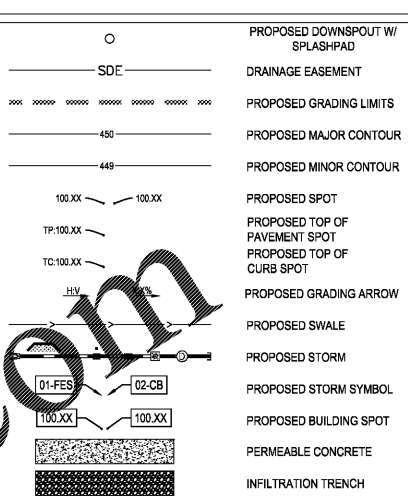


G:\NCA\Projects\Rock Properties\6191-01 - Firestone Garner, NC\03 - DWG\PlanSheets\C4-0 - GRADING PLAN.dwg Layout: GradeStm Plan Plotted: 10/31/2019 8:32:03 AM

TOTAL DISTURBED AREA:
0.99 AC.

STORM SEWER STRUCTURE DATA TABLE								
STRUCTURE NAME	RIM ELEV.	PIPE SIZE (IN.)	INV. IN.	PIPE SIZE OUT (IN.)	INV. OUT.	PIPE OUT LENGTH (FT.)	PIPE OUT SLOPE	TO NODE
DRIVEWAY PIPE OUTLET	315.15	CLASS V 18"	313.35 (N)					
DRIVEWAY PIPE INLET	315.44			18" (S)	313.04 (S)	57	0.50%	DRIVEWAY PIPE OUTLET
OS-1	318.87			15" (S)	318.42 (S)	37	0.94%	MH-2
MH-2	320.21	CLASS IV 18"	315.07 (N)	18" (SW)	315.87 (SW)	93	0.74%	MH-3
MH-3	319.20	CLASS IV 18"	314.93 (E)	18" (W)	314.91 (W)	80	0.50%	FES-1
FES-1	316.71	CLASS IV 18"	314.50 (E)					
EXISTING PIPE CONNECTION	317.33			18" (W)	315.53 (W)	85	0.92%	MH-3

PROPOSED GRADING AND DRAINAGE LEGEND



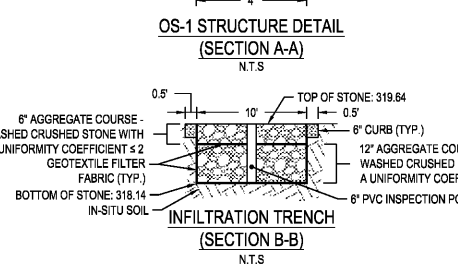
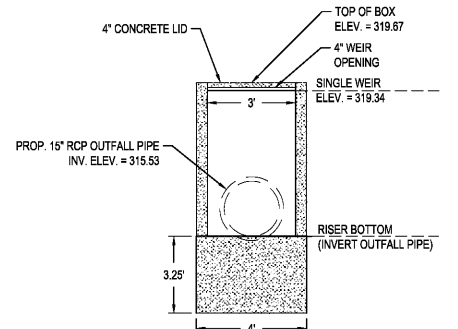
PERVIOUS CONCRETE CONSTRUCTION SEQUENCE

NOTE: PRIOR TO INSTALLATION OF CONCRETE, CONCRETE MIX SHOP DRAWINGS SHALL BE SUBMITTED TO JOHNSTON COUNTY FOR REVIEW AND APPROVAL. CONSTRUCTION MAY NOT COMMENCE UNTIL THE MIX DESIGN IS APPROVED. THE CONCRETE SHALL BE INSTALLED BY A QUALIFIED CONTRACTOR THAT IS EXPERIENCED IN PERVIOUS CONCRETE INSTALLATION.

- IN ORDER TO PROTECT THE PERVIOUS CONCRETE FROM CLOGGING, INSTALLATION OF THE CONCRETE SHALL NOT COMMENCE UNTIL ALL AREAS DRAINING TO IT ARE STABILIZED.
- CONTRACTOR SHALL INSTALL TEMPORARY DIVERSION AND EROSION CONTROL FEATURES TO DIRECT STORMWATER AWAY FROM THE PERMEABLE CONCRETE AREAS UNTIL IT IS CONSTRUCTED.
- WHERE POSSIBLE, EXCAVATION SHOULD WORK FROM THE SIDES AND OUTSIDE THE FOOTPRINT OF THE PERMEABLE PAVEMENT AREA IN ORDER TO PREVENT COMPACTION OF THE IN-SITU SOIL.
- IN-SITU SOILS SHALL BE SCARIFIED OR TILLED TO A DEPTH OF 4 INCHES AND GRADED PRIOR TO PLACEMENT OF AGGREGATE.
- SPREAD SUBGRADE AGGREGATE IN LIFTS WITH A MAXIMUM DEPTH OF 8 INCHES. MOISTEN THE AGGREGATE AND COMPACT EACH LIFT WITH A 10 TON ROLLER IN 2 PASSES IN STATIC MODE OR ROLLER WITH A VISIBLE MOVEMENT OF THE AGGREGATE. TAKE CARE NOT TO CRUSH THE AGGREGATE WITH THE ROLLER.
- PAVING MATERIAL SHOULD BE INSTALLED ACCORDING TO ACI SPECIFICATION 522.1.
- ONCE INSTALLATION IS COMPLETE, THE CONTRACTOR SHALL TEST THE INFILTRATION RATE OF THE PERVIOUS CONCRETE WITH THE METHODS DESCRIBED IN ASTM C1701.

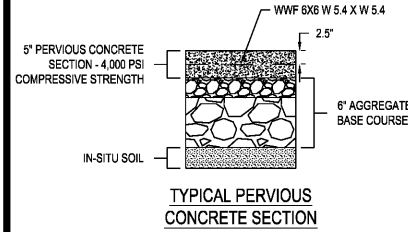
IMPERVIOUS AREA SUMMARY

TOTAL SITE AREA: 49,034 SF (1.13 AC)
 EXISTING IMPERVIOUS AREA: 8,015 SF (0.18 AC)
 EXISTING OPEN AREA: 41,208 SF (0.95 AC)
 PROPOSED BUILDING AREA: 6,116 SF
 PROPOSED SIDEWALK AREA: 562 SF
 PROPOSED NEW PAVEMENT: 8,909 SF
 PROPOSED PERVIOUS PAVEMENT AREA (COUNTS AS OPEN SPACE, NOT IMPERVIOUS): 10,746 SF (0.25 AC)
 TOTAL NEW IMPERVIOUS AREA: 15,586 SF (0.36 AC)
 IMPERVIOUS AREA PERCENTAGE: 40.7%
 TOTAL NEW OPEN AREA: 14,876 SF (0.34 AC)



GRADING NOTES

- SEE GENERAL NOTES AND GRADING NOTES (SHEET C0-1) FOR OVERALL PAVING, GRADING AND DRAINAGE REQUIREMENTS.
- CONTRACTOR SHALL REVIEW, UNDERSTAND AND IMPLEMENT ALL REQUIRED EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO ANY DISTURBANCE.
- ALL SPOT ELEVATIONS ALONG PAVEMENT REPRESENT FINISHED GRADE ELEVATION UNLESS OTHERWISE NOTED.
- ALL PROPOSED STORM PIPE TO BE CLASS III RCP UNLESS OTHERWISE NOTED.
- ALL STRUCTURES SHALL BE ADJUSTED AS NECESSARY TO BE FLUSH WITH FINAL PAVEMENT.
- CONTRACTOR SHALL PROVIDE SMOOTH TRANSITION BETWEEN PROPOSED PAVEMENT AND EXISTING PAVEMENT AND STORM STRUCTURES.
- CONTRACTOR SHALL COORDINATE PAVING IMPROVEMENTS TO AVOID TIRE MARKS FROM CONSTRUCTION ACTIVITY. FINAL PAVING SHALL BE AS SMOOTH AS POSSIBLE AND FREE FROM ANY MARKS, SCRAPES, GOUGES, TIRE MARKS, ETC. CAUSED DURING CONSTRUCTION.
- DURING CONSTRUCTION AND AFTER FINAL GRADING, NO SURFACE WATER RUNOFF MAY BE DIRECTED TO ADJACENT PROPERTIES, AND ALL SURFACE WATER RUNOFF MUST BE ROUTED TO APPROVED DRAINAGE FACILITIES OR BE RETAINED ON SITE. ALL RUNOFF FROM THE SITE, BOTH DURING AND AFTER CONSTRUCTION, MUST BE FREE OF POLLUTANTS, INCLUDING SEDIMENT, PRIOR TO DISCHARGE.
- SEE SHEET C2-0 FOR INFORMATION ON THICKNESS OF PERMEABLE CONCRETE PAVEMENT AREAS.

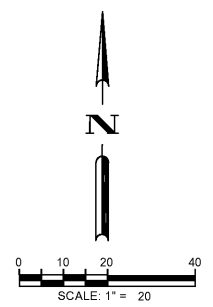


NOTE - PERVIOUS CONCRETE SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH ACI 522R-10 & ACI 522.1-13. REFER TO GEOTECHNICAL ENGINEER FOR ADDITIONAL GUIDANCE.

- PERMEABLE PAVEMENT AREA 1**
 PERMEABLE PAVEMENT SURFACE AREA: 968 SF
 ADDITIONAL BUA TO PERMEABLE PAVEMENT: 438 SF
 REQ'D AGGREGATE DEPTH FOR WATER QUALITY: 3"
 PROVIDED AGGREGATE DEPTH: 6"
 DRAWDOWN TIME: 14.5 HOURS
- PERMEABLE PAVEMENT AREA 2**
 PERMEABLE PAVEMENT SURFACE AREA: 4,154 SF
 ADDITIONAL BUA TO PERMEABLE PAVEMENT: 3,952 SF
 REQ'D AGGREGATE DEPTH FOR WATER QUALITY: 4.9"
 PROVIDED AGGREGATE DEPTH: 6"
 DRAWDOWN TIME: 19.5 HOURS
- PERMEABLE PAVEMENT AREA 3**
 PERMEABLE PAVEMENT SURFACE AREA: 5,689 SF
 ADDITIONAL BUA TO PERMEABLE PAVEMENT: 4,233 SF
 REQ'D AGGREGATE DEPTH FOR WATER QUALITY: 4.4"
 PROVIDED AGGREGATE DEPTH: 6"
 DRAWDOWN TIME: 19.1 HOURS

Order Plans

ROWAN ASSET COMPANY LLC
 DEED BOOK 3536, PAGE 608
 LOT 1A - BIRKSHIRE BUSINESS PARK
 PLAT BOOK 75, PAGE 35
 NC PIN NUMBER: 162700-03-4664



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firestone
 COMPLETE AUTO CARE
 N.C. HIGHWAY 42
 GARNER, JOHNSTON COUNTY, NC 27529

GRADING AND DRAINAGE PLAN

FILE NUMBER: 6191-01
 DATE: 07/24/19
 C3-0

DESIGNED BY:	JOB	
DRAWN BY:	JOB	
REVIEWED BY:	ECH	
REV	DATE	DESCRIPTION