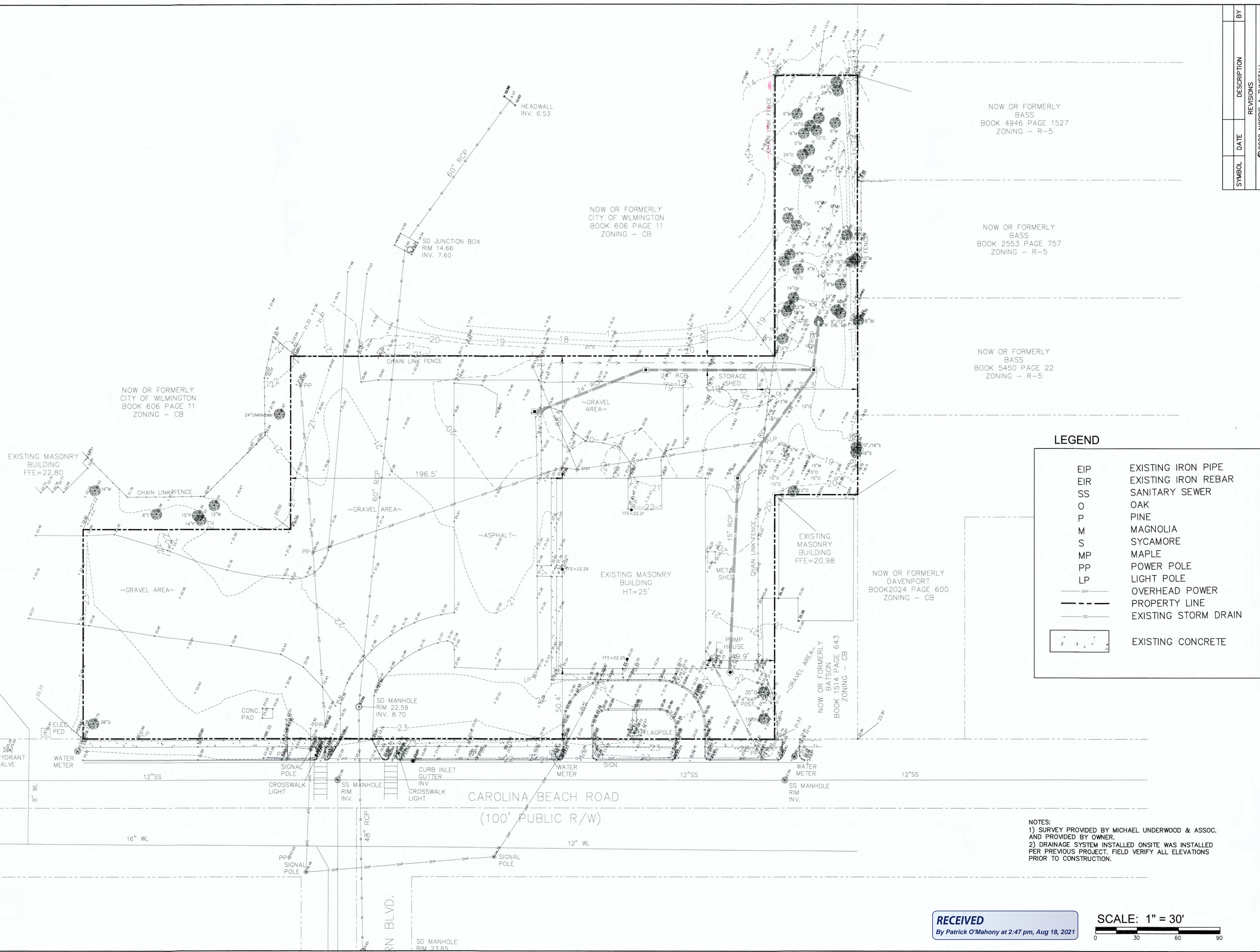




C:\wpp\p1\2018\18006 DR Rm Army\18006 Plans\18006\18006.dwg (CO - Existing Conditions) Plotfile: dm Aug 18, 2021 11:28am by User



**LEGEND**

EIP	EXISTING IRON PIPE
EIR	EXISTING IRON REBAR
SS	SANITARY SEWER
O	OAK
P	PINE
M	MAGNOLIA
S	SYCAMORE
MP	MAPLE
PP	POWER POLE
LP	LIGHT POLE
—OHP—	OVERHEAD POWER
—P—	PROPERTY LINE
—SD—	EXISTING STORM DRAIN
	EXISTING CONCRETE

**NOTES:**  
 1) SURVEY PROVIDED BY MICHAEL UNDERWOOD & ASSOC. AND PROVIDED BY OWNER.  
 2) DRAINAGE SYSTEM INSTALLED ONSITE WAS INSTALLED PER PREVIOUS PROJECT. FIELD VERIFY ALL ELEVATIONS PRIOR TO CONSTRUCTION.

**RECEIVED**  
 By Patrick O'Mahony at 2:47 pm, Aug 18, 2021

**SCALE: 1" = 30'**

SYMBOL	DATE	DESCRIPTION	BY
		REVISIONS	
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**EXISTING CONDITIONS PLAN**  
**NATIONAL GUARD ARMOY**  
 2221 CAROLINA BEACH RD  
 WILMINGTON, N. C. 28401

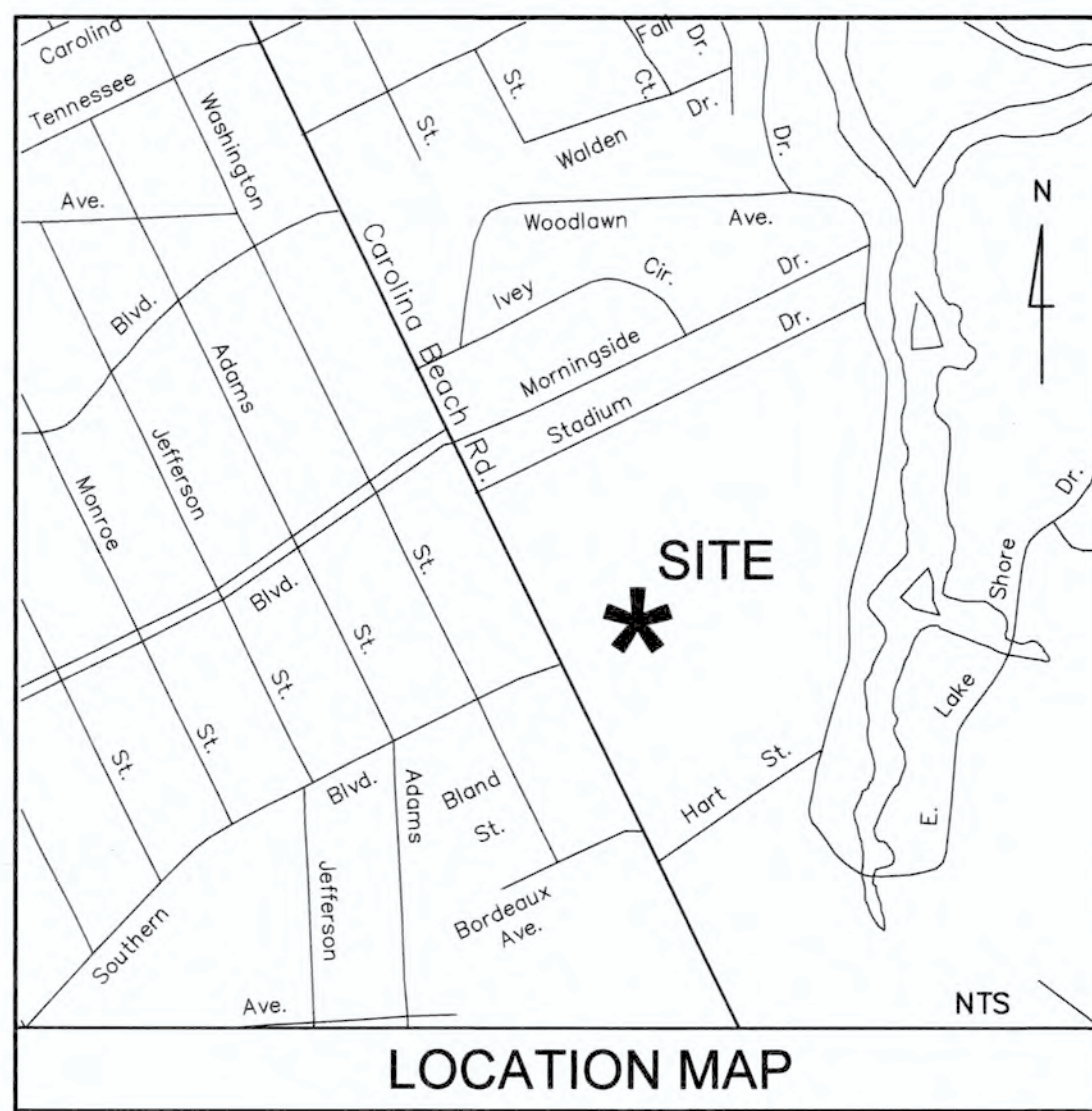
**OWNER/DEVELOPER**  
 STATE OF NORTH CAROLINA  
 NC NATIONAL GUARD  
 CONSTRUCTION & FACILITY  
 MANAGEMENT OFFICE  
 1636 GOLD STAR DR, SUITE 2800  
 RALEIGH, NC 27607  
 800-627-4136

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 WILMINGTON, NC 28412 ASHLAND, NC 28420  
 PHONE (910) 343-9653 PHONE (910) 267-5900

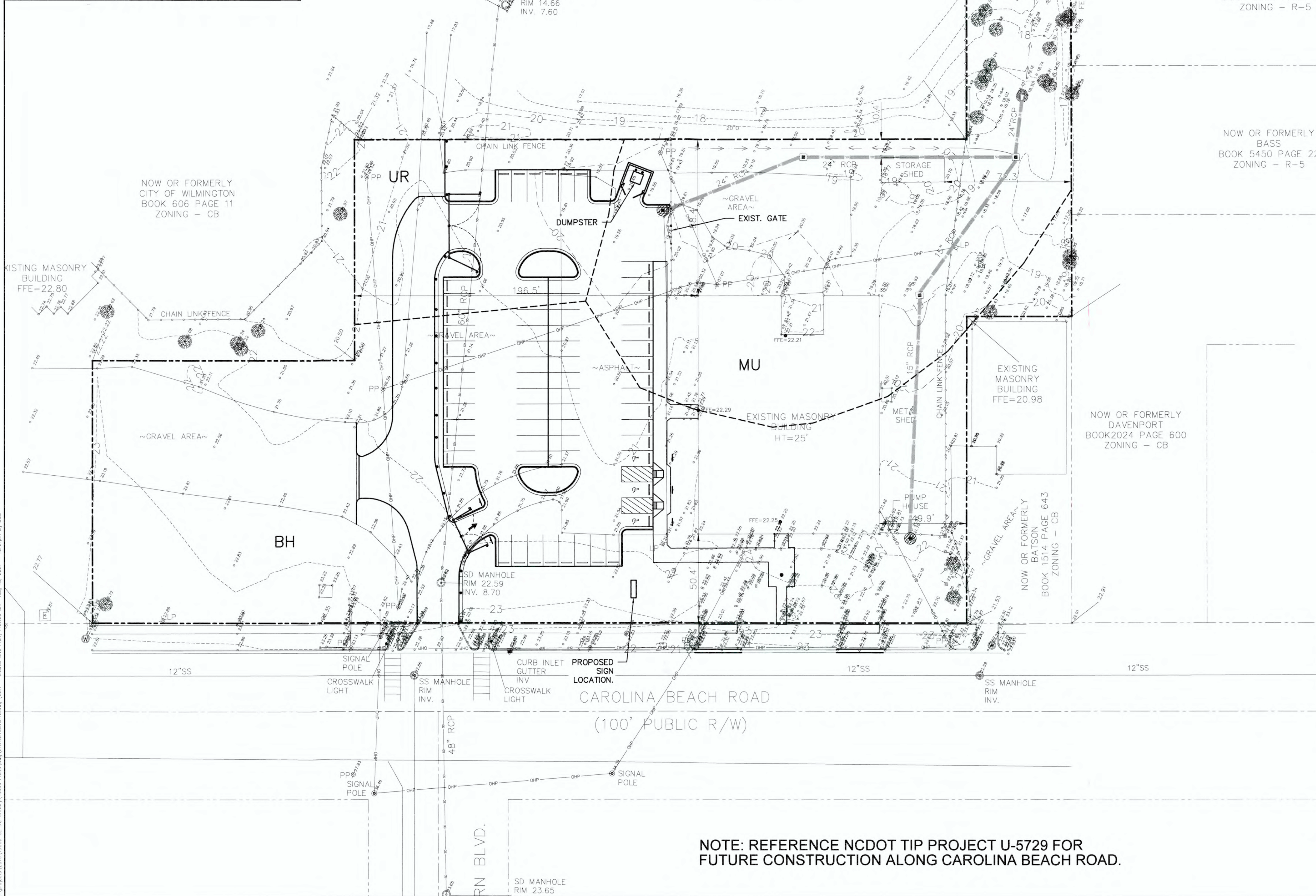
Licence #C-3641  
**21043**  
 DES. JST  
 O.D. JFN  
 DRWN. DGC  
 DATE 8/18/21



**CO**



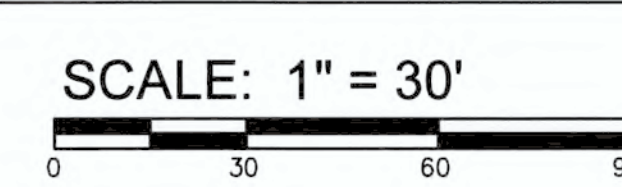
LOCATION MAP



SITE DATA TABLE	
PARCEL ID#:	R06013-018-002-000
PARCEL PIN#:	312609.05.8751.000
SITE ADDRESS:	2221 CAROLINA BEACH RD
PARCEL OWNER:	STATE OF NC
PARCEL AREA:	3.14 AC (136,765 SF)
PROPOSED PARCEL USE:	O&I-1
CURRENT ZONING:	URBAN
CAMA LAND CLASSIFICATION:	N/A
FUTURE LAND USE:	MU/BH/UR
SOIL TYPE:	MU/BH/UR
<b>BUILDING SETBACKS O&amp;I-1:</b>	
FRONT SETBACK:	20'
INTERIOR SIDE SETBACK:	20'
REAR SETBACKS:	20'
<b>PROPOSED(EXISTING) SETBACKS:</b>	
FRONT SETBACK:	50.5'
INTERIOR SIDE SETBACK:	49.8'
REAR SETBACK:	88.5'
<b>BUILDING INFORMATION:</b>	
TOTAL # OF BUILDINGS=	1 EXISTING
TOTAL SF OF BUILDINGS=	13,573 SF
TOTAL # OF STORIES=	1
BUILDING LOT COVERAGE PERCENTAGE=	9.92%
<b>IMPERVIOUS AREAS EXISTING:</b>	
BUILDING=	13,665 SF (ROOF AREA)
ASPHALT, CONCRETE, CURB & GUTTER=	30,953 SF
GRAVEL=	32,935 SF
SIDEWALK=	1,266 SF
TOTAL EXISTING IMPERVIOUS AREA=	65,806 SF
EXISTING TO REMAIN=	38,850 SF
<b>IMPERVIOUS AREAS PROPOSED:</b>	
BUILDING=	13,665 SF (ROOF AREA)
ASPHALT, CONCRETE, CURB & GUTTER=	30,953 SF
GRAVEL=	15,222 SF
SIDEWALK=	2,914 SF
TOTAL PROPOSED IMPERVIOUS AREA=	62,754 SF
TOTAL IMPERVIOUS AREA=	62,754 SF
% IMPERVIOUS LOT COVERAGE=	45.88%
<b>REQUIRED PARKING: N/A</b>	
TOTAL PARKING PROVIDED:	66
REGULAR SPACES:	63
HC SPACES:	3
TOTAL SPACES:	66
<b>LANDSCAPING: N/A</b>	
<b>STREETYARD FACTOR 18' (27' MAX - 9' MIN.): N/A</b>	
<b>AREA OF DISTURBED LIMITS = 55,309 SF (1.27 AC.)</b>	

PROPERTY IS NOT LOCATED WITHIN THE 100 YEAR FLOOD PLAIN BOUNDARY

LEGEND	
	PROPERTY LINE
	DISTURBED AREA LIMITS
	PROPOSED CONTOUR
	TEMPORARY SILT FENCE
	PROPOSED STORM DRAIN PIPE
	PROPOSED WATERLINE
	PROPOSED SANITARY SEWER
	PROPOSED SPOT ELEVATION FLOW LINE
	PROPOSED SPOT ELEVATION TOP OF CURB
	PROPOSED SPOT ELEVATION FINISH GRADE
	FLARED END SECTION WITH RIP-RAP ENERGY DISSIPATOR
	DROP INLET WITH INLET PROTECTION (DI)
	CURB INLET WITH INLET PROTECTION (CI)
	JUNCTION BOX WITH INLET PROTECTION (JB)
	PROPOSED FIRE HYDRANT
	EXISTING CONTOUR
	EXISTING TREE TO BE SAVED
	EXISTING TREE TO BE REMOVED
	TREE PROTECTION FENCING
	RESURFACE ASPHALT 4/C4
	NEW ASPHALT 4A/C4
	HD CONCRETE 2/C4 & 2/C4.1
	CONCRETE SIDEWALK



NOTE: REFERENCE NCDOT TIP PROJECT U-5729 FOR FUTURE CONSTRUCTION ALONG CAROLINA BEACH ROAD.

BY	DESCRIPTION
	REVISIONS
SYMBOL	DATE

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**OVERALL SITE PLAN**  
**NATIONAL GUARD ARMORY**  
 2221 CAROLINA BEACH RD  
 WILMINGTON, N. C. 28401

OWNER/DEVELOPER  
 STATE OF NORTH CAROLINA  
 NC NATIONAL GUARD  
 CONSTRUCTION & FACILITY  
 MANAGEMENT OFFICE  
 1636 GOLD STAR DR, SUITE 2600  
 RALEIGH, NC 27607  
 800-821-4136

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 WILMINGTON, NC 28412 ASH, NC 28420  
 PHONE (910) 343-9653 PHONE (910) 287-5900

License #C-3641

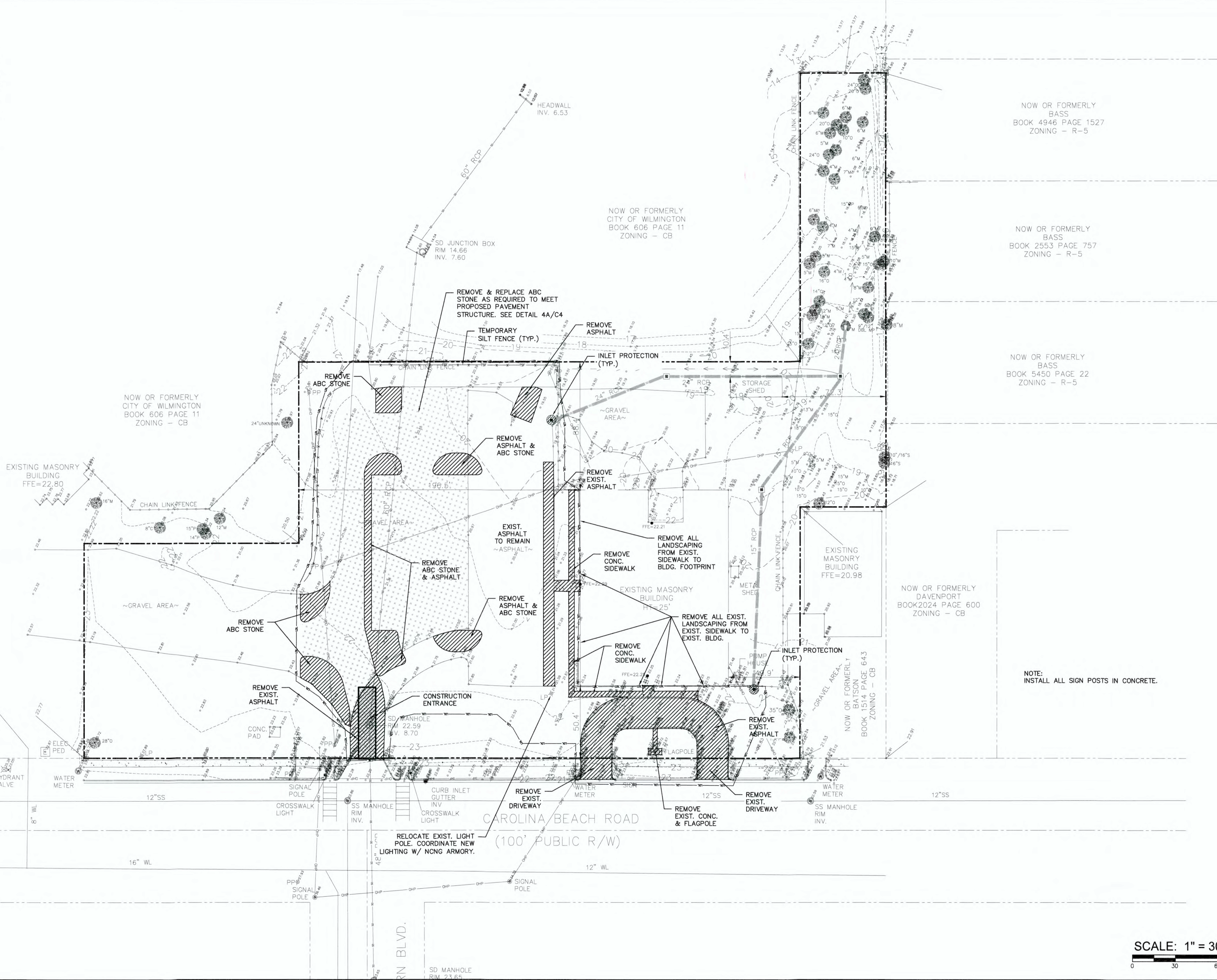
**21043**

DES.	JST
CHKD.	JPN
DRWN.	DGC
DATE	8/18/21

**C0.1**



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NOW OR FORMERLY  
BASS  
BOOK 4946 PAGE 1527  
ZONING - R-5

NOW OR FORMERLY  
BASS  
BOOK 2553 PAGE 757  
ZONING - R-5

NOW OR FORMERLY  
BASS  
BOOK 5450 PAGE 22  
ZONING - R-5

NOW OR FORMERLY  
DAVENPORT  
BOOK 2024 PAGE 600  
ZONING - CB

NOTE:  
INSTALL ALL SIGN POSTS IN CONCRETE.

SYMBOL	DATE	DESCRIPTION	BY
		REVISIONS	

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**DEMOLITION PLAN**  
**NATIONAL GUARD ARMORY**  
**2221 CAROLINA BEACH RD**  
**WILMINGTON, N. C. 28401**

**OWNER/DEVELOPER**  
 STATE OF NORTH CAROLINA  
 NC NATIONAL GUARD  
 CONSTRUCTION & FACILITY  
 MANAGEMENT OFFICE  
 1636 GOLD STAR DR. SUITE 2600  
 RALEIGH, NC 27607  
 800-627-4136

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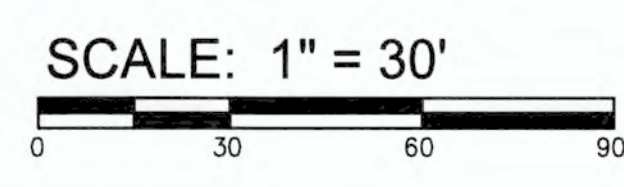
2603 IRON GATE DR. SUITE 102 1429 ASHLITTLE RIVER RD. NW  
 WILMINGTON, NC 28412 ASH, NC 28420  
 PHONE (910) 343-9653 PHONE (910) 287-5900

Licence #C-3641

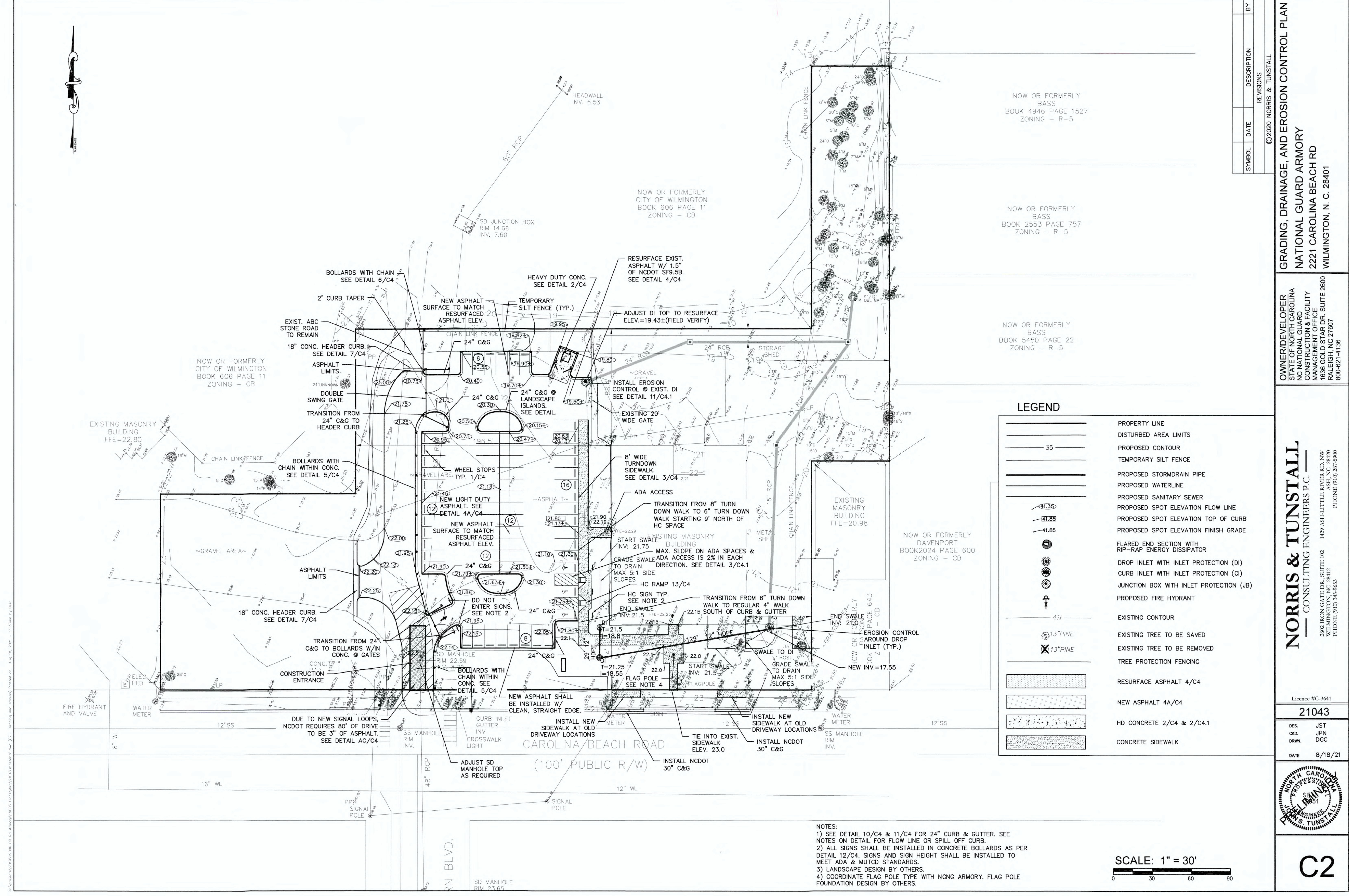
21043

DES. JST  
 CDR. JPN  
 DRWN. DGC

DATE 8/18/21



C1



### LEGEND

	PROPERTY LINE
	DISTURBED AREA LIMITS
	PROPOSED CONTOUR
	TEMPORARY SILT FENCE
	PROPOSED STORMDRAIN PIPE
	PROPOSED WATERLINE
	PROPOSED SANITARY SEWER
	PROPOSED SPOT ELEVATION FLOW LINE
	PROPOSED SPOT ELEVATION TOP OF CURB
	PROPOSED SPOT ELEVATION FINISH GRADE
	FLARED END SECTION WITH RIP-RAP ENERGY DISSIPATOR
	DROP INLET WITH INLET PROTECTION (DI)
	CURB INLET WITH INLET PROTECTION (CI)
	JUNCTION BOX WITH INLET PROTECTION (JB)
	PROPOSED FIRE HYDRANT
	EXISTING CONTOUR
	EXISTING TREE TO BE SAVED
	EXISTING TREE TO BE REMOVED
	TREE PROTECTION FENCING
	RESURFACE ASPHALT 4/C4
	NEW ASPHALT 4A/C4
	HD CONCRETE 2/C4 & 2/C4.1
	CONCRETE SIDEWALK

NOW OR FORMERLY BASS  
BOOK 4946 PAGE 1527  
ZONING - R-5

NOW OR FORMERLY BASS  
BOOK 2553 PAGE 757  
ZONING - R-5

NOW OR FORMERLY BASS  
BOOK 5450 PAGE 22  
ZONING - R-5

NOW OR FORMERLY DAVENPORT  
BOOK 2024 PAGE 600  
ZONING - CB

SYMBOL	DATE	DESCRIPTION	BY
		REVISIONS	

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**GRADING, DRAINAGE, AND EROSION CONTROL PLAN**

**NATIONAL GUARD ARMORY**  
2221 CAROLINA BEACH RD  
WILMINGTON, N. C. 28401

**OWNER/DEVELOPER**  
STATE OF NORTH CAROLINA  
NC NATIONAL GUARD  
CONSTRUCTION & FACILITY  
MANAGEMENT OFFICE  
1636 GOLD STAR DR, SUITE 2800  
RALEIGH, NC 27607  
800-621-4136

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PHONE (910) 343-9653 PHONE (910) 287-5900

License #C-3641

**21043**

DES. JST  
CHK. JPN  
DRWN. DGC

DATE 8/18/21



**C2**

- NOTES:
- SEE DETAIL 10/C4 & 11/C4 FOR 24" CURB & GUTTER. SEE NOTES ON DETAIL FOR FLOW LINE OR SPILL OFF CURB.
  - ALL SIGNS SHALL BE INSTALLED IN CONCRETE BOLLARDS AS PER DETAIL 12/C4. SIGNS AND SIGN HEIGHT SHALL BE INSTALLED TO MEET ADA & MUTCD STANDARDS.
  - LANDSCAPE DESIGN BY OTHERS.
  - COORDINATE FLAG POLE TYPE WITH NCGN ARMORY. FLAG POLE FOUNDATION DESIGN BY OTHERS.

SCALE: 1" = 30'

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SYMBOL	DATE	DESCRIPTION	BY
		REVISIONS	

**LAYOUT PLAN**  
**NATIONAL GUARD ARMORY**  
**2221 CAROLINA BEACH RD**  
**WILMINGTON, N. C. 28401**

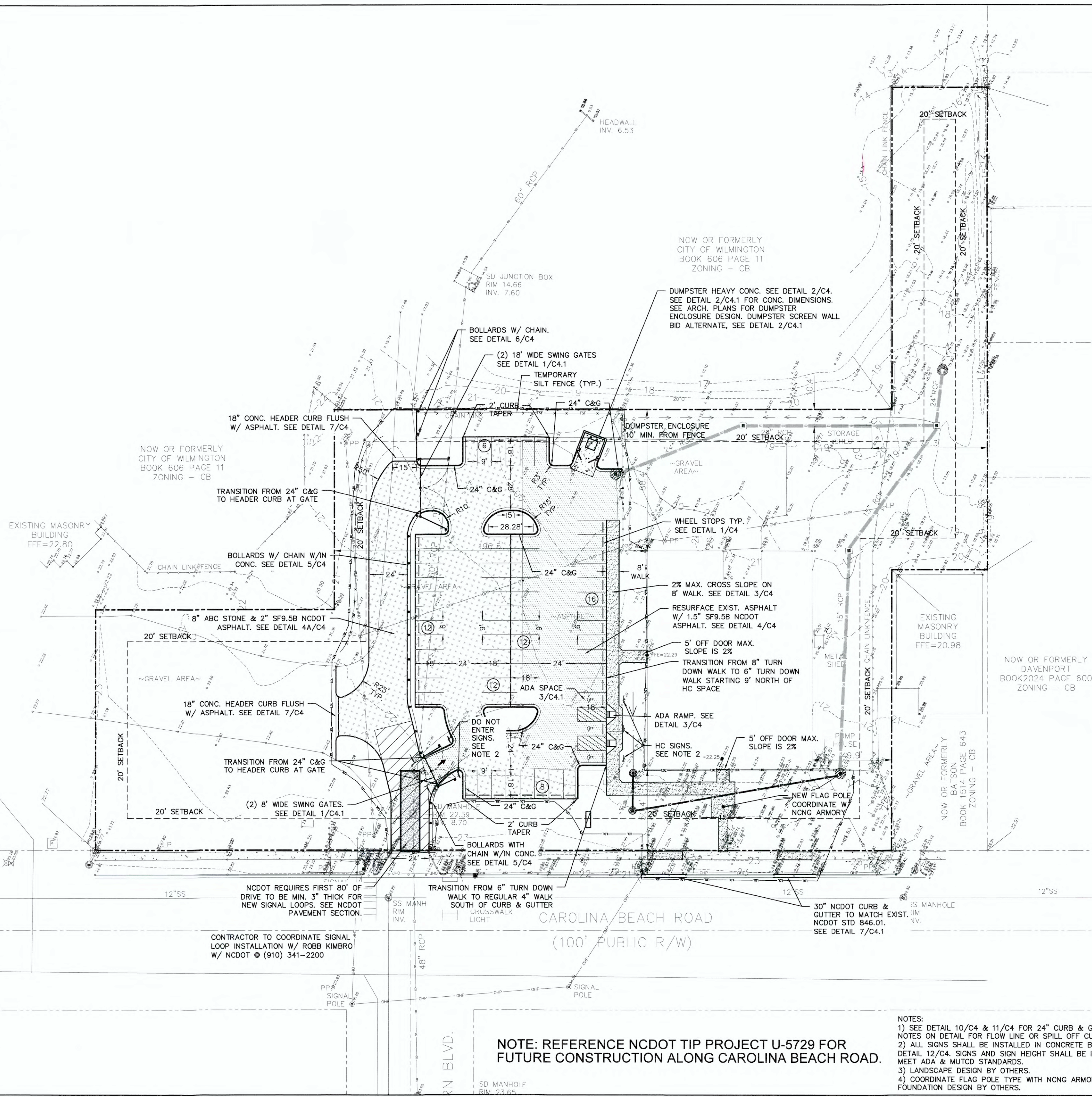
**OWNER/DEVELOPER**  
 STATE OF NORTH CAROLINA  
 NC NATIONAL GUARD  
 CONSTRUCTION & FACILITY  
 MANAGEMENT OFFICE  
 1636 GOLD STAR DR, SUITE 2600  
 RALEIGH, NC 27607  
 800-821-4136

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 CONSULTING ENGINEERS P.C.  
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 WILMINGTON, NC 28412  
 PHONE: (910) 343-9653

License #C-3641  
**21043**  
 DES. JUST  
 CDR. JPN  
 DRWN. DGC  
 DATE 8/18/21



**C3**



**LEGEND**

	PROPERTY LINE
	DISTURBED AREA LIMITS
	PROPOSED CONTOUR
	TEMPORARY SILT FENCE
	PROPOSED STORMDRAIN PIPE
	PROPOSED WATERLINE
	PROPOSED SANITARY SEWER
	PROPOSED SPOT ELEVATION FLOW LINE
	PROPOSED SPOT ELEVATION TOP OF CURB
	PROPOSED SPOT ELEVATION FINISH GRADE
	FLARED END SECTION WITH RIP-RAP ENERGY DISSIPATOR
	DROP INLET WITH INLET PROTECTION (DI)
	CURB INLET WITH INLET PROTECTION (CI)
	JUNCTION BOX WITH INLET PROTECTION (JB)
	PROPOSED FIRE HYDRANT
	EXISTING CONTOUR
	EXISTING TREE TO BE SAVED
	EXISTING TREE TO BE REMOVED
	TREE PROTECTION FENCING
	RESURFACE ASPHALT 4/C4
	NEW ASPHALT 4A/C4
	HD CONCRETE 2/C4 & 2/C4.1
	CONCRETE SIDEWALK
	NCDOT ASPHALT AC/C4

**NOTES:**  
 1) SEE DETAIL 10/C4 & 11/C4 FOR 24" CURB & GUTTER. SEE NOTES ON DETAIL FOR FLOW LINE OR SPILL OFF CURB.  
 2) ALL SIGNS SHALL BE INSTALLED IN CONCRETE BOLLARDS AS PER DETAIL 12/C4. SIGNS AND SIGN HEIGHT SHALL BE INSTALLED TO MEET ADA & MUTCD STANDARDS.  
 3) LANDSCAPE DESIGN BY OTHERS.  
 4) COORDINATE FLAG POLE TYPE WITH NCNG ARMORY. FLAG POLE FOUNDATION DESIGN BY OTHERS.

**SCALE: 1" = 30'**

**NOTE: REFERENCE NCDOT TIP PROJECT U-5729 FOR FUTURE CONSTRUCTION ALONG CAROLINA BEACH ROAD.**

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**DRAINAGE AREA / IMPERVIOUS AREA**

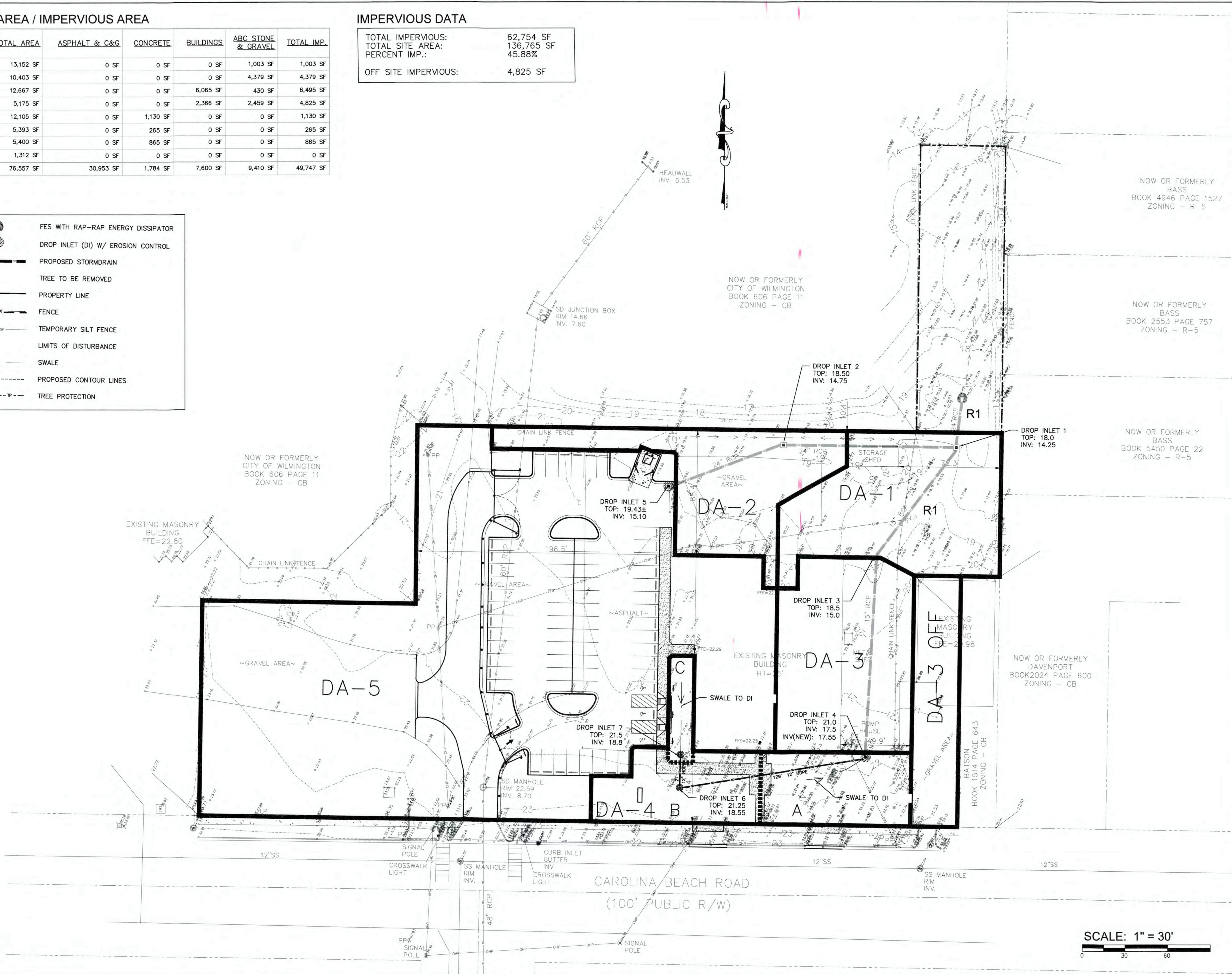
DRAINAGE AREA	TOTAL AREA	ASPHALT & C&G	CONCRETE	BUILDINGS	ABC STONE & GRAVEL	TOTAL IMP.
DA-1	13,152 SF	0 SF	0 SF	0 SF	1,003 SF	1,003 SF
DA-2	10,403 SF	0 SF	0 SF	0 SF	4,379 SF	4,379 SF
DA-3	12,667 SF	0 SF	0 SF	6,065 SF	430 SF	6,495 SF
DA-3 OFF SITE	5,175 SF	0 SF	0 SF	2,366 SF	2,459 SF	4,825 SF
DA-4 (TOTAL)	12,105 SF	0 SF	1,130 SF	0 SF	0 SF	1,130 SF
DA-4A	5,393 SF	0 SF	265 SF	0 SF	0 SF	265 SF
DA-4B	5,400 SF	0 SF	865 SF	0 SF	0 SF	865 SF
DA-4C	1,312 SF	0 SF	0 SF	0 SF	0 SF	0 SF
DA-5	76,557 SF	30,953 SF	1,784 SF	7,600 SF	9,410 SF	49,747 SF

**IMPERVIOUS DATA**

TOTAL IMPERVIOUS:	62,754 SF
TOTAL SITE AREA:	136,765 SF
PERCENT IMP.:	45.88%
OFF SITE IMPERVIOUS:	4,825 SF

**LEGEND**

	FES WITH RAP-RAP ENERGY DISSIPATOR
	DROP INLET (DI) W/ EROSION CONTROL
	PROPOSED STORMDRAIN
	TREE TO BE REMOVED
	PROPERTY LINE
	FENCE
	TEMPORARY SILT FENCE
	LIMITS OF DISTURBANCE
	SWALE
	PROPOSED CONTOUR LINES
	TREE PROTECTION



REVISED STORM DRAINAGE	DATE	DESCRIPTION	BY
R2-AS#5	6.08.20	REVISED STORM PIPES ADDED TREES TO BE SAVED	
R1-AS#4	4.24.20		

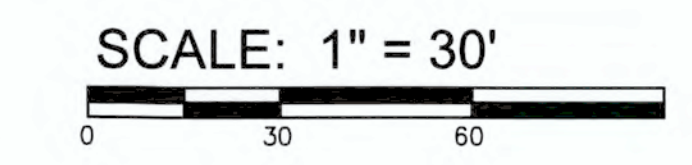
**OWNER/DEVELOPER**  
 STATE OF NORTH CAROLINA  
 NC NATIONAL GUARD  
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 1636 GOLD STAR DR. SUITE 2600  
 RALEIGH, NC 27607  
 800-621-4136

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 1900 EASTWOOD RD., SUITE #11  
 WILMINGTON, NC 28403  
 PHONE (910) 343-9653

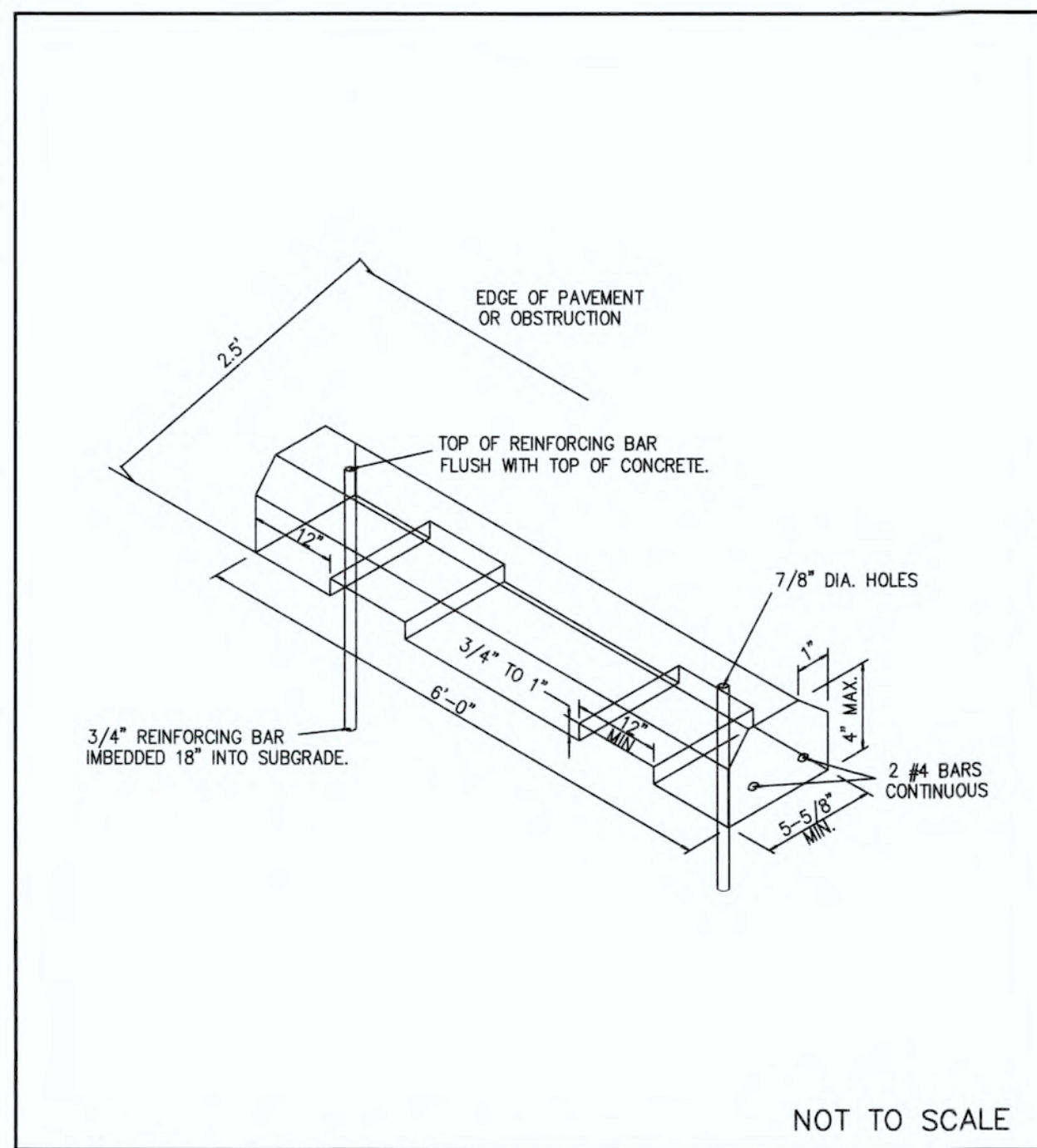
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 CKD. JPN  
 DRWN. RPH  
 DATE 8/18/21



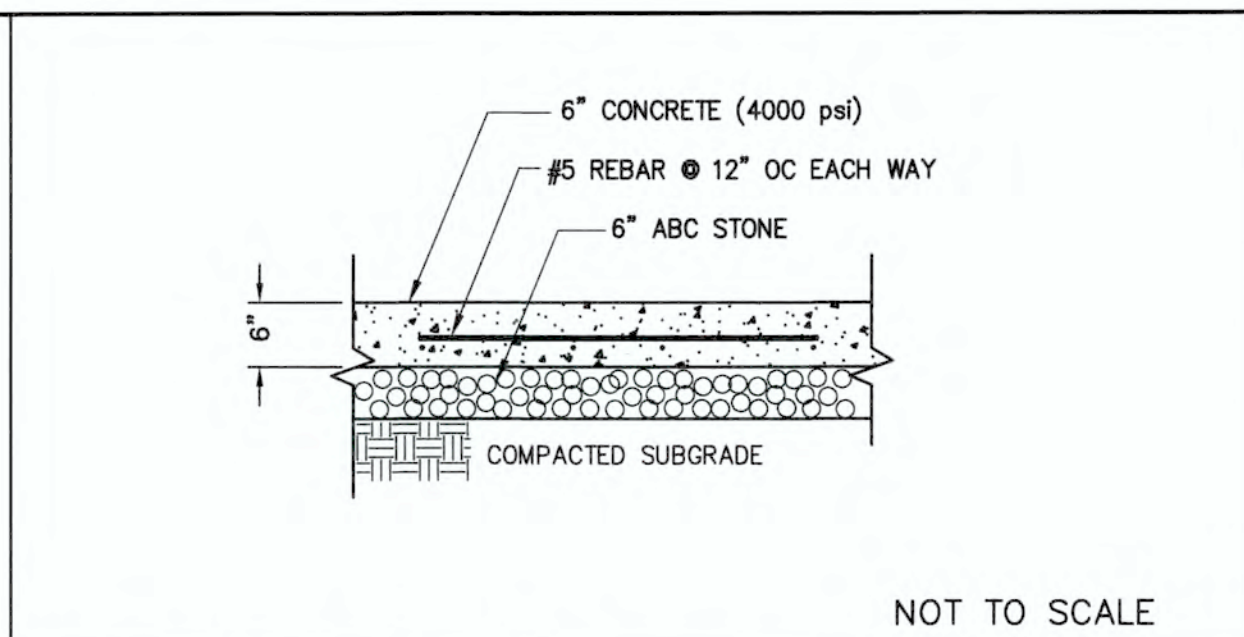
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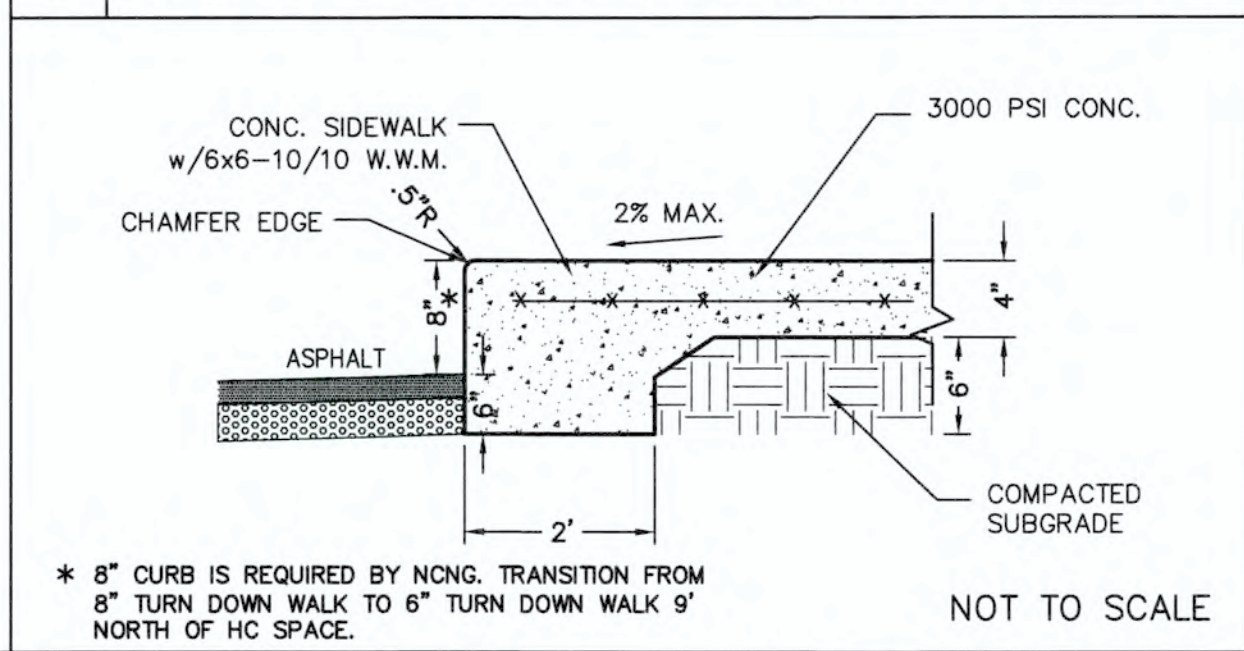
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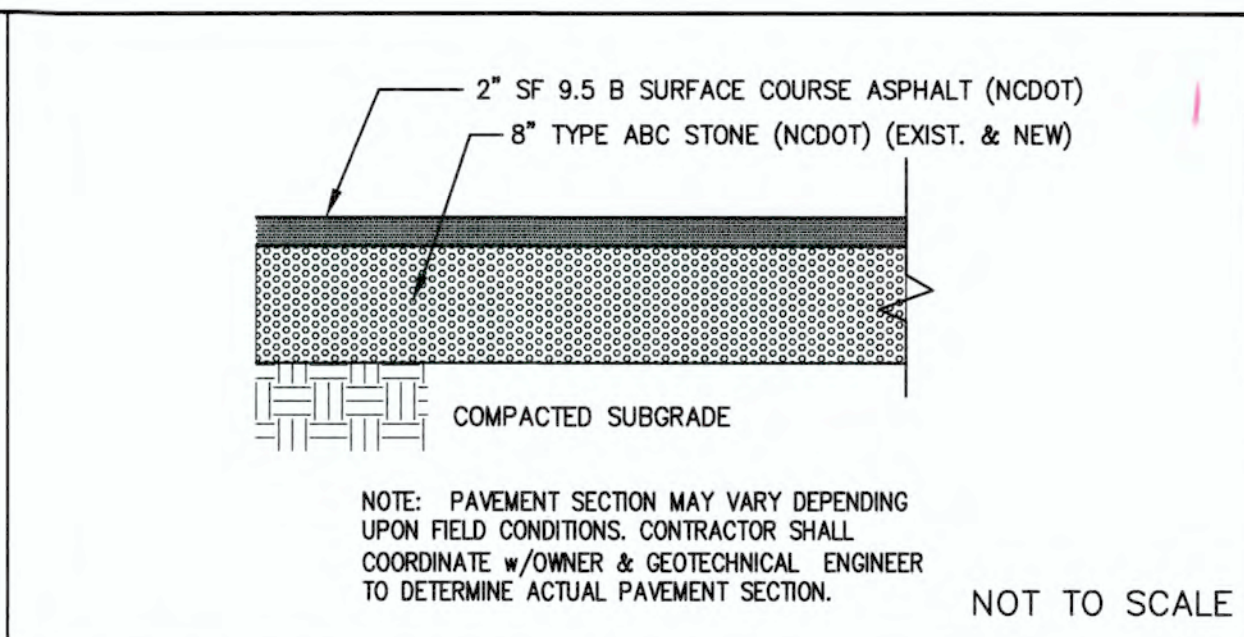
1 CONCRETE WHEEL STOP DETAIL



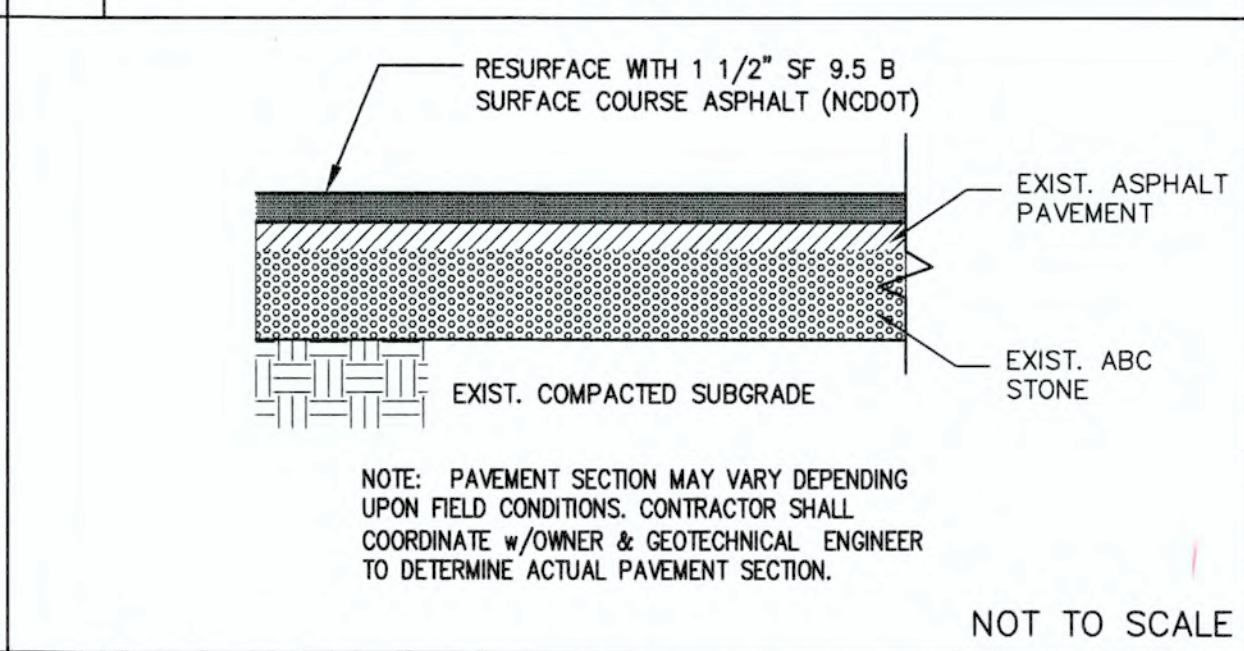
2 HEAVY DUTY CONCRETE PAVEMENT SECTION



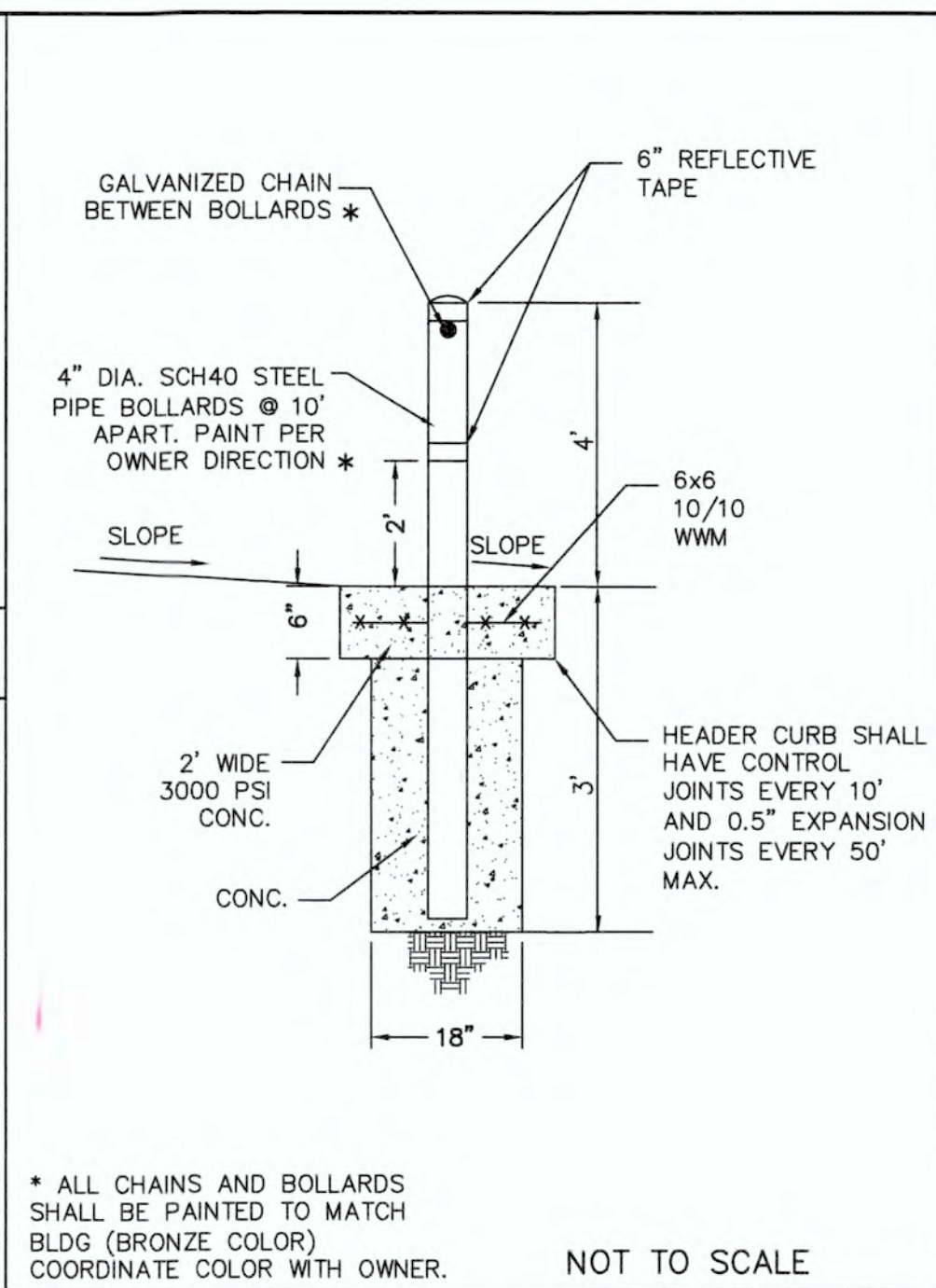
3 TURN DOWN WALK SECTION



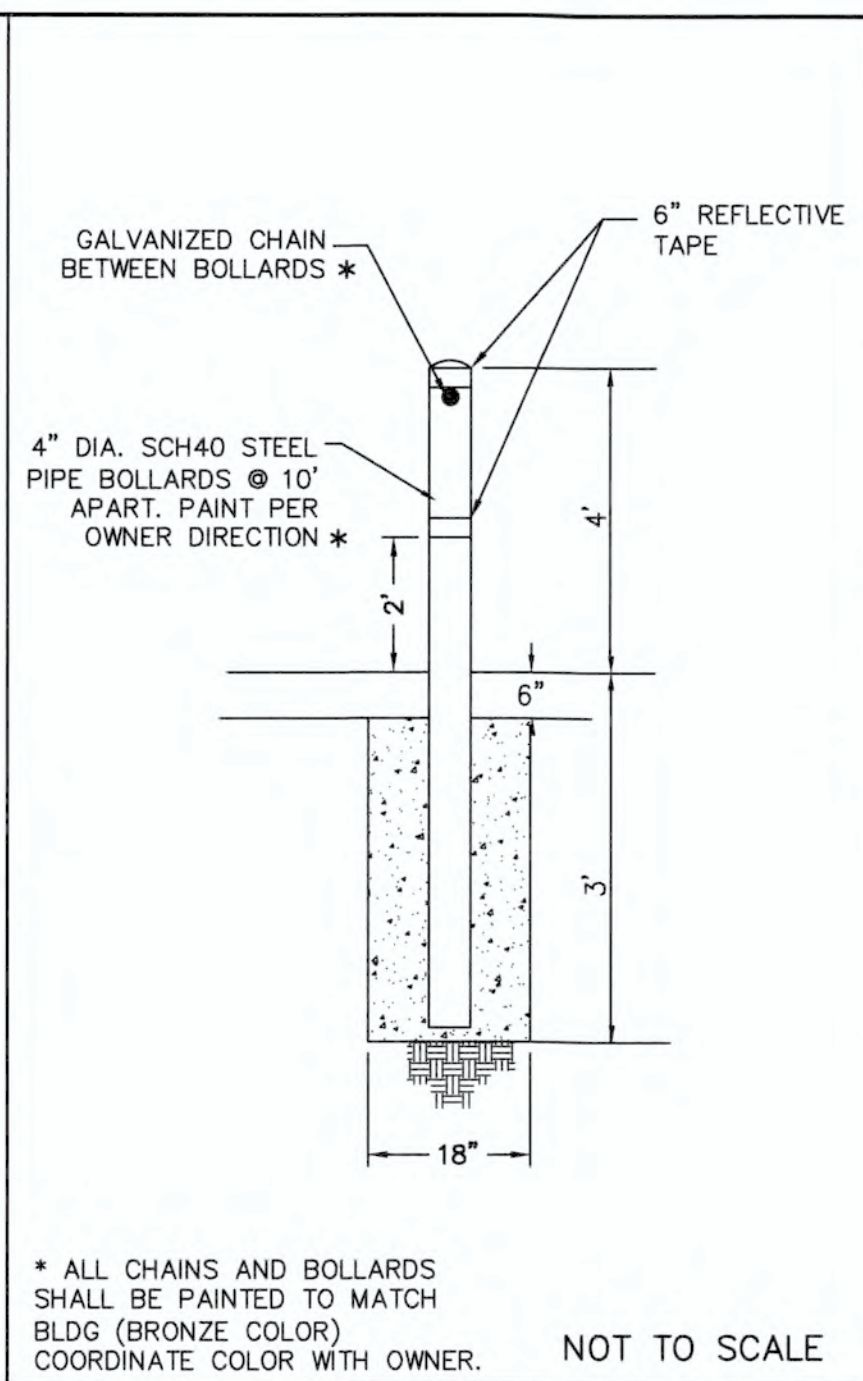
4A NEW ASPHALT SECTION



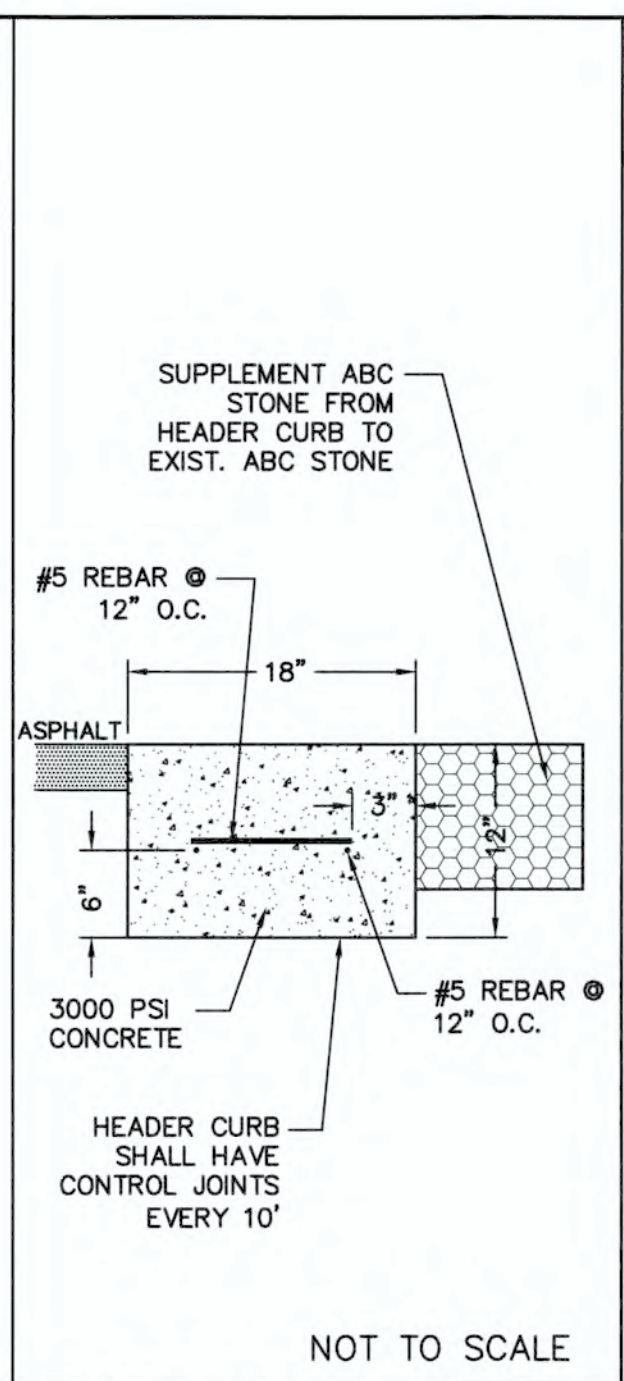
4B ASPHALT RESURFACE PAVEMENT SECTION



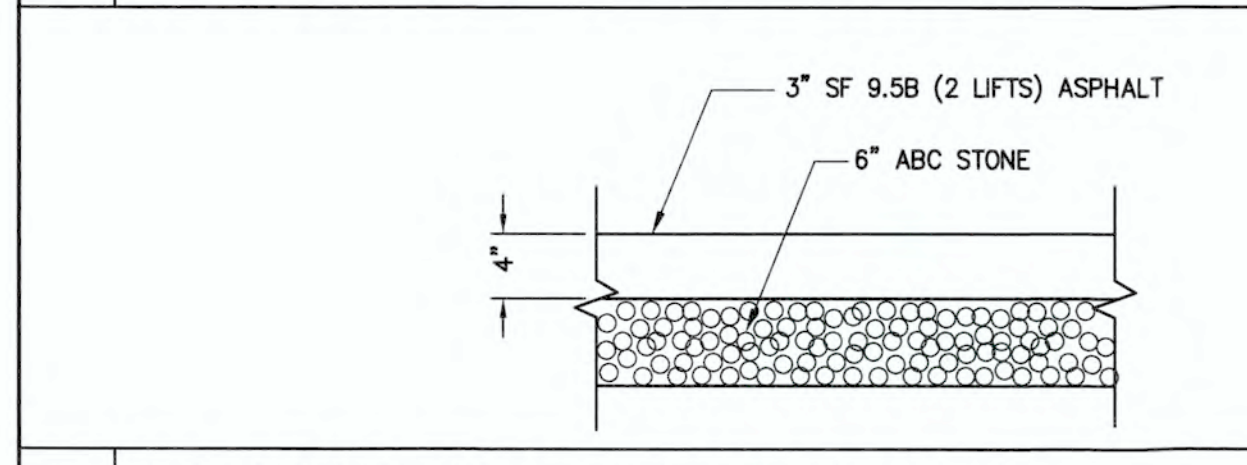
5 BOLLARDS WITH CHAIN WITHIN CONC. DETAIL



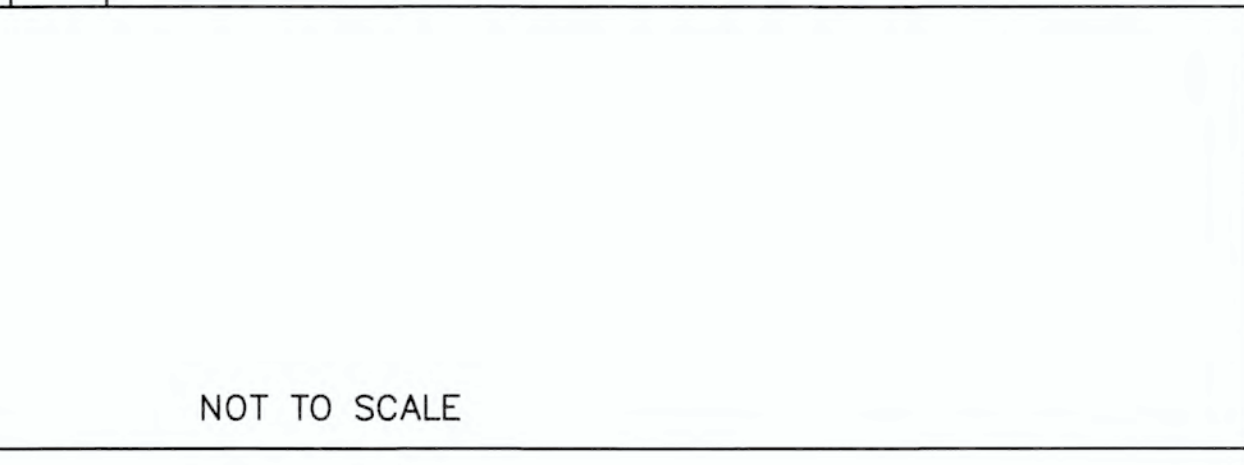
6 BOLLARDS WITH CHAIN DETAIL



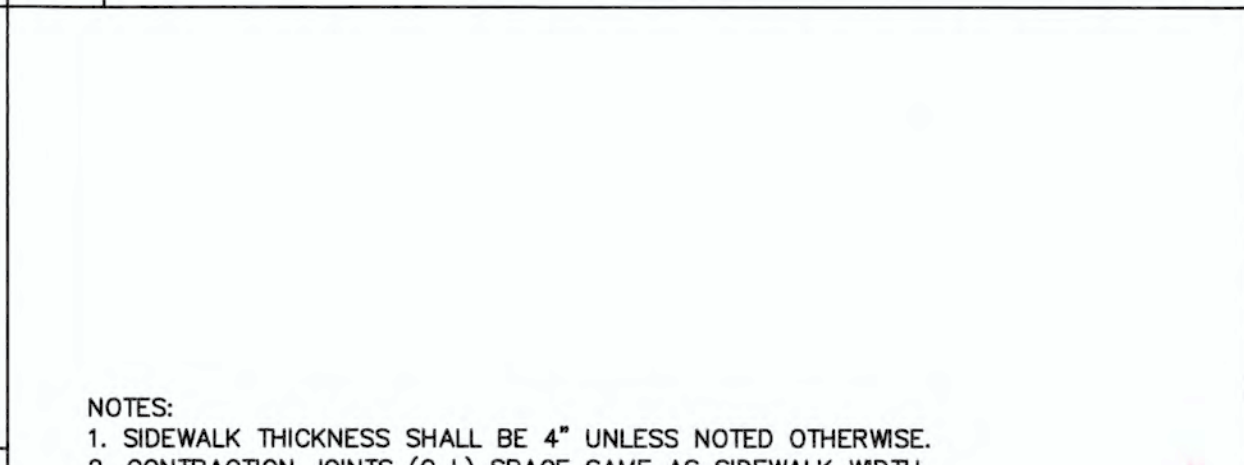
7 REINFORCED HEADER CURB DETAIL



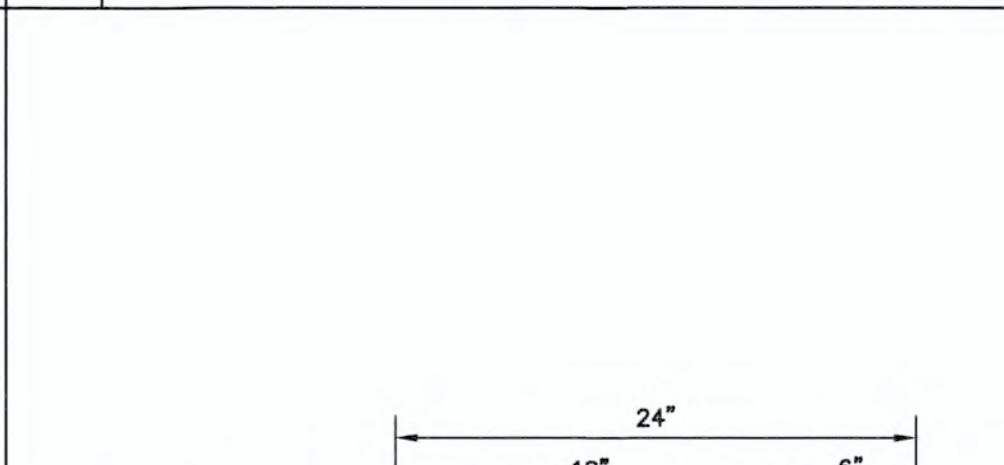
4C NCDOT REQUIRED PAVEMENT SECTION



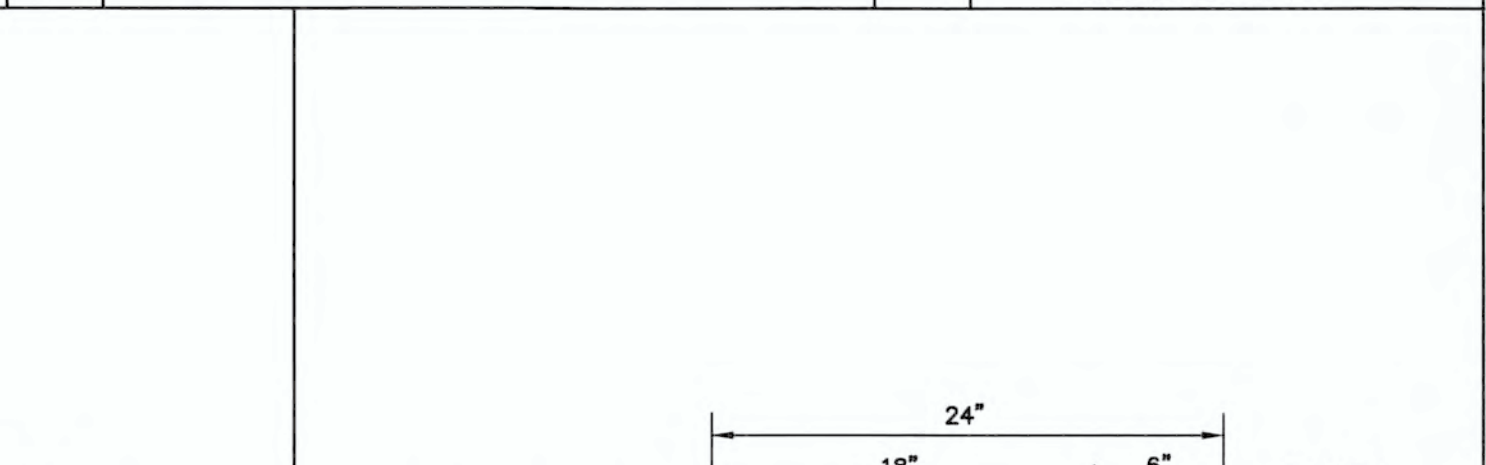
8 STANDARD SIDEWALK DETAIL



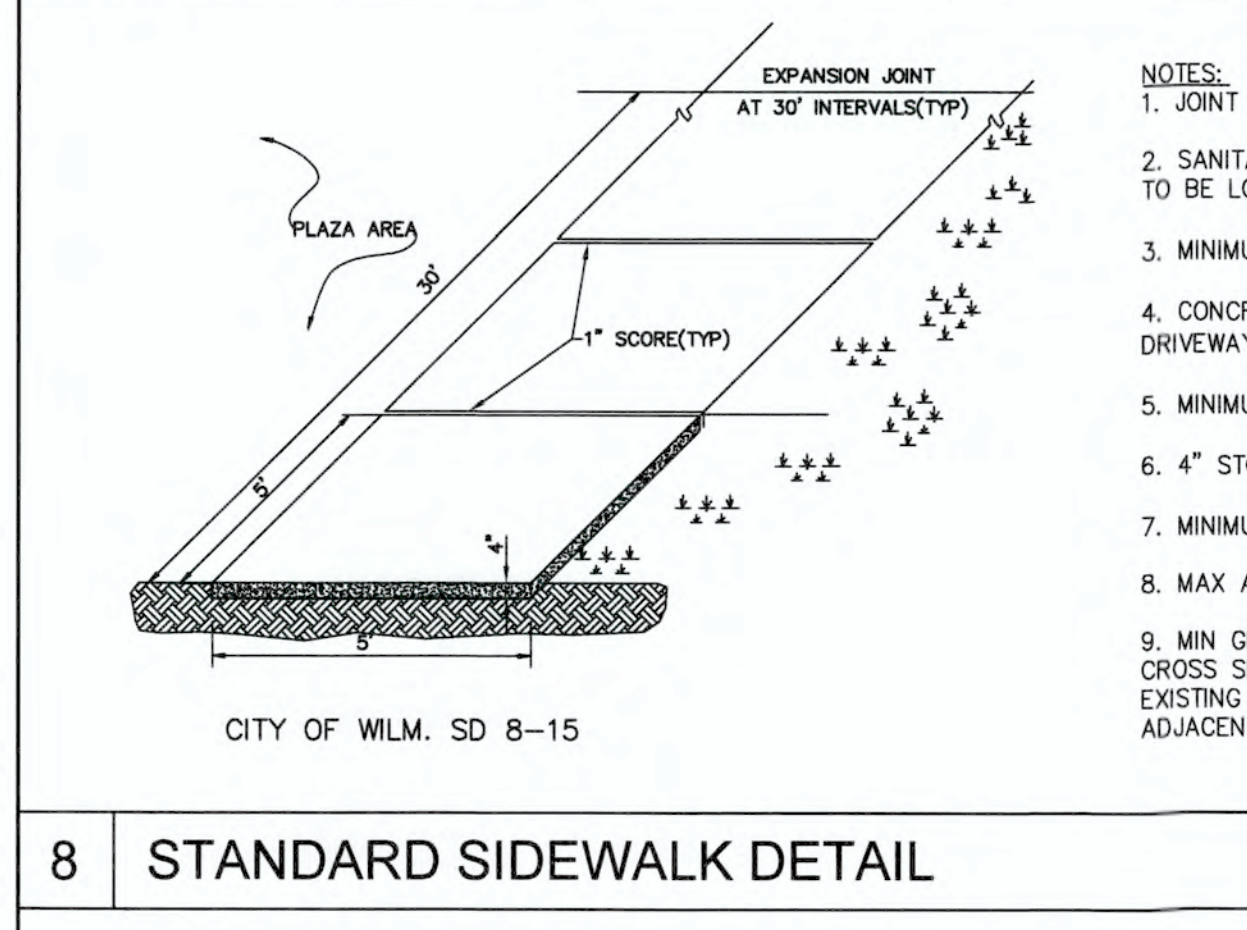
9 SIDEWALK JOINT DETAIL



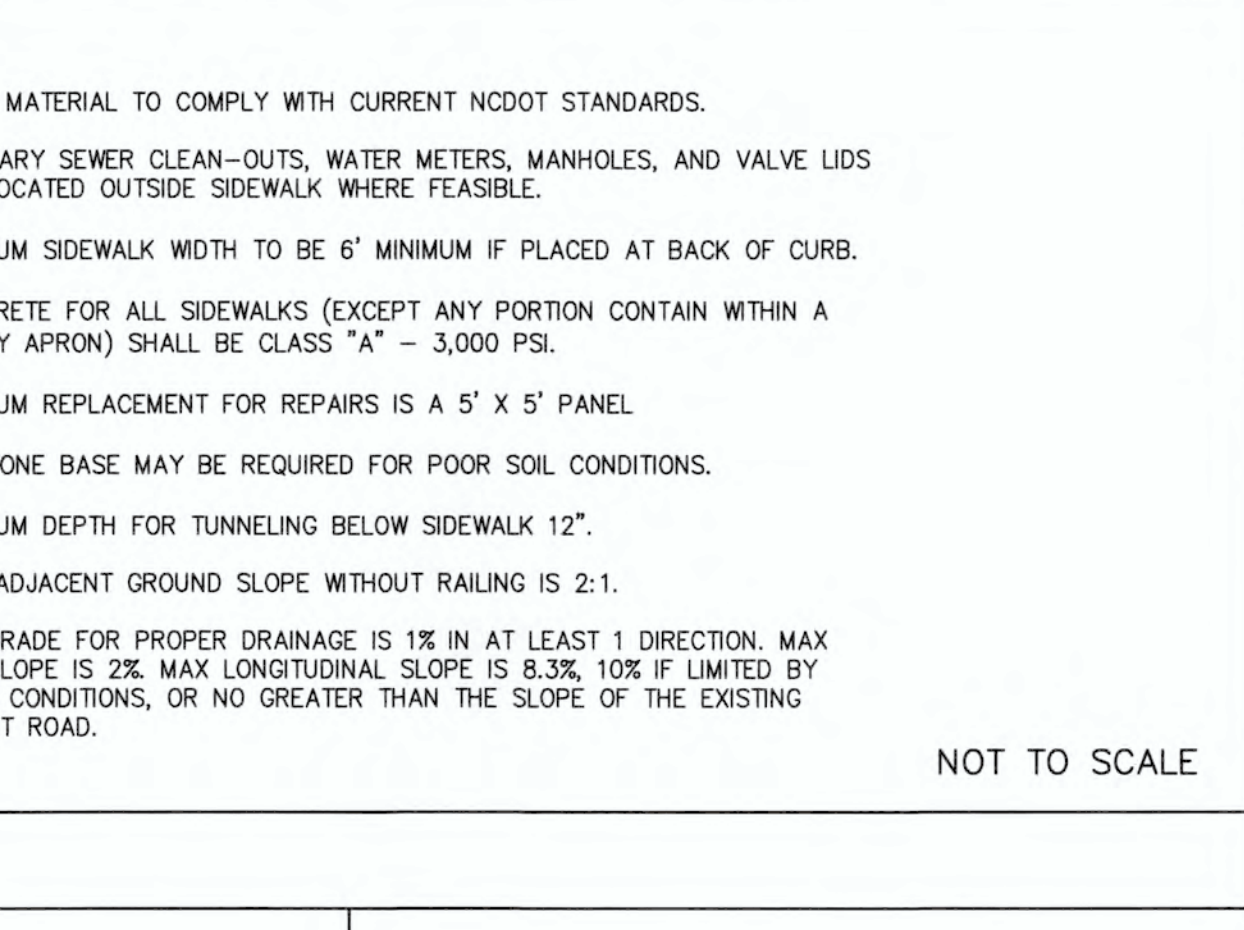
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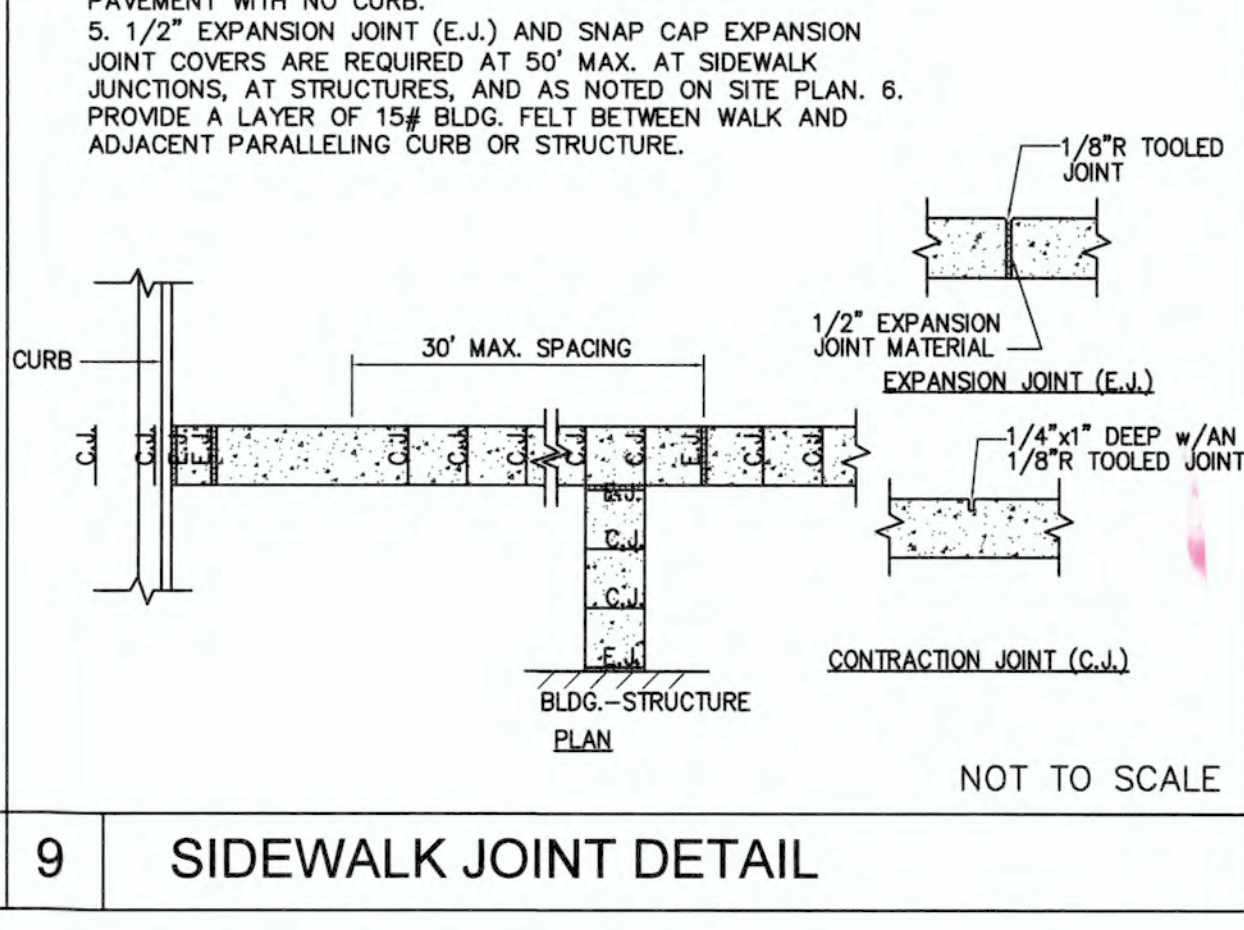
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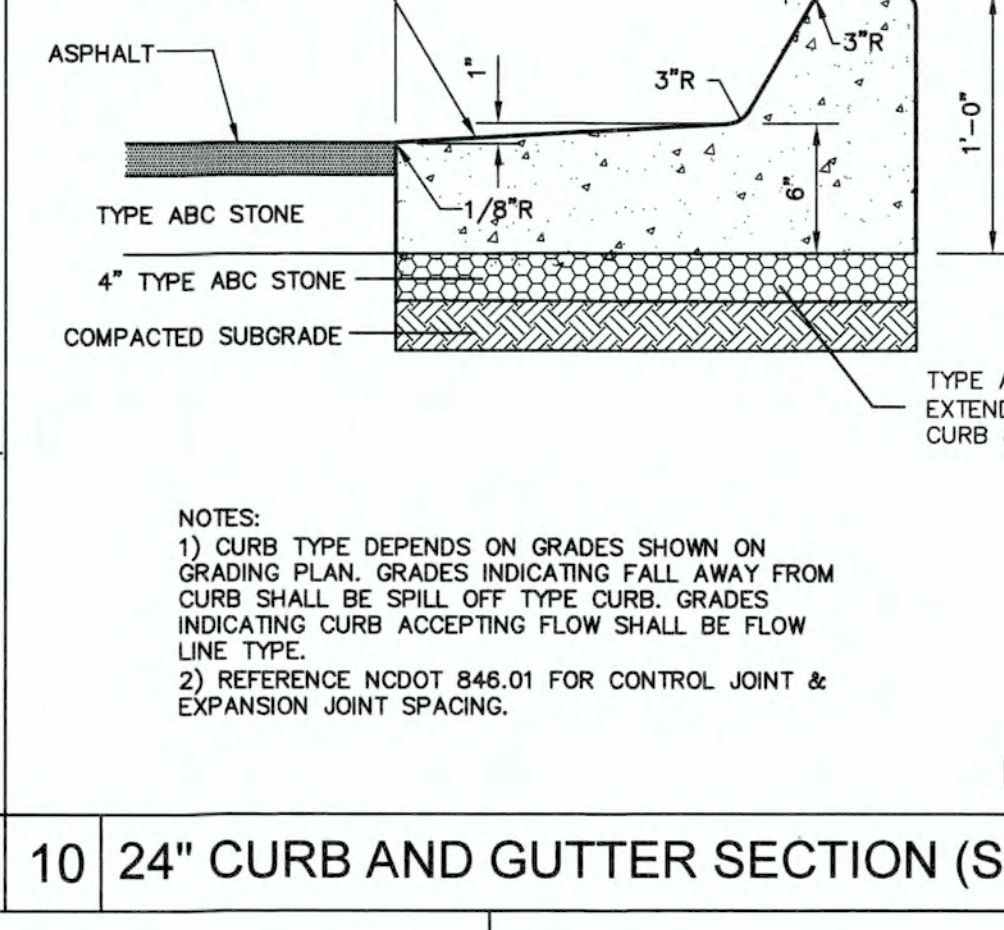
12 TYPICAL HANDICAPPED SIGN DETAIL



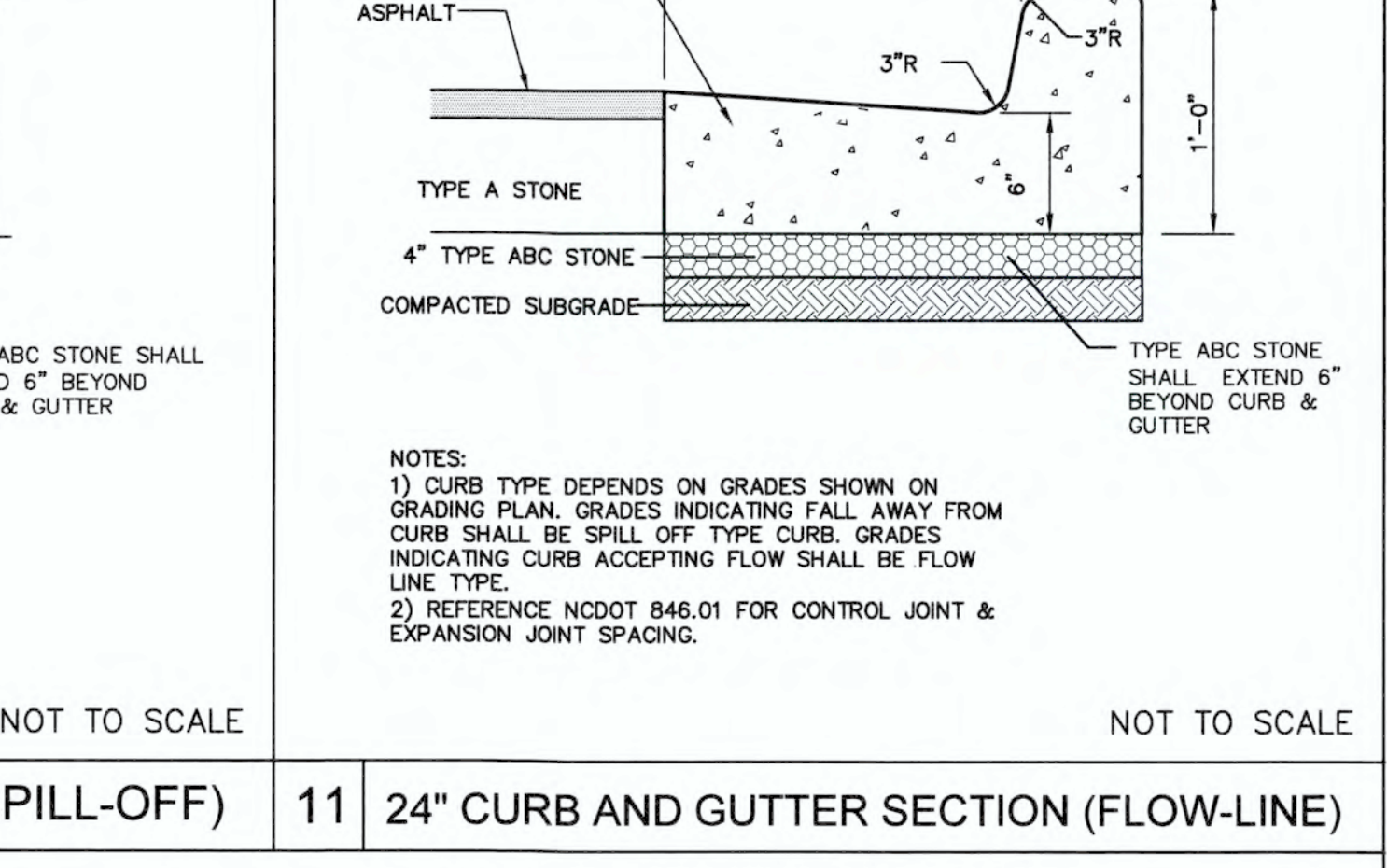
13 SIDEWALK, CURB CUT AND WHEEL CHAIR RAMP DETAIL



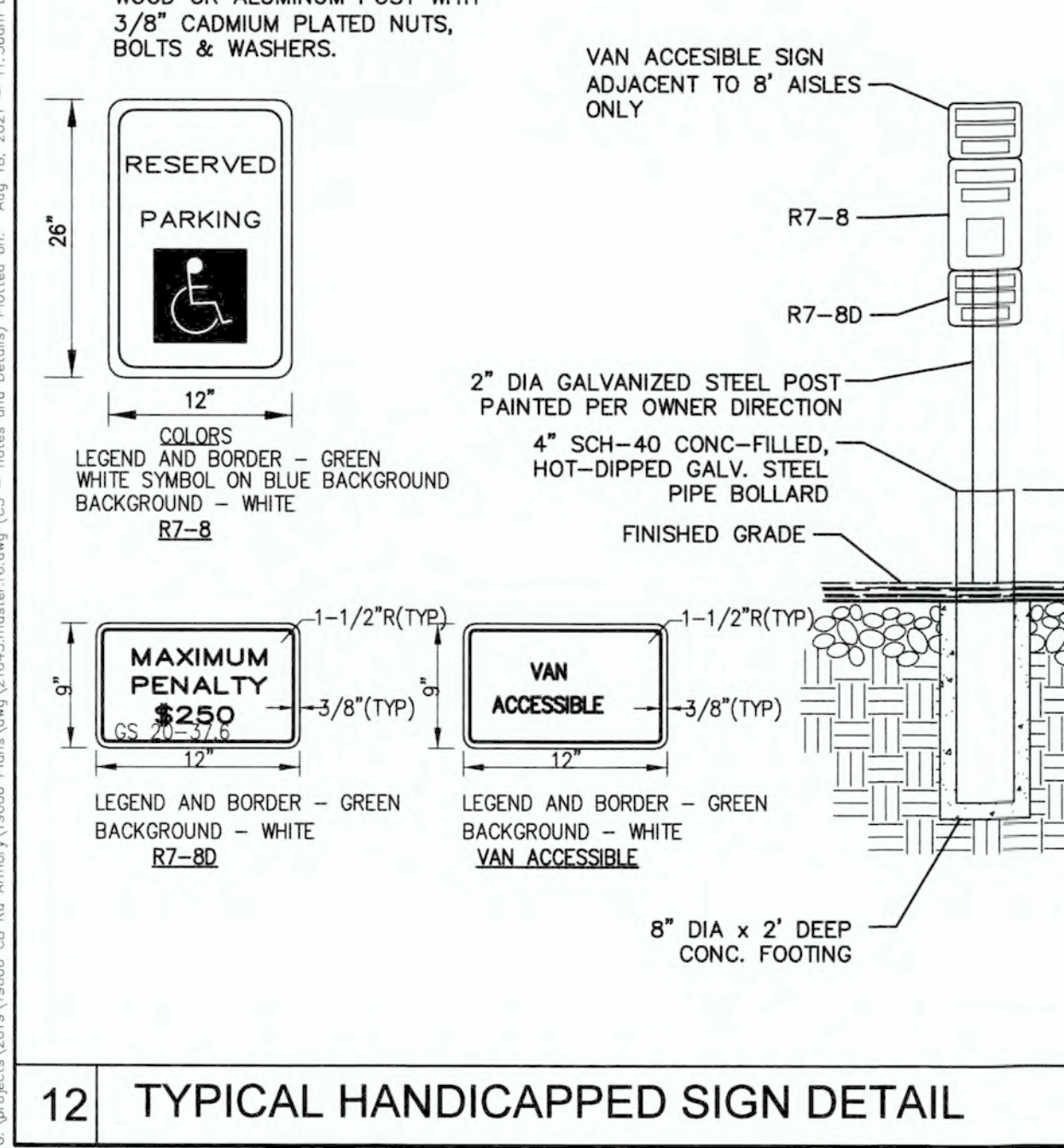
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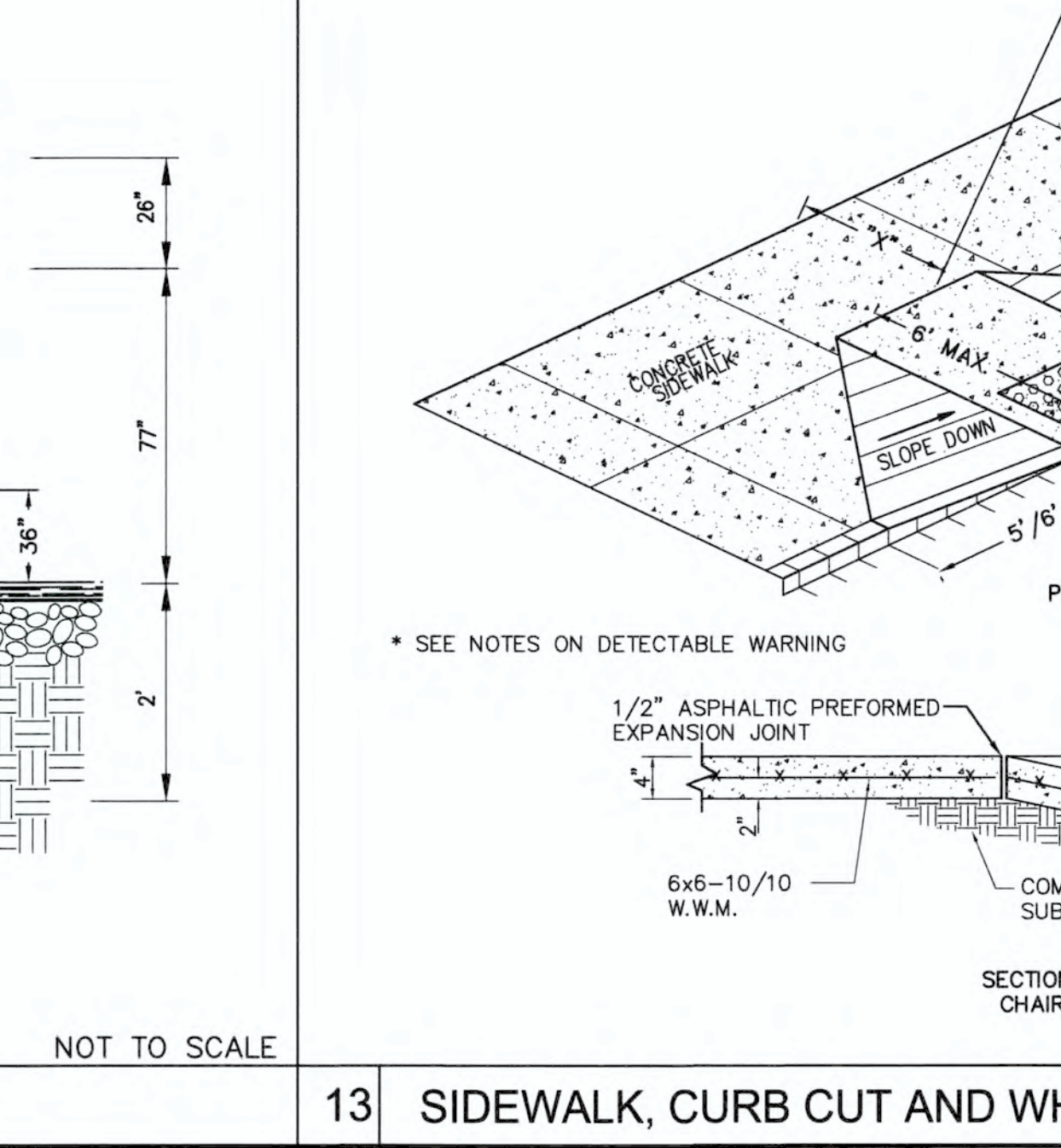
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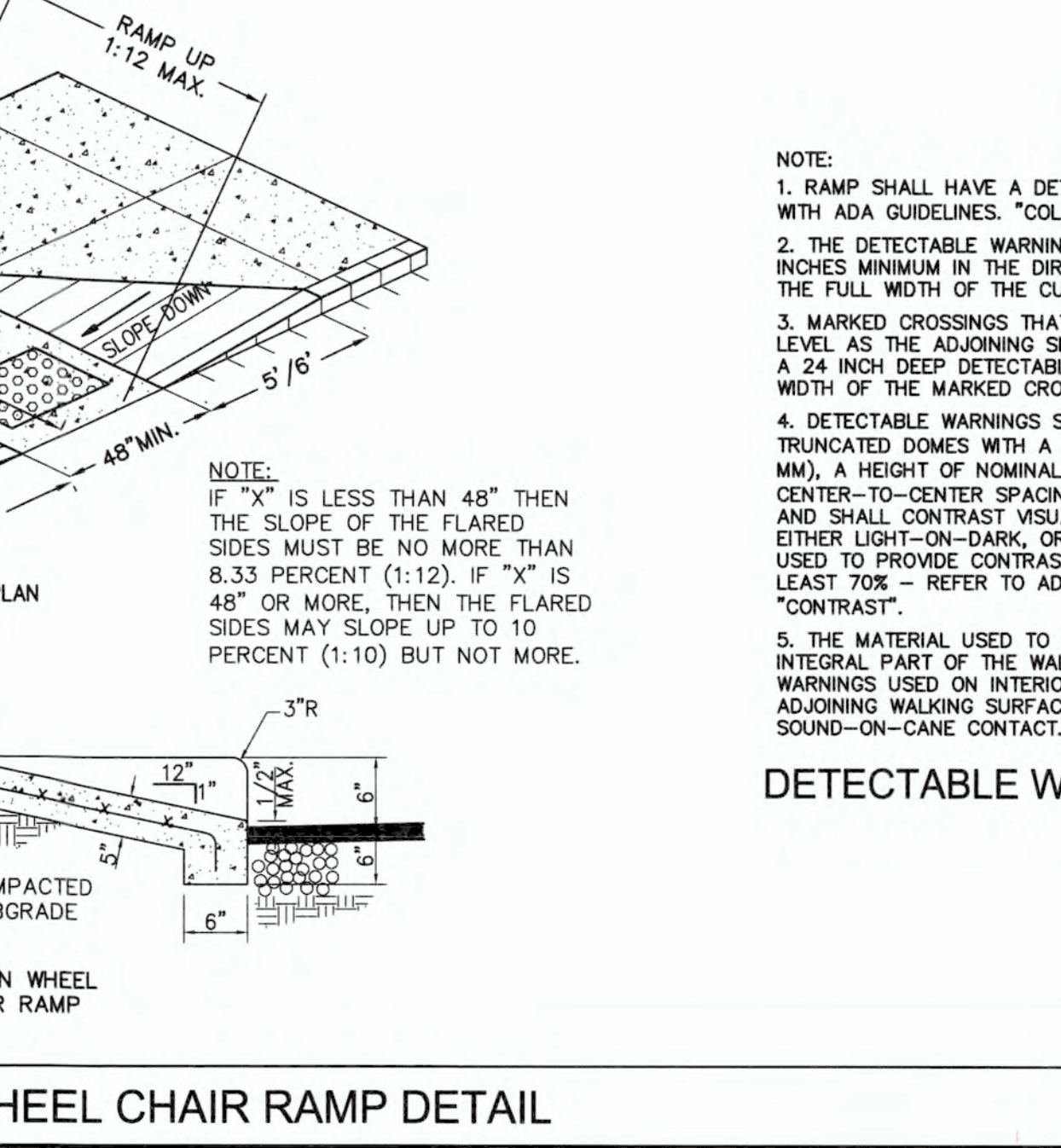
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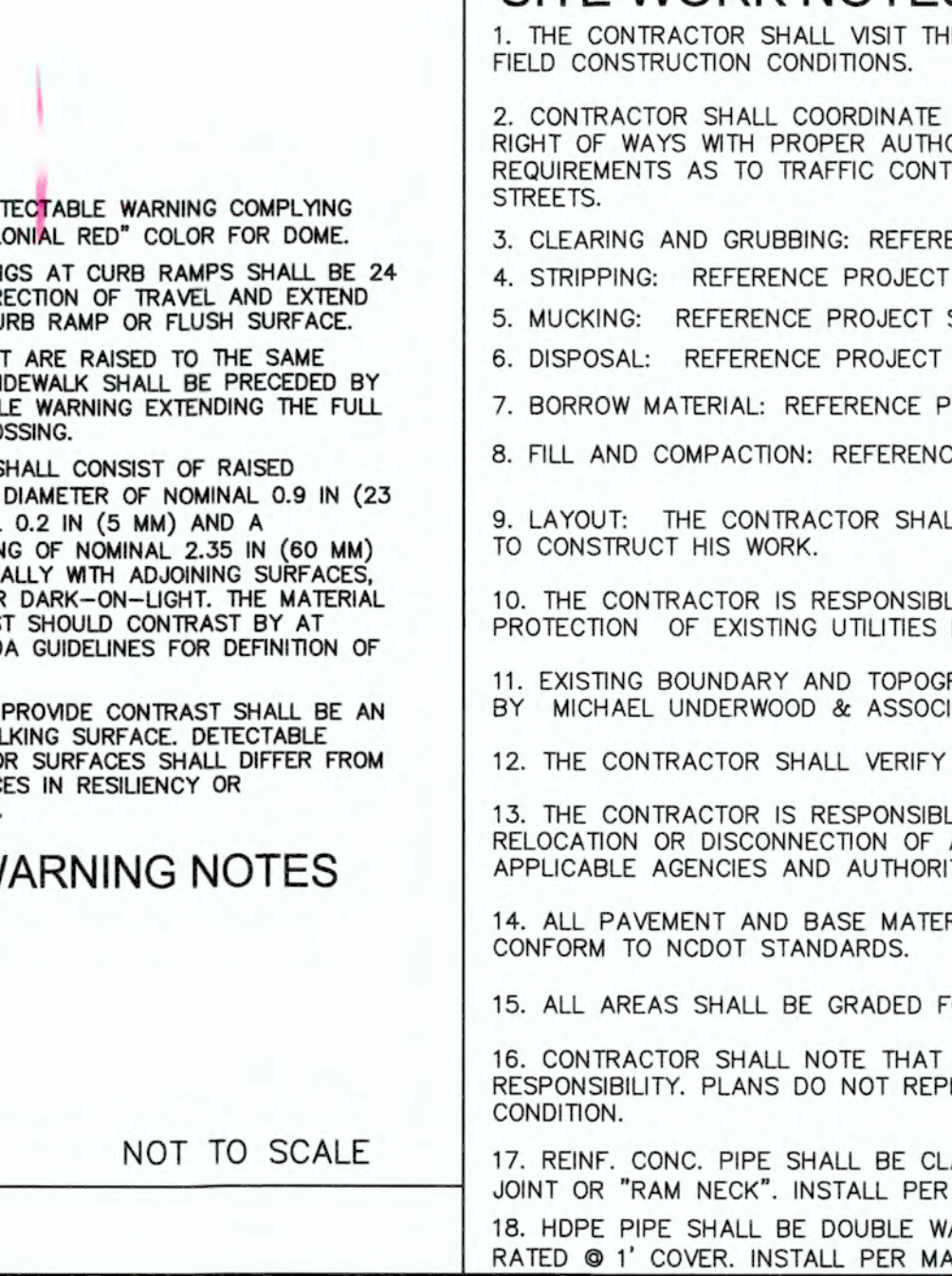
12 TYPICAL HANDICAPPED SIGN DETAIL



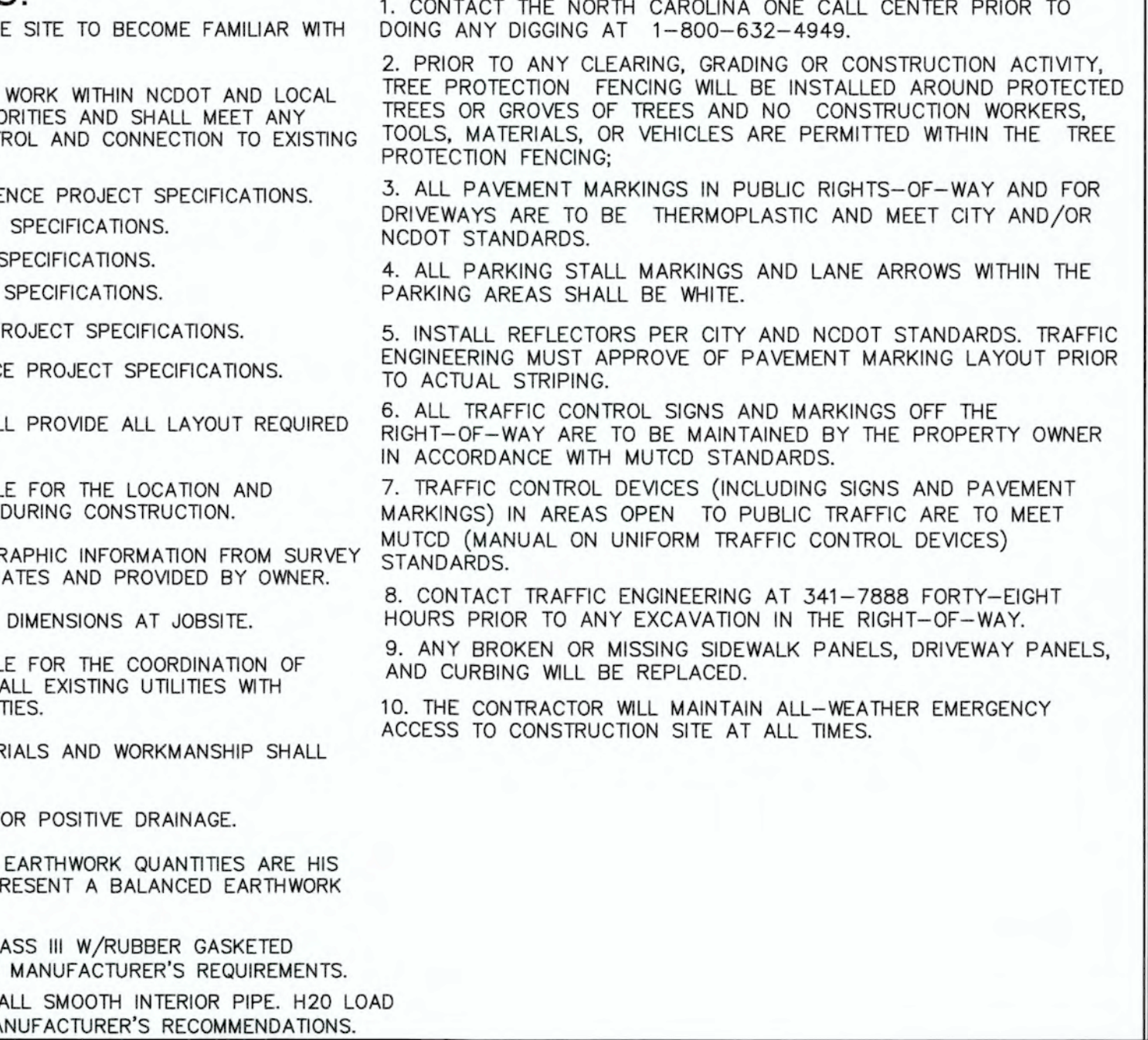
13 SIDEWALK, CURB CUT AND WHEEL CHAIR RAMP DETAIL



10 24\"/>



11 24\"/>



11 24\"/>

SIGNS TO BE 0.080 STANDARD ALUMINUM. BOLT TO TREATED WOOD OR ALUMINUM POST WITH 3/8\"/>

RESERVED PARKING

MAXIMUM PENALTY \$250

VAN ACCESSIBLE

LEGEND AND BORDER - GREEN  
WHITE SYMBOL ON BLUE BACKGROUND  
BACKGROUND - WHITE

7-80

LEGEND AND BORDER - GREEN  
BACKGROUND - WHITE  
VAN ACCESSIBLE  
R7-80

2\"/>

4\"/>

FINISHED GRADE

8\"/>

NOTES:

- JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
- SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
- MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
- CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAIN WITHIN A DRIVEWAY APRON) SHALL BE CLASS "A" - 3,000 PSI.
- MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL.
- 4\"/>
- MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK 12\"/>
- MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1.
- MIN GRADE FOR PROPER DRAINAGE IS 1/4\"/>

CITY OF WILM. SD 8-15

NOTES:

- SIDEWALK THICKNESS SHALL BE 4\"/>
- CONTRACTION JOINTS (C.J.) SPACE SAME AS SIDEWALK WIDTH.
- THICKEN SIDEWALK TO 6\"/>
- THICKEN SIDEWALK TO 6\"/>
- 1/2\"/>
- JOINT COVERS ARE REQUIRED AT 50' MAX. AT SIDEWALK JUNCTIONS, AT STRUCTURES, AND AS NOTED ON SITE PLAN.
- PROVIDE A LAYER OF 15# BLDG. FELT BETWEEN WALK AND ADJACENT PARALLELING CURB OR STRUCTURE.

CONTRACTION JOINT (C.J.)

EXPANSION JOINT (E.J.)

1/8\"/>

1/4\"/>

1/8\"/>

BLDG.-STRUCTURE PLAN

NOTES:

- CURB TYPE DEPENDS ON GRADES SHOWN ON GRADING PLAN. GRADES INDICATING FALL AWAY FROM CURB SHALL BE SPILL OFF TYPE CURB. GRADES INDICATING CURB ACCEPTING FLOW SHALL BE FLOW LINE TYPE.
- REFERENCE NCDOT 846.01 FOR CONTROL JOINT & EXPANSION JOINT SPACING.

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- REFERENCE NCDOT 846.01 FOR CONTROL JOINT & EXPANSION JOINT SPACING.

**SITE WORK NOTES:**

- THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH FIELD CONSTRUCTION CONDITIONS.
- CONTRACTOR SHALL COORDINATE WORK WITHIN NCDOT AND LOCAL RIGHT OF WAYS WITH PROPER AUTHORITIES AND SHALL MEET ANY REQUIREMENTS AS TO TRAFFIC CONTROL AND CONNECTION TO EXISTING STREETS.
- CLEARING AND GRUBBING: REFERENCE PROJECT SPECIFICATIONS.
- STRIPPING: REFERENCE PROJECT SPECIFICATIONS.
- MUCKING: REFERENCE PROJECT SPECIFICATIONS.
- DISPOSAL: REFERENCE PROJECT SPECIFICATIONS.
- BORROW MATERIAL: REFERENCE PROJECT SPECIFICATIONS.
- FILL AND COMPACTION: REFERENCE PROJECT SPECIFICATIONS.
- LAYOUT: THE CONTRACTOR SHALL PROVIDE ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK.
- EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION FROM SURVEY BY MICHAEL UNDERWOOD & ASSOCIATES AND PROVIDED BY OWNER.
- THE CONTRACTOR SHALL VERIFY DIMENSIONS AT JOBSITE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF RELOCATION OR DISCONNECTION OF ALL EXISTING UTILITIES WITH APPLICABLE AGENCIES AND AUTHORITIES.
- ALL PAVEMENT AND BASE MATERIALS AND WORKMANSHIP SHALL CONFORM TO NCDOT STANDARDS.
- ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE.
- CONTRACTOR SHALL NOTE THAT EARTHWORK QUANTITIES ARE HIS RESPONSIBILITY. PLANS DO NOT REPRESENT A BALANCED EARTHWORK CONDITION.
- REINF. CONC. PIPE SHALL BE CLASS III W/RUBBER GASKETED JOINT OR "RAM NECK". INSTALL PER MANUFACTURER'S REQUIREMENTS.
- HDPE PIPE SHALL BE DOUBLE WALL SMOOTH INTERIOR PIPE. H20 LOAD RATED @ 1' COVER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

**DETECTABLE WARNING NOTES**

NOTE:

- RAMP SHALL HAVE A DETECTABLE WARNING COMPLYING WITH ADA GUIDELINES. "COLONIAL RED" COLOR FOR DOME.
- THE DETECTABLE WARNINGS AT CURB RAMP SHALL BE 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
- MARKED CROSSINGS THAT ARE RAISED TO THE SAME LEVEL AS THE ADJOINING SIDEWALK SHALL BE PRECEDED BY A 24 INCH DEEP DETECTABLE WARNING EXTENDING THE FULL WIDTH OF THE MARKED CROSSING.
- DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 IN (23 MM), A HEIGHT OF NOMINAL 0.2 IN (5 MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 IN (60 MM) AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES. EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHOULD CONTRAST BY AT LEAST 70% - REFER TO ADA GUIDELINES FOR DEFINITION OF "CONTRAST".
- THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE. DETECTABLE WARNINGS USED ON INTERIOR SURFACES SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT.

NOTE:

IF "X" IS LESS THAN 48" THEN THE SLOPE OF THE FLARED SIDES MUST BE NO MORE THAN 8.33 PERCENT (1:12). IF "X" IS 48" OR MORE, THEN THE FLARED SIDES MAY SLOPE UP TO 10 PERCENT (1:10) BUT NOT MORE.

**C.O.W. STANDARD NOTES:**

- CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING ANY DIGGING AT 1-800-632-4949.
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING;
- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
- INSTALL REFLECTORS PER CITY AND NCDOT STANDARDS. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
- TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
- CONTACT TRAFFIC ENGINEERING AT 341-7888 FORTY-EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
- ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS, AND CURBING WILL BE REPLACED.
- THE CONTRACTOR WILL MAINTAIN ALL WEATHER EMERGENCY ACCESS TO CONSTRUCTION SITE AT ALL TIMES.

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

OWNER/DEVELOPER  
STATE OF NORTH CAROLINA  
NC NATIONAL GUARD  
CONSTRUCTION & FACILITY  
MANAGEMENT OFFICE  
1636 GOLD STAR DR. SUITE 2800  
RALEIGH, NC 27607  
800-627-4136

**NORRIS & TUNSTALL**  
CONSULTING ENGINEERS P.C.

2602 IRON GATE DR. SUITE 102  
WILMINGTON, NC 28412  
PHONE (910) 343-9653

1429 ASHLITTLE RIVER RD. NW  
ASH, NC 28420  
PHONE (910) 287-5900

Licence #C-3641

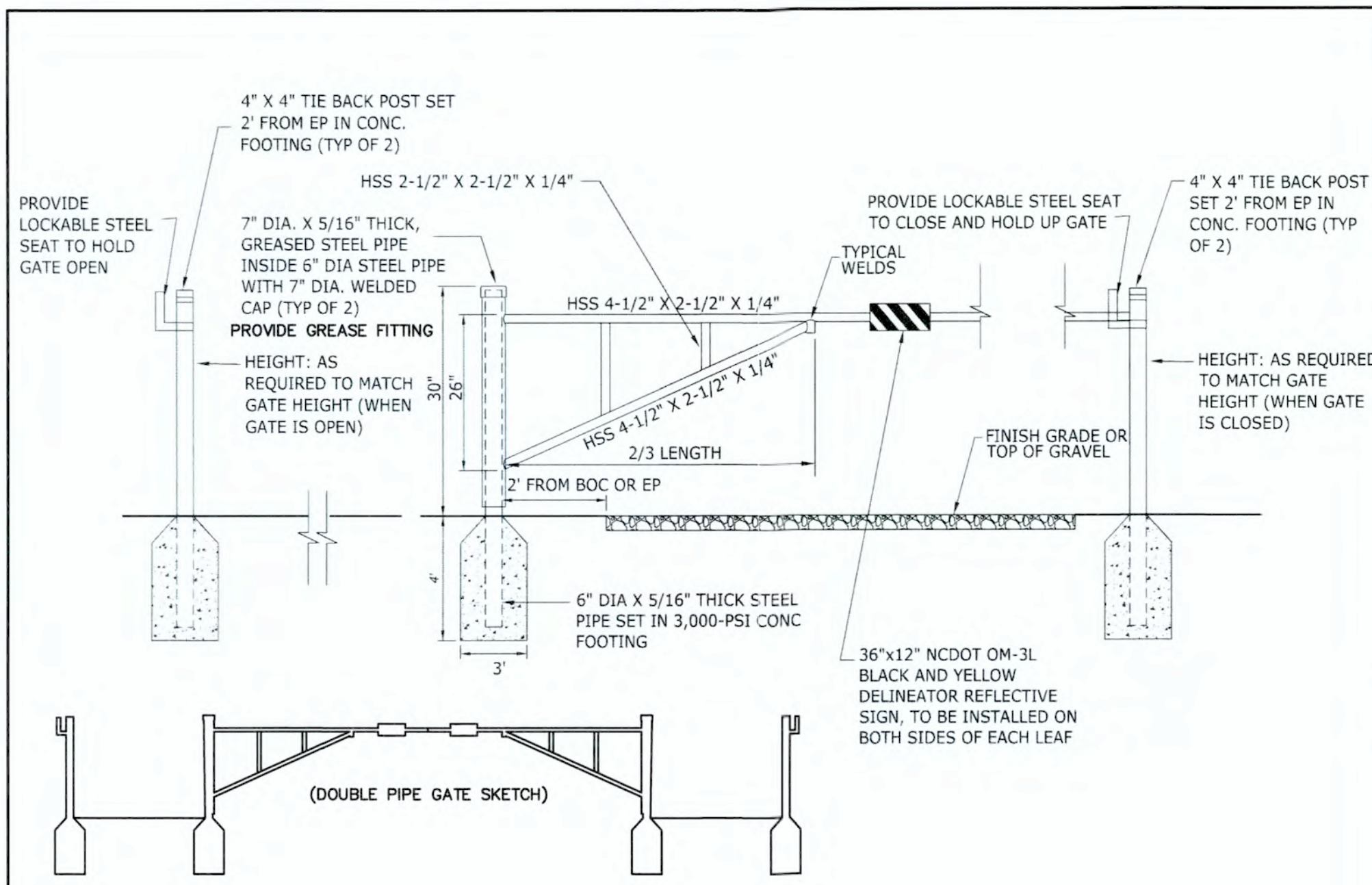
21043

DES. JUST  
C.D. JPN  
DRWN. DCC

DATE 8/18/21

PROFESSOR OF CIVIL ENGINEERING  
NORTH CAROLINA STATE UNIVERSITY

C5



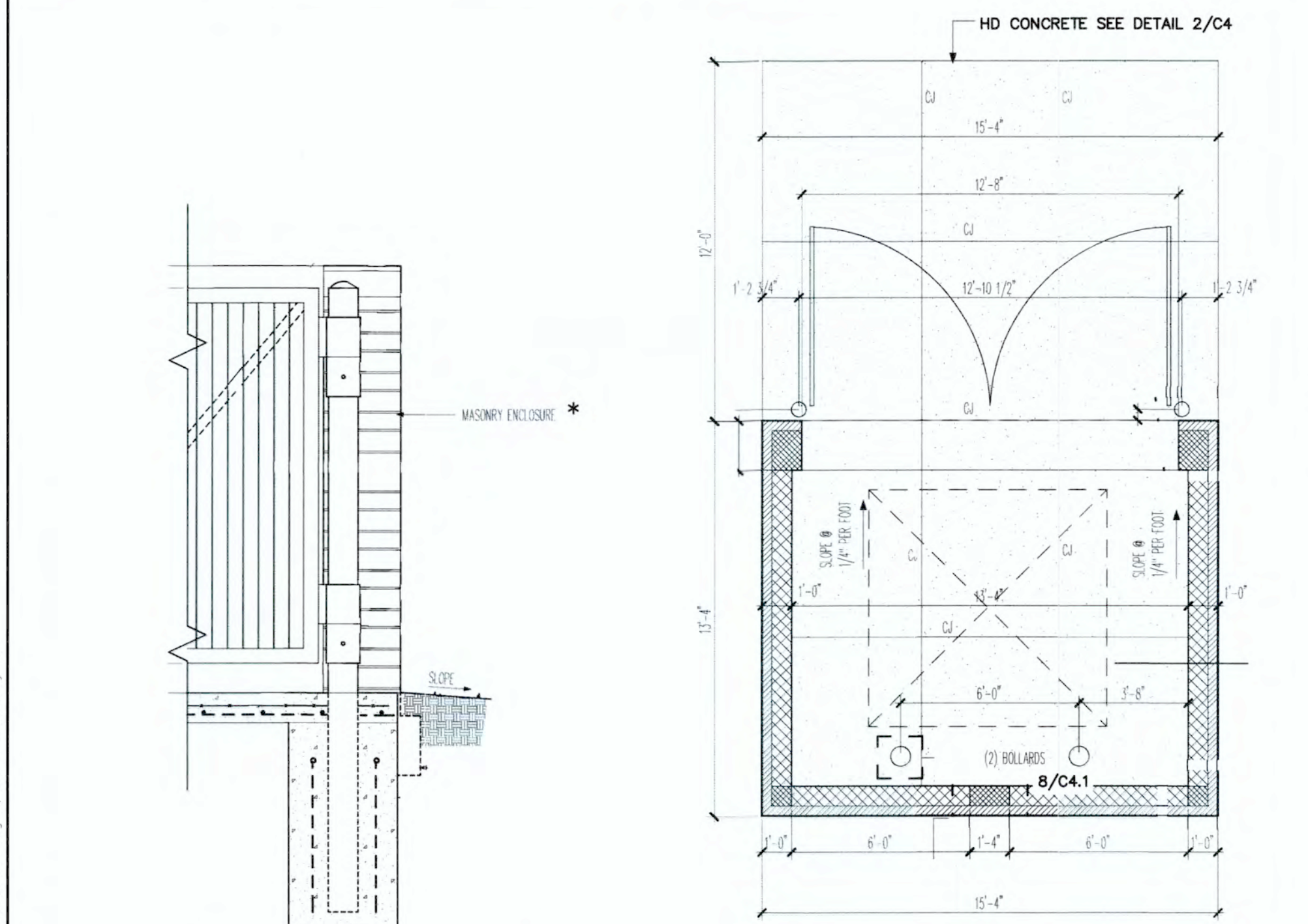
**NOTES:**

- ALL STEEL SHALL BE HOT-DIPPED GALVANIZED AND EPOXY PAINTED.
- SUBMIT SHOP DRAWING FOR REVIEW AND APPROVAL PRIOR TO FABRICATION AND ASSEMBLY.
- CONTRACTOR SHALL CONTRACT OUT DIMENSIONS OF PIPES FOR STRUCTURAL SUPPORT.
- ALL GATES SHALL HAVE 8' OF CONCRETE JERSEY BARRIER ON EITHER SIDE OF GATE POST. (SEE NCDOT SPECIFICATION FOR JERSEY BARRIERS)

**PAINTING SPECIFICATIONS:**

- MANUFACTURER: TNEMEC COMPANY, INC.; CARY, NC (919-859-3737)
- SYSTEM TYPE: EPOXY-POLYURETHANE
- SURFACE PREPARATION: SSPV-SPI AND BRUSH OFF BLAST CLEAN
- PRIMER: SERIES 27 (FIELD-COATED) TYPOXY OR 69 HI-BUILD EPOXOLINE
- FINISH PAINT: SERIES 73 ENDURA-SHIELD, SEMI-GLOSS, COLOR: BRONZE TO MATCH BLDG. COORDINATE W/ NCNG ARMOYR.

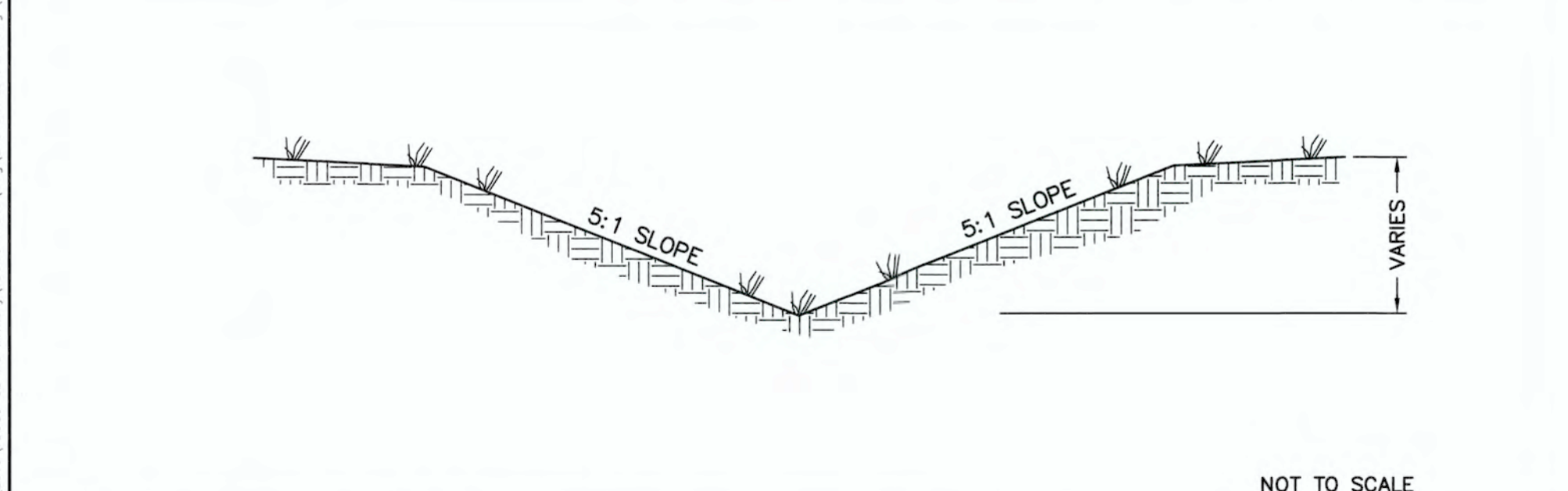
DOUBLE PIPE GATE (SEE SKETCH ABOVE) DETAIL 1 N.T.S.



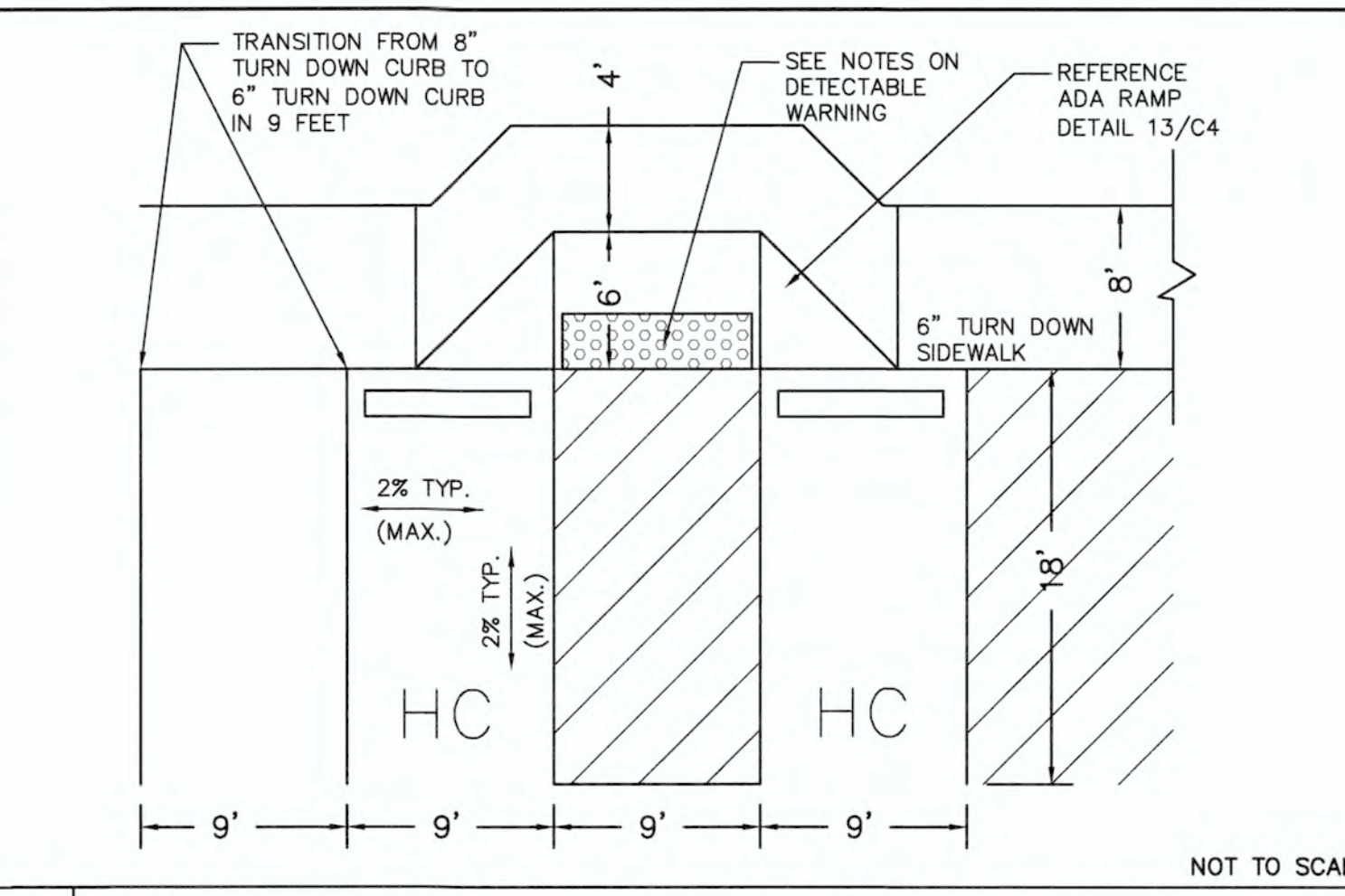
**2 DUMPSTER GATE POST ELEVATION\***  
1/2" = 1'-0"

**DUMPSTER SCREEN WALL PLAN\***  
1/4" = 1'-0"

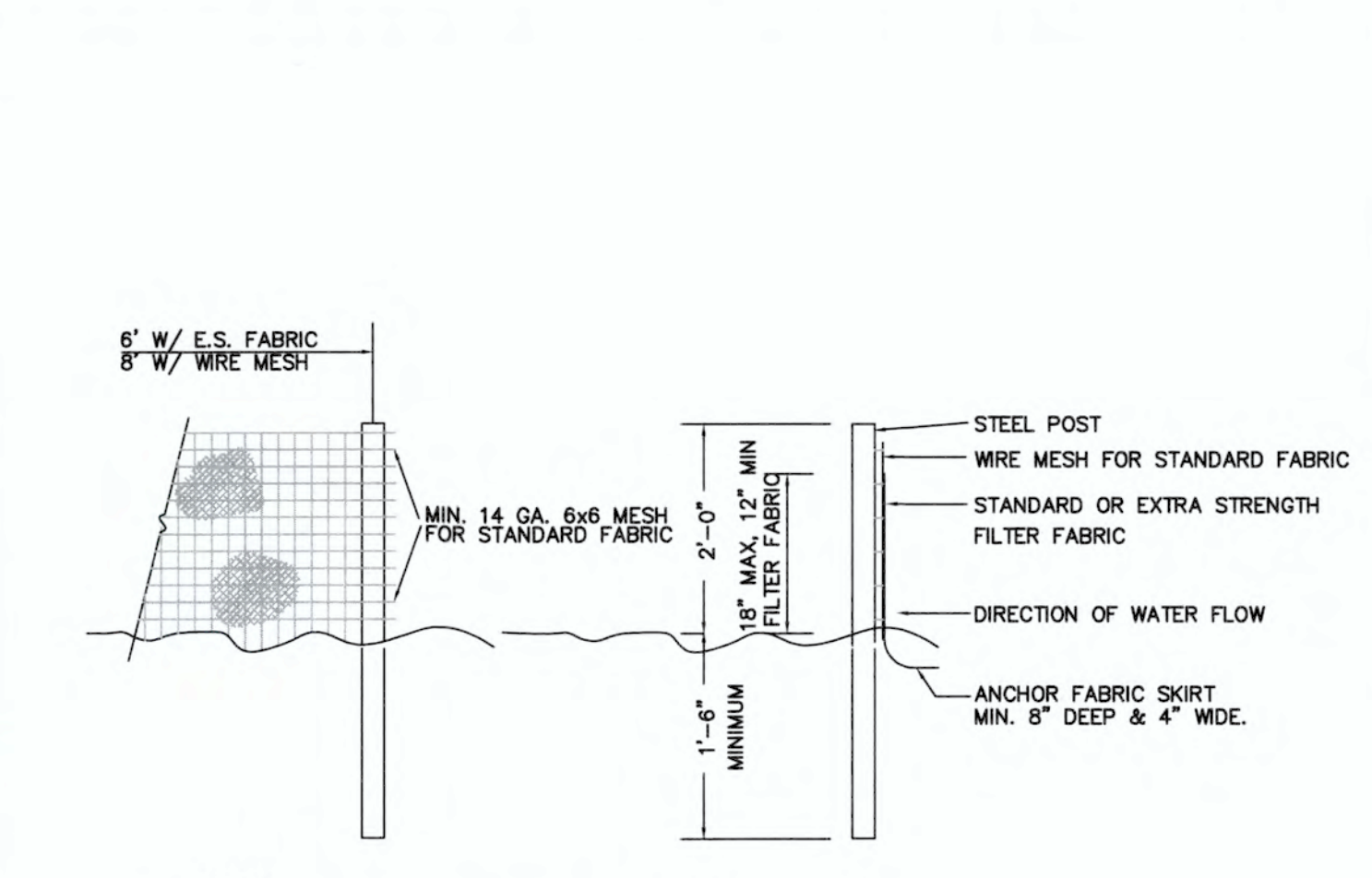
\* SEE ARCHITECTURAL PLANS FOR DUMPSTER SCREEN WALL DESIGN. VERIFY ALL DIMENSIONS.



4 TYPICAL GRASS SWALE



3 SIDEWALK, CURB CUT AND WHEEL CHAIR RAMP DETAIL

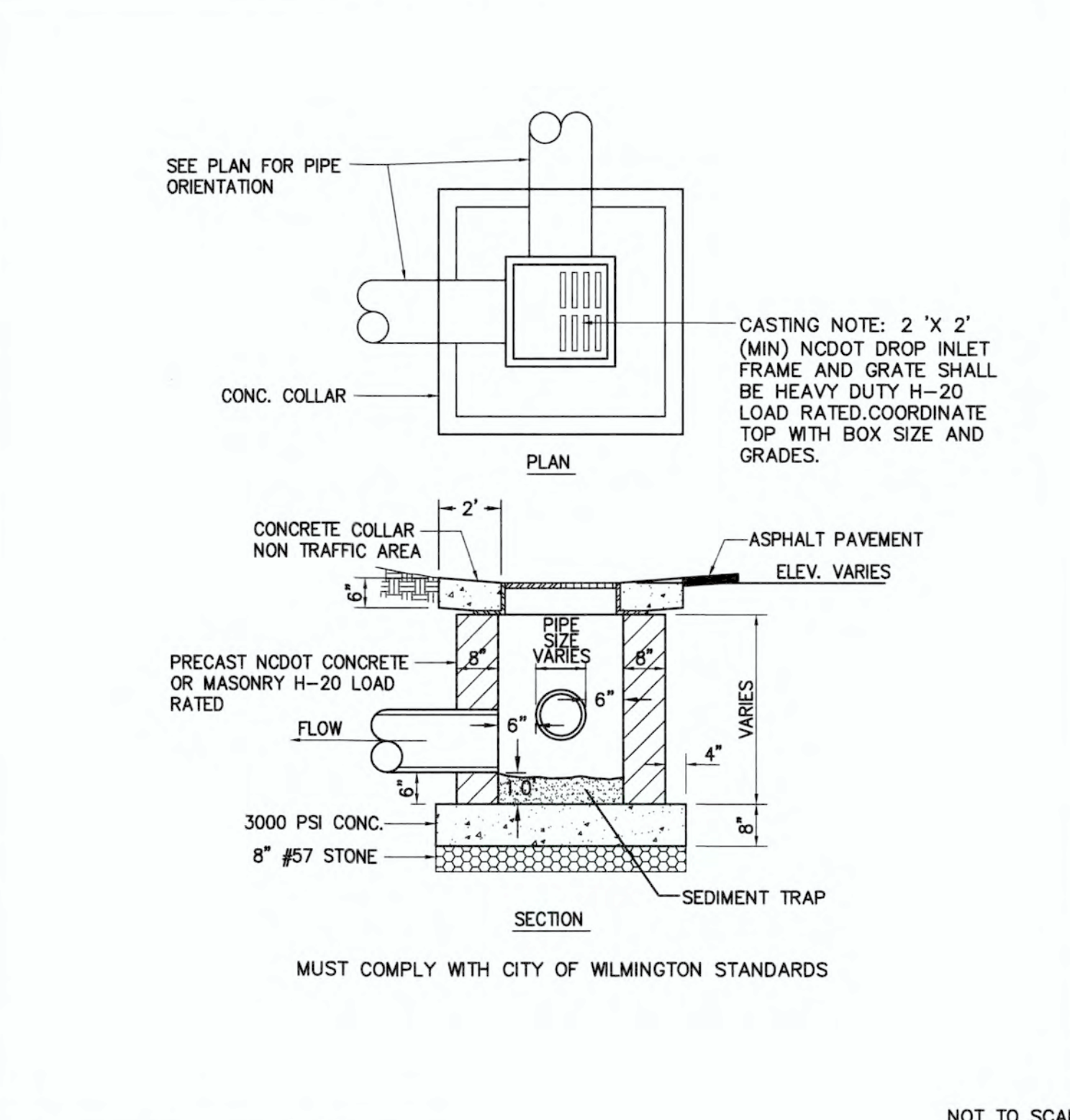


**NOTES:**

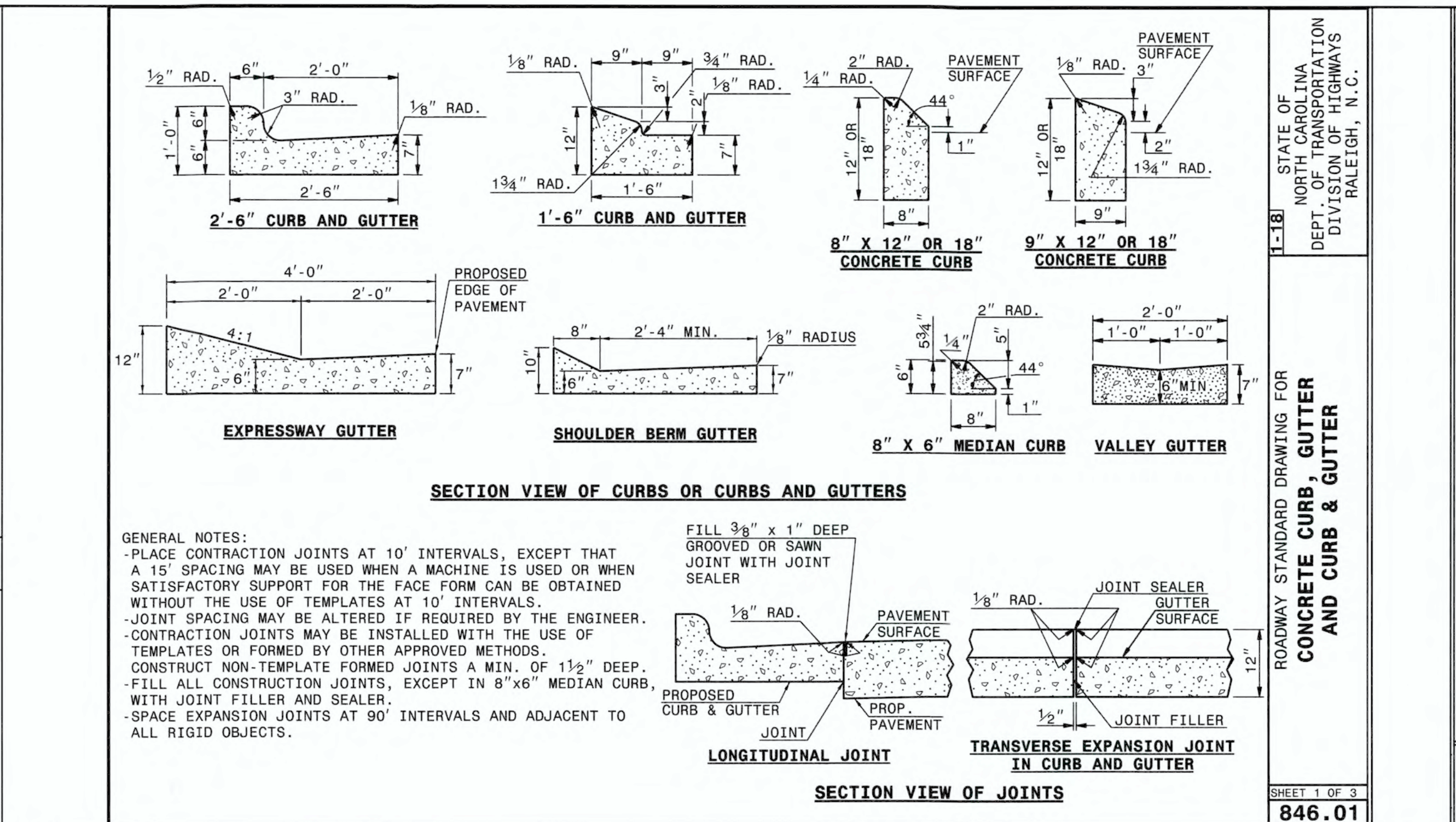
- SYN. FENCE FABRIC SHALL BE MIN. OF 30" IN WIDTH WITH 30 LB/IN TENSILE STRENGTH FOR STANDARD FABRIC AND 50 LB/IN FOR EXTRA STRENGTH.
- FABRIC SHALL BE CONTINUOUS LENGTH. IF JOINTS ARE NECESSARY, LAP FABRIC POST TO POST.
- STEEL POST SHALL BE MIN 4" IN HEIGHT AND BE OF THE SELF-FASTENER STEEL ANGLE TYPE.

NOT TO SCALE

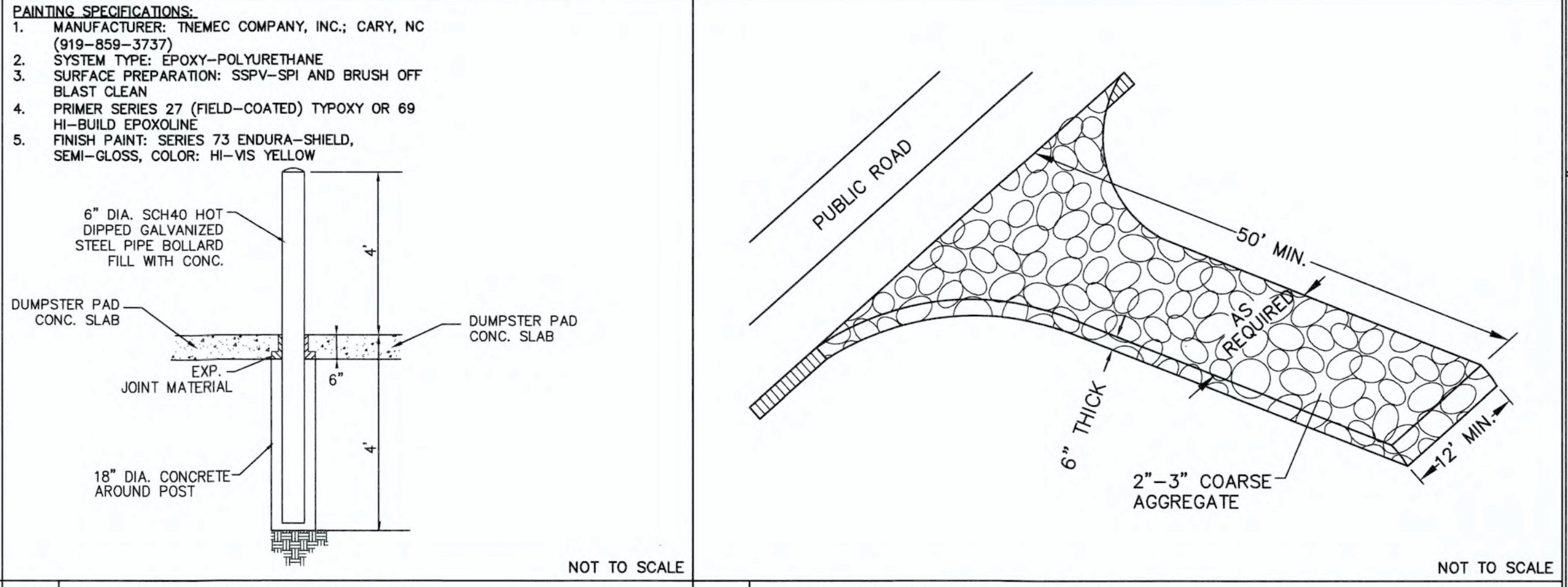
5 TEMPORARY SILT FENCE



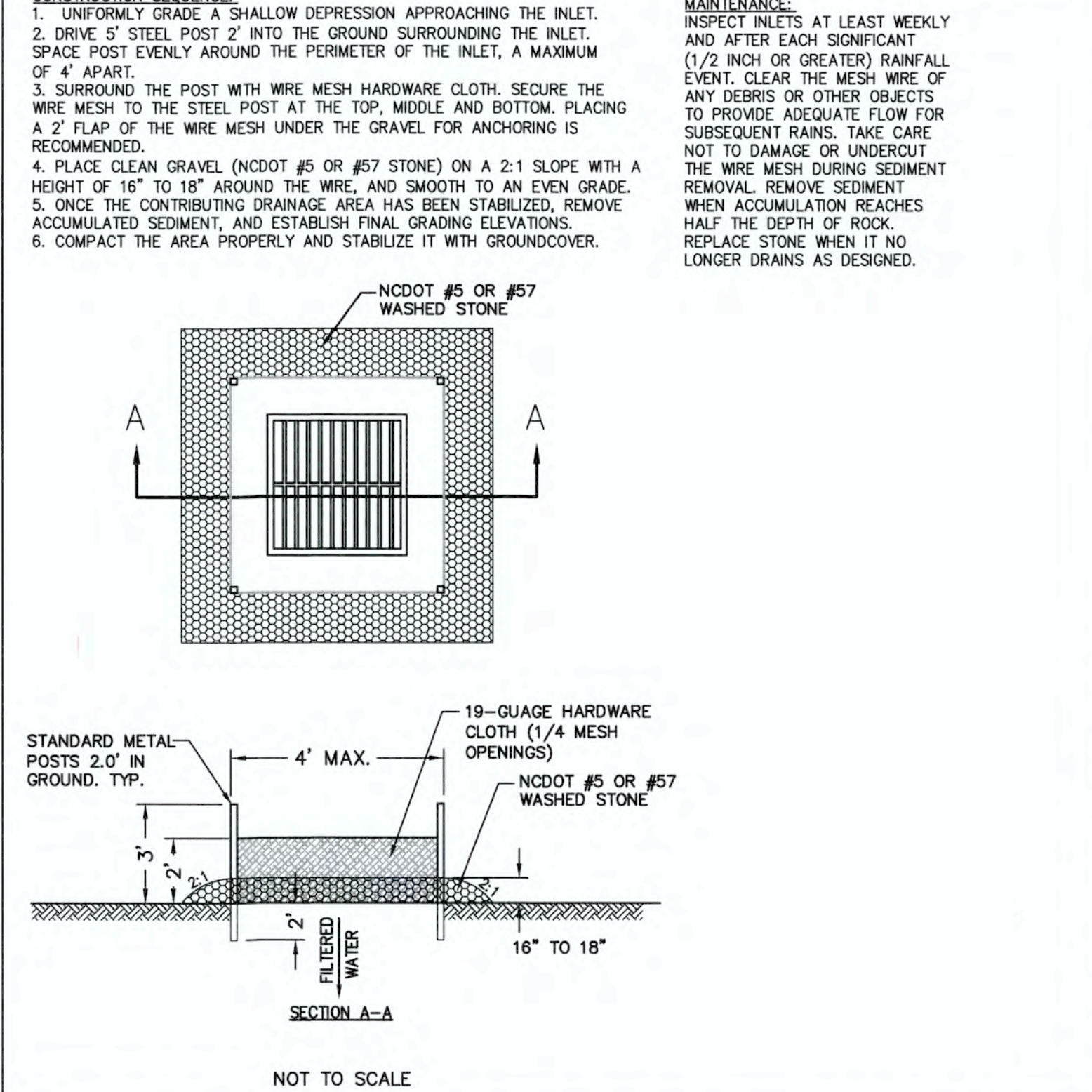
6 DROP INLET DETAIL



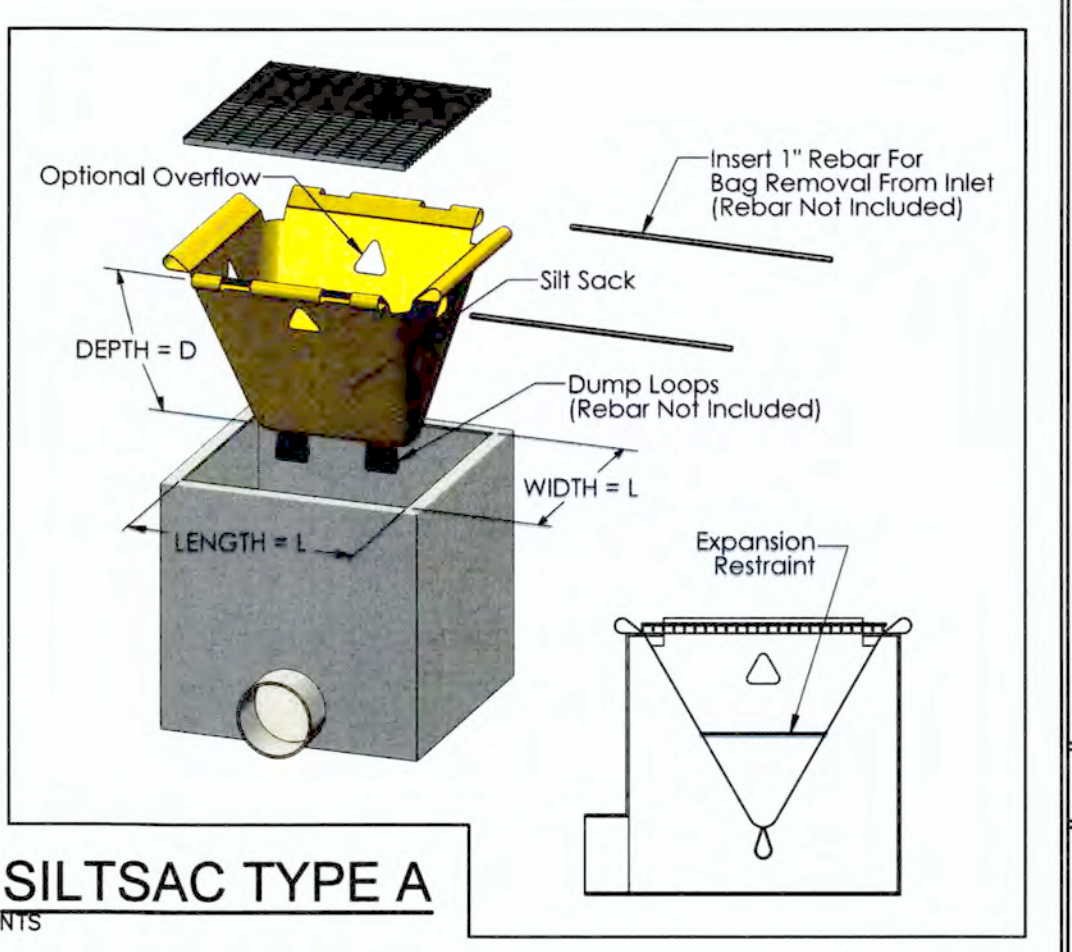
7 NCDOT 30" CURB & GUTTER STD# 846.01



8 PIPE BOLLARD DETAIL



10 HARDWARE CLOTH AND GRAVEL INLET PROTECTION



**SILTSACK TYPE A**

**NOTES:**

- THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE OPENING SIZE OF THE EXISTING OR PROPOSED CATCH BASIN OR DROP INLET. THE SILTSACK WILL BE MANUFACTURED TO FIT THE OPENING OF THE EXISTING OR PROPOSED CATCH BASIN OR DROP INLET.
- TO INSTALL THE SILTSACK IN THE CATCH BASIN, REMOVE THE GRATE AND PLACE THE SACK IN THE OPENING. HOLD OUT APPROXIMATELY SIX INCHES OF THE SACK OUTSIDE THE FRAME. THIS IS THE AREA OF THE LIFTING STRAPS. REPLACE THE GRATE TO HOLD THE SACK IN PLACE.
- THE SILTSACK IS FULL AND SHOULD BE EMPTIED WHEN THE RESTRAINT CORD IS NO LONGER VISIBLE.
- TO REMOVE THE SILTSACK, TAKE TWO PIECES OF 1" DIAMETER REBAR AND PLACE THROUGH THE LIFTING LOOPS ON EACH SIDE OF THE SACK TO FACILITATE THE LIFTING OF THE SILTSACK.
- TO EMPTY THE SILTSACK, PLACE IT WHERE THE CONTENTS WILL BE COLLECTED. PLACE THE REBAR THROUGH THE LIFT STRAPS (CONNECTED TO THE BOTTOM OF THE SACK) AND LIFT. THIS WILL TURN THE SILTSACK INSIDE OUT AND EMPTY THE CONTENTS. CLEAN OUT AND RINSE. RETURN THE SILTSACK TO ITS ORIGINAL SHAPE AND PLACE BACK IN THE BASIN.

11 SILT SACK NOTES

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N. C.

ROADWAY STANDARD DRAWING FOR  
CONCRETE CURB, GUTTER  
AND CURB & GUTTER

SHEET 1 OF 3  
846.01

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RALEIGH, NC 27607  
800-621-4136

NOTES AND DETAILS  
NATIONAL GUARD ARMOYR  
2221 CAROLINA BEACH RD  
WILMINGTON, N. C. 28401

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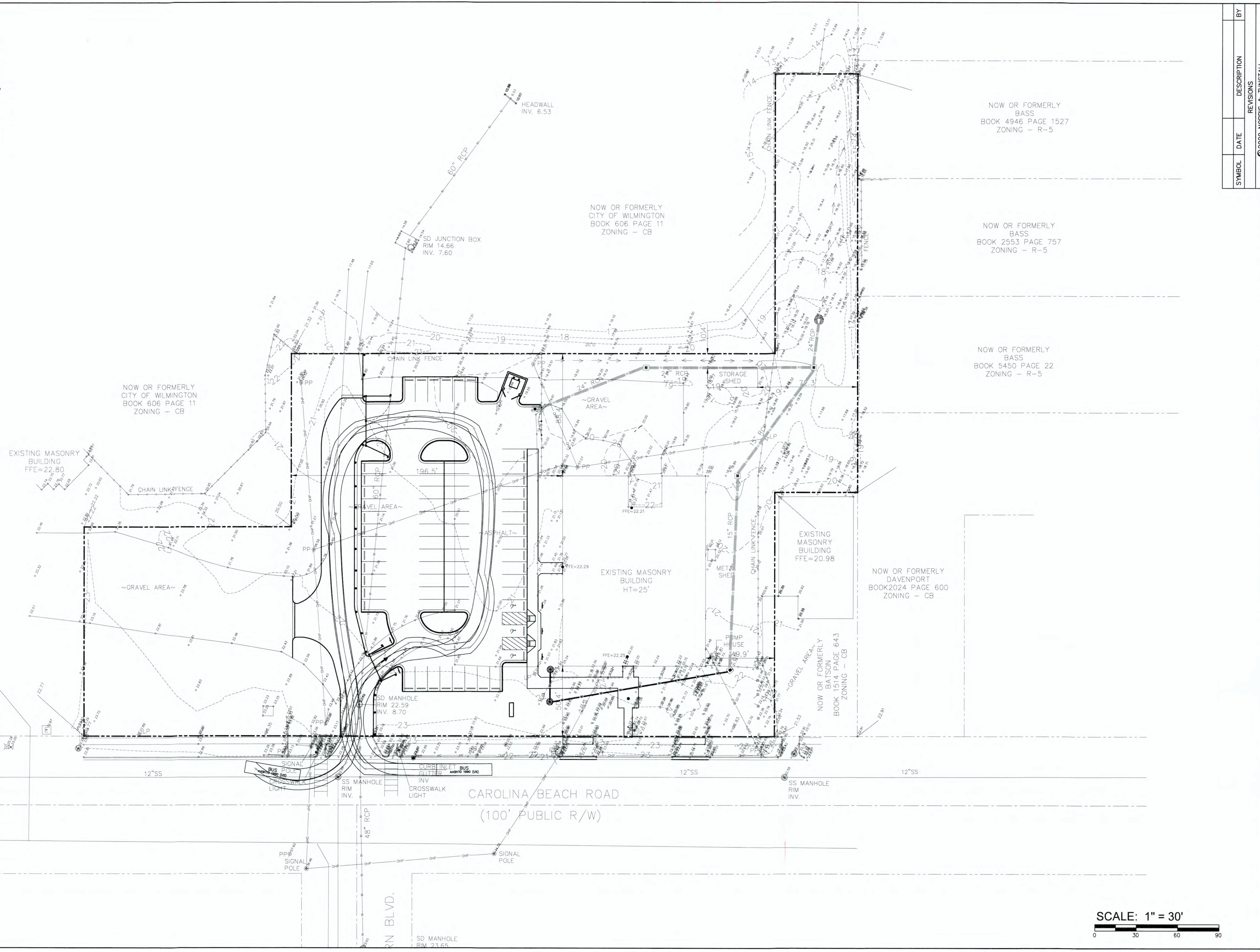
DES. JUST  
CHKD. JPN  
DRWN. DGC

DATE 8/18/21

2021 NORTH CAROLINA PROFESSIONAL ENGINEER EXAMINATION

C5.1





NOW OR FORMERLY  
BASS  
BOOK 4946 PAGE 1527  
ZONING - R-5

NOW OR FORMERLY  
CITY OF WILMINGTON  
BOOK 606 PAGE 11  
ZONING - CB

NOW OR FORMERLY  
BASS  
BOOK 2553 PAGE 757  
ZONING - R-5

NOW OR FORMERLY  
BASS  
BOOK 5450 PAGE 22  
ZONING - R-5

NOW OR FORMERLY  
CITY OF WILMINGTON  
BOOK 606 PAGE 11  
ZONING - CB

NOW OR FORMERLY  
DAVENPORT  
BOOK 2024 PAGE 600  
ZONING - CB

NOW OR FORMERLY  
BATSON  
BOOK 1514 PAGE 643  
ZONING - CB

SYMBOL	DATE	DESCRIPTION	BY
REVISIONS			
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**BUS EXHIBIT**  
NATIONAL GUARD ARMORY  
2221 CAROLINA BEACH RD  
WILMINGTON, N. C. 28401

OWNER/DEVELOPER  
STATE OF NORTH CAROLINA  
NC NATIONAL GUARD  
CONSTRUCTION & FACILITY  
MANAGEMENT OFFICE  
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DES. JST  
CHK. JPN  
DRWN. DGC

DATE 8/18/21



SCALE: 1" = 30'  
0 30 60 90

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