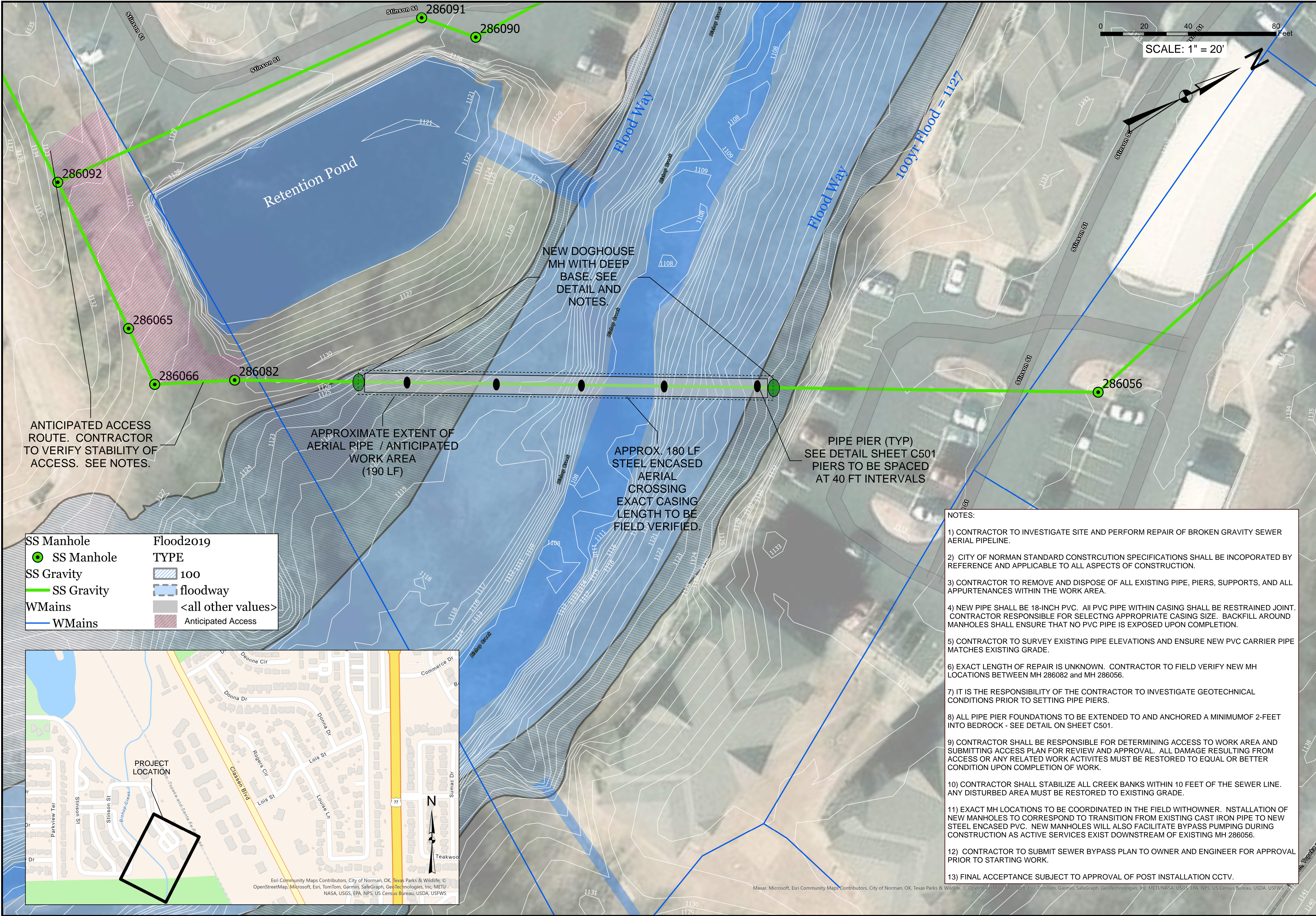


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Date Exported: 5/15/2025 8:52 AM  
1 inch equals 0 miles



SS Manhole

SS Gravity

SS Gravity

WMains

WMains

SS Manhole

SS Gravity

SS Gravity

WMains

WMains

Flood2019

TYPE

100

floodway

<all other values>

Anticipated Access

- NOTES:
- 1) CONTRACTOR TO INVESTIGATE SITE AND PERFORM REPAIR OF BROKEN GRAVITY SEWER AERIAL PIPELINE.
  - 2) CITY OF NORMAN STANDARD CONSTRUCTION SPECIFICATIONS SHALL BE INCORPORATED BY REFERENCE AND APPLICABLE TO ALL ASPECTS OF CONSTRUCTION.
  - 3) CONTRACTOR TO REMOVE AND DISPOSE OF ALL EXISTING PIPE, PIERS, SUPPORTS, AND ALL APPURTENANCES WITHIN THE WORK AREA.
  - 4) NEW PIPE SHALL BE 18-INCH PVC. ALL PVC PIPE WITHIN CASING SHALL BE RESTRAINED JOINT. CONTRACTOR RESPONSIBLE FOR SELECTING APPROPRIATE CASING SIZE. BACKFILL AROUND MANHOLES SHALL ENSURE THAT NO PVC PIPE IS EXPOSED UPON COMPLETION.
  - 5) CONTRACTOR TO SURVEY EXISTING PIPE ELEVATIONS AND ENSURE NEW PVC CARRIER PIPE MATCHES EXISTING GRADE.
  - 6) EXACT LENGTH OF REPAIR IS UNKNOWN. CONTRACTOR TO FIELD VERIFY NEW MH LOCATIONS BETWEEN MH 286082 and MH 286056.
  - 7) IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INVESTIGATE GEOTECHNICAL CONDITIONS PRIOR TO SETTING PIPE PIERS.
  - 8) ALL PIPE PIER FOUNDATIONS TO BE EXTENDED TO AND ANCHORED A MINIMUM OF 2- FEET INTO BEDROCK - SEE DETAIL ON SHEET C501.
  - 9) CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ACCESS TO WORK AREA AND SUBMITTING ACCESS PLAN FOR REVIEW AND APPROVAL. ALL DAMAGE RESULTING FROM ACCESS OR ANY RELATED WORK ACTIVITIES MUST BE RESTORED TO EQUAL OR BETTER CONDITION UPON COMPLETION OF WORK.
  - 10) CONTRACTOR SHALL STABILIZE ALL CREEK BANKS WITHIN 10 FEET OF THE SEWER LINE. ANY DISTURBED AREA MUST BE RESTORED TO EXISTING GRADE.
  - 11) EXACT MH LOCATIONS TO BE COORDINATED IN THE FIELD WITH OWNER. INSTALLATION OF NEW MANHOLES TO CORRESPOND TO TRANSITION FROM EXISTING CAST IRON PIPE TO NEW STEEL ENCASED PVC. NEW MANHOLES WILL ALSO FACILITATE BYPASS PUMPING DURING CONSTRUCTION AS ACTIVE SERVICES EXIST DOWNSTREAM OF EXISTING MH 286056.
  - 12) CONTRACTOR TO SUBMIT SEWER BYPASS PLAN TO OWNER AND ENGINEER FOR APPROVAL PRIOR TO STARTING WORK.
  - 13) FINAL ACCEPTANCE SUBJECT TO APPROVAL OF POST INSTALLATION CCTV.

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REGISTRATION NO.  
4193

05.16.2025

WILLIAM W. NADING

35093

OKLAHOMA

Digitally signed by William W. Nading  
Date: 2025.05.16 14:47:29 -0400

BY	DESCRIPTION	DATE	REV

CITY OF NORMAN

BISHOP CREEK SEWER LINE REPAIR

SITE PLAN

JOB NO.: 20W02080

DATE: MAY 2025

DRAWN BY: WWN

CHECKED BY: MTN

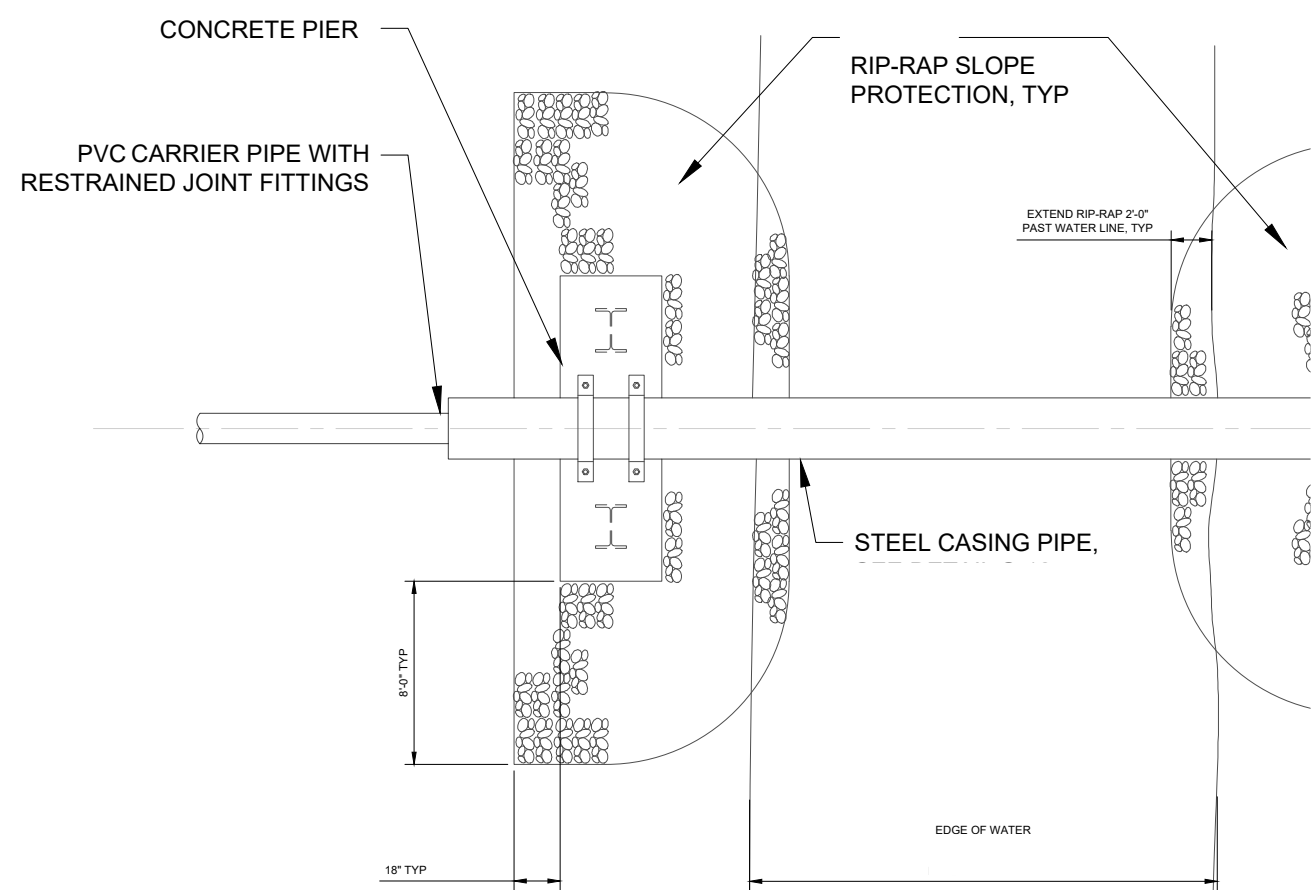
BAR IS ONE INCH ON ORIGINAL DRAWING

0" = 1'

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DRAWING NUMBER  
05-C101

SHEET NUMBER  
01



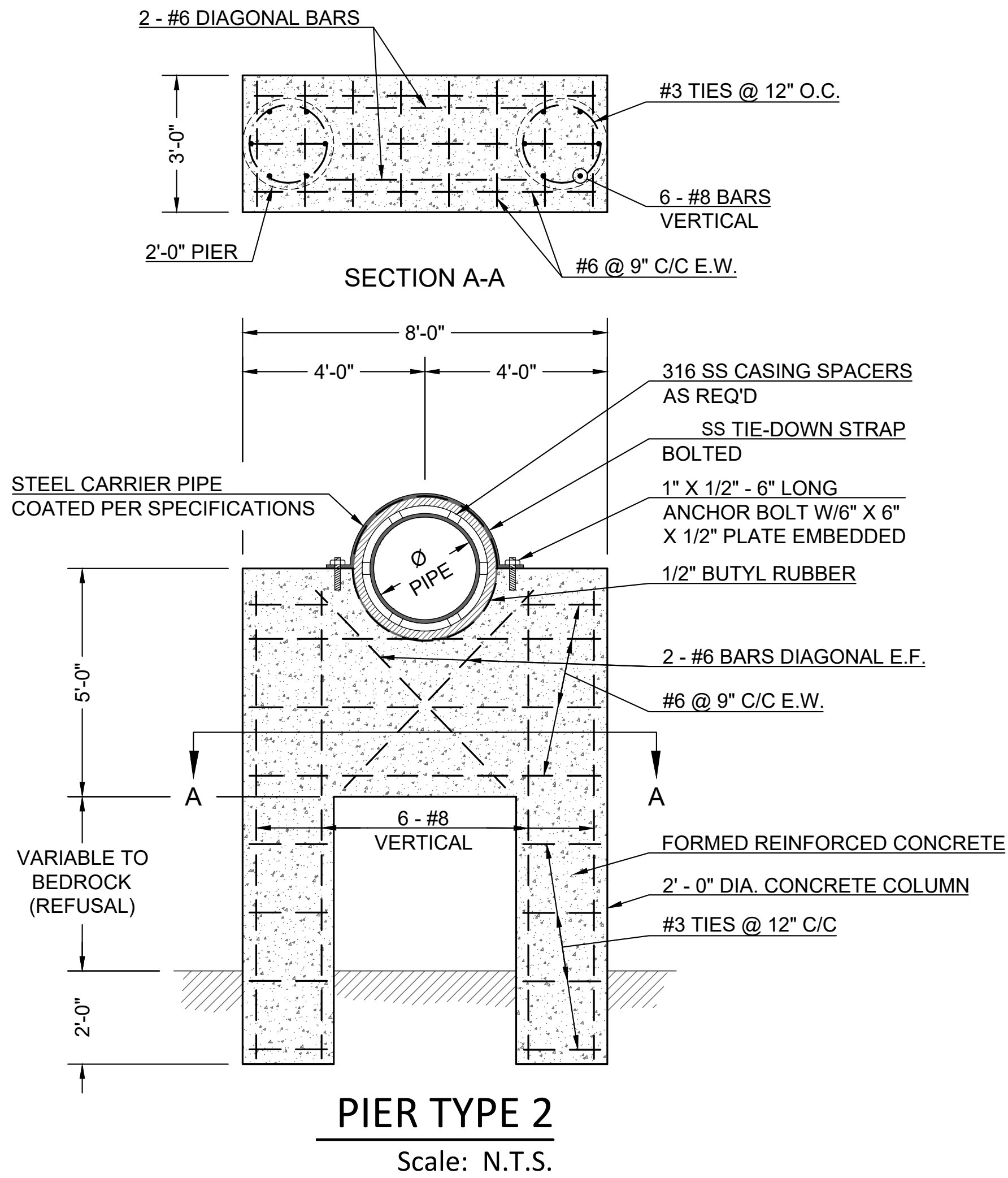
AERIAL PIPE CROSSING TYPICAL PLAN  
Scale: N.T.S.

NOTES:  
1. SEE RIP RAP AND STREAM BANK GRADING DETAIL.  
2. RIP RAP SHALL BE FEDERAL HIGHWAY ADMINISTRATION CLASS 3 (FHWA FP14)

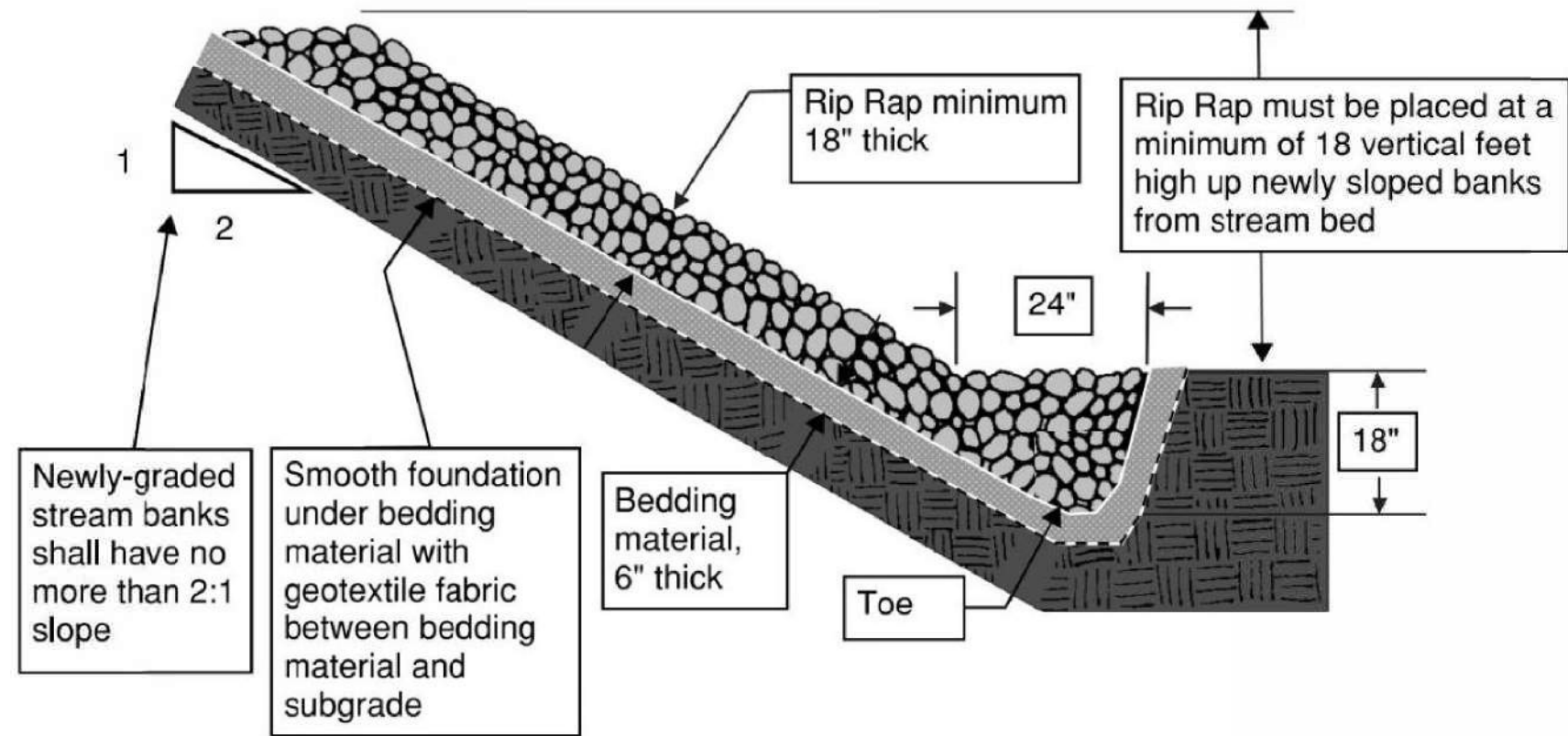
Class	% of Bank Equal or Smaller by Count, No.	Range of Intermediate Dimensions, inches (millimeters)	Range of Bulk Mass, pounds (kilograms)
1	100	9 - 15 (230 - 380)	50 - 275 (23 - 130)
2	85	7 - 11 (180 - 280)	28 - 100 (13 - 50)
3	50	5 - 8 (130 - 200)	10 - 42 (5 - 19)
4	15	3 - 6 (80 - 150)	2 - 18 (1 - 8)
5	100	15 - 21 (380 - 530)	270 - 750 (120 - 340)
6	85	11 - 15 (280 - 380)	110 - 270 (50 - 120)
7	50	8 - 11 (200 - 280)	42 - 110 (19 - 50)
8	15	6 - 8 (150 - 200)	10 - 42 (5 - 19)
9	100	21 - 27 (530 - 690)	750 - 1600 (340 - 730)
10	85	15 - 19 (380 - 490)	270 - 500 (120 - 230)
11	50	11 - 14 (280 - 360)	110 - 230 (50 - 100)
12	15	8 - 10 (200 - 250)	42 - 81 (19 - 37)
13	100	27 - 33 (690 - 840)	1600 - 3000 (730 - 1360)
14	85	19 - 23 (490 - 580)	500 - 900 (230 - 400)
15	50	14 - 17 (360 - 430)	250 - 400 (100 - 180)
16	15	9 - 12 (230 - 300)	97 - 140 (44 - 64)

TABLE OF STEEL CARRIER PIPE SIZES											
Nominal Size [in]	Wall Thickness [in]										
	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	
	Span Length - [ft]										
6	36	40	44								
8	38	42	45								
10	39	43	46								
12	40	44	47								
14	40	44	47								
16	41	45	48								
18	41	46	49	52							
20	42	46	50	53							
22	42	46	51	54							
24	42	48	52	55	58	60					
26	43	48	52	56	59	61					
28	43	48	53	56	59	62					
30	43	49	53	57	60	63					
32	44	49	54	57	61	64					
34	44	49	54	58	61	64					
36	44	50	54	58	62	65	70				
38	44	50	55	59	62	65	70				
40	44	50	55	59	63	66	71				
42	44	50	55	59	63	66	72				
45		51	55	60	63	67	72				
48		51	56	60	64	67	73	78			
51		51	56	60	64	68	74	79			
54		51	56	61	65	68	74	79			
57		51	57	61	65	69	75	80			
60		51	57	61	65	69	75	80			
63		52	57	62	66	69	76	81			
66		52	57	62	66	70	76	81	86	90	
72		52	58	62	66	70	77	82	87	92	

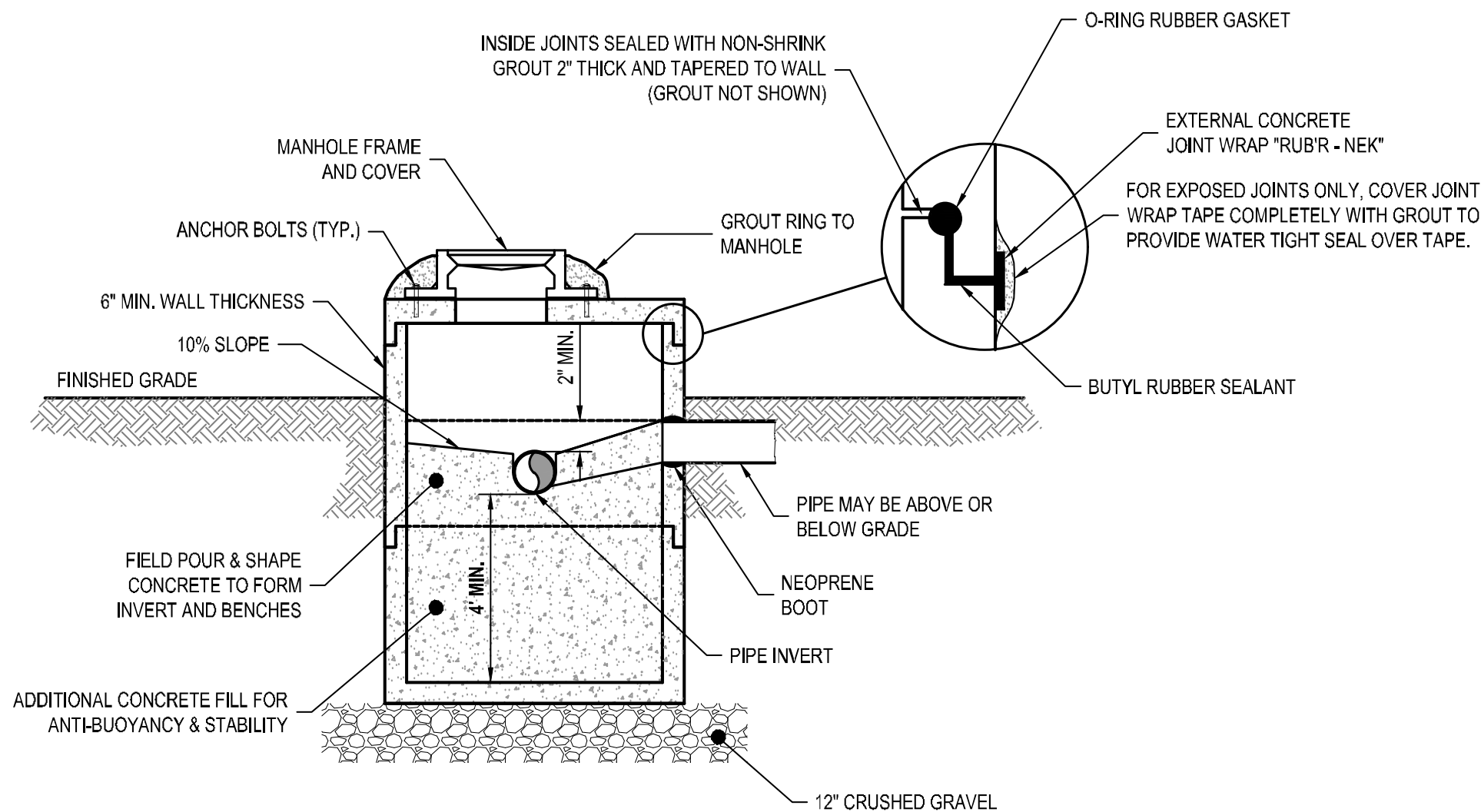
STEEL CARRIER SIZES AND SPAN  
Scale: N.T.S.



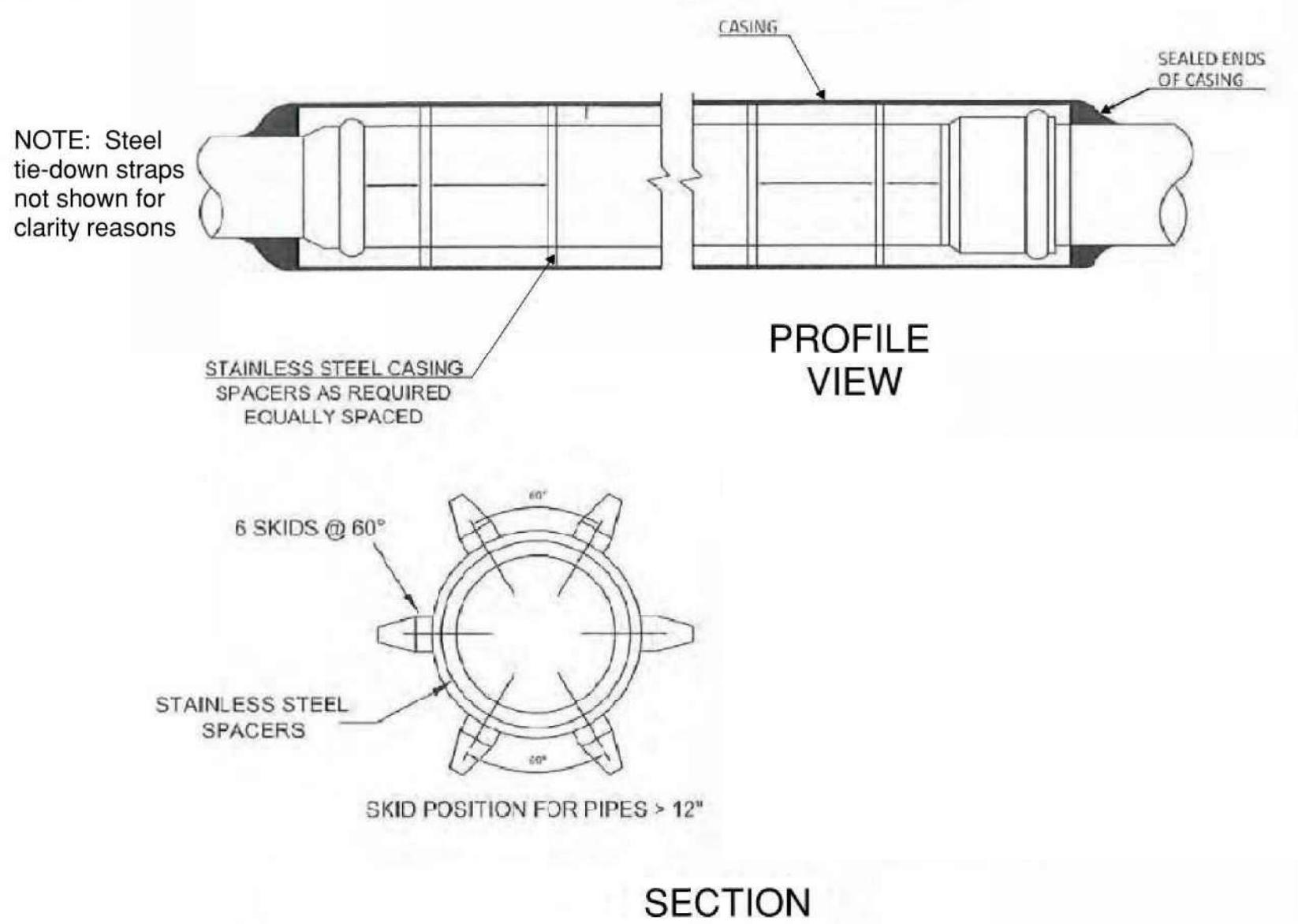
NOTE: PIER DESIGN IS FOR TYPICAL INSTALLATION. INDEPENDENT STRUCTURAL OR GEOTECHNICAL DESIGN OF THE PIER FOR THE SPECIFIC SITE HAS NOT BEEN COMPLETED. DETAIL IS CONSIDERED A REPRESENTATIVE EXAMPLE FOR ROCK ANCHOR PIER CONSTRUCTION.



Rip Rap and Stream Bank Grading Detail



PRECAST CONCRETE MANHOLE FOR WET AREAS  
N.T.S.



Steel Casing Pipe Profile and Cross-Section View

CASING MATERIAL -- STEEL CASING PIPE SHALL CONFORM WITH ASTM A-139, STANDARD SPECIFICATION FOR ELECTRIC-FUSION (ARC)-WELDED STEEL PIPE (NPS4 AND OVER). THE STEEL MATERIAL SHALL BE NEW, SMOOTH WALL, CARBON STEEL, GRADE B, WITH A MINIMUM TENSILE STRENGTH, AND MINIMUM THIRTY-FIVE-THOUSAND (35,000 PSI) POUNDS PER SQUARE INCH YIELD STRENGTH.