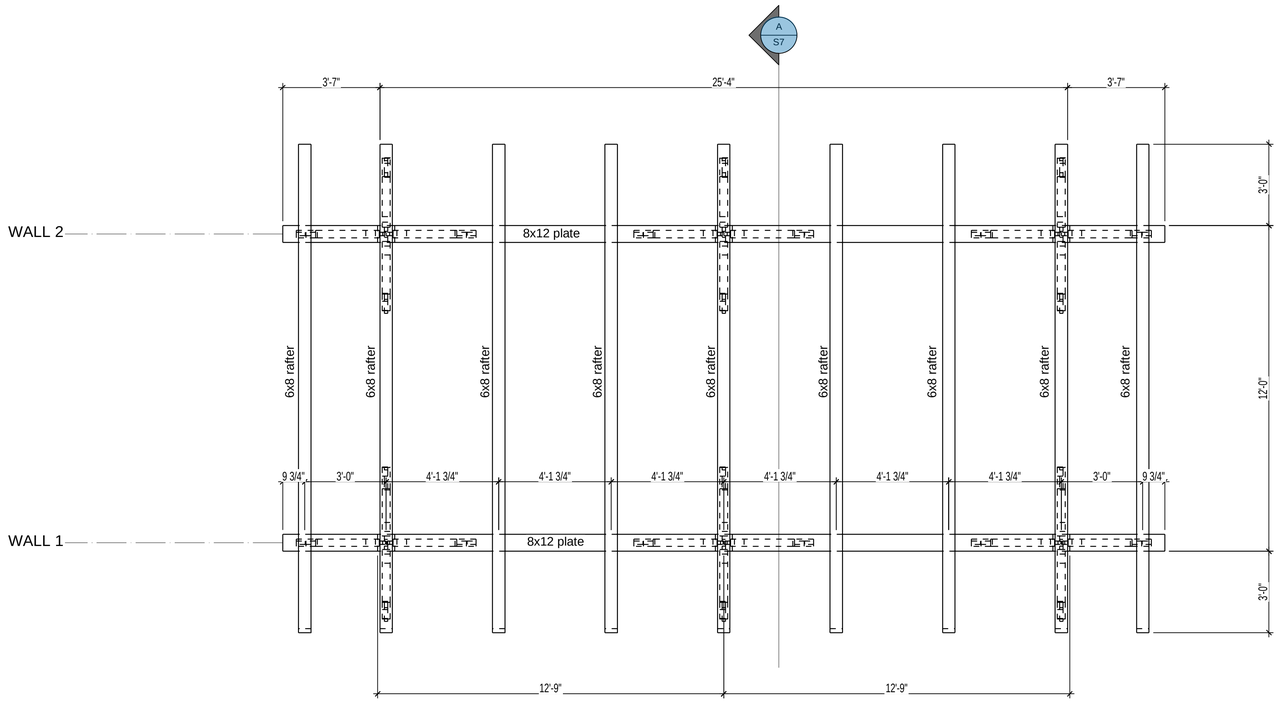
Review		6-9-23
Review		6-16-23

Scale: 3/8" = 1'-0"

Sheet **S5**



ROOF FRAMING PLAN

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NORTH CAROLINA PROFESSIONAL SEAL 050888 ENGINEER TRISTAN SARREMEJANE 7/21/2023

REV 1 : 7.21.2023

Engineer:

ROCKY KNOB SHELTER

Location: 285 Mountain Bike Way
Boone, NC 28607

Drawn By:	**DMK**	**Date: 2-20-23**
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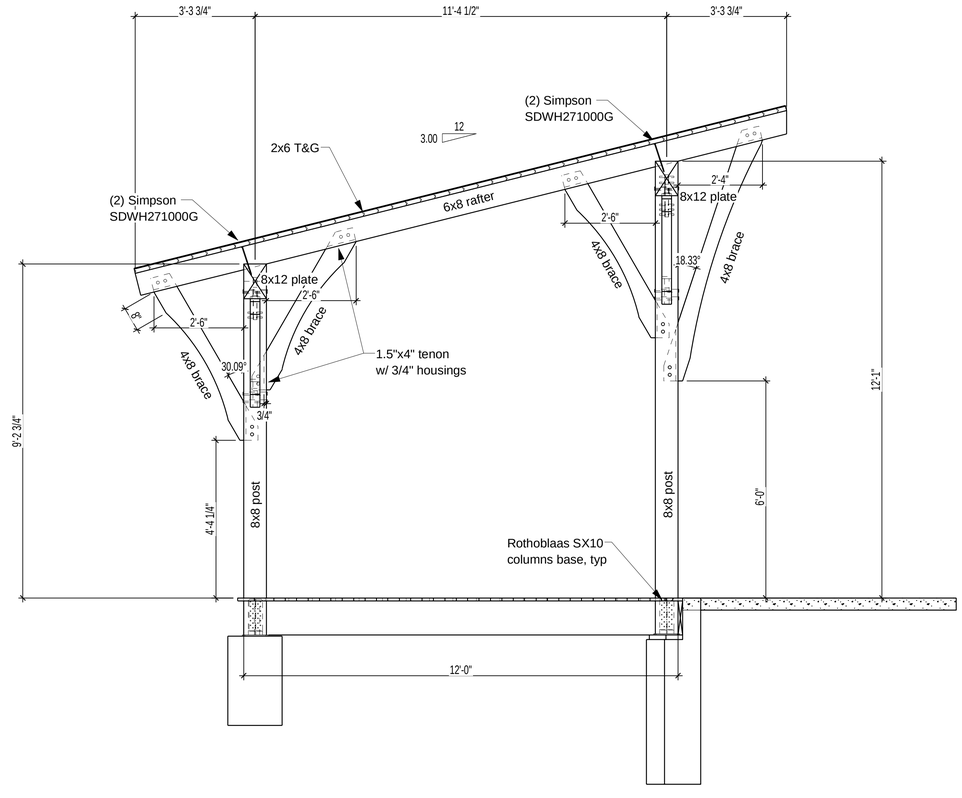
Review		**4-26-23**
Review		**6-7-23**
Review		**6-9-23**
Review		**6-16-23**

Scale: 3/8" = 1'-0"

Sheet **S6**

NOTES:
- TIMBER FRAME TO BE DOUGLAS FIR #1 OR BETTER
- ROOFING = STANDING SEAM METAL ROOF, GREY TO MATCH EXISTING WITH SYNTHETIC ROOFING UNDERLAYMENT (ICE AND WATER SHIELD), DRIP EDGE, RIDGE CAP, GABLE TRIM, FOAM ENCLOSURE STRIP
- CONTRACTOR TO PROVIDE MIN. x2 COATS OF SIKKENS STAIN. COORDINATE WITH OWNER FOR COLOR.



A SIDE ELEVATION

Areté ENGINEERS

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NORTH CAROLINA PROFESSIONAL SEAL 050888 7/21/2023 ENGINEER TRISTAN SARREMEJANE

REV 1 : 7.21.2023

Engineer:

ROCKY KNOB SHELTER

Location: 285 Mountain Bike Way
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Drawn By:	DMK	Date:	2-20-23
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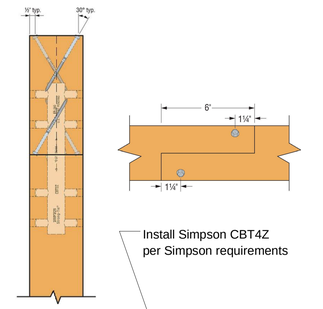
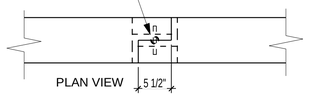
Review			6-16-23

Scale: 1/2" = 1'-0"

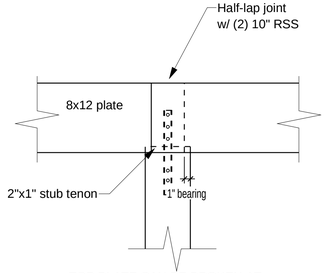
Sheet S7



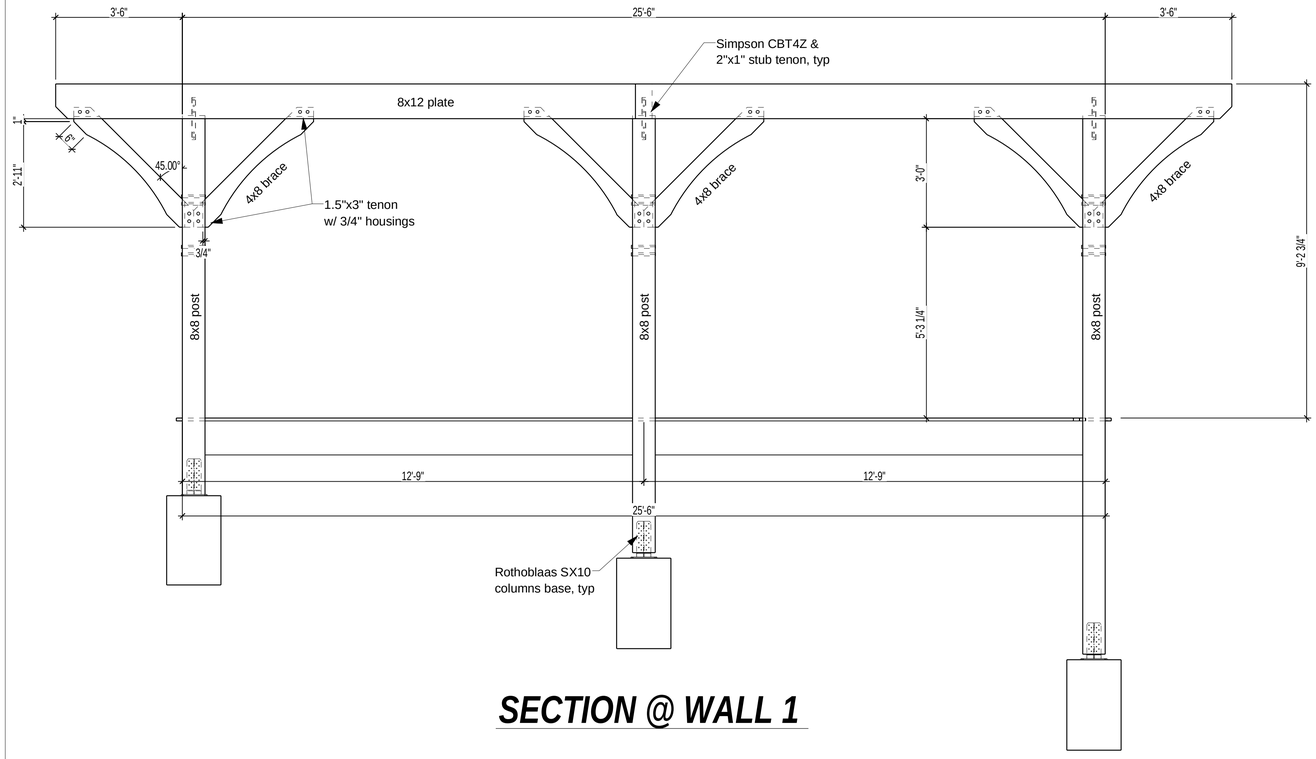
Install Simpson CBT4Z
per Simpson requirements



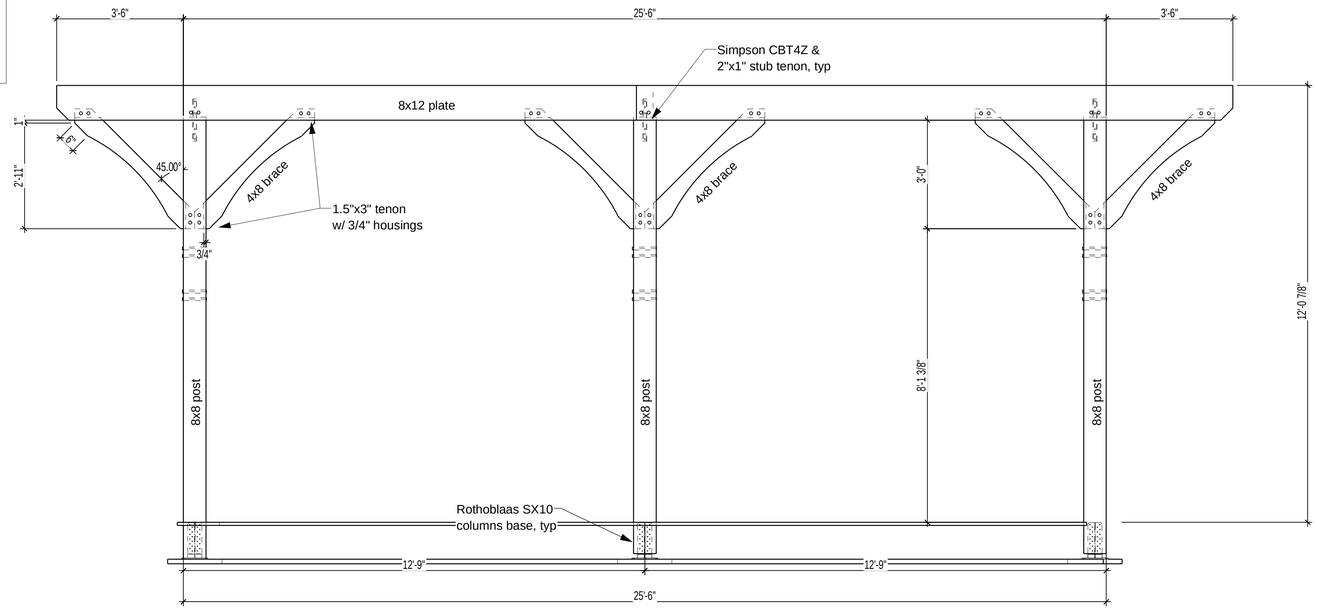
PLAN VIEW



TOP PLATE CAN BE BROKEN AT
CENTER POST W/ HALF-LAP JOINT
IF DESIRED.



SECTION @ WALL 1



SECTION @ WALL 2

Areté ENGINEERS

T. Shawn Ausel, PE 828-434-0857
Arete Engineers, PLLC
605 W. King Street
Boone, NC 28607

NORTH CAROLINA PROFESSIONAL SEAL 050888 ENGINEER TRISTAN SARREMEJANE 7/21/2023

REV 1 : 7.21.2023

Engineer:

ROCKY KNOB SHELTER

Location: 285 Mountain Bike Way
Boone, NC 28607

Drawn By:	DMK	Date: 2-20-23
Review:		
Review		4-26-23
Review		6-7-23
Review		6-9-23
Review		6-16-23

Scale: 1/2" = 1'-0"

Sheet **S8**

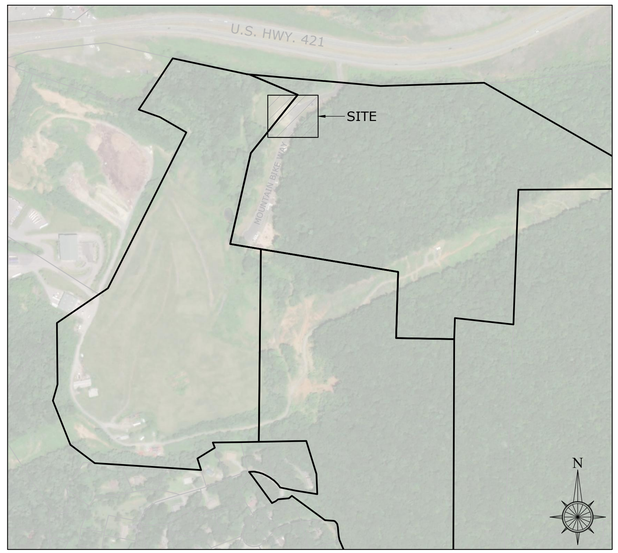
SHEET INDEX

SITE/CIVIL CONSTRUCTION DOCUMENTS FOR:

ROCKY KNOB PARK

285 MOUNTAIN BIKE WAY, BOONE NC 28607

VICINITY MAP



PREPARED BY:

DESTINATION BY DESIGN

PLANNING | ENGINEERING | COMMUNICATIONS

136 FURMAN ROAD, SUITE 6 BOONE, WATAUGA COUNTY, NC 28607
(828)386-1866

DRAWING SETS

NO.	DESCRIPTION:	BY:	DATE:
	ISSUED FOR BID	DBD	09/01/2023

CLIENT
WATAUGA COUNTY TDA
331 QUEEN STREET, SUITE 101
BOONE, NC 28607
(828)266-1345
CONTACT: L. WRIGHT TILLEY,
EXECUTIVE DIRECTOR

LANDSCAPE ARCHITECT/PROJECT MANAGER
DESTINATION BY DESIGN STUDIOS, PLLC
136 FURMAN ROAD, SUITE 6
BOONE, NC 28607
(828)386-1866
CONTACT: ALEX GOTHERMAN, PLA
(PROJECT MANAGER)

CIVIL ENGINEER
DESTINATION BY DESIGN ENGINEERING
136 FURMAN ROAD, SUITE 6
BOONE, NC 28307
(828)386-1866
CONTACT: JASON GASTON, PE

STRUCTURAL ENGINEER
ARETÉ ENGINEERS
7668 VALLEY BOULEVARD
BLOWING ROCK, NC 28605
(828)434-0587
CONTACT: BRIAN MULLEN, PE

TIMBER FRAME STRUCTURE
SOJOURN TIMBER DESIGN, LLC
301 FOUR HORSE LANE
SUGAR GROVE, NC 28679
(828)773-7040
CONTACT: DANIEL KISER

BEGINNING
Existing 5/8" Rebar
located N 38°21'01" W 251.58' (GROUND)
from GPS Control Point #2

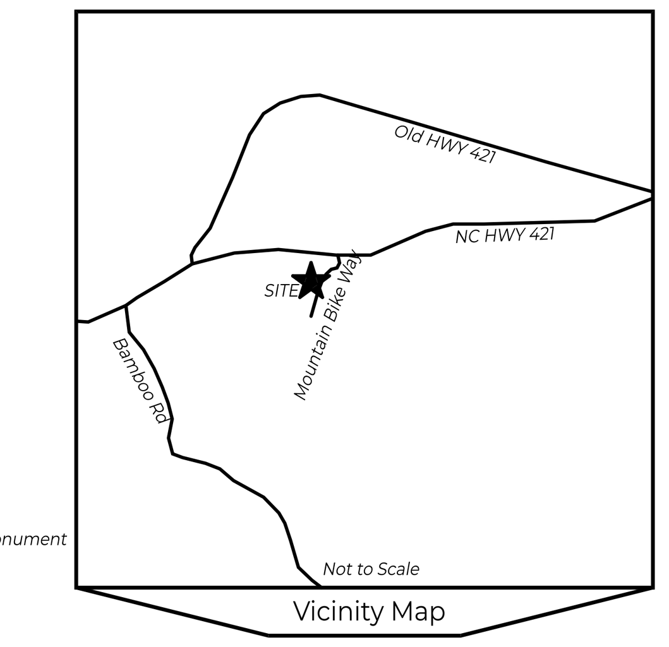
NOTES:

1) This is a Topographic survey of a portion of the lands conveyed to Watauga County by deeds recorded in Book of Records 248 at page 146 and by deed recorded in Book of Records 1487 at page 851 (also see Plat Book 22 at page 36) all of the Watauga County Public Registry.
2) Bearings are relative to NCGS NAD '83 per GPS ties, see surveyors certificate.
3) All distances are horizontal measurements.
4) Elevations are based on NAVD '88 by ties to GPS control (see surveyors GPS certificate). Contour Interval is One Foot.
5) The ratio of precision of the unadjusted field traverse loop is not more than 1:10,000 and was adjusted by Least Squares (Star*Net).
6) This parcel is located in a Zone "X" (an area outside the 0.2% annual chance of flooding) per the North Carolina Floodplain Mapping Program.
7) This property is not inside of a protected watershed per NCDENR GIS maps.
8) This plat reflects information discovered during the normal course of work and does not necessarily show every possible condition affecting the property. 811 was contacted for a utility locate. Orange markings were present to the south beyond the restrooms facilities (not shown on this map but approximately 450 feet south of the the picnic table shown hereon) leading towards the landfill property. No other markings were observed by surveyor in the subject area that was requested. Additional underground utilities may exist outside the subject area which are not shown hereon. The property may be subject to easements and/or rights of way of record not shown. Other easements, rights of way, building ordinances, zoning, and other legal encumbrances may also exist.
9) Reference was made to NCDOT Project 6.759003T Plans.
10) Revised November 9, 2022 to show new pump track area. Topographic Lines generated on November 9 are shown in legend. No additional field was performed outside this subject area.
11) Revised August 24, 2023 to add location of existing 18" CPP #2 as shown on prior survey by New River Land Surveying.

N
NCGS NAD '83 (2011)
Grid North

Drainage Pipe Inverts:

	Invert In "A"	Invert Out "B"
18" CPP #1	3,237.87'	3,226.75'
18" CPP #2	3,239.30'	3,228.32'
18" CPP #3	3,239.62'	3,237.07'
4" CPP #1	3,240.41'	3,238.10'
4" CPP #2	3,240.37'	3,237.89'



Vicinity Map

Legend

- Iron Found (as described)
- 5/8" Rebar Set (or as described)
- Computed Point (no iron set)
- Lines Surveyed
- Adjoiner Lines
- Right-of-Way
- Utility Lines
- Building Setback Lines
- River or Stream
- Minor Contours (1') (6/24/2022)
- Major Contours (5') (6/24/2022)
- Minor Contours (1') (11/9/2022)
- Major Contours (5') (11/9/2022)
- Yard Drain (typ)

Surveyor's Certificate

I, Alexander W. Crowe, certify that this map was drawn under my supervision from an actual survey made under my supervision (deed description recorded in Book/Page : as noted or other reference source); that the boundaries not surveyed are indicated as drawn from information in Book page or other reference source ; that the ratio of precision or positional accuracy is 1:10,000 ; and that this map meets the requirements of The Standards of Practice for Land Surveying in North Carolina (21 NCAC 56.1600) witness my original signature and seal this 24th day of august 20 23.

Surveyors GPS Certificate

I, Alexander W. Crowe, P.L.S., L-5337, certify that this map was drawn under my supervision and that the horizontal and vertical grid control was established fron an actual GPS Survey made under my supervision and the following information was used to perform the survey:

(1) Class of survey: Class A
(2) Positional accuracy: Horizontal: 0.03' Vertical: 0.09'
(3) Type of GPS field procedure: NC VRS NETWORK
(4) Dates of survey: 5/4/22 & 5/6/22
(5) Datum/Epoch: NAD'83(2011)(EPOCH: 2010.0000)
(6) Published/Fixed-control used: NC VRS NETWORK
(7) Geoid model: GEOID18
(8) Combined grid factor: 0.9998566
(9) Units: US. Survey Foot

NORTH CAROLINA PROFESSIONAL SEAL L-5337 LAND SURVEYOR ALEXANDER W. CROWE

Alexander W. Crowe, PLS L-5337

NEW RIVER LAND SURVEYING

1608 Highway 194 N, Boone, North Carolina 28607 ----- (828) 268-9779 License # P-2146

Topographic Survey prepared for

Watauga County District U Tourism Development Authority

New River Township ~ Watauga County
North Carolina

June 24, 2022 (Original Topo)
November 9, 2022 (New Topo Area)
August 24, 2023 (Revision 1)

Scale is 1"=20' (1:240)
0 20' 40' 60' 80'

Contour Interval is One Foot

Job Number: 22057