

2024 Jackson Park and
County Facilities Paving
for
Henderson County

Henderson County
North Carolina

SITE PLANS

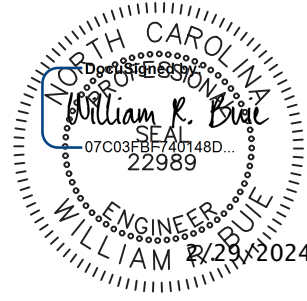
SHEET NO.	DESCRIPTION
C-100	PAVING LOCATION MAP
C-101A	JACKSON PARK MAINTENANCE BUILDING
C-101B	JACKSON PARK MAINTENANCE BUILDING - STORMWATER ADD/ALT
C-102	4TH AVENUE PAVING AND BRIDGE RESURFACING
C-103	JACKSON PARK ROAD
C-104	COOPERATIVE EXTENSION
C-105	HEALTH AND HUMAN SERVICES
C-106	CENTRAL SERVICES
C-107	HENDERSON COUNTY GARAGE
C-108	EDNEYVILLE LIBRARY
C-109	PROBATION AND PAROLE DEPARTMENT
C-110	ANIMAL SHELTER
C-111	PAVING DETAILS
C-112	PAVING DETAILS
C-113	ADD/ALTERNATE STORMWATER DETAILS

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REVISIONS	
DATE	DESCRIPTION

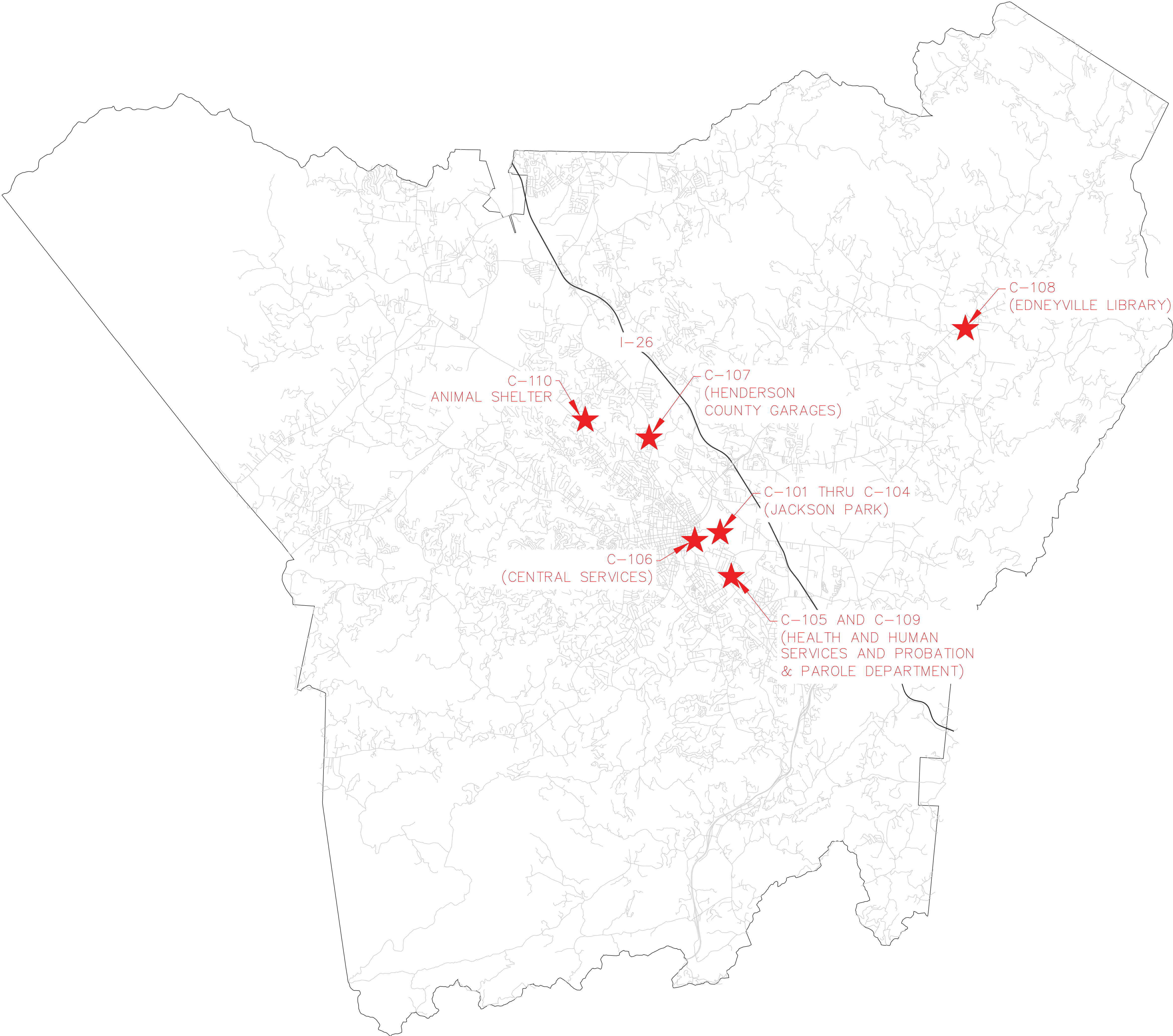


PROJECT NUMBER: 23199
DATE: 1/24

Cover Sheet

C-000

SCALE: NOT TO SCALE

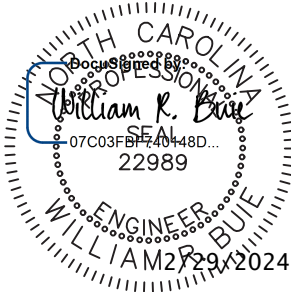


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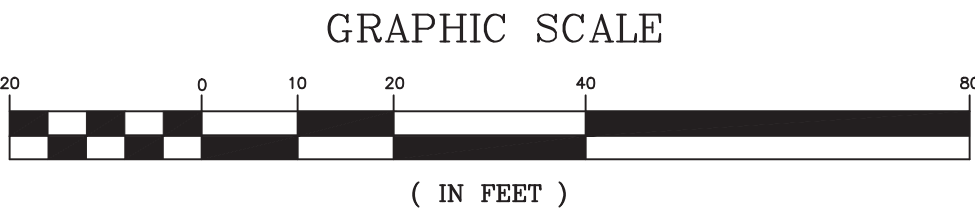


PROJECT NUMBER: 23199
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PAVING
LOCATION
MAP

C-100

SCALE: NOT TO SCALE



- NOTES:**
1. COMPACT EXISTING STONE AND INSTALL 4" OF ADDITIONAL STONE SUBGRADE ACROSS PROPOSED PARKING AREA. COORDINATE PROOF ROLL WITH ENGINEER PRIOR TO INSTALLING NEW ASPHALT.
 2. NEW PARKING LOT TO BE INSTALLED AT A MIN. GRADE OF 2% WITH A MAX GRADE OF 5% IN ANY DIRECTION.

LEGEND:

	4" OF ADDITIONAL STONE SUBGRADE W/ 2" NEW ASPHALT
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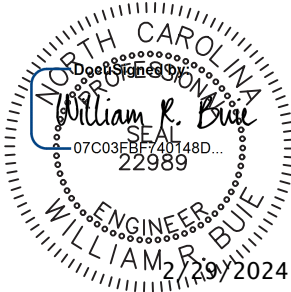


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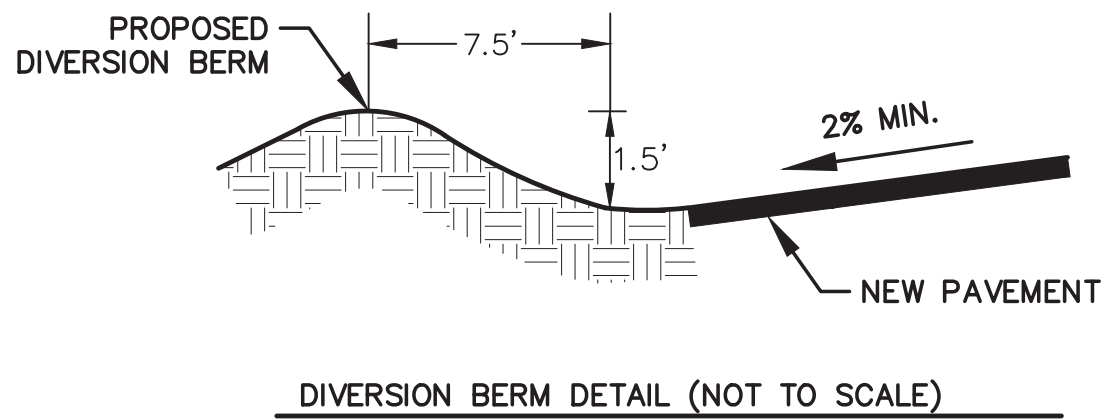
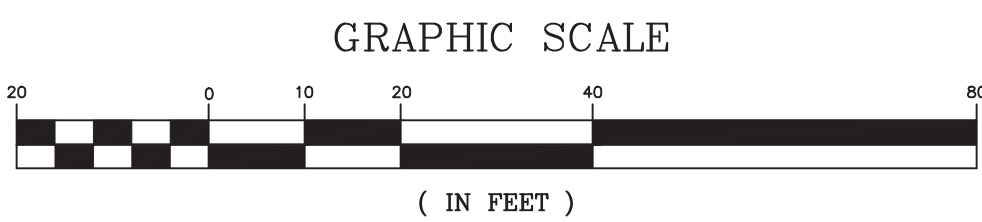


PROJECT NUMBER: 23199
DATE: 1/24

JACKSON PARK
MAINTENANCE
BUILDING
PARKING LOT

C-101A

SCALE: 1"=20'

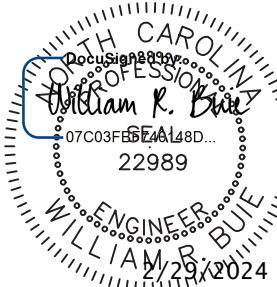


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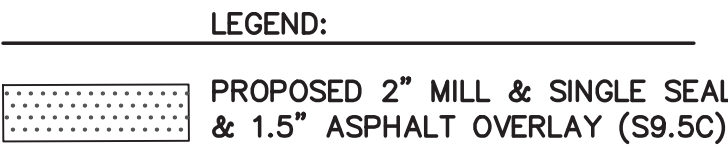
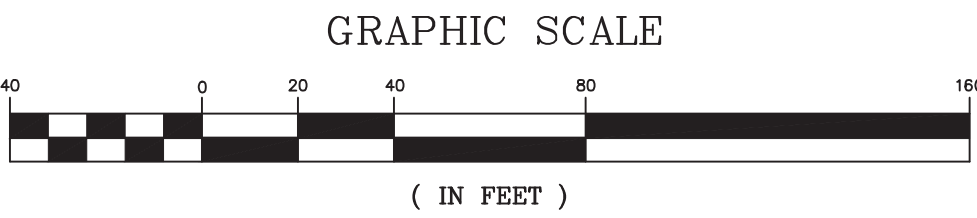
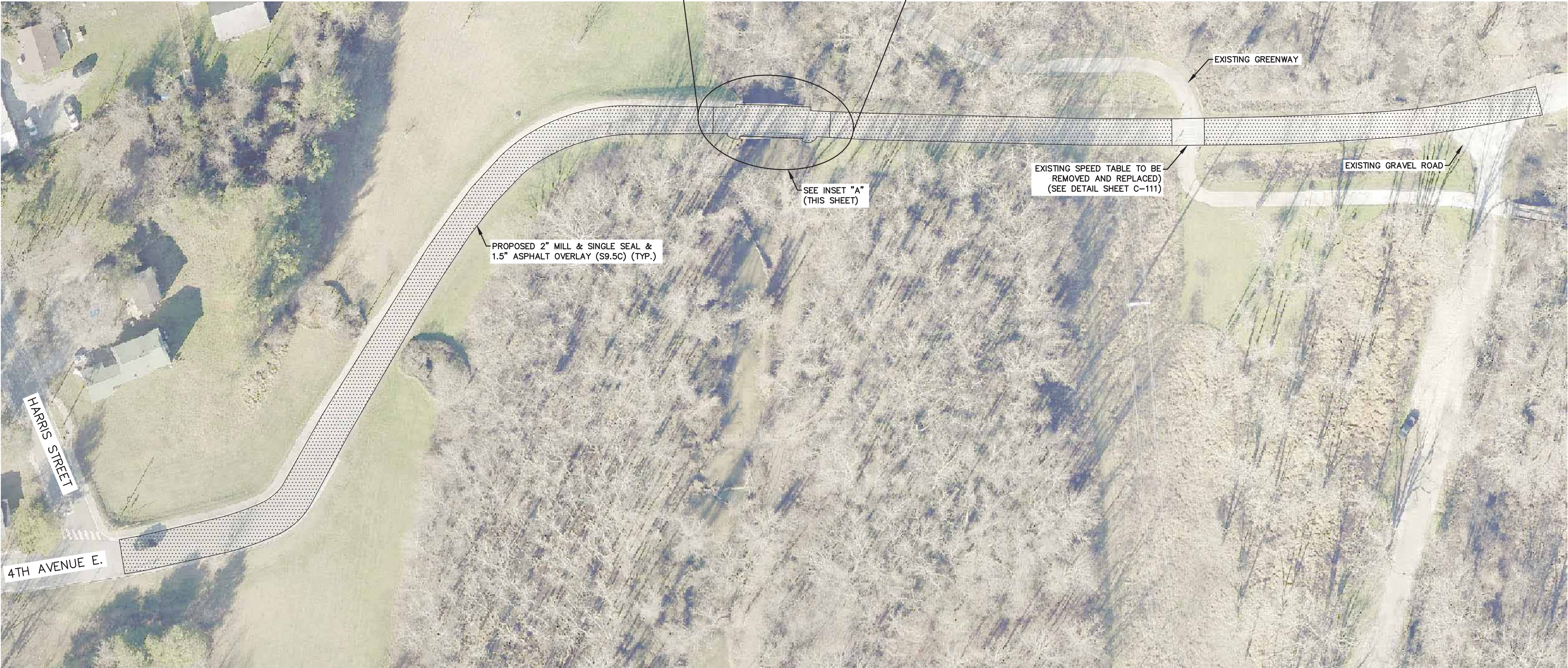
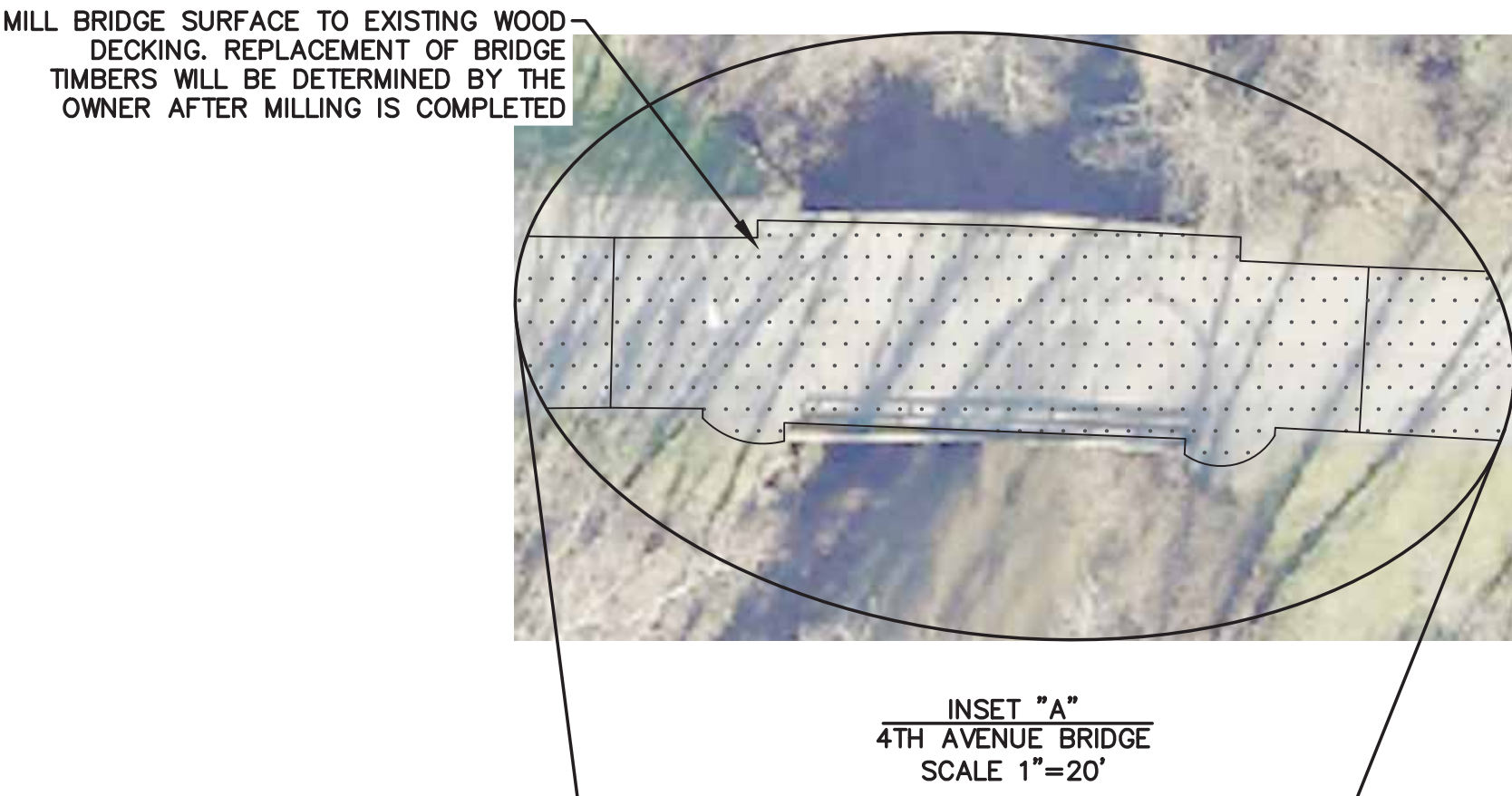


PROJECT NUMBER: 23199
DATE: 1/24

MAINTENANCE
BUILDING
STORMWATER
ADD/ALT

C-101B

SCALE: 1"=20'

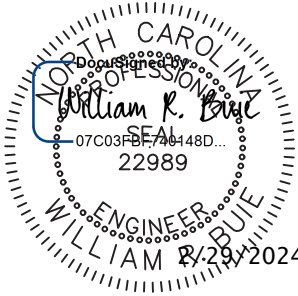


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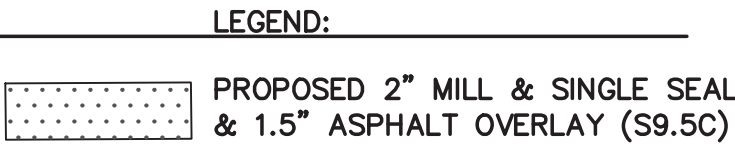
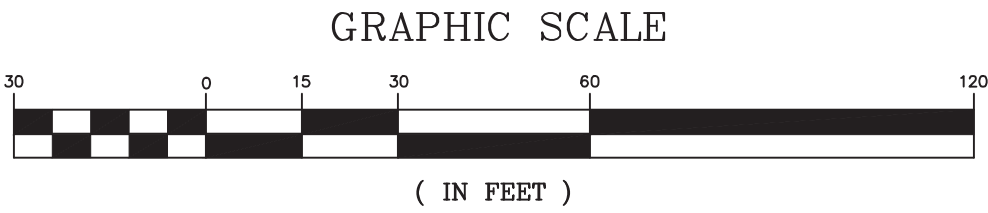


PROJECT NUMBER: 23199
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4TH AVENUE
PAVING
AND BRIDGE
RESURFACING

C-102

SCALE: 1"=40'

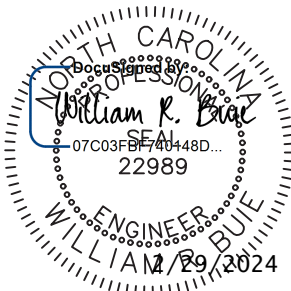


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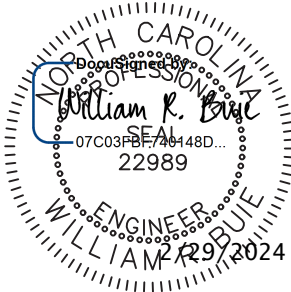
JACKSON PARK
ROAD

C-103

SCALE: 1"=30'

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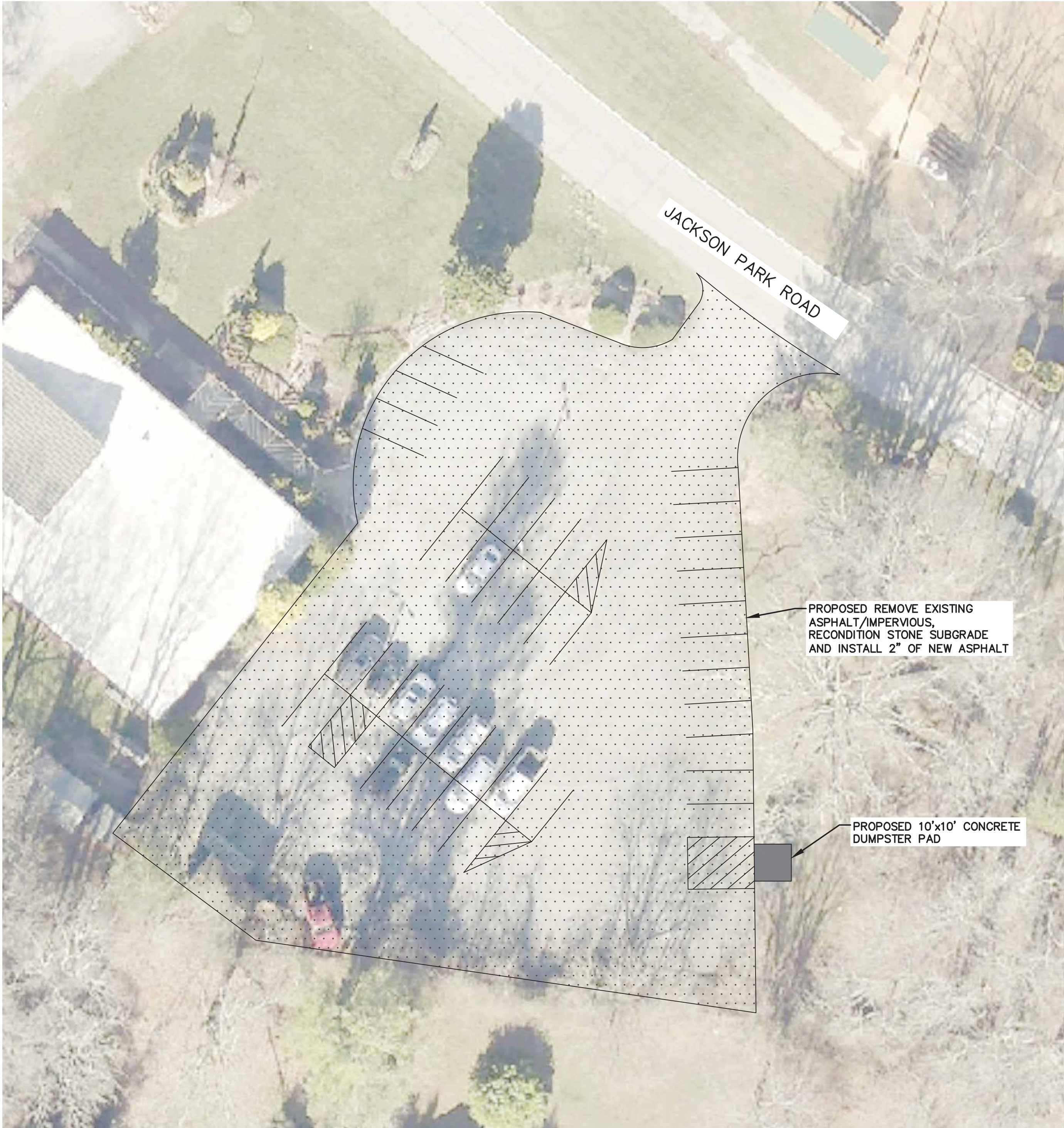


PROJECT NUMBER: 23199
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COOPERATIVE
EXTENSION

C-104

SCALE: 1"=20'



LEGEND:

 PROPOSED REMOVE EXISTING ASPHALT/IMPERVIOUS, RECONDITION STONE SUBGRADE AND INSTALL 2" OF NEW ASPHALT

GRAPHIC SCALE



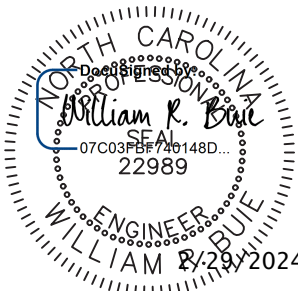


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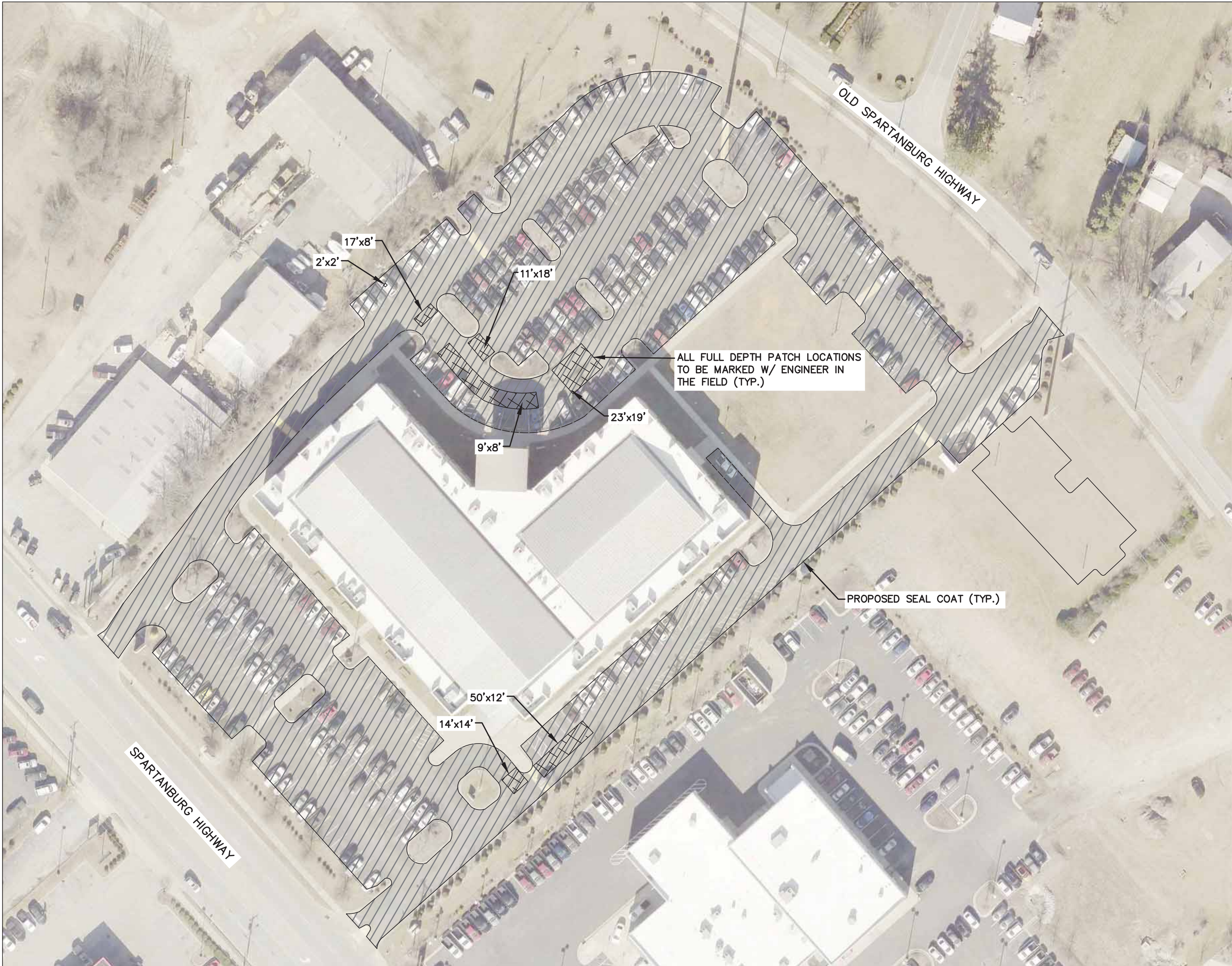
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DATE: 1/24

HEALTH AND
HUMAN
SERVICES

C-105

SCALE: 1"=50'



GRAPHIC SCALE



(IN FEET)

LEGEND:

 PROPOSED FULL DEPTH
ASPHALT PATCH

 PROPOSED SEAL COAT

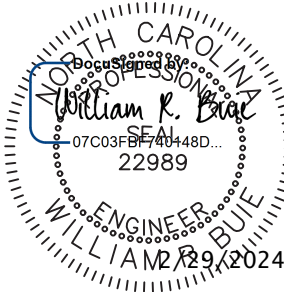


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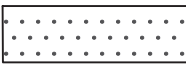

CENTRAL
SERVICES

C-106

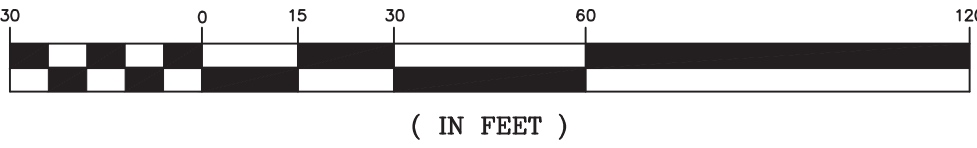
SCALE: 1"=30'



LEGEND:

-  PROPOSED REMOVE EXISTING ASPHALT, RECONDITION STONE SUBGRADE AND INSTALL 2" OF NEW ASPHALT
-  PROPOSED DOUBLE SEAL

GRAPHIC SCALE



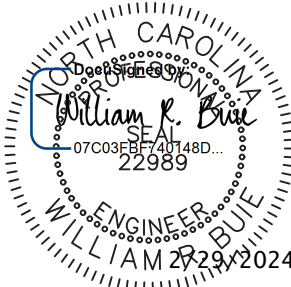


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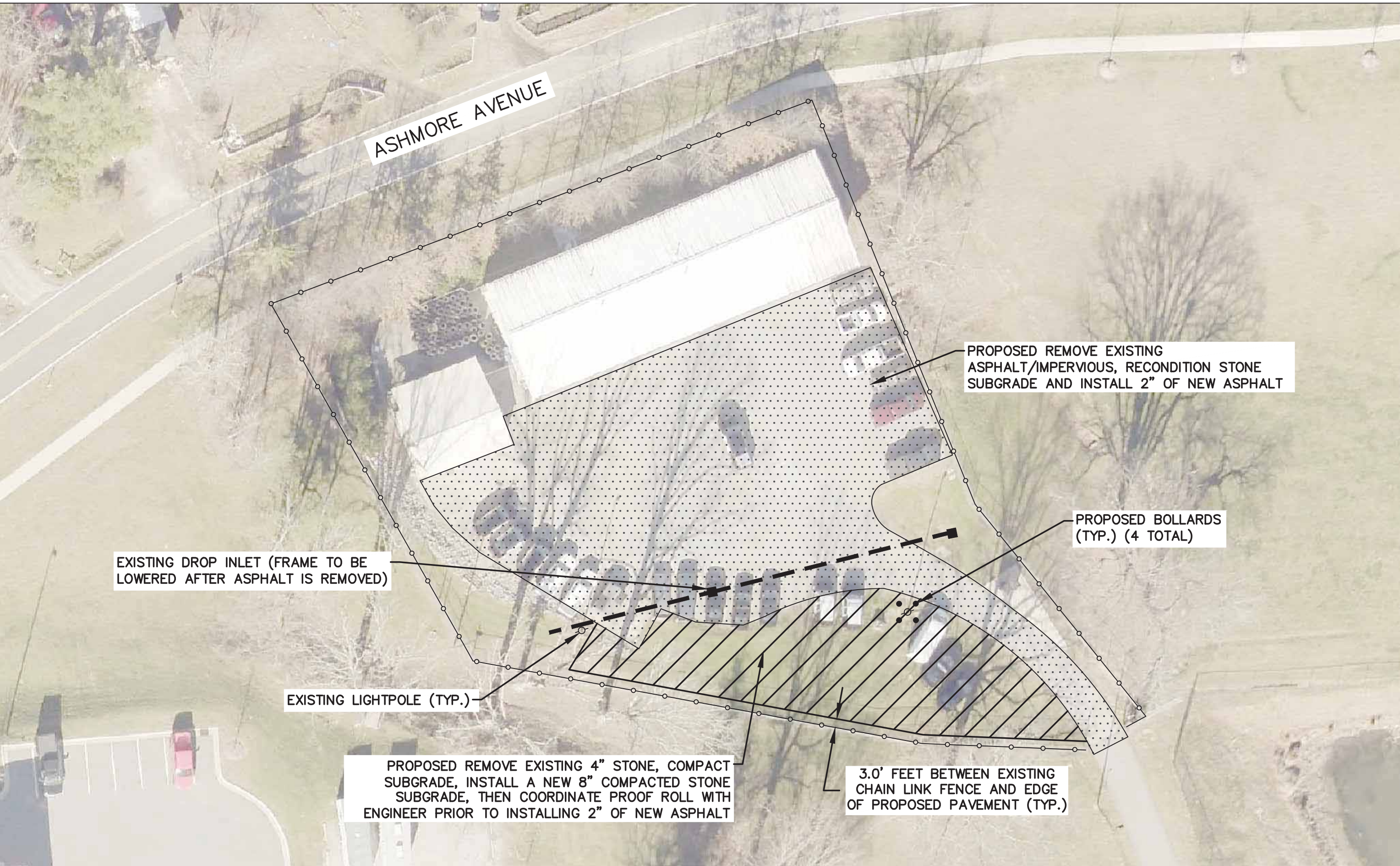


PROJECT NUMBER: 23199
DATE: 1/24


HENDERSON
COUNTY GARAGE


C-107

SCALE: 1"=30'

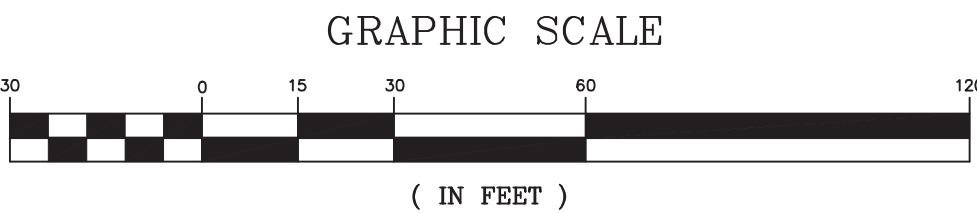


LEGEND:

- 

PROPOSED REMOVE EXISTING 4" STONE, COMPACT SUBGRADE, INSTALL A NEW 8" COMPACTED STONE SUBGRADE, THEN COORDINATE PROOF ROLL WITH ENGINEER PRIOR TO INSTALLING 2" OF NEW ASPHALT
- 

PROPOSED REMOVE EXISTING ASPHALT/IMPERVIOUS, RECONDITION STONE SUBGRADE AND INSTALL 2" OF NEW ASPHALT



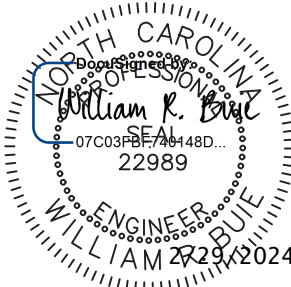


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REVISIONS

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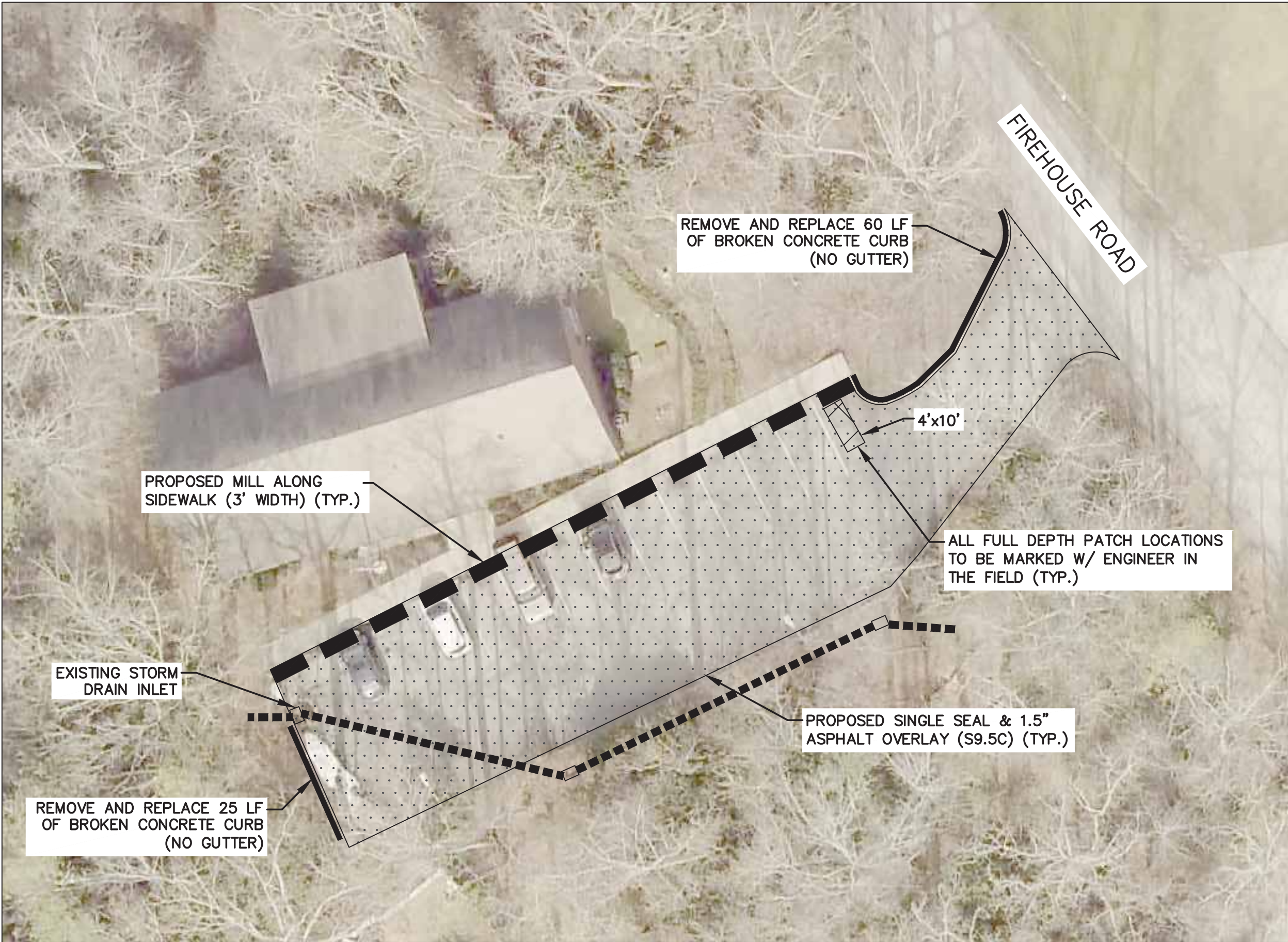
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EDNEYVILLE
LIBRARY

C-108

SCALE: 1"=20'



LEGEND:

-  PROPOSED FULL DEPTH ASPHALT PATCH
-  SINGLE SEAL & 1.5" ASPHALT OVERLAY (\$9.5C)

GRAPHIC SCALE



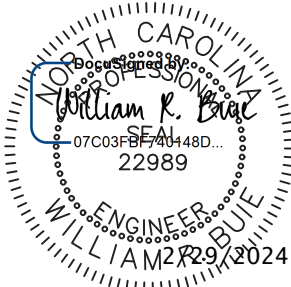


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REVISIONS

DATE	DESCRIPTION



PROJECT NUMBER: 23199
DATE: 1/24

PROBATION AND
PAROLE
DEPARTMENT

C-109

SCALE: 1"=30'



LEGEND:



PROPOSED SEAL COAT



PROPOSED REMOVE EXISTING
ASPHALT/IMPERVIOUS, RECONDITION STONE
SUBGRADE AND INSTALL 2" OF NEW ASPHALT

GRAPHIC SCALE



(IN FEET)

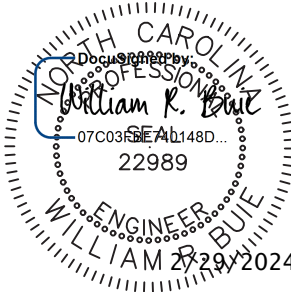


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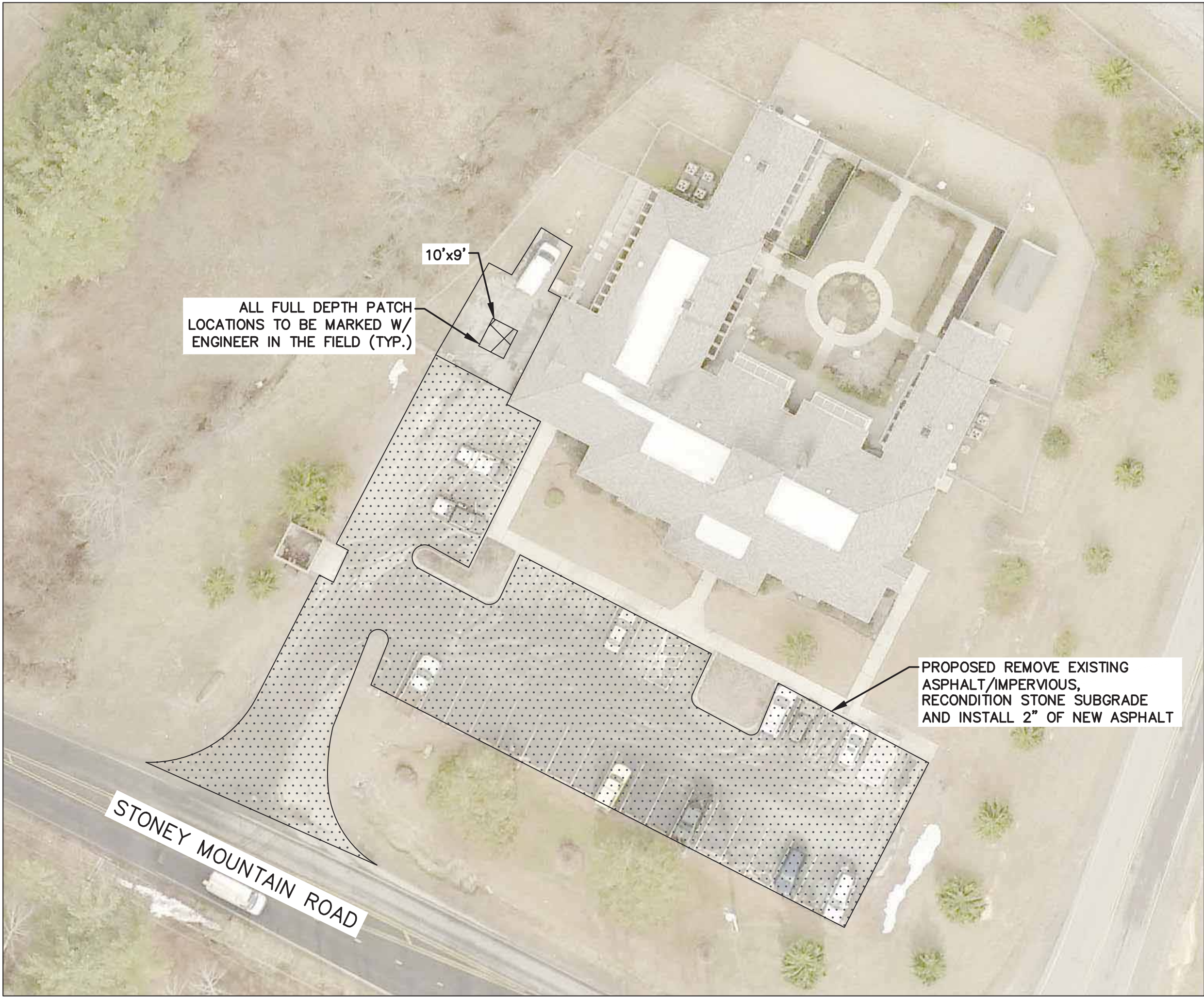
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ANIMAL
SHELTER

C-110

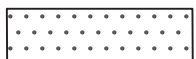
SCALE: 1"=30'



LEGEND:



PROPOSED FULL DEPTH ASPHALT PATCH

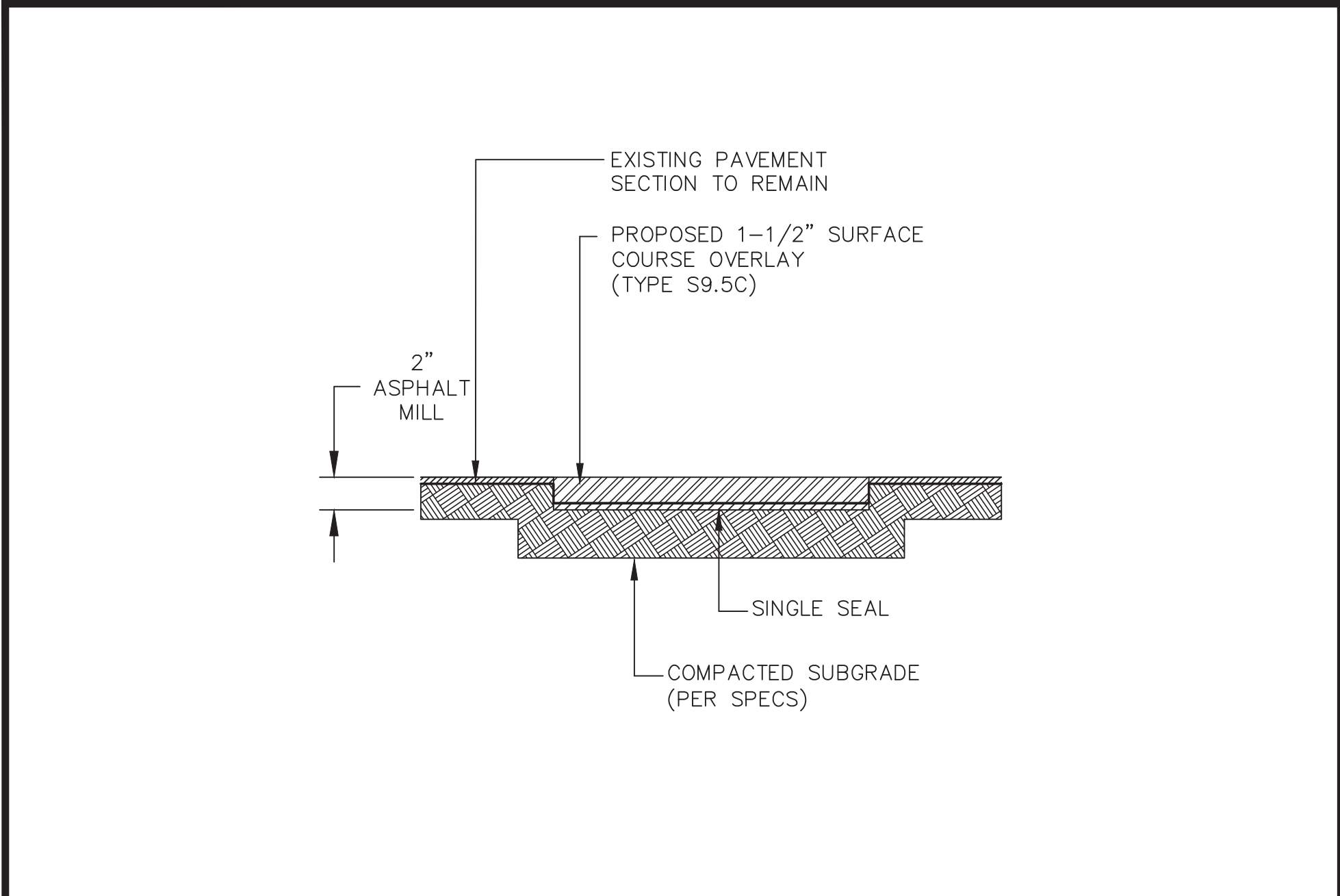


PROPOSED REMOVE EXISTING
ASPHALT/IMPERVIOUS, RECONDITION STONE
SUBGRADE AND INSTALL 2" OF NEW ASPHALT

GRAPHIC SCALE



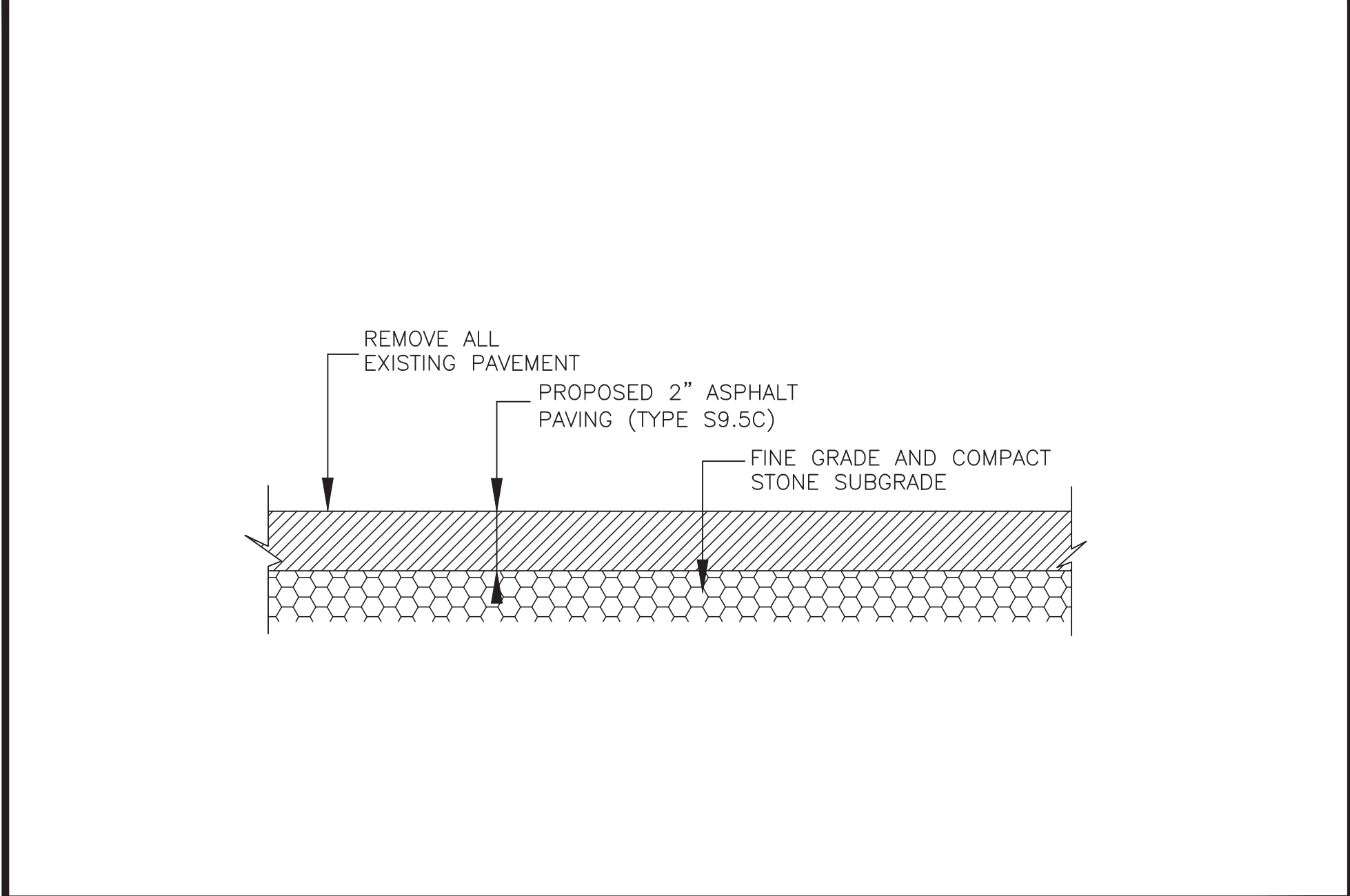
(IN FEET)



MILL & OVERLAY SECTION

1-5-23

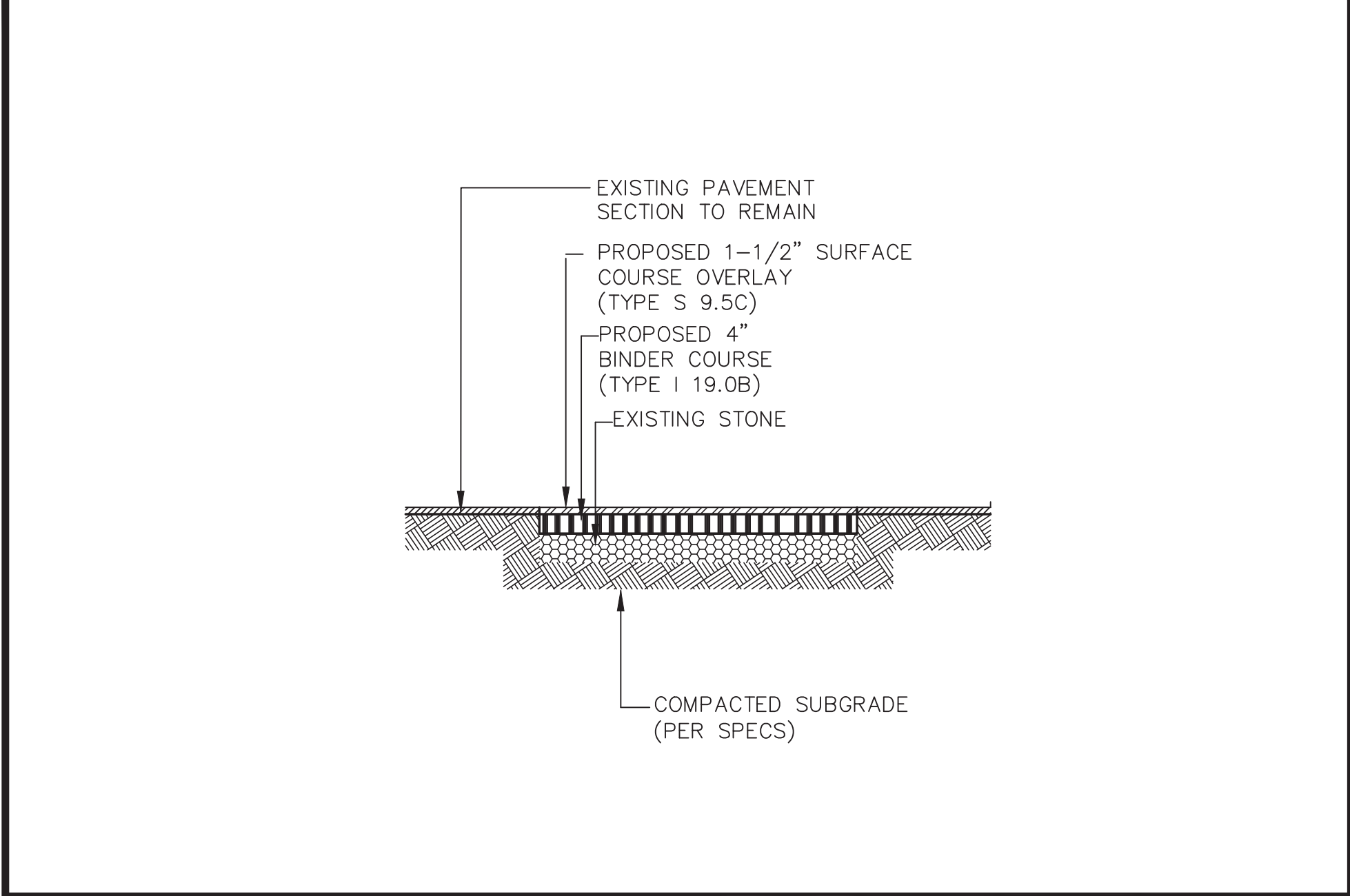
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FULL DEPTH PAVEMENT REMOVAL SECTION

1-5-23

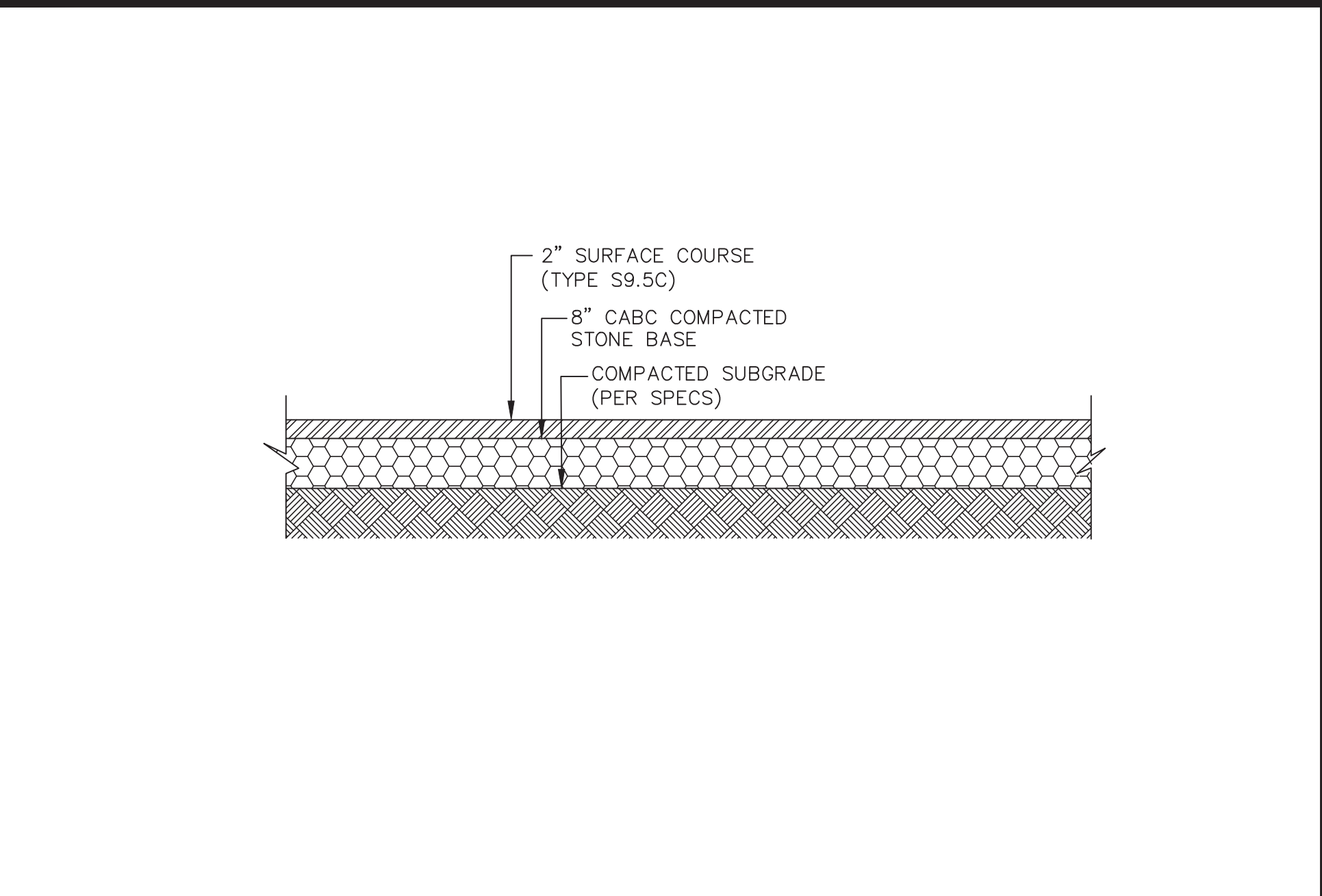
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FULL DEPTH PATCH SECTION

1-5-23

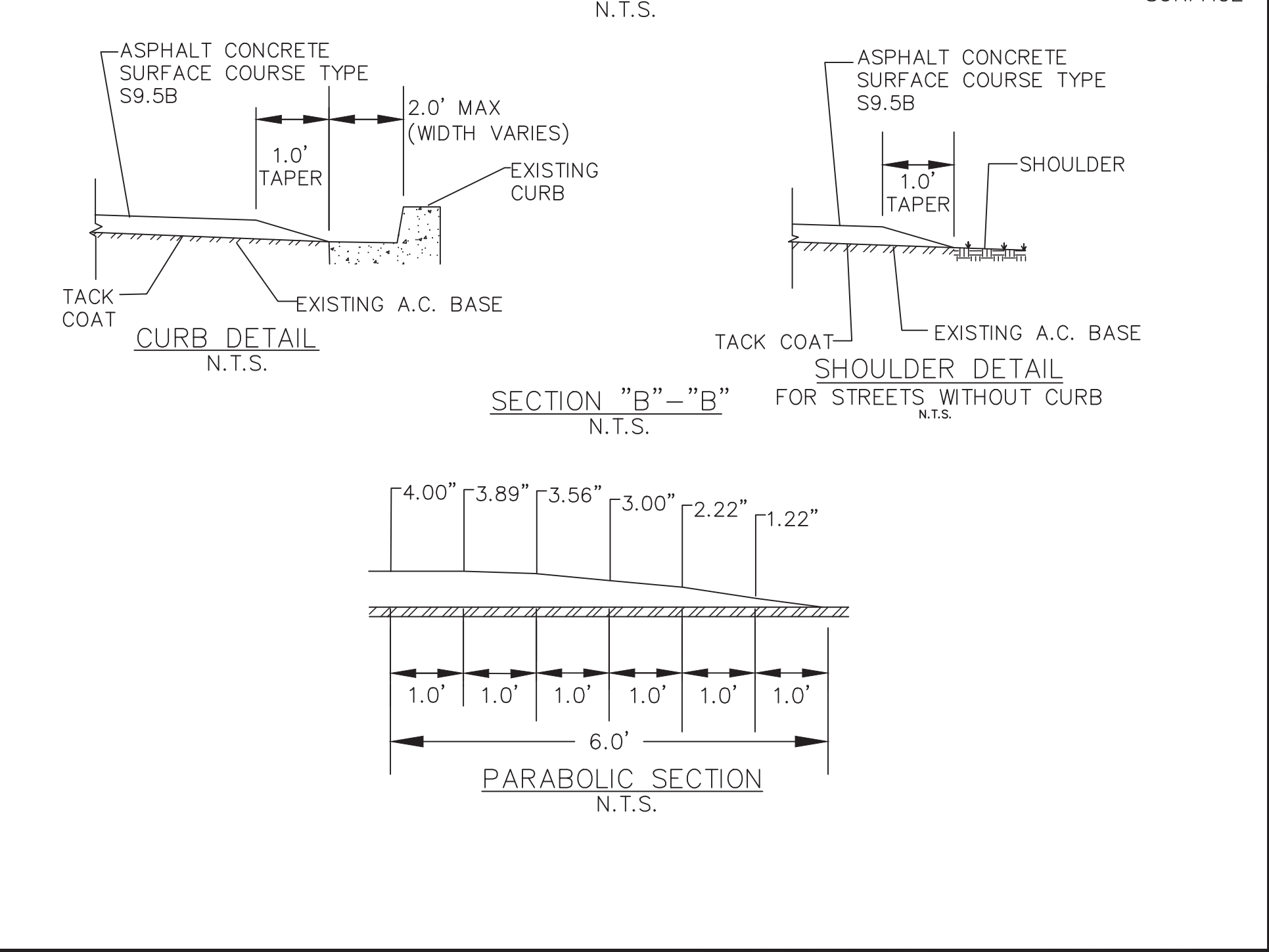
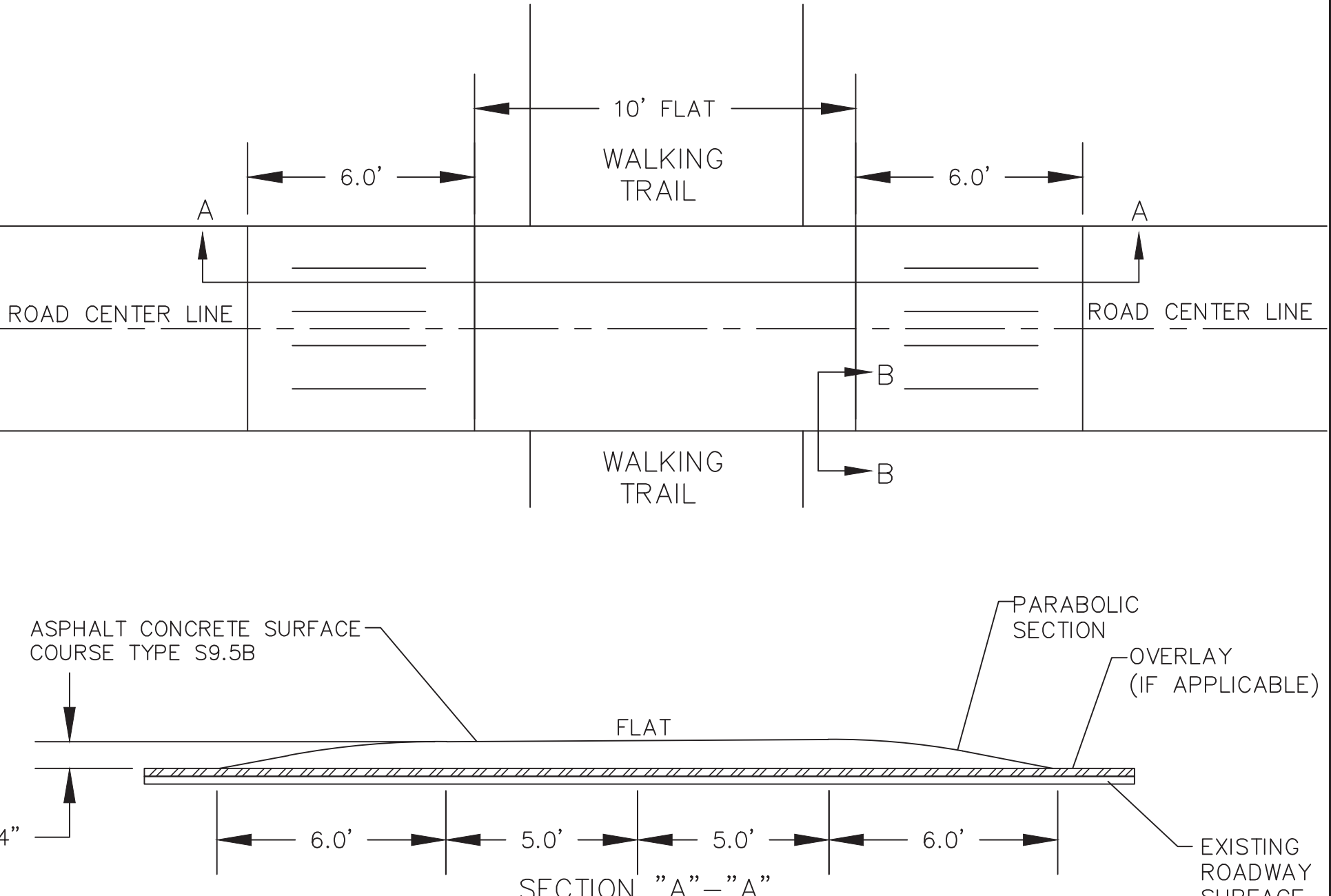
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NEW ASPHALT SECTION

1-5-23

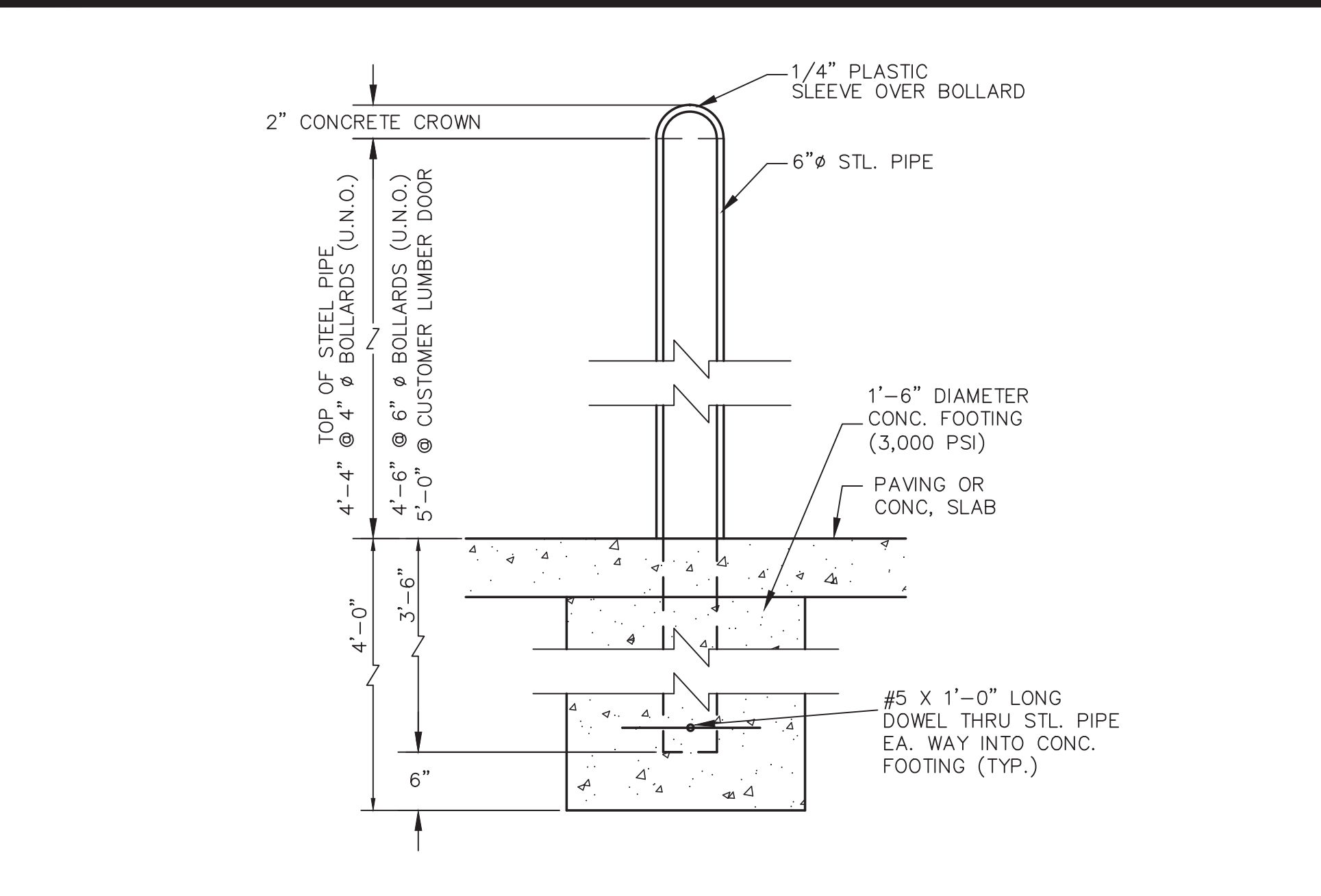
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22' SPEED TABLE

11-9-23

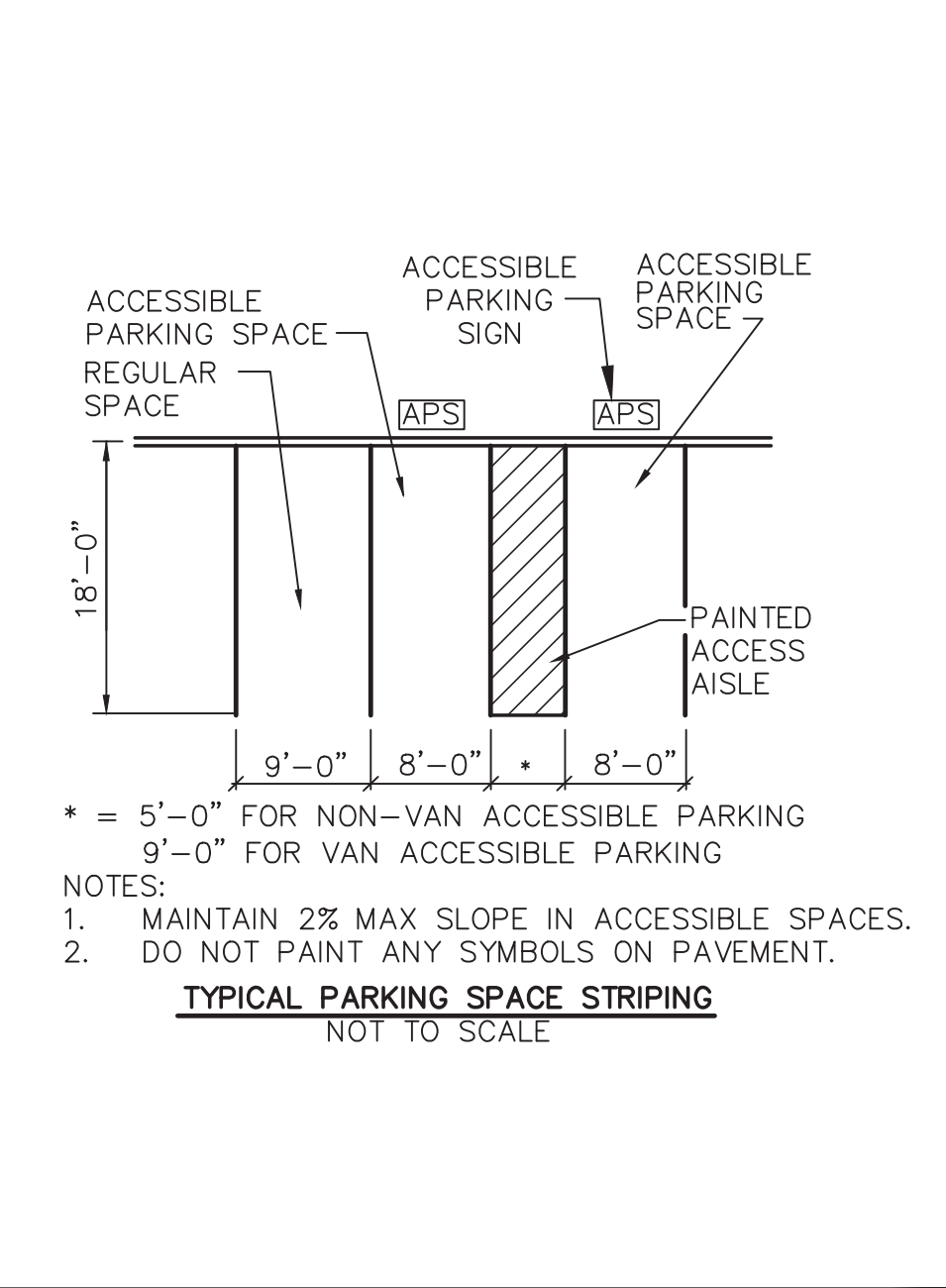
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BOLLARD

1-5-23

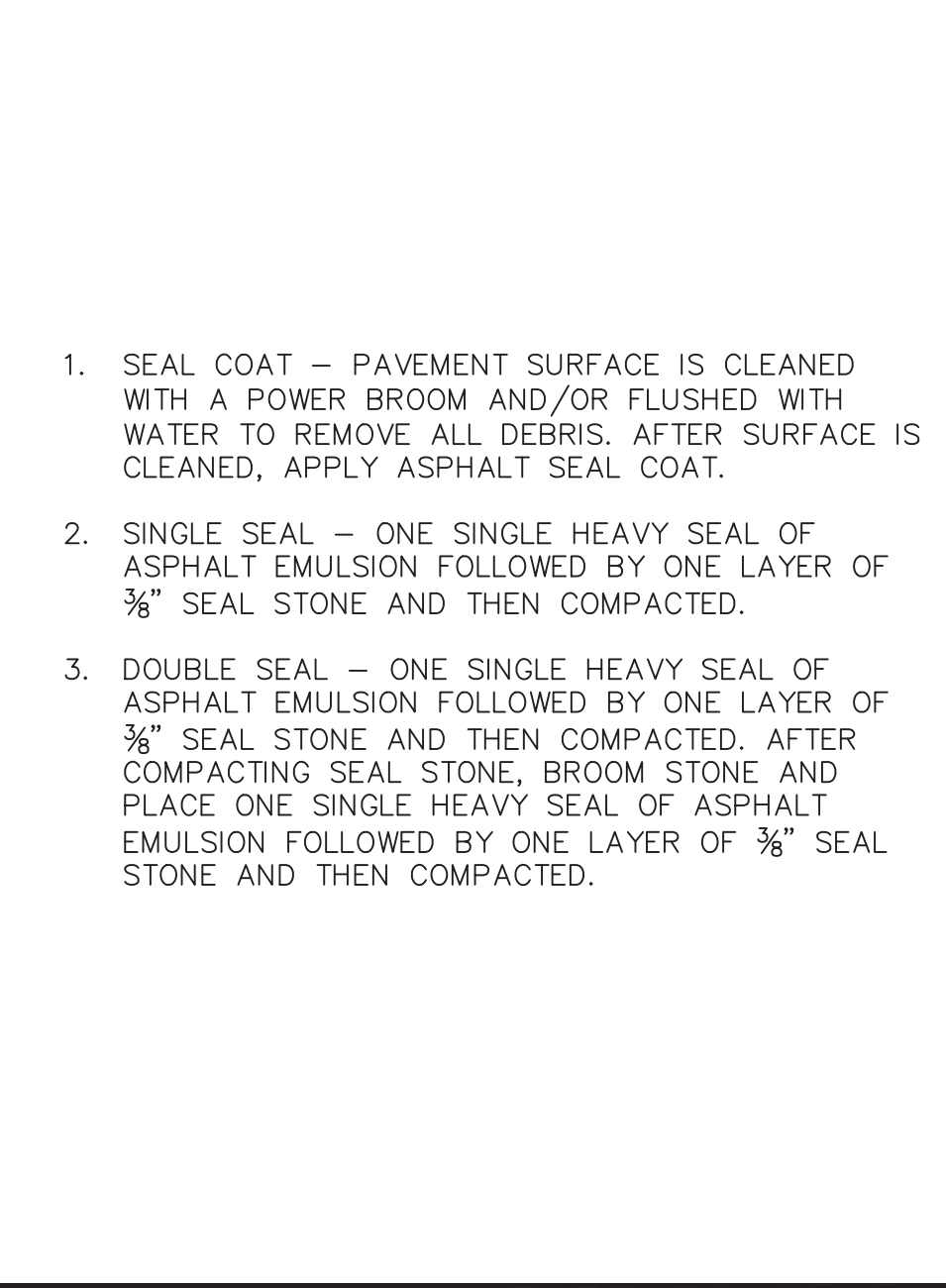
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PARKING SPACE STRIPING

1-5-23

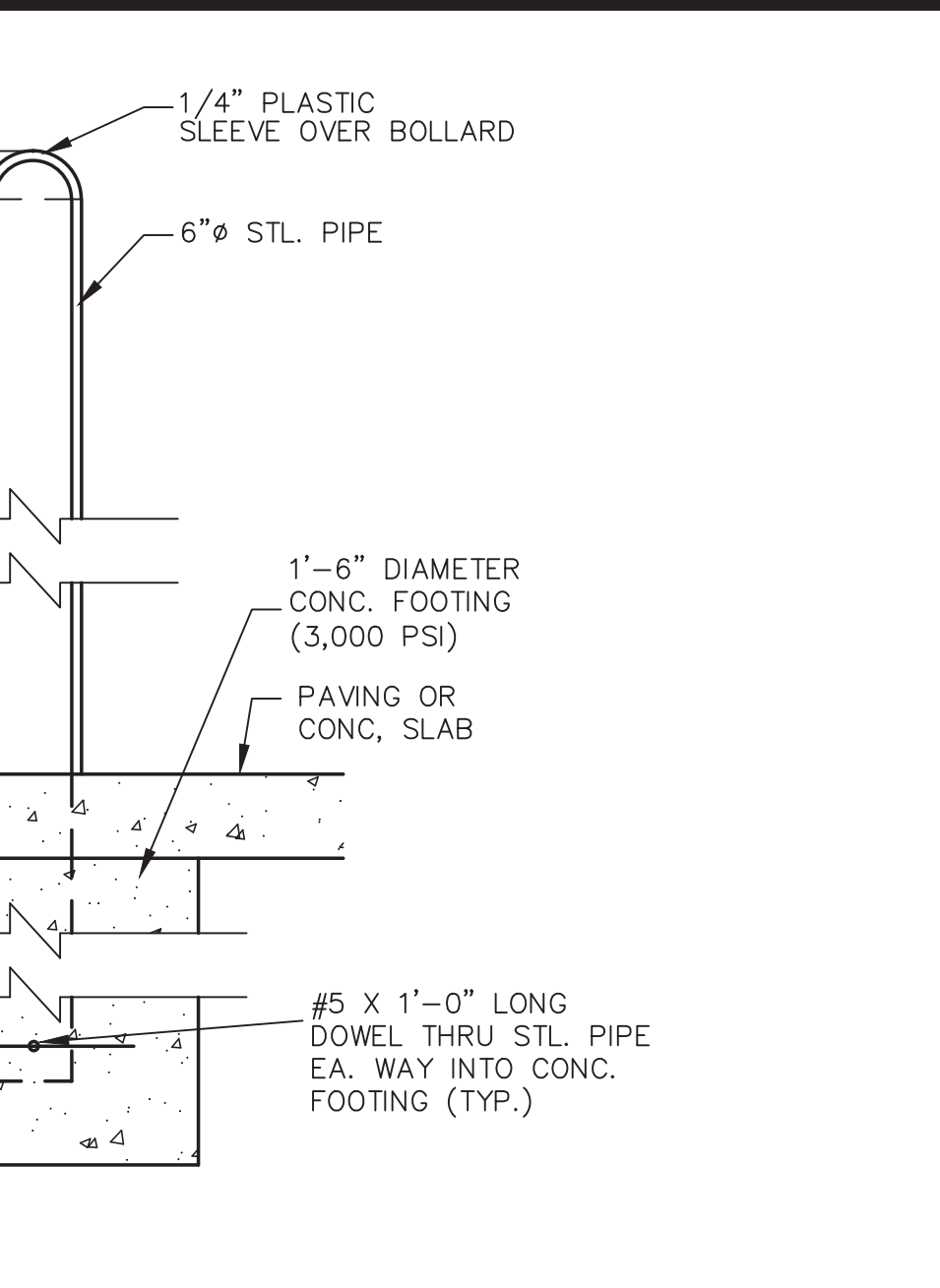
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ASPHALT SEAL APPLICATIONS

1-5-23

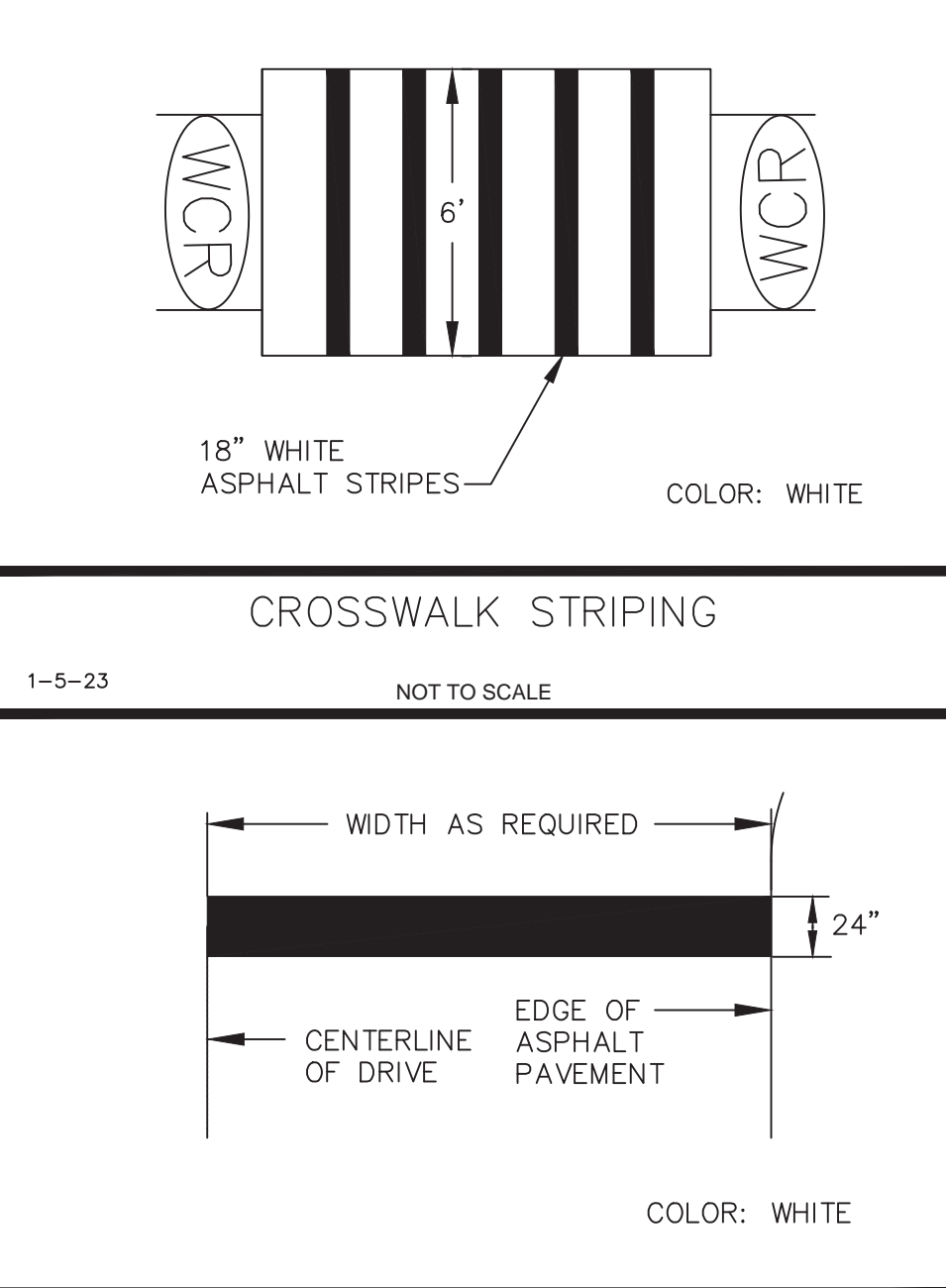
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CROSSWALK STRIPING

1-5-23

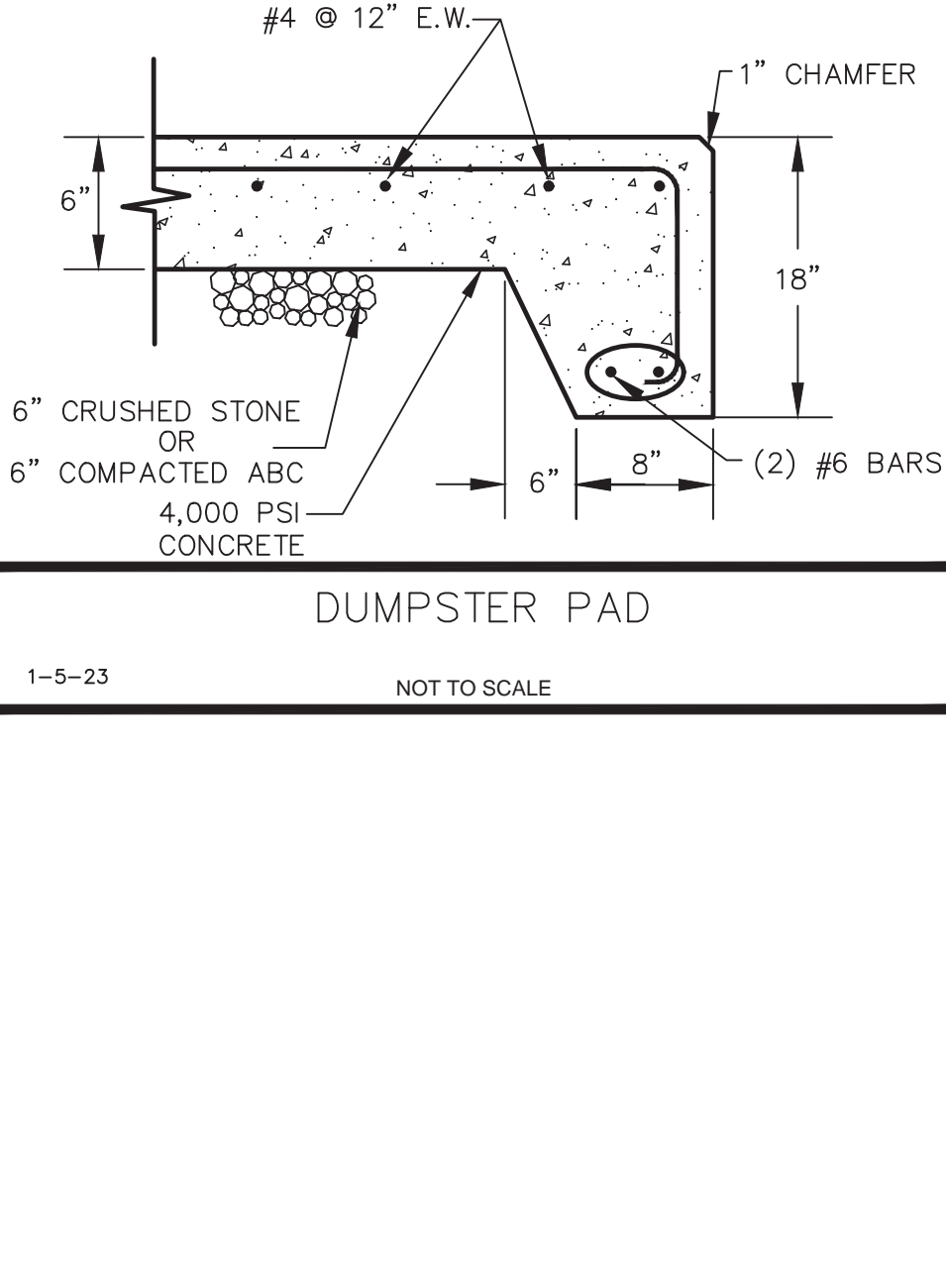
NOT TO SCALE



STOP BAR STRIPING

1-5-23

NOT TO SCALE



DUMPSTER PAD

1-5-23

NOT TO SCALE

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HENDERSON COUNTY NORTH CAROLINA

REVISIONS

DATE	DESCRIPTION

PROJECT NUMBER: 23199
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PAVING DETAILS

C-111

SCALE: NOT TO SCALE

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

GENERAL CONSTRUCTION NOTES

1. ALL WORK AND CONSTRUCTION ACTIVITIES ON THE PROJECT SITE SHALL COMPLY WITH ALL APPLICABLE OSHA REGULATIONS AND REQUIREMENTS. IT IS THE CONTRACTOR’S RESPONSIBILITY TO MAINTAIN A SAFE WORK SITE.
2. THE ENGINEER AND OWNER RESERVE THE RIGHT TO MODIFY PROJECT WORK ITEMS (INCLUDING GRADING) AS DEEMED NECESSARY FOR THE SUCCESSFUL COMPLETION OF THE PROJECT. THE CONTRACTOR MAY SUGGEST ADJUSTMENTS TO GRADING OR OTHER WORK ITEMS TO BE APPROVED BY THE ENGINEER OR OWNER.
3. THE CONTRACTOR SHALL COMPLY WITH THE GEOTECHNICAL REPORT FOR THE PLACEMENT OF FILL AND COMPACTION REQUIREMENTS. IF NO REPORT IS AVAILABLE, THE FOLLOWING MINIMUM STANDARDS SHALL APPLY:

PLACEMENT OF FILL:
A. PLACE THE MATERIAL IN SUCCESSIVE HORIZONTAL LAYERS NOT EXCEEDING 8” FOR THE FULL WIDTH OF THE CROSS SECTION.
B. FILL SHALL BE PLACED ONLY WHEN IT IS WITHIN 3% OF ITS OPTIMUM MOISTURE CONTENT AS DETERMINED BY A STANDARD PROCTOR ASTM D 698.
C. EACH LAYER OF FILL SHALL BE SPREAD EVENLY AND SHALL BE COMPACTED TO ITS SPECIFIED DENSITY AS DETERMINED BY STANDARD PROCTOR ASTM D 698 BEFORE NEW LAYERS ARE PLACED AND COMPACTED.
D. SLOPED GROUND SURFACES STEEPER THAN ONE VERTICAL TO FOUR HORIZONTAL, ON WHICH FILL IS TO BE PLACED, SHALL BE STEPPED OR BENCHED SUCH THAT FILL MATERIAL WILL BOND TO THE EXISTING SURFACES.
E. EMBANKMENT SLOPES SHALL BE CONSTRUCTED BY FILLING ONE (1) FOOT BEYOND THE PROPOSED FINISHED SLOPE SURFACE FOR EACH LIFT. COMPACTION EQUIPMENT SHALL WORK TO THE EDGE OF EACH LIFT. AFTER THE ENTIRE FILL IS PLACED AND COMPACTED, THE OUTSIDE FOOT OF THE SLOPE SHALL BE TRIMMED TO THE DESIGN SLOPE WITH A DOZER. UNLESS INDICATED ON THE DRAWINGS, NO FILL SLOPES SHALL BE STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.

COMPACTION:
A. STRUCTURAL FILL UNDER BUILDINGS AND WITHIN 10’ OF BUILDING PERIMETER, 100% OF STANDARD PROCTOR THE ENTIRE DEPTH OF FILL.
B. UNDER WALKS, DRIVES, PADS, AND PAVED AREAS: 95% OF STANDARD PROCTOR EXCEPT 100% OF STANDARD PROCTOR IN THE UPPER 2’.
C. UNDER LAWNS AND PLANTING AREAS BEYOND 10’ FROM BUILDING: 95% OF STANDARD PROCTOR.
D. BACKFILL IN TRENCHES: COMPLY WITH COMPACTION REQUIREMENTS FOR THE AREA THROUGH WHICH THE TRENCH RUNS.
4. ALL EROSION CONTROL DEVICES SUCH AS SILT FENCES, DIVERSIONS, SEDIMENT TRAPS, ETC. SHALL BE MAINTAINED IN WORKABLE CONDITIONS FOR THE LIFE OF THE PROJECT AND SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT ONLY WITH THE ENGINEER’S APPROVAL. SEE THE NPDES REQUIREMENTS ON THIS PLAN SHEET FOR MORE DETAIL. IF DURING THE LIFE OF THE PROJECT A STORM CAUSES SOIL EROSION WHICH CHANGES THE FINISHED GRADES OR CREATES "GULLIES" AND "WASHED AREAS", THESE SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXTRA COST. THE CONTRACTOR SHALL ADHERE TO THE APPROVED EROSION CONTROL PLAN AND TAKE ANY ADDITIONAL MEASURES NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE.

4. DISPOSABLE MATERIALS:
A. CLEARING AND GRUBBING WASTES SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR AT THEIR EXPENSE, UNLESS OTHERWISE SPECIFIED.
B. SOLID WASTES TO BE REMOVED SUCH AS SIDEWALKS, CURBS, PAVEMENT, ETC. MAY BE PLACED IN SPECIFIED DISPOSAL AREAS IF PERMITTED BY THE APPROPRIATE AGENCIES AND APPROVED BY THE OWNER. THIS MATERIAL SHALL BE SPREAD AND MIXED WITH DIRT ELIMINATING ALL VOIDS. THIS MATERIAL SHALL HAVE A MINIMUM COVER OF 2’. THE CONTRACTOR SHALL MAINTAIN SPECIFIED COMPACTION REQUIREMENTS IN THESE AREAS. WHEN DISPOSAL SITES ARE NOT PROVIDED, THE CONTRACTOR SHALL REMOVE THIS WASTE FROM THE SITE AND PROPERLY DISPOSE OF IT AT THEIR EXPENSE.
C. ABANDONED UTILITIES SUCH AS CULVERTS, WATER PIPE, HYDRANTS, CASTING PIPE APPURTENANCES, UTILITY POLES, ETC. SHALL BE THE PROPERTY OF THE SPECIFIED UTILITY AGENCY OR COMPANY HAVING JURISDICTION. BEFORE THE CONTRACTOR CAN REMOVE, DESTROY, SALVAGE, RE–USE, SELL OR STORE FOR THEIR OWN USE ANY ABANDONED UTILITY, THEY MUST PRESENT TO THE OWNER WRITTEN PERMISSION FROM THE UTILITY INVOLVED.
D. UNLESS OTHERWISE NOTED ON THE PLANS, BURNING WILL NOT BE ALLOWED ON THIS PROJECT. SHOULD BURNING BE ALLOWED BY THE OWNER, IT IS THE CONTRACTOR’S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS (AT THEIR EXPENSE) AND FOLLOW ALL APPLICABLE RULES AND REGULATIONS.

6. UNLESS OTHERWISE SPECIFIED, ALL BASE, PAVING, CURBING AND OTHER CONCRETE WORK SHALL CONFORM TO THE LOCAL MUNICIPALITY OR NCDOT SPECIFICATIONS FOR CONSTRUCTION. ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM TO THE LOCAL UTILITY REQUIREMENTS AND/OR THE NCDENR MINIMUM STANDARDS.

7. IN THE EVENT EXCESSIVE GROUND WATER OR SPRINGS ARE ENCOUNTERED WITHIN THE LIMITS OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL NECESSARY UNDERDRAINS AND STONE AS DIRECTED BY THE ENGINEER. ALL WORK SHALL BE PAID BASED UPON THE UNIT PRICES UNLESS OTHERWISE SPECIFIED.

8. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ADJUSTMENT OF ALL UTILITY SURFACE ACCESSSES (INCLUDING MANHOLE COVERS, VALVE BOXES, ETC.) WHETHER HE PERFORMS THE WORK OR THE UTILITY COMPANY PERFORMS THE WORK.

9. THE CONTRACTOR SHALL CONTROL ALL "DUST" BY PERIODIC WATERING AND SHALL PROVIDE ACCESS AT ALL TIMES FOR PROPERTY OWNERS WITHIN THE PROJECT AND FOR EMERGENCY VEHICLES. ALL OPEN DITCHES AND HAZARDOUS AREAS SHALL BE CLEARLY MARKED IN ACCORDANCE WITH OSHA REGULATIONS.

10. ALL AREAS OF EXPOSED SOIL SHALL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO THE SPECIFICATIONS. THE FINISHED SURFACE SHALL BE TO GRADE AND SMOOTH, FREE OF ALL ROCKS LARGER THAN 3”, EQUIPMENT TRACKS, DIRT CLOUDS, BUMPS, RIDGES, AND GOUGES PRIOR TO SEEDING. THE SURFACE SHALL BE LOOSENEED TO A DEPTH OF 1" +/- TO ACCEPT SEED. THE CONTRACTOR SHALL NOT PROCEED WITH SEEDING OPERATIONS WITHOUT FIRST OBTAINING THE ENGINEER’S APPROVAL OF THE GRADED SURFACE. ALL SEEDING SHALL BE PERFORMED BY A MECHANICAL "HYDRO–SEEDER". THE ENGINEER PRIOR TO SEEDING MUST APPROVE HAND SEEDING ON ANY AREA.

11. GRADED SLOPES AND FILLS SHALL BE PROTECTED WITH ROLLED EROSION CONTROL PRODUCT IF COMPLETED OUTSIDE OF OPTIMUM GERMINATION SEASON WHEN UNFAVORABLE WEATHER CONDITIONS PREVENT ESTABLISHMENT OF VEGETATIVE GROUND COVER.

GENERAL CONSTRUCTION NOTES

12–20–2022

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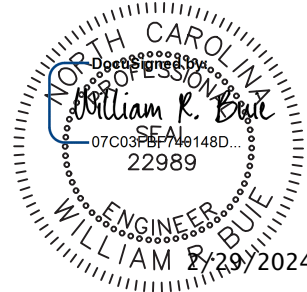
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2024
Jackson Park
and County
Facilities Paving

HENDERSON
COUNTY
NORTH CAROLINA



REVISIONS	
DATE	DESCRIPTION



PROJECT NUMBER: 23199
DATE: 1/24

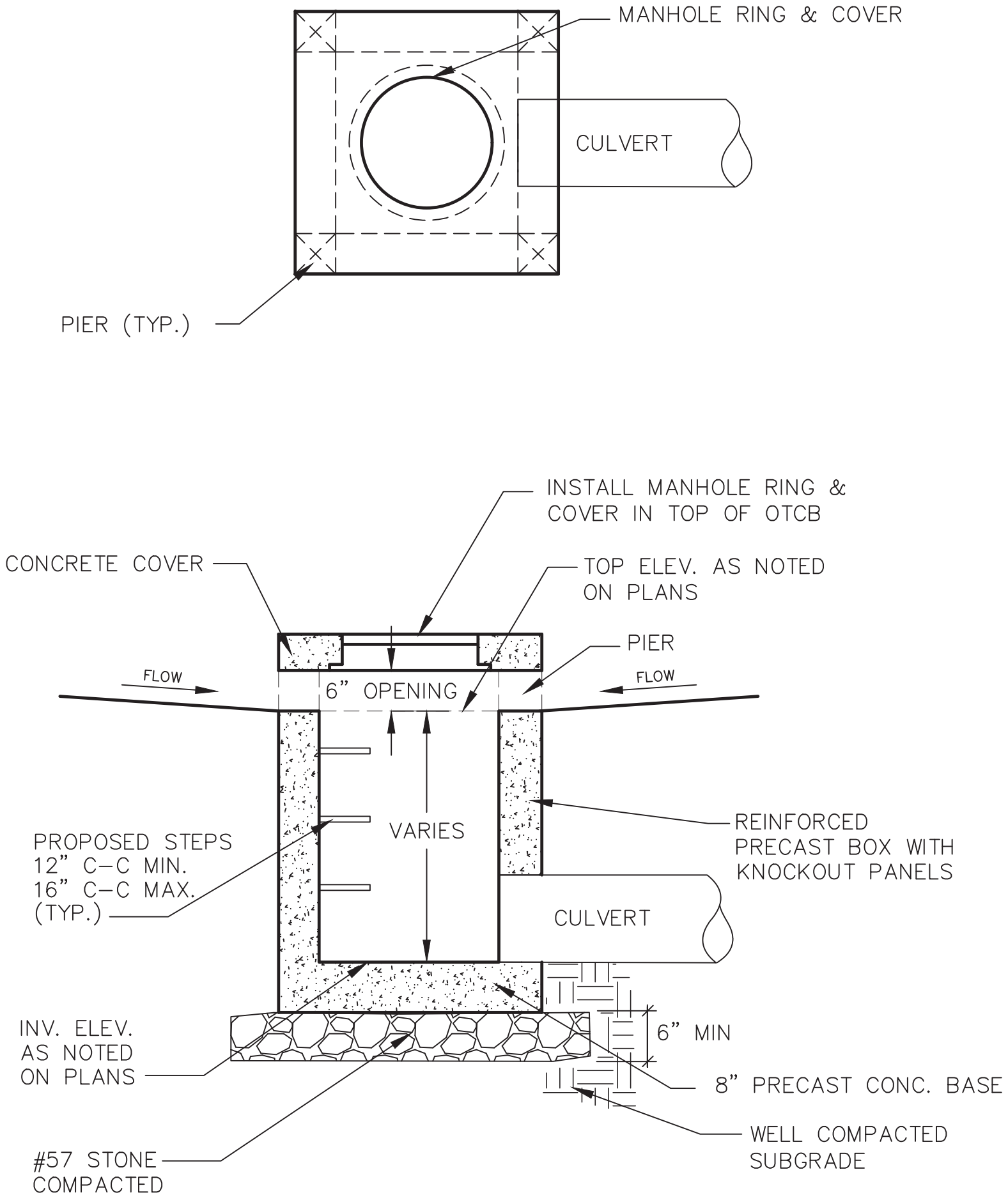
PAVING
DETAILS

C-112

SCALE: NOT TO SCALE

NOTE:
ALL CATCH BASINS OVER 3' DEEP SHALL
HAVE STANDARD STEPS @ 16" O.C.

WRAP BOX IN FILTER FABRIC

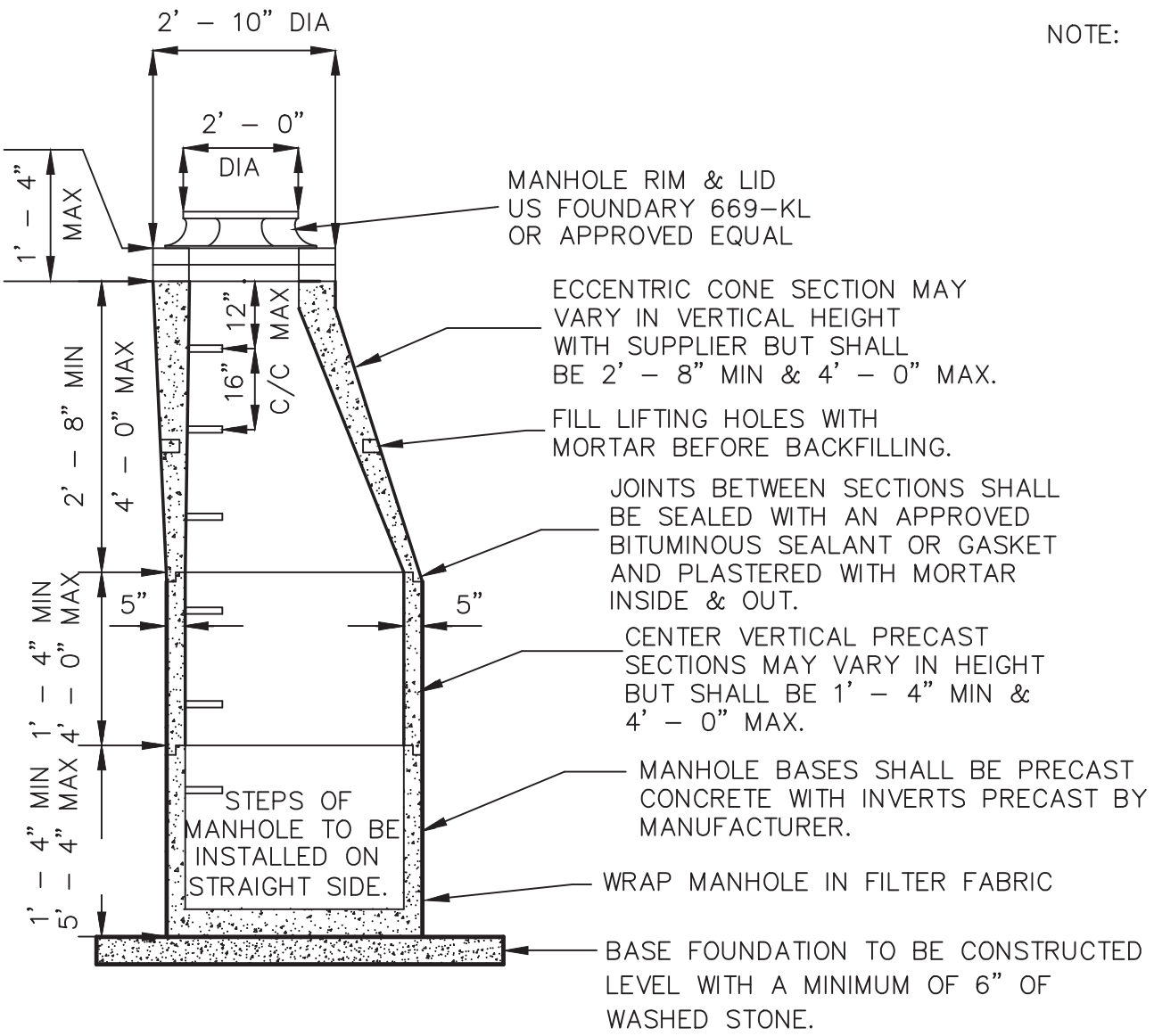


OPEN THROAT CATCH BASIN

1-3-23

NOT TO SCALE

4.16



JUNCTION MANHOLE

12-21-2022

NOT TO SCALE

4.09

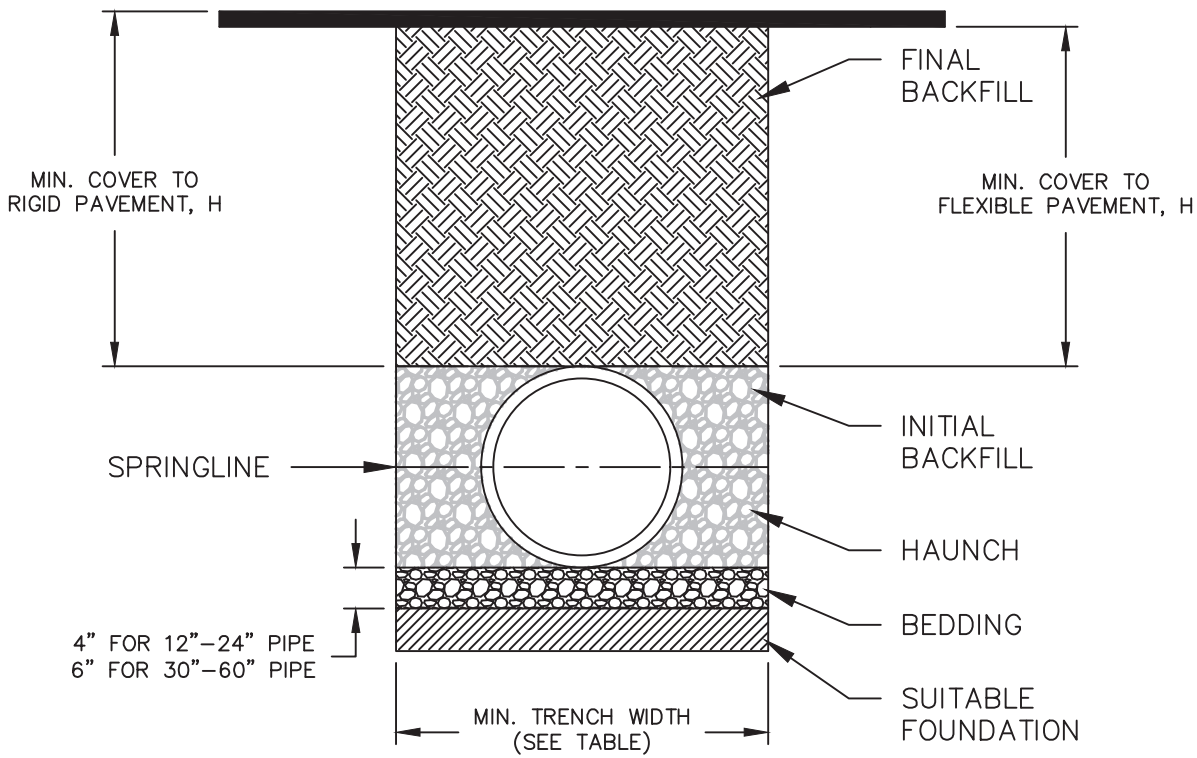
PIPE DIAM.	MAXIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS			
	CLASS I		CLASS II	
	COMPACTED	DUMPED	95%	95%
4"	37	18	25	18
(100mm)	(11.3m)	(5.5m)	(7.6m)	(5.5m)
6"	44	20	29	21
(150mm)	(13.4m)	(6.1m)	(8.8m)	(6.4m)
8"	32	15	22	15
(200mm)	(9.8m)	(4.6m)	(6.7m)	(4.6m)
10"	38	18	26	18
(250mm)	(11.6m)	(5.5m)	(7.9m)	(5.5m)
12"	35	17	24	17
(300mm)	(10.7m)	(5.2m)	(7.3m)	(5.2m)
15"	38	17	25	18
(375mm)	(11.6m)	(5.2m)	(7.6m)	(5.5m)
18"	36	17	24	17
(450mm)	(11.0m)	(5.2m)	(7.3m)	(5.2m)
24"	28	13	20	13
(600mm)	(8.5m)	(4.0m)	(6.1m)	(4.0m)
30"	28	13	20	13
(750mm)	(8.5m)	(4.0m)	(6.1m)	(4.0m)
36"	26	12	18	13
(900mm)	(7.9m)	(3.7m)	(5.5m)	(4.0m)
42"	23	11	16	11
(1050mm)	(7.0m)	(3.4m)	(4.9m)	(3.4m)
48"	25	11	17	12
(1200mm)	(7.6m)	(3.4m)	(5.2m)	(3.4m)
60"	25	11	17	12
(1500mm)	(7.6m)	(3.4m)	(5.2m)	(3.4m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE,
UNIT WEIGHT OF SOIL (Ys) = 120 PCF

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS**

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48"	12"	48"
(300mm - 1200mm)	(305mm)	(1219mm)
60"	24"	60"

**SEE BACKFILL REQUIREMENTS IN NOTE 6.

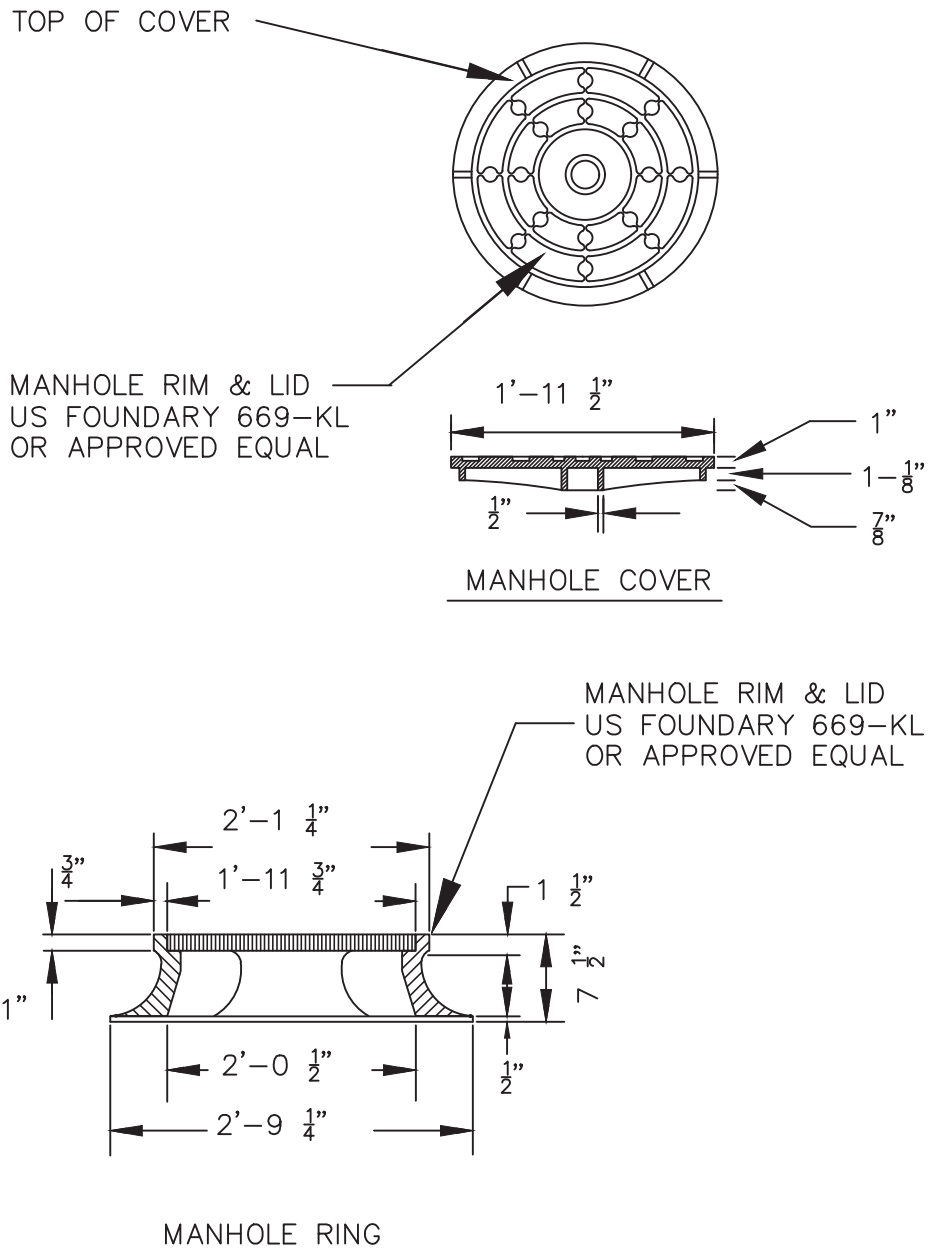


HDPE TRENCH DETAIL

12-20-2022

NOT TO SCALE

3.08



MANHOLE RING AND LID

12-21-22

NOT TO SCALE

4.13

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-1500mm).
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING TO THE 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 FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE. MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4"	21"
(100mm)	(533mm)
6"	23"
(150mm)	(584mm)
8"	26"
(200mm)	(660mm)
10"	28"
(250mm)	(711mm)
12"	30"
(300mm)	(762mm)
15"	34"
(375mm)	(864mm)
18"	39"
(450mm)	(991mm)
24"	48"
(600mm)	(1219mm)
30"	56"
(750mm)	(1422mm)
36"	64"
(900mm)	(1626mm)
42"	72"
(1050mm)	(1829mm)
48"	80"
(1200mm)	(2032mm)
60"	96"
(1500mm)	(2438mm)

GENERAL STORMWATER NOTES:

- 1.) ALL STORMWATER PIPES SHALL BE HDPE WITH SMOOTH INTERIOR WALL, WITH BELL AND SPIGOT ENDS AND SOIL TIGHT JOINTS, UNLESS OTHERWISE NOTED ON PLANS.
- 2.) ALL PENETRATIONS INTO STORMWATER STRUCTURES SHALL BE REPAIRED PROPERLY INSIDE AND OUTSIDE WITH BRICK AND OR NON-SHRINK GROUT.
- 3.) GIVEN PIPE LENGTHS ARE BASED ON HORIZONTAL DISTANCES BETWEEN STORMWATER STRUCTURES. CONTRACTOR SHALL FACTOR IN SLOPES WHEN ORDERING PIPE AND ORDER ADDITIONAL LENGTH AS NECESSARY.
- 4.) ALL STORMWATER PIPES IN EXCESS OF 20% SLOPE SHALL BE KEYED.
- 5.) ALL ROOF LEADERS SHALL BE 8" HDPE SMOOTH INTERIOR WALL (MAY BE PVC/SCH-40) WITH 1.0% MIN SLOPE UNLESS OTHERWISE NOTED ON PLANS.
- 6.) CONTRACTOR TO ENSURE THAT ALL EXISTING AND PROPOSED STORM DRAINAGE STRUCTURES, PIPES AND GRADES WILL PROVIDE POSITIVE DRAINAGE PRIOR TO INSTALLATION.
- 7.) ALL DRAINAGE STRUCTURES GREATER THAN 4' IN DEPTH SHALL HAVE ACCESS TO STEPS INSTALLED 16" ON CENTER.
- 8.) ALL PRECAST "WAFFLE BOX" STORM DRAINAGE STRUCTURES TO HAVE A MAXIMUM DEPTH OF 10'.

STORMWATER NOTES

5-30-2023

NOT TO SCALE

SEEDING SPECIFICATIONS

I. TEMPORARY COVER

A. LIME & FERTILIZER

CONTRACTOR SHALL FURNISH AND APPLY LIME AND FERTILIZER TO THE SOIL AS REQUIRED TO PROVIDE SATISFACTORY CONDITIONS FOR SEED GERMINATION.

A NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOILS TEST OR EQUAL SHALL BE OBTAINED FOR ALL AREAS TO BE SEEDED. RECOMMENDED FERTILIZER AND pH ADJUSTING PRODUCTS SHALL BE INCORPORATED INTO APPLICABLE AREAS BASED ON THE TEST RESULTS.

THESE MATERIALS SHALL BE SPREAD UNIFORMLY OVER THE AREA TO BE PLANTED. THE SOIL SHALL BE TILLED TO A DEPTH OF 3 - 4 INCHES WITH EQUIPMENT APPROVED BY THE ENGINEER.

B. TEMPORARY COVER

SEEDING - CONTRACTOR SHALL SELECT A QUICK GROWING GRASS WITH HIGH SEEDING VIGOR THAT IS SUITED TO THE AREA, THE TIME OF PLANTING, AND THAT WILL NOT INTERFERE WITH PLANT TO BE SOWN LATER FOR PERMANENT COVER.

MAY THROUGH AUGUST
SUNDANGRASS 50 LB / AC
OR GERMAN MILLET 40 LB / AC

SEPT. THROUGH APRIL
RYEGRAIN 120 LB / AC

ALL SEEDS SHALL HAVE BEEN TESTED NOT MORE THAN 6 MONTHS PRIOR TO THE DATE OF SEEDING.

CONTRACTOR SHALL APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRAULICALLY.

A SLURRY MIXTURE OF WATER, FERTILIZER, SEED AND CELLULOSE FIBER MULCH IS ACCEPTABLE ON THIS PROJECT.

C. MULCHING

IN ORDER TO REDUCE DAMAGE FROM WATER RUN-OFF AND IMPROVE MOISTURE CONDITIONS FOR SEEDLINGS, A MULCH MATERIAL SHALL BE FURNISHED WHEN TEMPORARY SEEDING IS TO BE DONE. ACCEPTABLE MATERIALS ARE:
-DRY UNCHOPPED, UNWEATHERED SMALL GRAIN STRAW OR HAY FREE OF SEEDS OF COMPETING PLANTS - 1-2 TONS / ACRE
-WOOD FIBER (EXCELSIOR)
-WOOD CELLULOSE FIBER - 500 LBS / ACRE WITHOUT STRAW
-JUTE MATTING

II. PERMANENT COVER

A. CONTRACTOR SHALL FURNISH AND APPLY

1- A NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOILS TEST OR EQUAL SHALL BE OBTAINED FOR ALL AREAS TO BE SEEDED. RECOMMENDED FERTILIZER AND pH ADJUSTING PRODUCTS SHALL BE INCORPORATED INTO APPLICABLE AREAS BASED ON THE TEST RESULTS.

2- 2.3 LBS / 1000 SF OF KENTUCKY 31 TALL FESCUE (100 LBS / ACRE)

IN THE MANNER DESCRIBED ABOVE IN PARTS 1, 2 AND 3.

APPLY NURSE CROP AS FOLLOWS:

MAY 1 - AUG 15 - 10 LBS / AC GERMAN MILLET OR
AUG 15 - MAY 1 - 15 LBS / AC SUNDANGRASS
AUG 15 - MAY 1 - 40 LBS / AC RYE (GRAIN)

B. SEEDING DATES: KY-31 TALL FESCUE

(BELOW 2500' ELEV)
AUG 20 - SEPT 15
MARCH 1 - MAY 1

(ABOVE 2500' ELEV)
JULY 15 - AUG 30
MARCH 5 - MAY 15

C. MULCHING

APPLY 4000 LB / AC OF GRAIN STRAW SUITABLY TACKED DOWN. ADD NETTING TO STEEP SLOPES AND STAPLE PER MANUFACTURERS RECOMMENDATIONS

III. SOIL PREPARATION

A. GENERAL REQUIREMENTS

1-PREPARATION FOR PRIMARY/PERMANENT STABILIZATION SHALL NOT BEGIN UNTIL ALL CONSTRUCTION AND UTILITY WORK WITHIN THE PREPARATION AREA IS COMPLETE. HOWEVER, IT MAY BE NECESSARY TO PREPARE FOR NURSE CROPS PRIOR TO COMPLETION OF CONSTRUCTION AND INSTALLATION OF UTILITIES.

2-A NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOILS TEST (OR EQUAL) SHALL BE OBTAINED FOR ALL AREAS TO BE SEEDED, SPRIGGED, SODDED OR PLANTED. RECOMMENDED FERTILIZER AND pH ADJUSTING PRODUCTS SHALL BE INCORPORATED INTO THE PREPARED AREAS AND BACKFILL MATERIAL PER THE TEST.

3-ALL AREAS TO BE SEEDED OR PLATED SHALL BE TILLED OR RIPPED TO A DEPTH OF 4". RIPPING CONSISTS OF CREATING FISSURES IN A CRISS-CROSS PATTERN OVER THE ENTIRE SURFACE AREA USING AN IMPLEMENT THAT WILL NOT GLAZE THE SIDE WALLS OF THE FISSURES. SITE PREPARATION THAT DOES NOT COMPLY WITH THESE DOCUMENTS SHALL NOT BE ACCEPTABLE. THE DEPTH OF SOIL PREPARATION MAY BE ESTABLISHED AS A RANGE BASED ON THE APPROVAL OF THE REVIEW AGENCY. ONCE TILLED OR RIPPED ACCORDING TO THE APPROVED PLAN, ALL AREAS ARE TO BE RETURNED TO FINAL GRADE. pH MODIFIERS AND/OR OTHER SOIL AMENDMENTS SPECIFIED IN THE SOIL TESTS CAN BE ADDED DURING THE SOIL PREPARATION PROCEDURE OR AS DESCRIBED BELOW.

4-ALL STONES LARGER THAN 3" ON ANY SIDE, STICKS, ROOTS, AND OTHER EXTRANEIOUS MATERIALS THAT SURFACE DURING THE BED PREPARATION SHALL BE REMOVED.

B. AREAS TO BE SEEDED.

1-TILL OR DISC THE PREPARED AREAS TO BE SEEDED TO A MINIMUM DEPTH OF 4". REMOVE STONES LARGER THAN 3" ON ANY SIDE, STICKS, ROOTS, AND OTHER EXTRANEIOUS MATERIALS THAT SURFACE. IF NOT INCORPORATED IN THE RIPPING PROCESS, ADD pH MODIFIERS AND FERTILIZERS AT THE RATE SPECIFIED.

2-RECOMPACT THE AREA UTILIZING A CULTIPACKER ROLLER. THE FINISHED GRADE SHALL BE SMOOTH EVEN SOIL SURFACE WITH LOOSE, UNIFORMLY FINE TEXTURE. ALL RIDGES AND DEPRESSIONS SHALL BE REMOVED AND FILLED TO PROVIDE THE APPROVED SURFACE DRAINAGE. SEEDING THE GRADED AREAS IS TO BE DONE IMMEDIATELY AFTER FINISHED GRADES ARE OBTAINED AND SEEDBED PREPARATION IS COMPLETE.

C. AREAS TO BE SPRIGGED, SODDED, AND/OR PLANTED

1-AT THE TIME OF PLANTING, TILL OR DISC THE PREPARED AREA TO A DEPTH OF 4"-6" BELOW THE APPROVED FINISHED GRADE. REMOVE ALL STONES LARGER THAN 3" ON ANY SIDE, STICKS, ROOTS AND OTHER EXTRANEIOUS MATERIALS THAT SURFACE. IF NOT INCORPORATED DURING THE RIPPING PROCESS, ADD pH MODIFIERS, FERTILIZER AND OTHER RECOMMENDED SOIL AMENDMENTS.

2-RECOMPACT THE AREA UTILIZING A CULTIPACKER ROLLER AND PREPARE FINAL GRADES AND DESCRIBED ABOVE. INSTALL SPRIGS, SOD AND PLANTS AS DIRECTED IMMEDIATELY AFTER FINE GRADING IS COMPLETE. MULCH, MAT AND/OR TACK AS SPECIFIED.

IV. CLOSEOUT

1-REFER TO NCG01 REQUIREMENTS AND CONSTRUCTION SEQUENCE FOR GROUND STABILIZATION TIMEFRAMES.

2-CONTRACTOR RESPONSIBLE FOR ESTABLISHING GROUND COVER PRIOR TO CLOSE OUT OF EROSION CONTROL PERMIT OR ACCEPTANCE BY OWNER. GROUND COVER WILL BE CONSIDERED ESTABLISHED WHEN ALL EXPOSED SOILS HAVE BEEN STABILIZED WITH A PERMANENT PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 80% WITH NO CONTIGUOUS BARE AREAS GREATER THAN ONE SQUARE YARD. VEGETATION DENSITY SHALL BE DETERMINED BY THE ENGINEER OR EROSION CONTROL INSPECTOR.

3-MULTIPLE SEEDING EFFORTS BY THE CONTRACTOR MAY BE REQUIRED FOR PORTIONS OF OR THE ENTIRE SITE TO ESTABLISH SUITABLE GROUND COVER.

SEEDING SPECIFICATIONS

11-15-23

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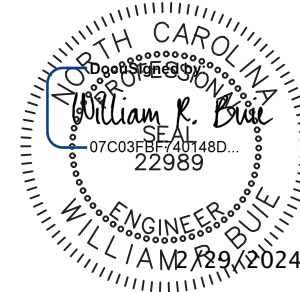
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SCALE: NOT TO SCALE