

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BO-2412E_F	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50941.3.7		CONST. CAT. < 5,000	
50941.3.8		CONST. LINC. < 5,000	

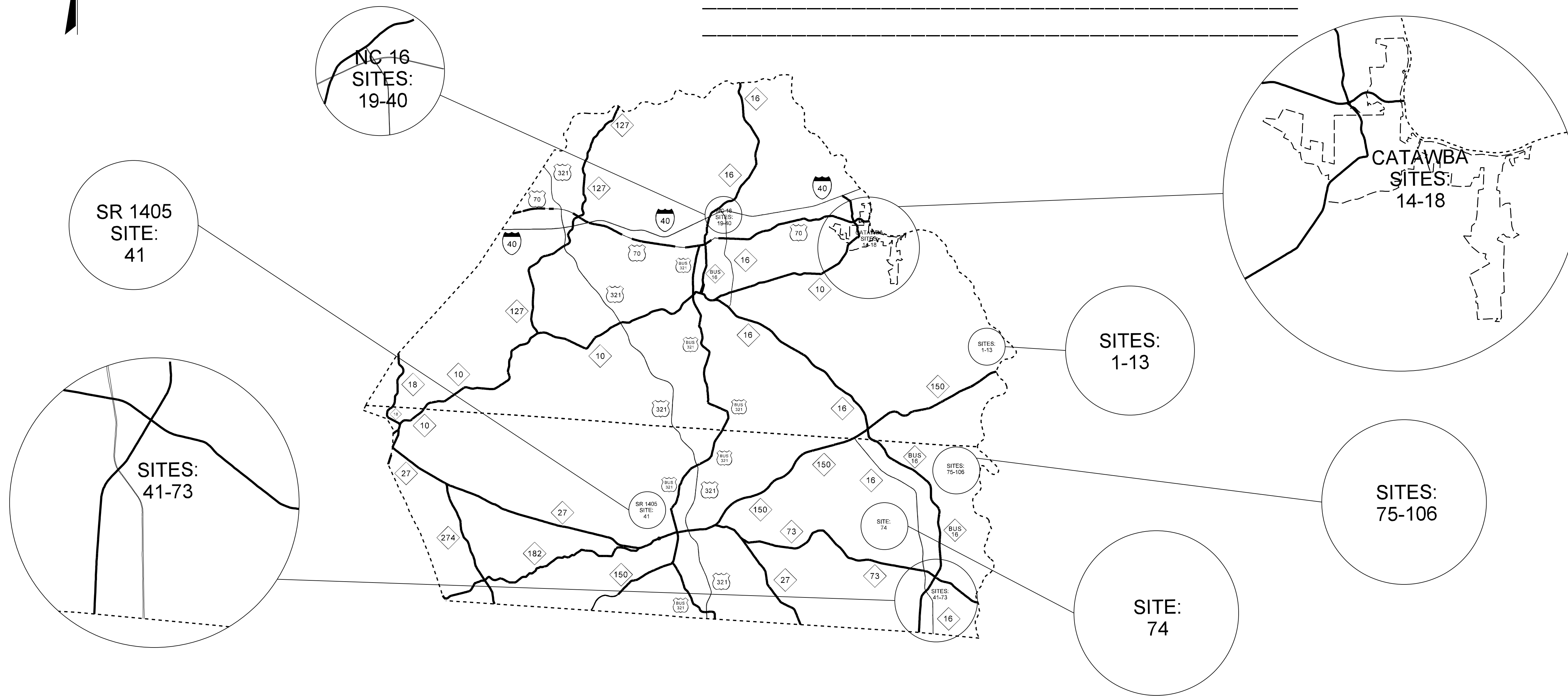
# CATAWBA & LINCOLN COUNTIES

LOCATION: VARIOUS THROUGHOUT: CATAWBA AND LINCOLN COUNTIES.

TYPE OF WORK: UPGRADE EXISTING CURB RAMPS TO CURRENT STANDARDS.

TIP PROJECT: BO-2412E\_F

CONTRACT: DL00332



Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1710 E. MARION ST., SHELBY NC 28150

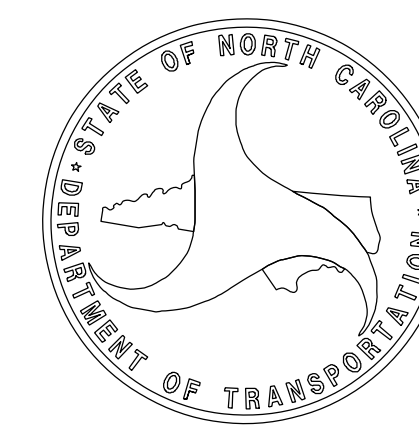
2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
N/A

LETTING DATE:  
MAY 28, 2024

BRYAN K. D. SOWELL, PE  
PROJECT ENGINEER

JOSHUA S. CARPENTER  
PROJECT DESIGN ENGINEER



8/17/99

SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
2B-1 THRU 2B-4	SPECIAL DETAILS
2C-1	SUMMARY OF QUANTITIES
4 THRU 15	PLAN SHEETS

GENERAL NOTES: 2024 SPECIFICATIONS

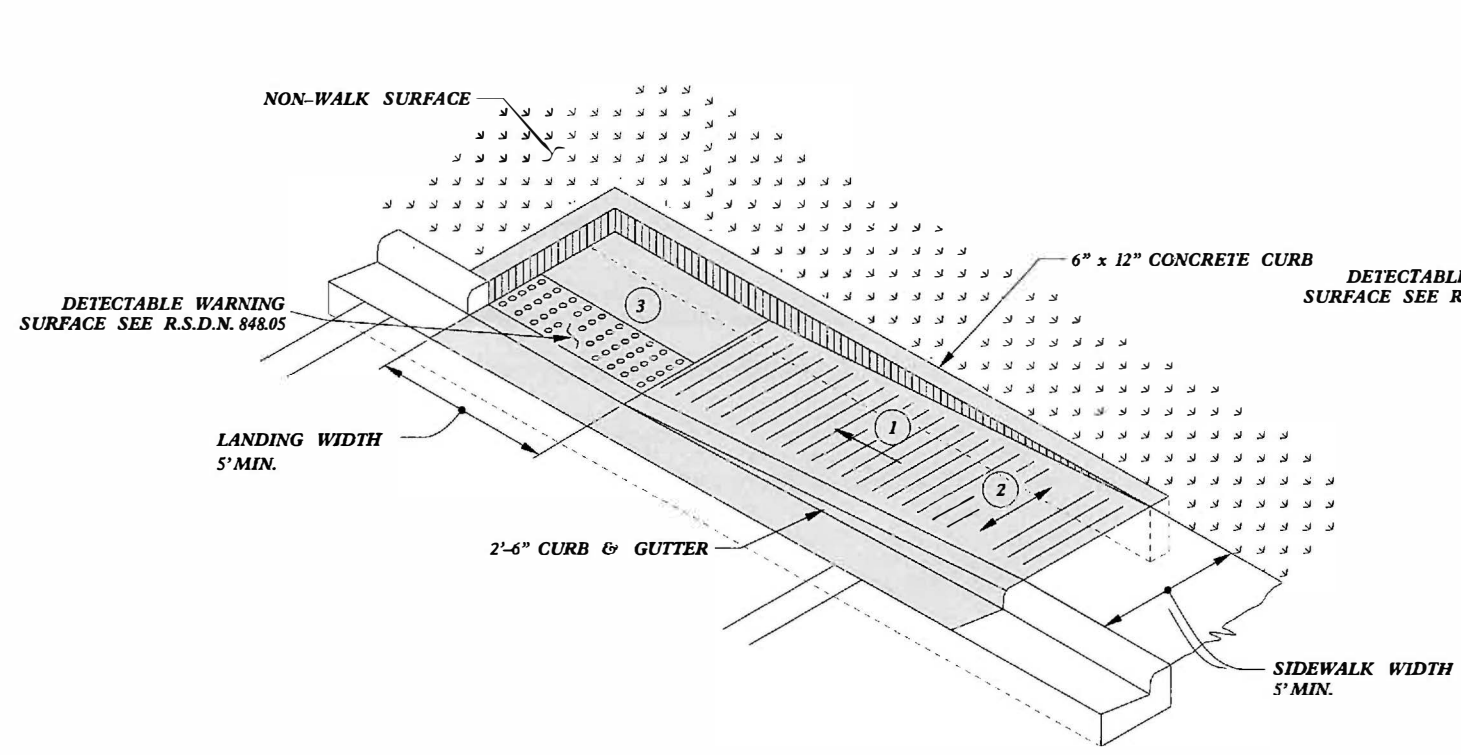
CURB RAMP

CURB RAMP ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMP'S ACCORDANCE WITH STD 848.05, 848.06, & SPECIAL DETAILS.

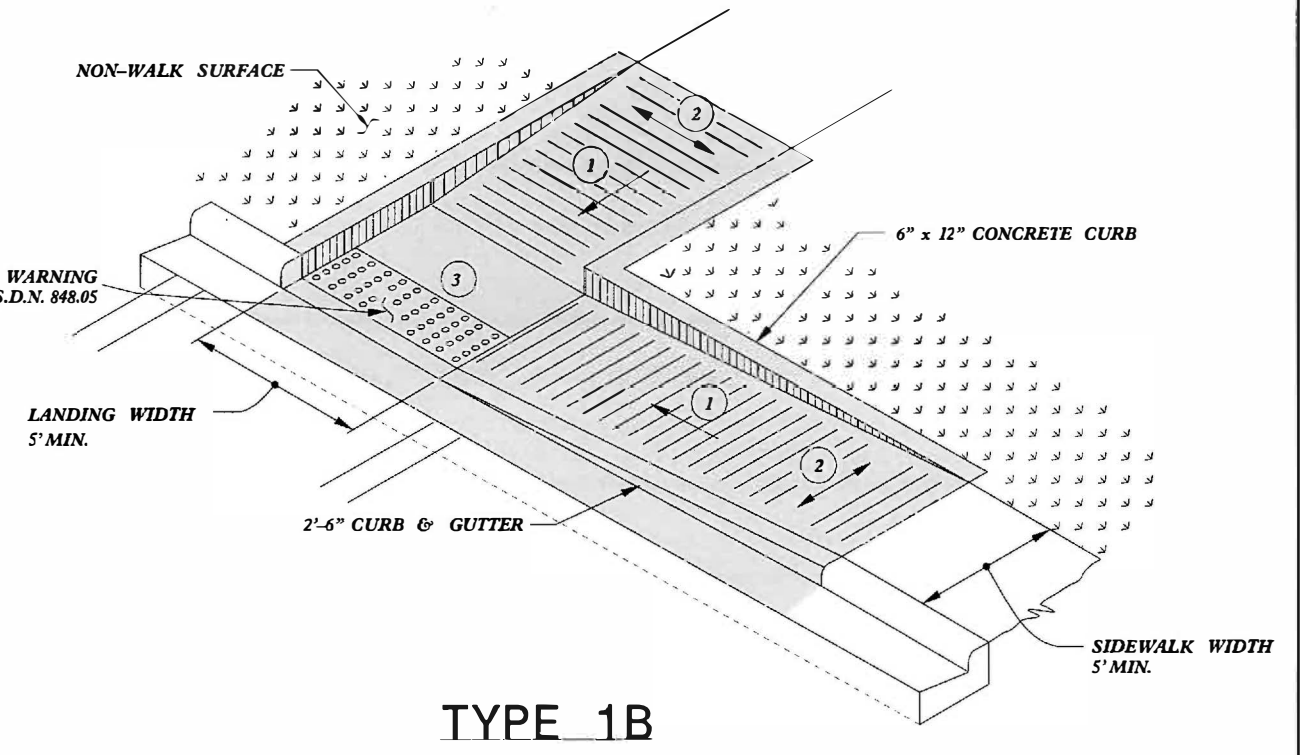
2024 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 8 - INCIDENTALS	
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.06	Curb Ramp - Existing Curb & Gutter



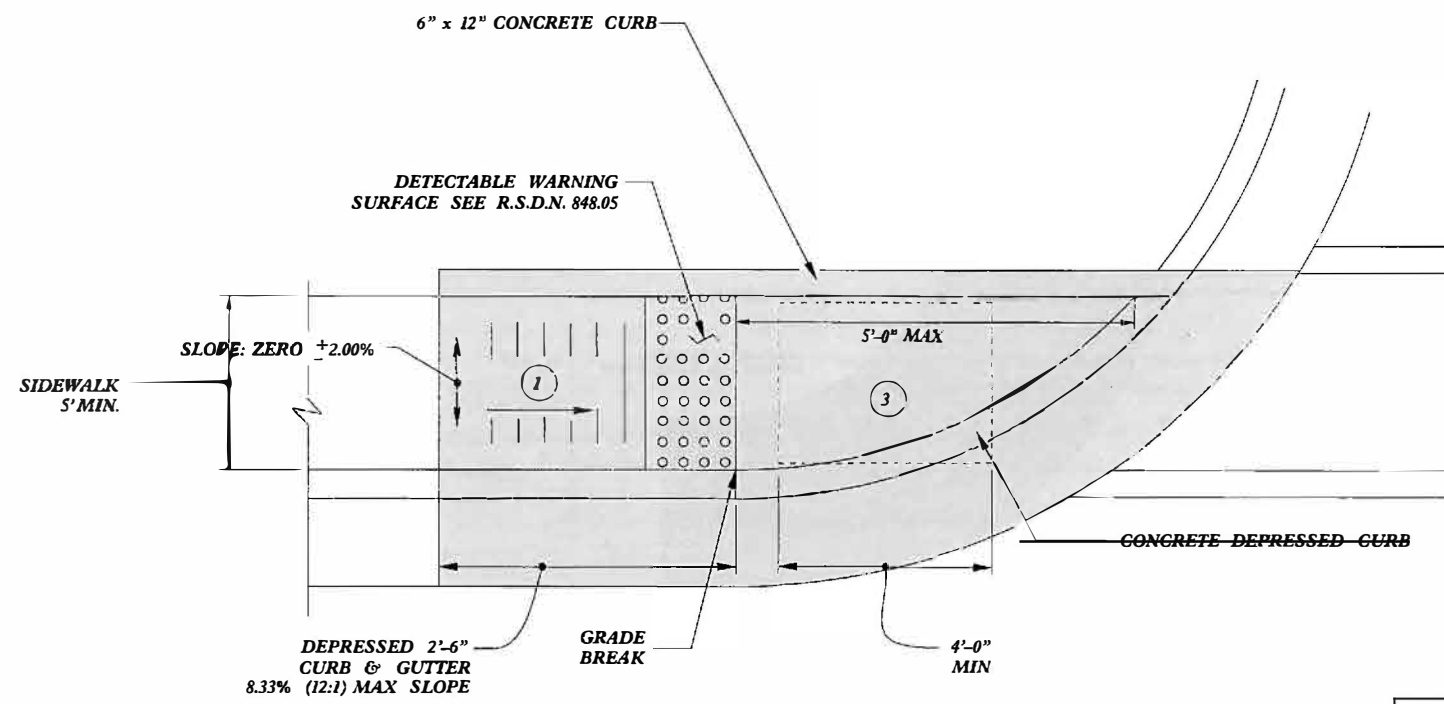
TYPE 1A



TYPE 1B

PAY LIMITS FOR 1 CURB RAMP

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

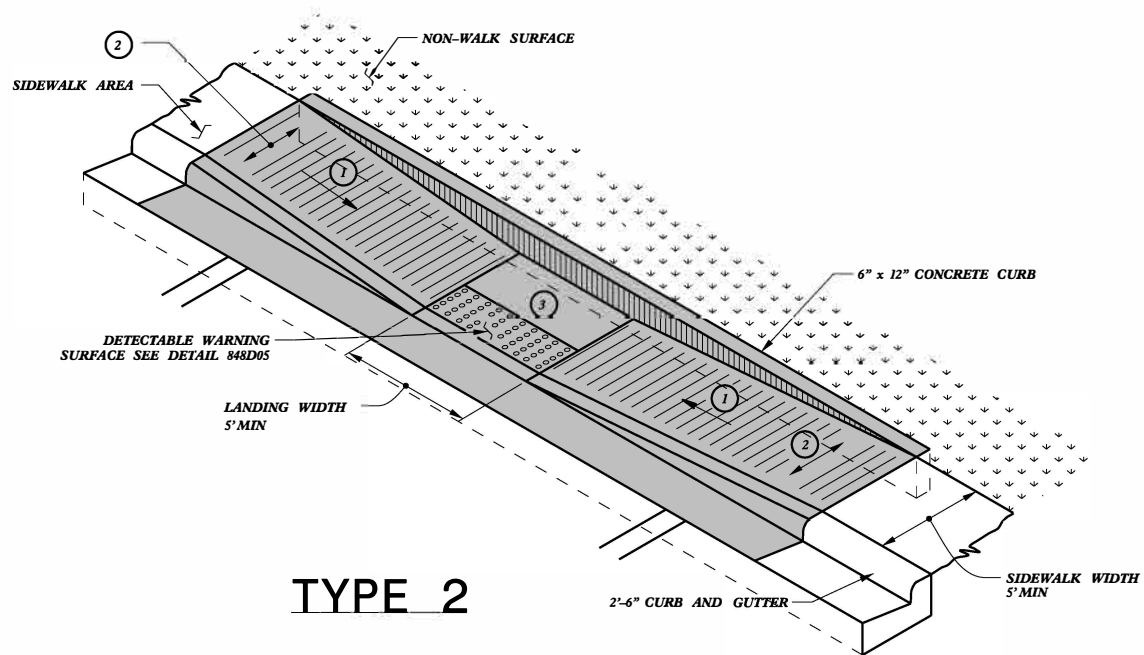


TYPE 1

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Directional Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dgn	

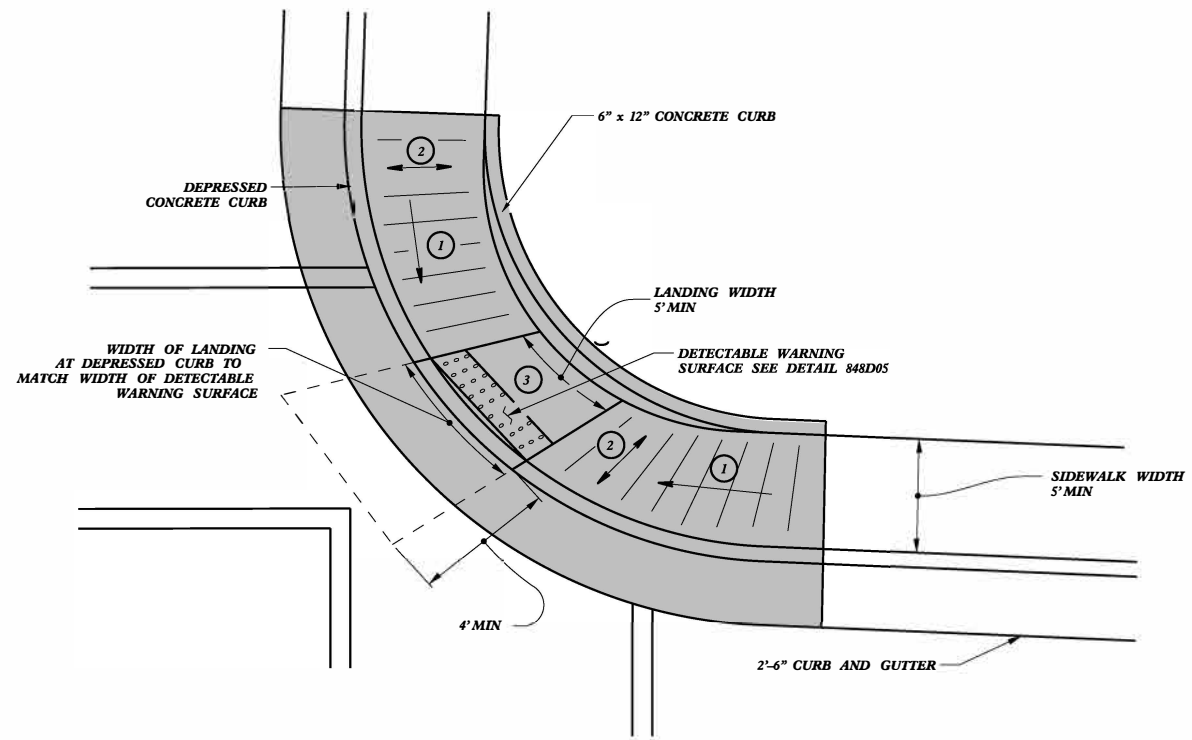
\*\*\*\*\*SYTIME\*\*\*\*\*  
\*\*\*\*\*SUPERVISOR\*\*\*\*\*



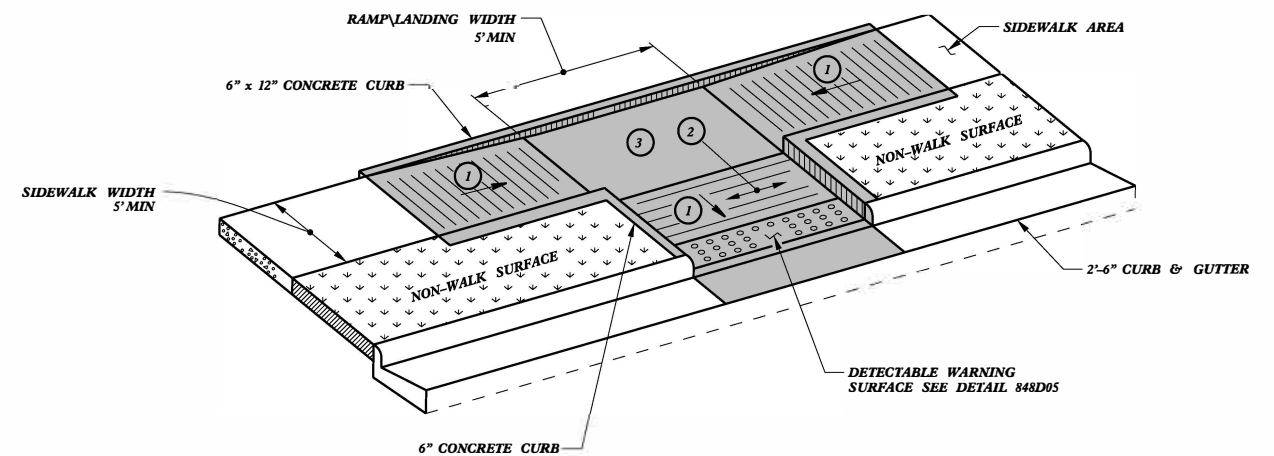
**TYPE 2**

PAY LIMITS FOR CURB RAMP

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



**TYPE 2A**

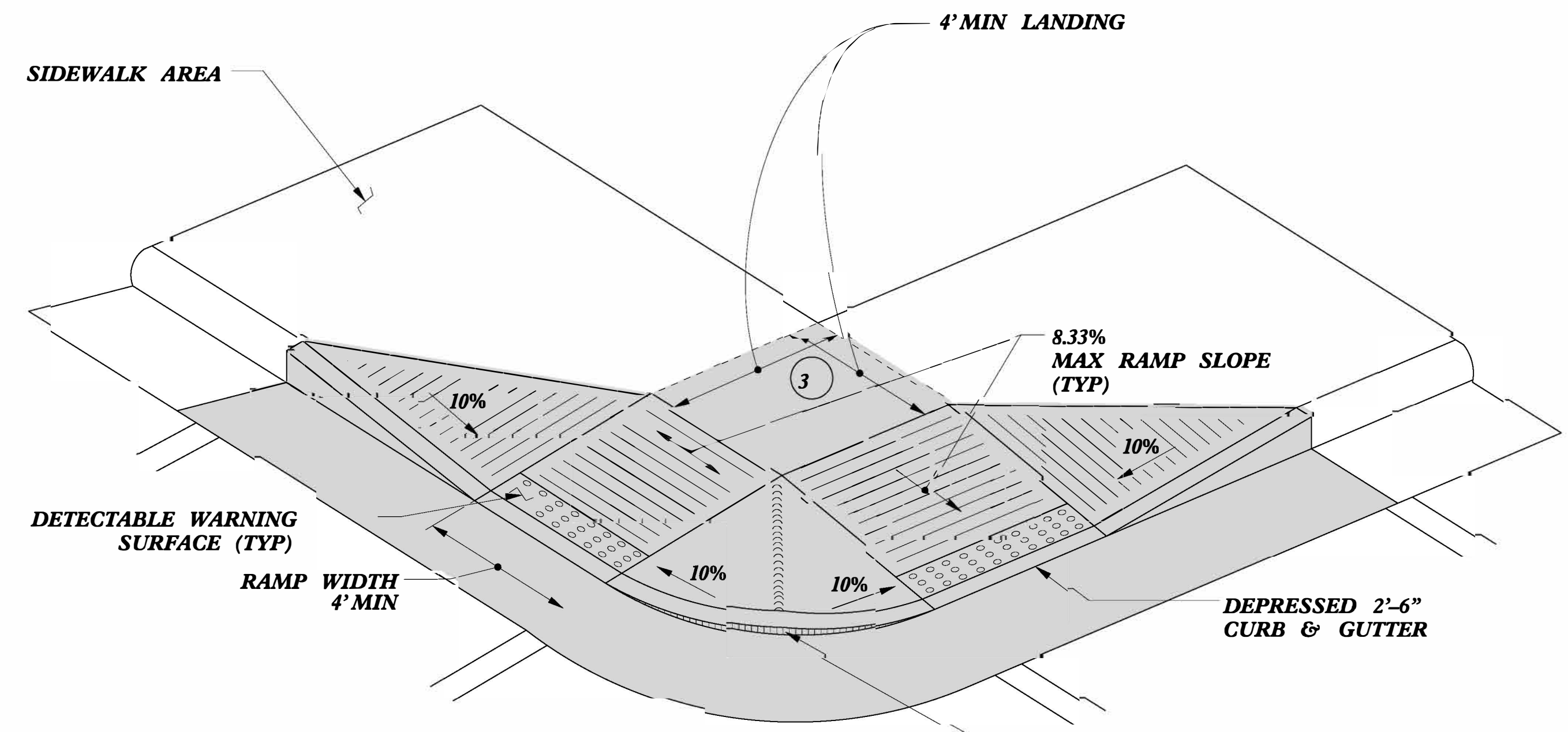


**TYPE 2B**

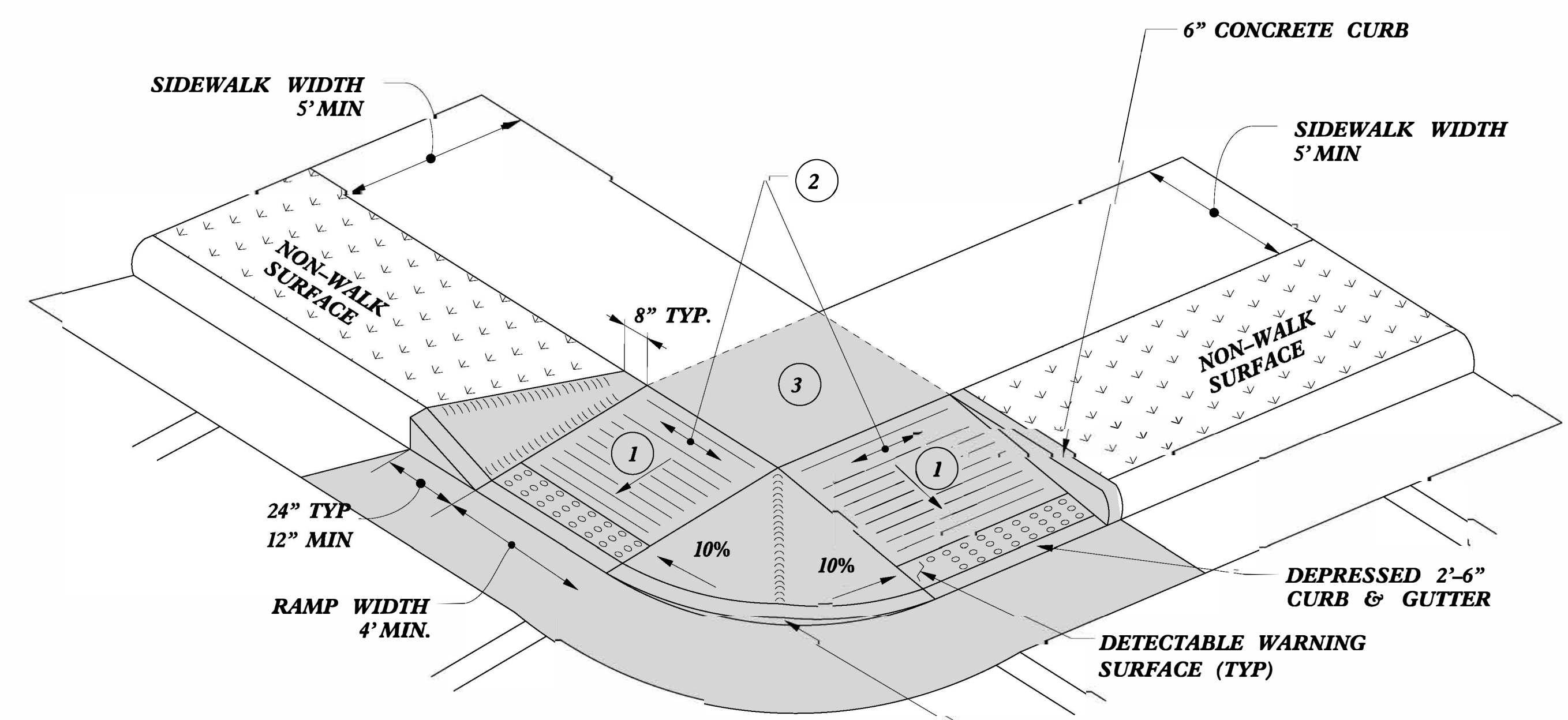
<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Parallel Ramps	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dwg	

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

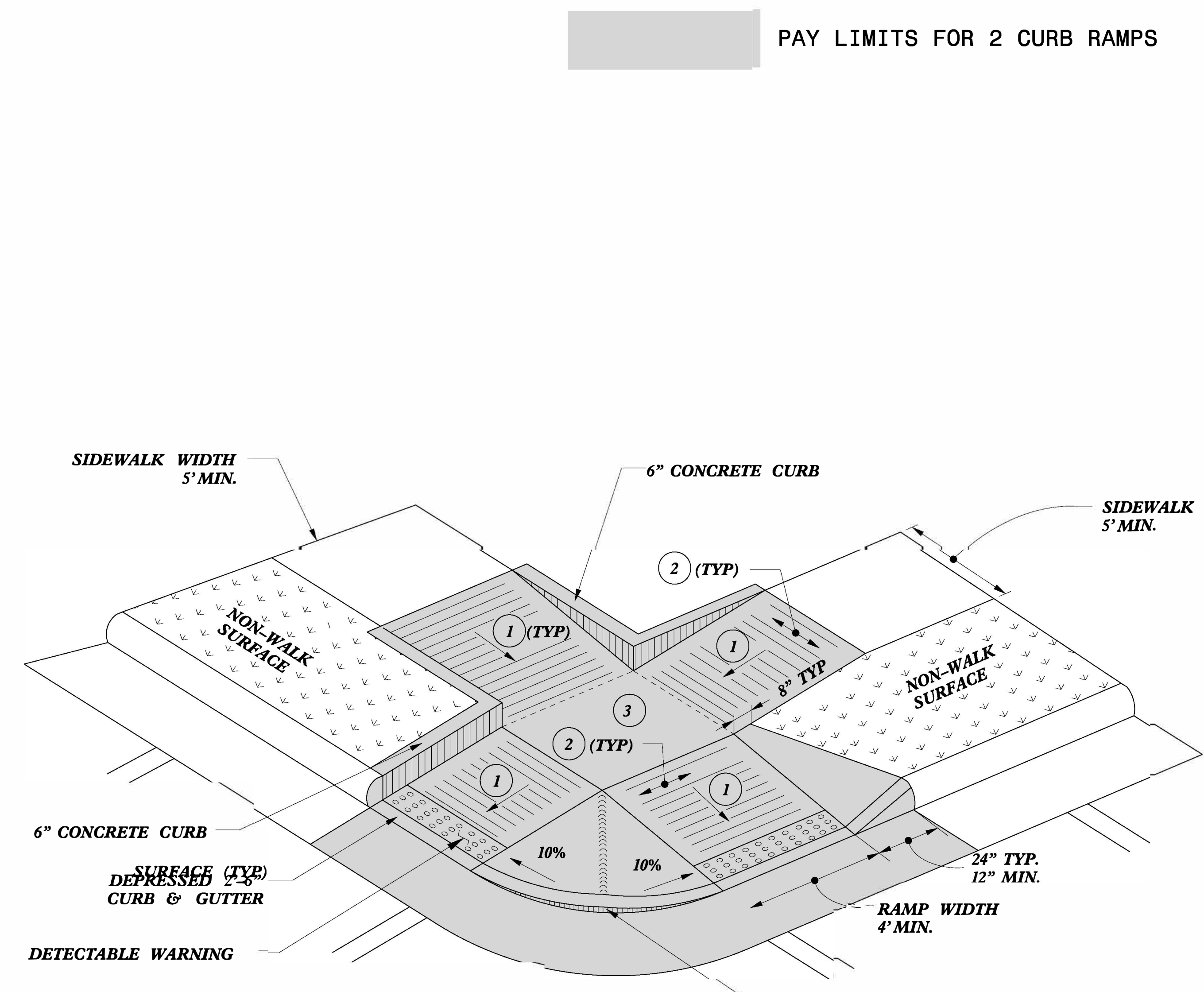
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**TYPE 4**



**TYPE 4A**



**TYPE 5**


- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

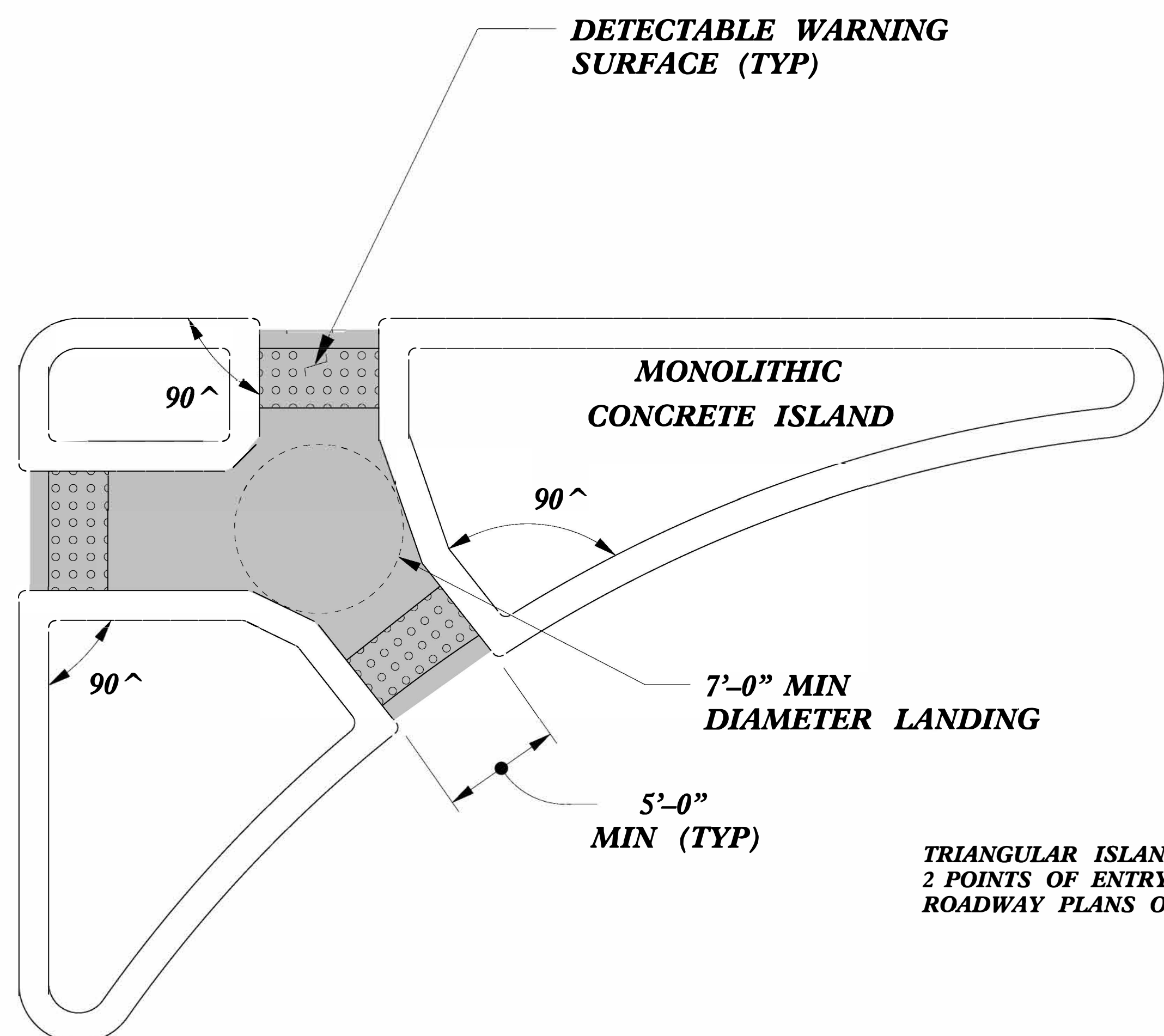
PAY LIMITS FOR 2 CURB RAMPS

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Shared Landing	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dgn	

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

5/14/99

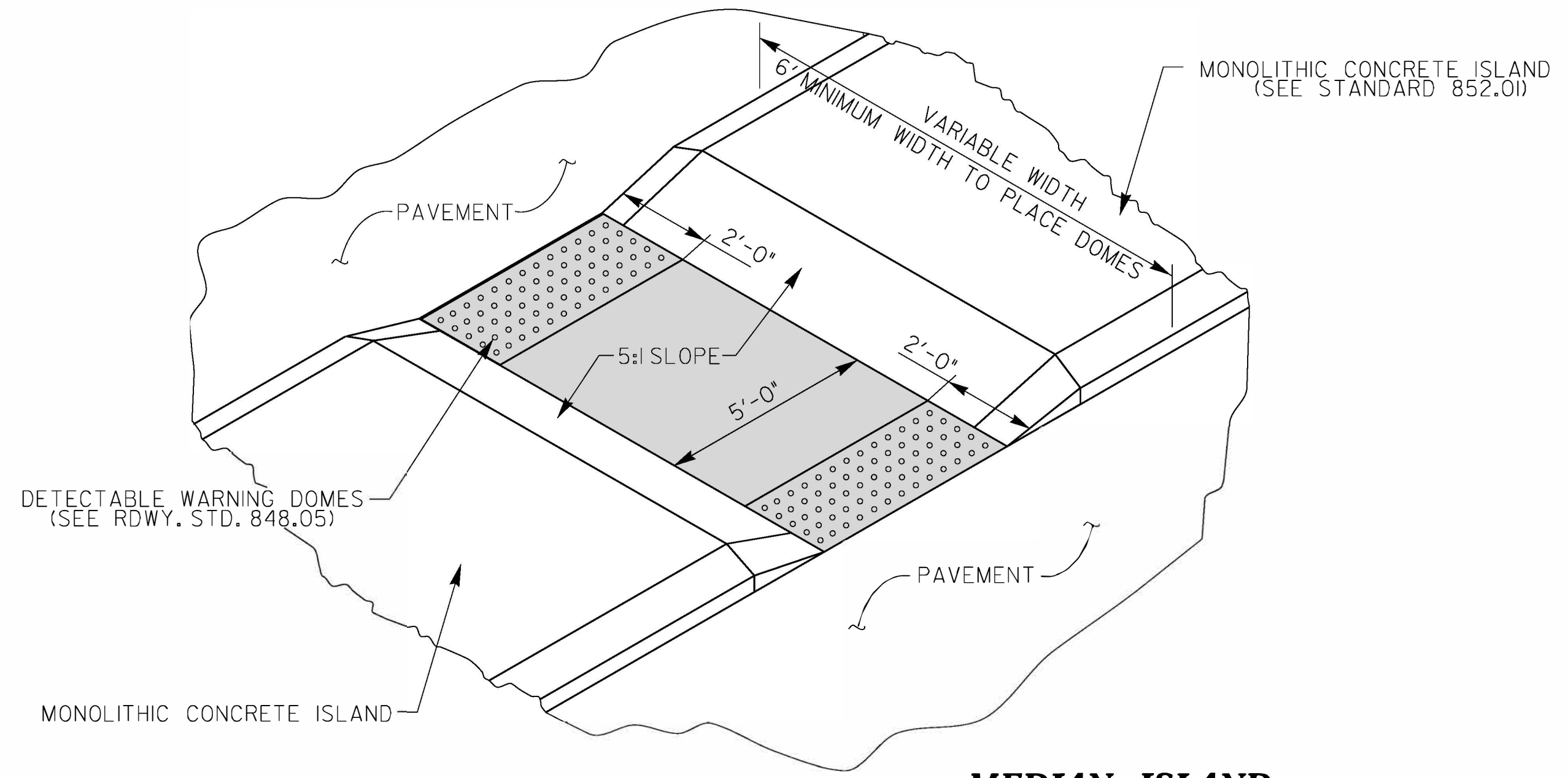
 PAY LIMITS FOR 2 OR 3 CURB RAMPS  
(CALCULATE BASED ON NUMBER OF  
SETS OF TRUNCATED DOMES)



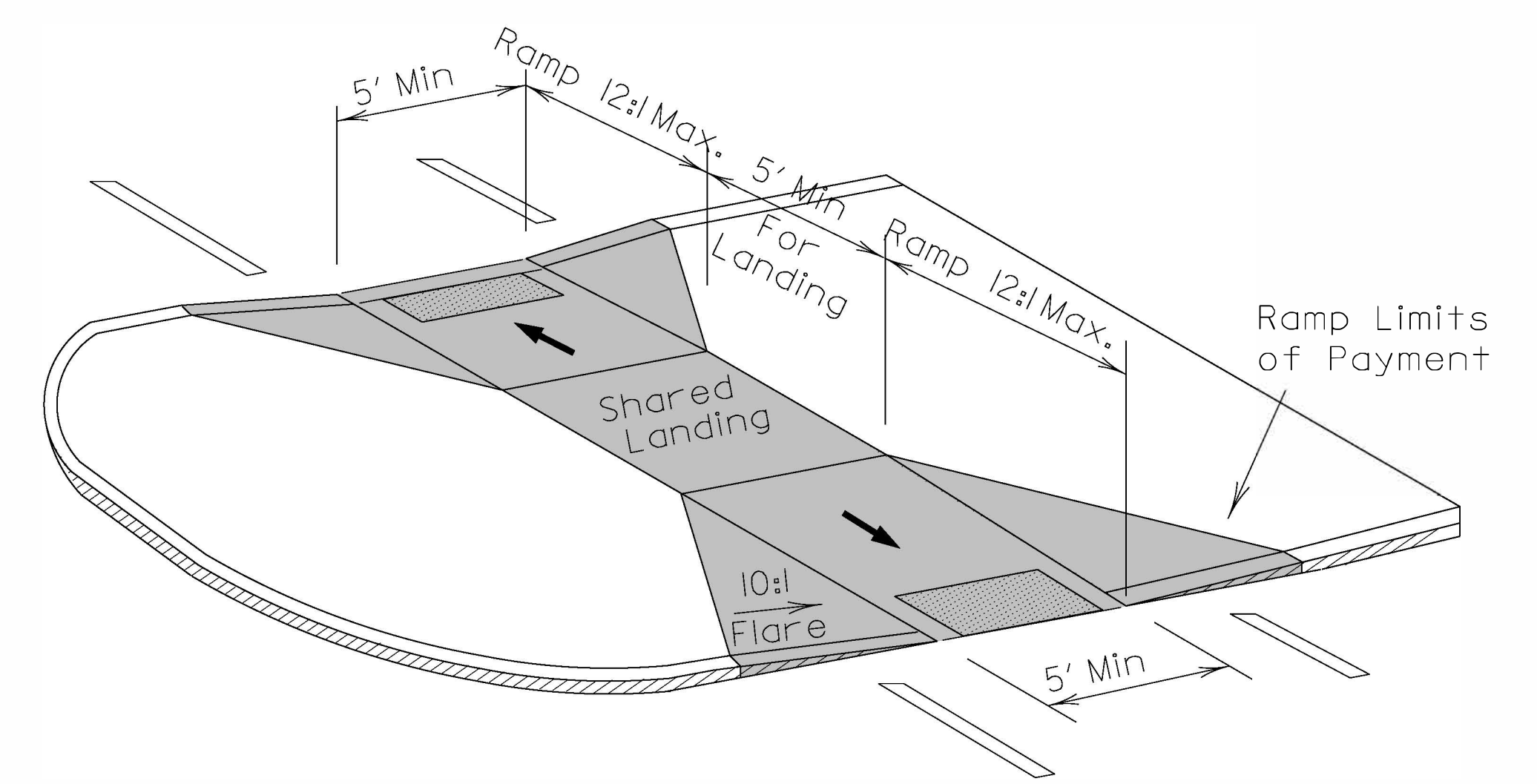
TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY  
2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE  
ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

**TRIANGULAR ISLAND  
WITH CUT THROUGH**

**TYPE 6**



**MEDIAN ISLAND  
WITH CUT THROUGH**



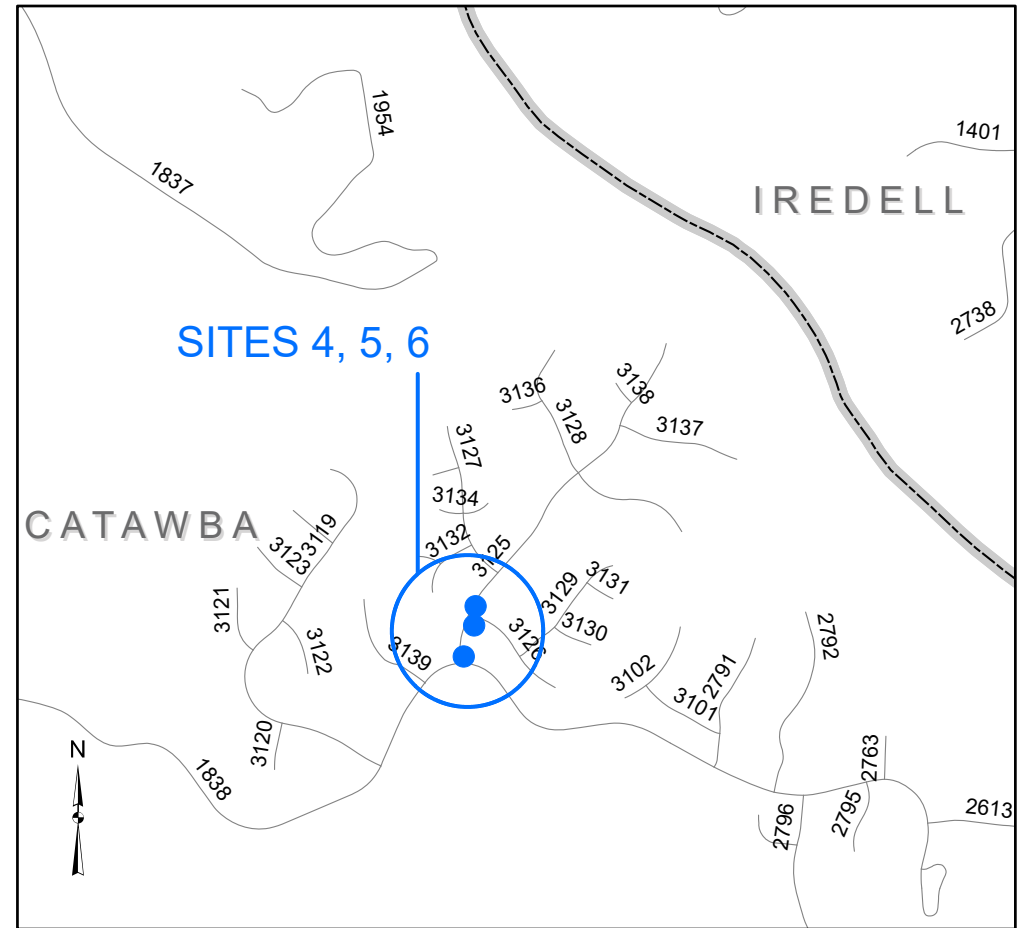
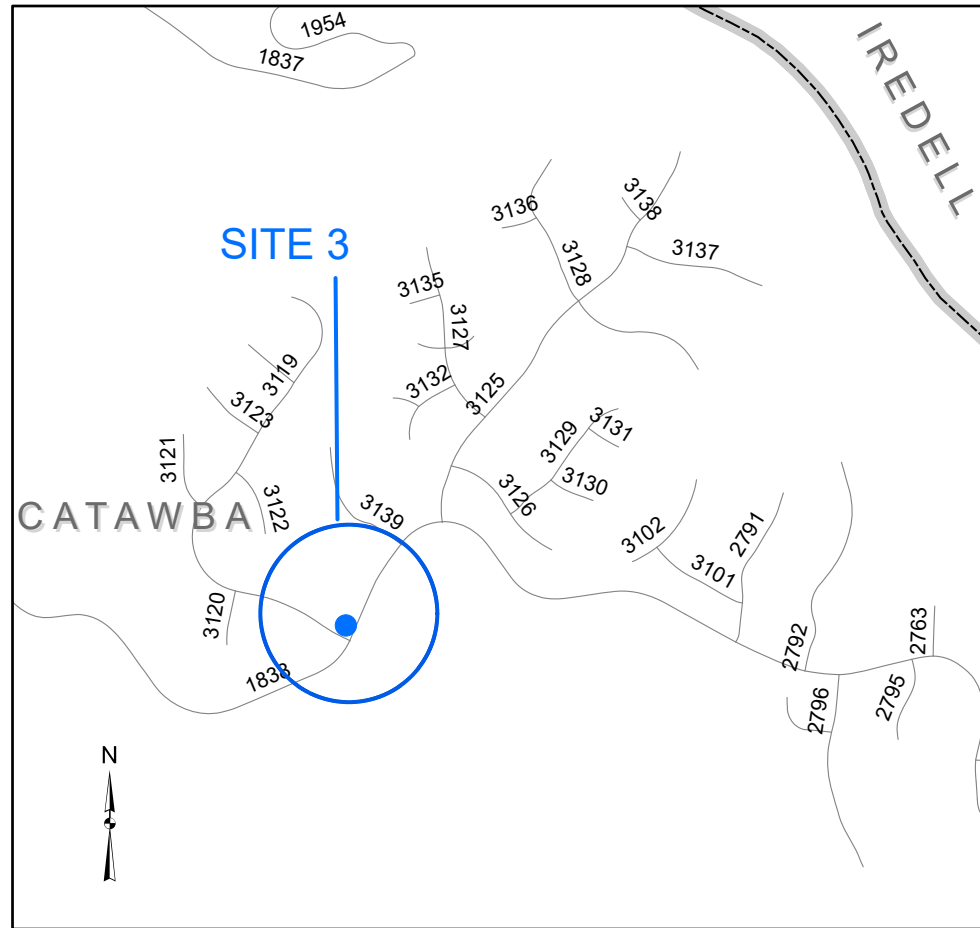
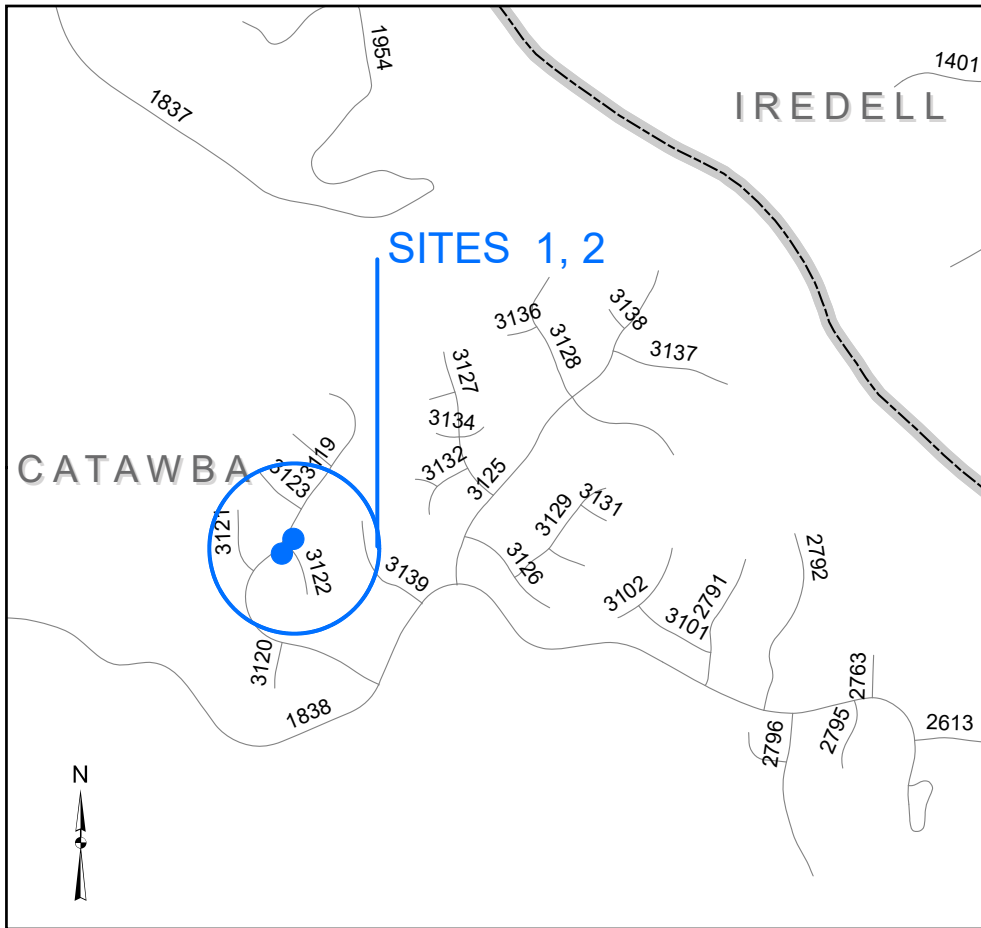
**MEDIAN ISLAND  
CURB RAMPS**

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Median or Turn Lane Islands	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC. stds/2012CurbRamp/CurbRampDetails.dgn	

5/14/99  
\$\$\$\$\$USERNAME\$\$\$\$\$

**SUMMARY OF QUANTITIES**

SUMMARY OF QUANTITIES													Proj. #	BO-2412E_F
													Sheet	2C-1
Sheet #	Division	County	Municipality	Under 5k Population? (Y/N)	WBS No.	Major Route	Minor Route	Proposed Concrete Sidewalk (SY)	Proposed 2'6" Concrete C&G (LF)	Proposed Remove Existing Curb Ramps (EA)	Proposed Retrofit Existing Concrete Curb Ramp (EA)	Proposed Remove and Replace Existing Curb Ramp (EA)	Site #	Comments
4	12	Catawba		Y	50941.3.7	SR 3119 (Capes Cove Dr.)	SR 3122 (Radford Ct.)					2	1, 2	(2) - STD. 848.06 (1 Ramp)
4	12	Catawba		Y	50941.3.7	SR 1838 (Island Point Rd.)	SR 3119 (Capes Cove Dr.)					1	3	(1) - STD. 848.06 (1 Ramp)
4	12	Catawba		Y	50941.3.7	SR 1838 (Island Point Rd.)	SR 3125 (Northview Harbour Dr.)					1	4	(1) - Type 1A
4	12	Catawba		Y	50941.3.7	SR 3125 (Northview Harbour Dr.)	SR 3126 (Garrison Rd.)					2	5, 6	(1) - Type 2A; (1) - Type 1A
5	12	Catawba		Y	50941.3.7	SR 3125 (Northview Harbour Dr.)	SR 3127 (Metcalfe Dr.)					2	7, 8	(1) - Type 2; (1) - Type 1A
5	12	Catawba		Y	50941.3.7	SR 3127 (Metcalfe Dr.)	SR 3132 (Braxton Dr.)					1	9	(1) - Type 2A
5	12	Catawba		Y	50941.3.7	SR 3125 (Northview Harbour Dr.)	SR 3128 (Fair Oak Dr.)					2	10, 11	(2) - Type 1A
5	12	Catawba		Y	50941.3.7	SR 3125 (Northview Harbour Dr.)	SR 3137 (Sherbourne Ln)	15				2	12, 13	(2) - Type 1A (Install Concrete Sidewalk SW Corner)
6	12	Catawba	Catawba	Y	50941.3.7	NC 10	1st Ave SW					4	14, 15, 16, 17	(1) - STD. 840.06 (1 Ramp); (1) - Type 4 (2 Ramps); (1) - Type 1B
6	12	Catawba	Catawba	Y	50941.3.7	NC 10	1st Ave NW					1	18	(1) - Type 4 (1 Ramp)
6	12	Catawba	Catawba	Y	50941.3.7	NC 16	Hunsucker Dr. NE	7	10			2	19, 20	(2) - Type 2B
7	12	Catawba	Catawba	Y	50941.3.7	NC 16	I 40 Ramps	7	10			7	21-30	(2) - Type 2B; (1) - STD.848.06 (2 Ramps); (1) - STD.848.06 (1 Ramp); (2) - Type 6
7	12	Catawba	Catawba	Y	50941.3.7	NC 16	I 40 Ramps					6	31-38	(2) - STD. 848.06 (2 Ramps); (2) - STD. 848.06 (1 Ramp); (1) Type 6
7	12	Catawba	Catawba	Y	50941.3.7	NC 16	NC 16 Bus (1st Ave N)					2	39-40	(2) - STD. 848.06 (1 Ramp)
8	12	Lincoln		Y	50941.3.8	SR 1405 (N. Aspen St.)	SR 1265 (Walt Burgess Rd)					1	41	(1) - Type 1
8	12	Lincoln		Y	50941.3.8	SR 2107 (Turkey Trot Dr.)	Cul-de-sac					1	42	(1) - Type 1
8	12	Lincoln		Y	50941.3.8	SR 2108 (Common Oak Dr.)	Cul-de-sac					1	43	(1) - Type 1
9	12	Lincoln		Y	50941.3.8	SR 2109 (Brookdale Ln)	SR 3066 (Brandywine Ln)					2	44, 45	(1) - Type 2B; (1) - Type 1
9	12	Lincoln		Y	50941.3.8	SR 2109 (Brookdale Ln)	SR 3065 (Meta Ct)					2	46, 47	(1) - Type 2B; (1) - Type 1
9	12	Lincoln		Y	50941.3.8	SR 2109 (Brookdale Ln)	SR 2106 (Stableford Ln)/(Vanguard Ct) Cul-de-sac					4	48, 49, 50, 51	(3) - Type 1; (1) - Type 2B
9	12	Lincoln		Y	50941.3.8	SR 2102 (Sedgebrook Dr E)	SR 1982 (Glencrest Dr)					3	52, 53, 54	(3) - Std. 848.06 (1 Ramp)
10	12	Lincoln		Y	50941.3.8	SR 1394 (S Pilot Knob Rd)	SR 2039 (Waterside Crossing Blvd)					3	55, 56, 57	(3) - Std. 848.06 (1 Ramp)
10	12	Lincoln		Y	50941.3.8	SR 2039 (Waterside Crossing Blvd)	Pilot Cove Ct/Bluff Point Ln					4	58, 59, 60, 61	(4) - Std. 848.06 (1 Ramp)
10	12	Lincoln		Y	50941.3.8	SR 2039 (Waterside Crossing Blvd)	SR 2167 (Waterside Loop)					2	62, 63	(2) - Std. 848.06 (1 Ramp)
11	12	Lincoln		Y	50941.3.8	SR 2039 (Waterside Crossing Blvd)	SR 2167 (Waterside Loop)/SR 2040 (Cross Center Rd)					4	64, 65, 66, 67	(4) - Std. 848.06 (1 Ramp)
11	12	Lincoln		Y	50941.3.8	NC 16	SR 2039 (Waterside Crossing Blvd)					2	68, 69	(2) - Std. 848.06 (1 Ramp)
11	12	Lincoln		Y	50941.3.8	SR 2003 (Oxford Bluff Dr)	SR 2009 (Quail Hunt Dr)					2	70, 71	(1) - Type 1; (1) - Type 1A
12	12	Lincoln		Y	50941.3.8	SR 2003 (Oxford Bluff Dr)	SR 2002 (Oxford Hunt Dr)					2	72, 73	(1) - Type 1; (1) - Type 2B
12	12	Lincoln		Y	50941.3.8	SR 2091 (Verdict Ridge Dr)	SR 2094 (Sahalee Dr)					1	74	(1) - Type 1
12	12	Lincoln		Y	50941.3.8	SR 1972 (Silver Jade Dr)	SR 2071 (Crepe Ridge Dr)					2	75, 76	(2) - Std. 848.06 (1 Ramp)
12	12	Lincoln		Y	50941.3.8	SR 1972 (Silver Jade Dr)	SR 1973 (Augusta Ridge Ct)					2	77, 78	(2) - Std. 848.06 (1 Ramp)
12	12	Lincoln		Y	50941.3.8	SR 1972 (Silver Jade Dr)	SR 1974 (Buena Vista Dr)					2	79, 80	(2) - Std. 848.06 (1 Ramp)
13	12	Lincoln		Y	50941.3.8	SR 2031 (Rustling Woods Dr)	SR 2079 (Shelter Cove Ln)					2	81, 82	(2) - Std. 848.06 (1 Ramp)
13	12	Lincoln		Y	50941.3.8	SR 2031 (Rustling Woods Dr)	SR 2032 (Ivey Hollow Ct)					2	83, 84	(2) - Std. 848.06 (1 Ramp)
13	12	Lincoln		Y	50941.3.8	SR 2031 (Rustling Woods Dr)	SR 2033 (Stormy Pointe Ct)					2	85, 86	(2) - Std. 848.06 (1 Ramp)
13	12	Lincoln		Y	50941.3.8	SR 2031 (Rustling Woods Dr)	SR 2035 (Silver Eagle Cove)					2	87, 88	(2) - Std. 848.06 (1 Ramp)
13	12	Lincoln		Y	50941.3.8	SR 2031 (Rustling Woods Dr)	SR 2081 (Lake Spring Ct)					1	89	(1) - Std. 848.06 (1 Ramp)
14	12	Lincoln		Y	50941.3.8	SR 2031 (Rustling Woods Dr)	SR 2036 (Channel Point Ln)					1	90	(1) - Std. 848.06 (1 Ramp)
14	12	Lincoln		Y	50941.3.8	SR 2071 (Crepe Ridge Dr)	Parking Area (300'+/- of SR 2073)					2	91, 92	(2) - Type 1
14	12	Lincoln		Y	50941.3.8	SR 2071 (Crepe Ridge Dr)	SR 2072 (Ash Hollow Ln)					2	93, 94	(2) - Std. 848.06 (1 Ramp)
14	12	Lincoln		Y	50941.3.8	SR 2071 (Crepe Ridge Dr)	SR 2070 (Sailview Dr)					1	95	(1) - Std. 848.06 (1 Ramp)
15	12	Lincoln		Y	50941.3.8	SR 2075 (Chapel Creek Dr)	SR 2078 (Artesian Cove Ct)					2	96, 97	(2) - Std. 848.06 (1 Ramp)
15	12	Lincoln		Y	50941.3.8	SR 1974 (Buena Vista Dr)	SR 1975 (Morming Dove Ct)					2	98, 99	(2) - Std. 848.06 (1 Ramp)
15	12	Lincoln		Y	50941.3.8	SR 1974 (Buena Vista Dr)	SR 1976 (Osprey Run Ct)					2	100, 101	(2) - Std. 848.06 (1 Ramp)
15	12	Lincoln		Y	50941.3.8	SR 1974 (Buena Vista Dr)	SR 1977 (Hawkes Bay Ct)					2	102, 103	(2) - Std. 848.06 (1 Ramp)
15	12	Lincoln		Y	50941.3.8	SR 1974 (Buena Vista Dr)	SR 1978 (Eagle Pointe Ct)					2	104, 105	(2) - Std. 848.06 (1 Ramp)
15	12	Lincoln		Y	50941.3.8	SR 1974 (Buena Vista Dr)	SR 1979 (Sierra View Dr)					1	106	(1) - STD. 848.06 (1 Ramp)
								29	20	0	0	101		



SR 3119 (CAPES COVE DR.) @ SR 1322 (RADFORD CT.)



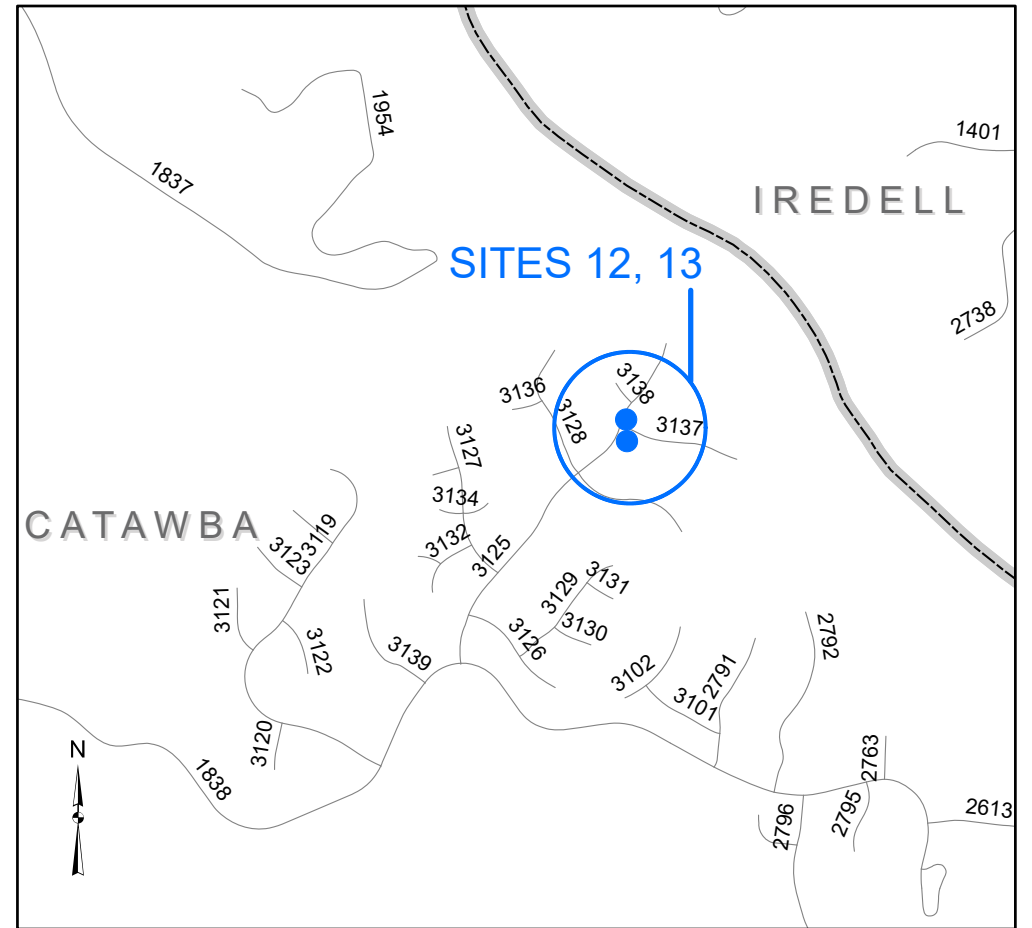
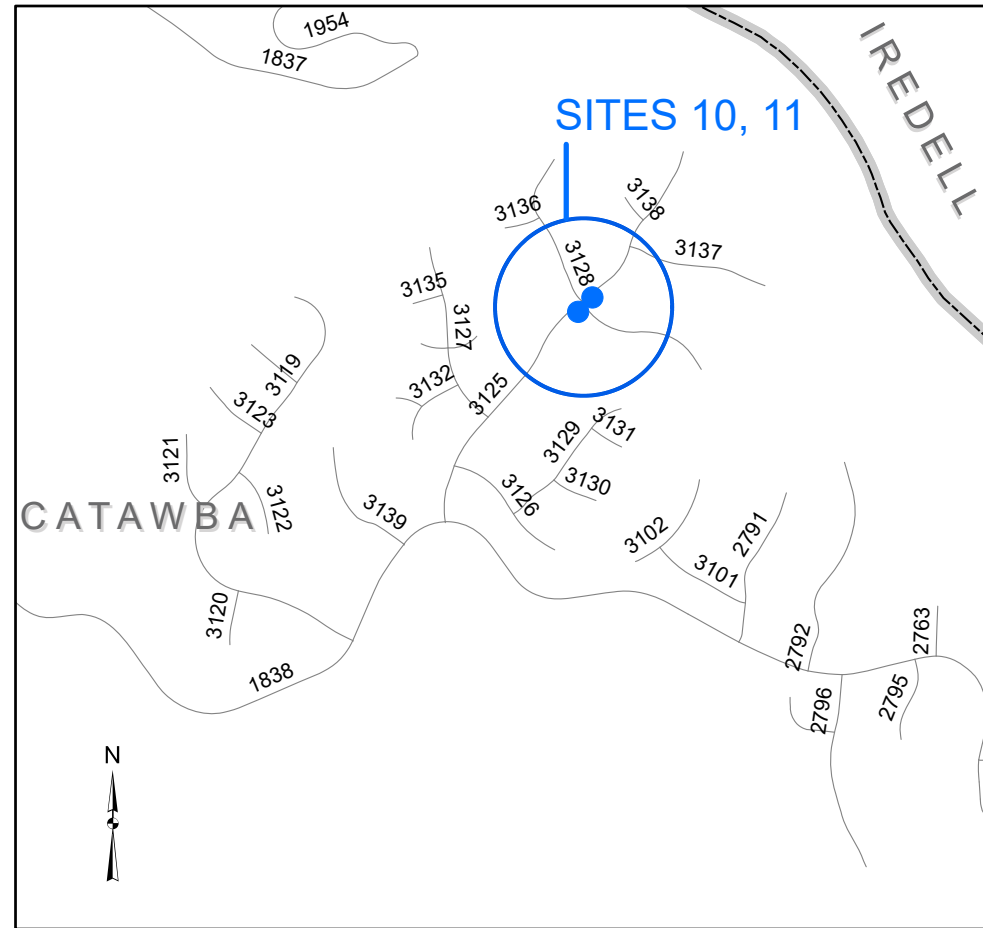
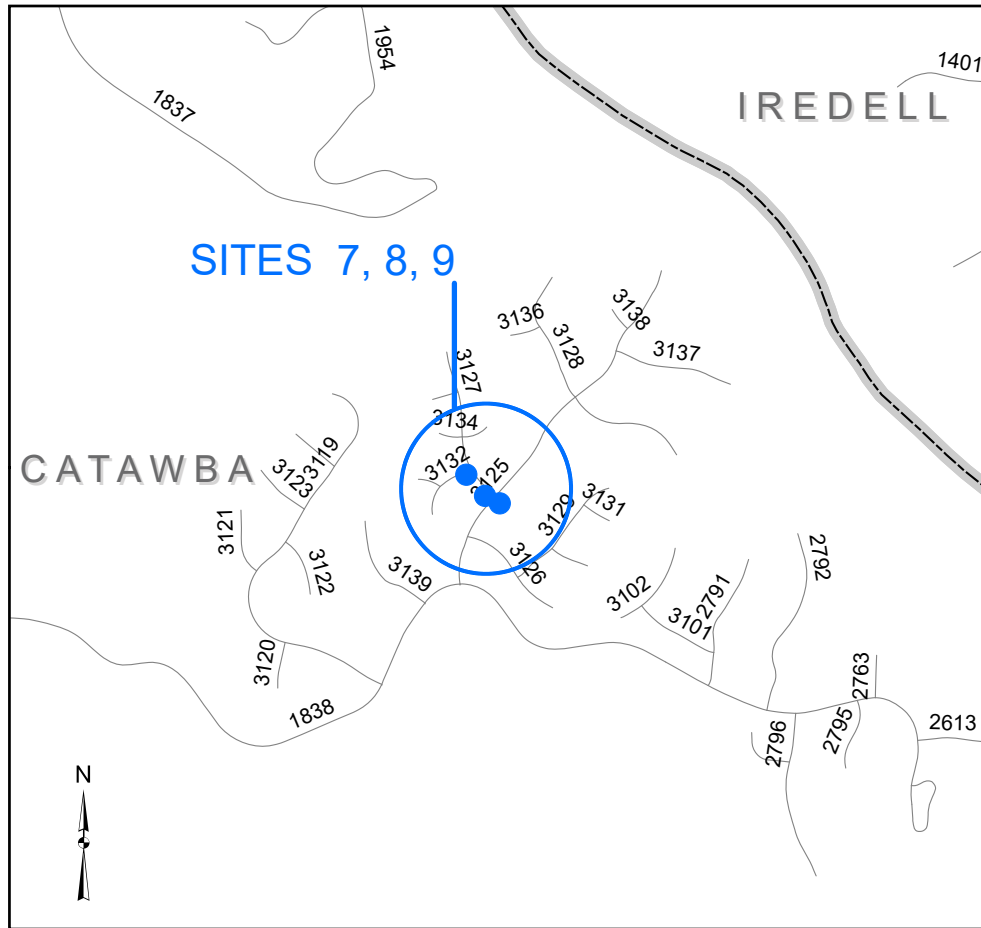
SR 1838 (ISLAND POINT RD.) @ SR 3119 (CAPES COVE DR.)



SR 1838 (ISLAND POINT RD.) @ SR 3125 (NORTHVIEW HARBOUR DR.)  
& SR 3125 (NORTHVIEW HARBOUR DR.) @ SR 3126 (GARRISON RD.)





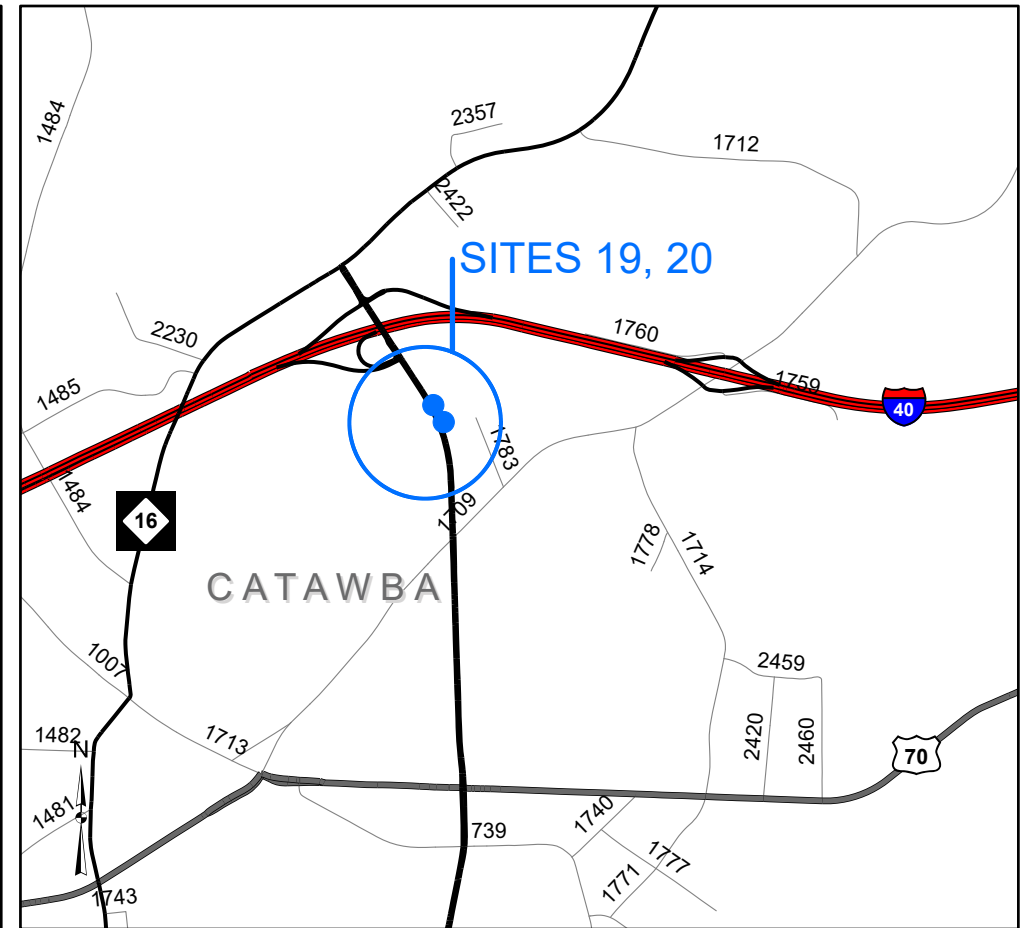
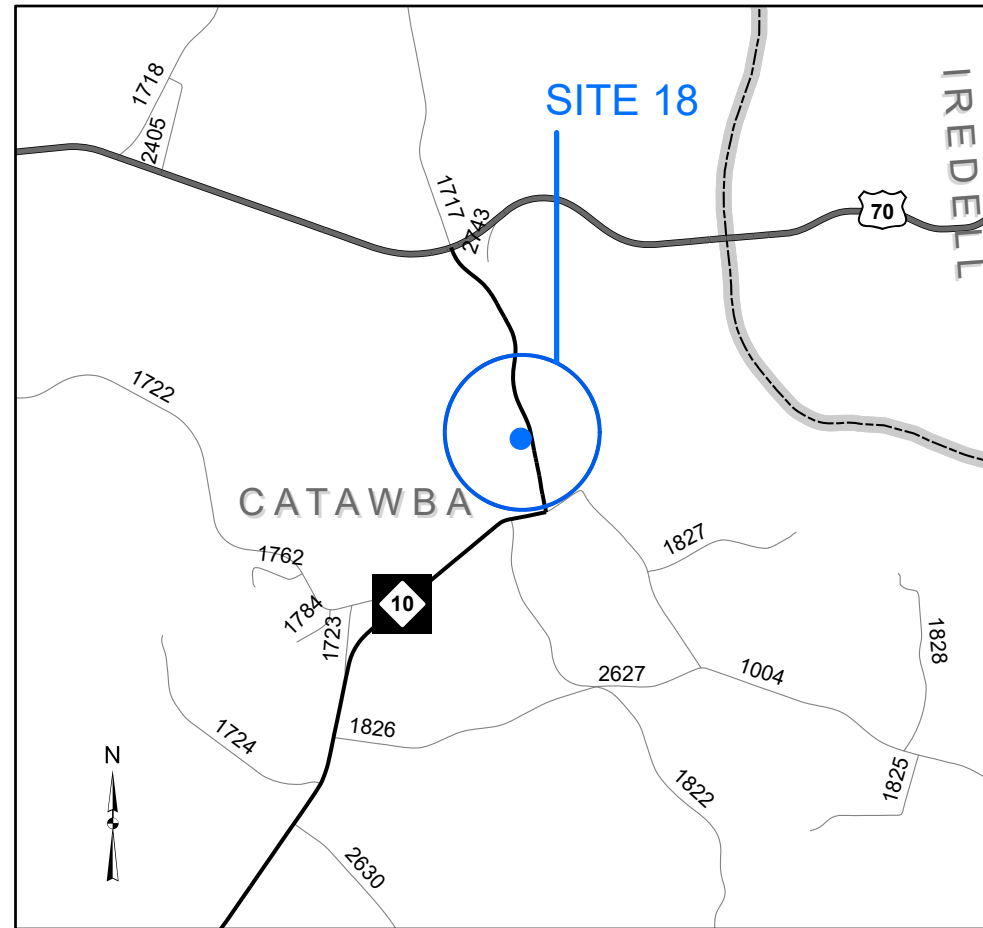
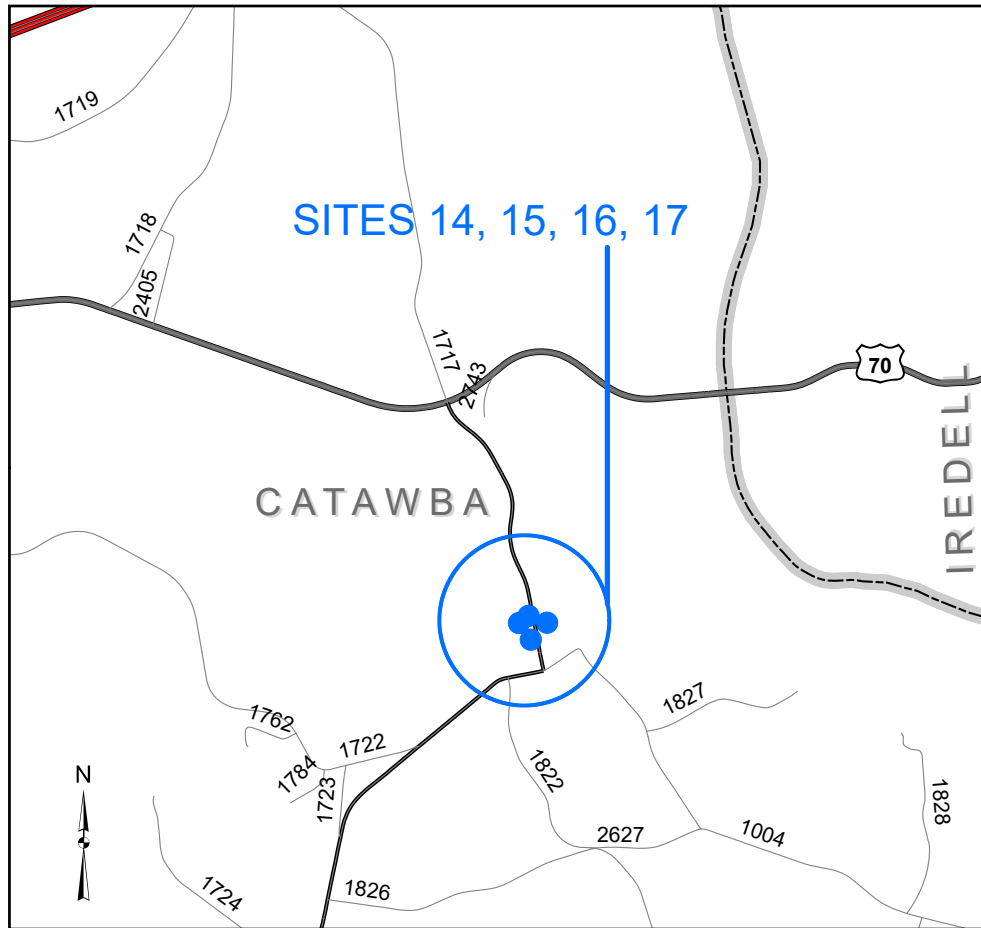


SR 3125 (NORTHVIEW HARBOUR DR.) @ SR 3127 (METCALF DR.)  
& SR 3127 (METCALF DR.) @ SR 3132 (BRAXTON DR.)

SR 3125 (NORTHVIEW HARBOUR DR.) @ SR 3128 (FAIR OAK DR.)

SR 3125 (NORTHVIEW HARBOUR DR.) @ SR 3137 (SHEBOURNE LN.)

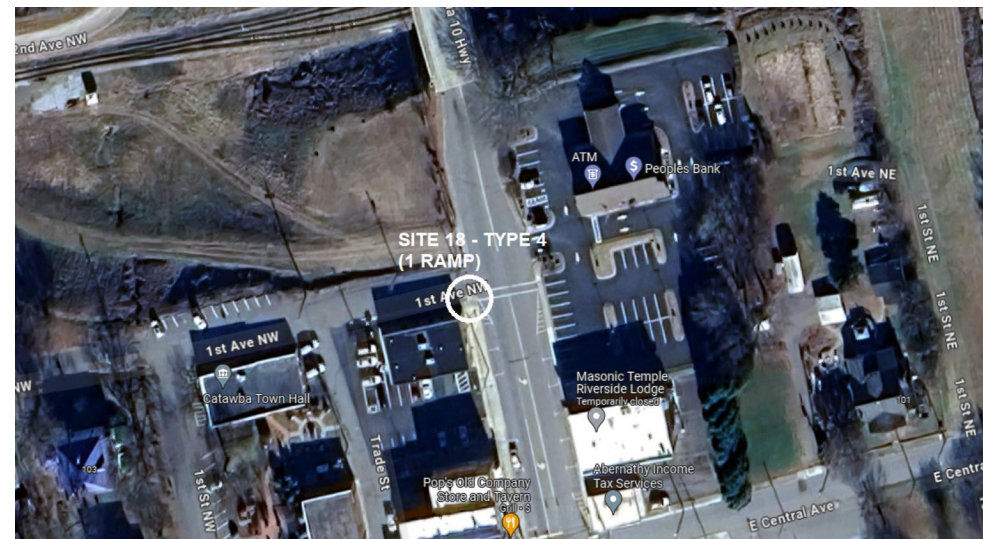




CATAWBA COUNTY  
WBS# BO-2412E



NC 10 @ 1ST. AVE. SW

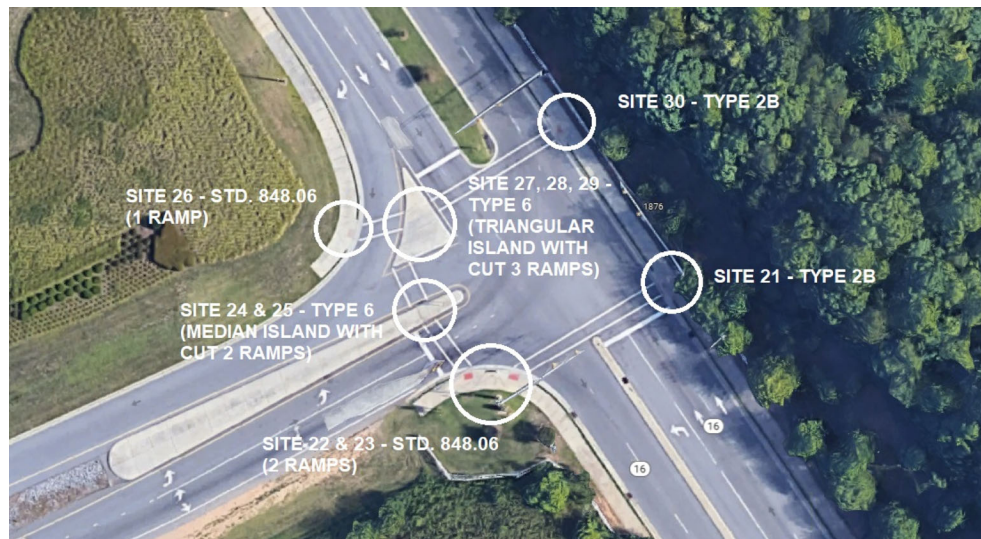
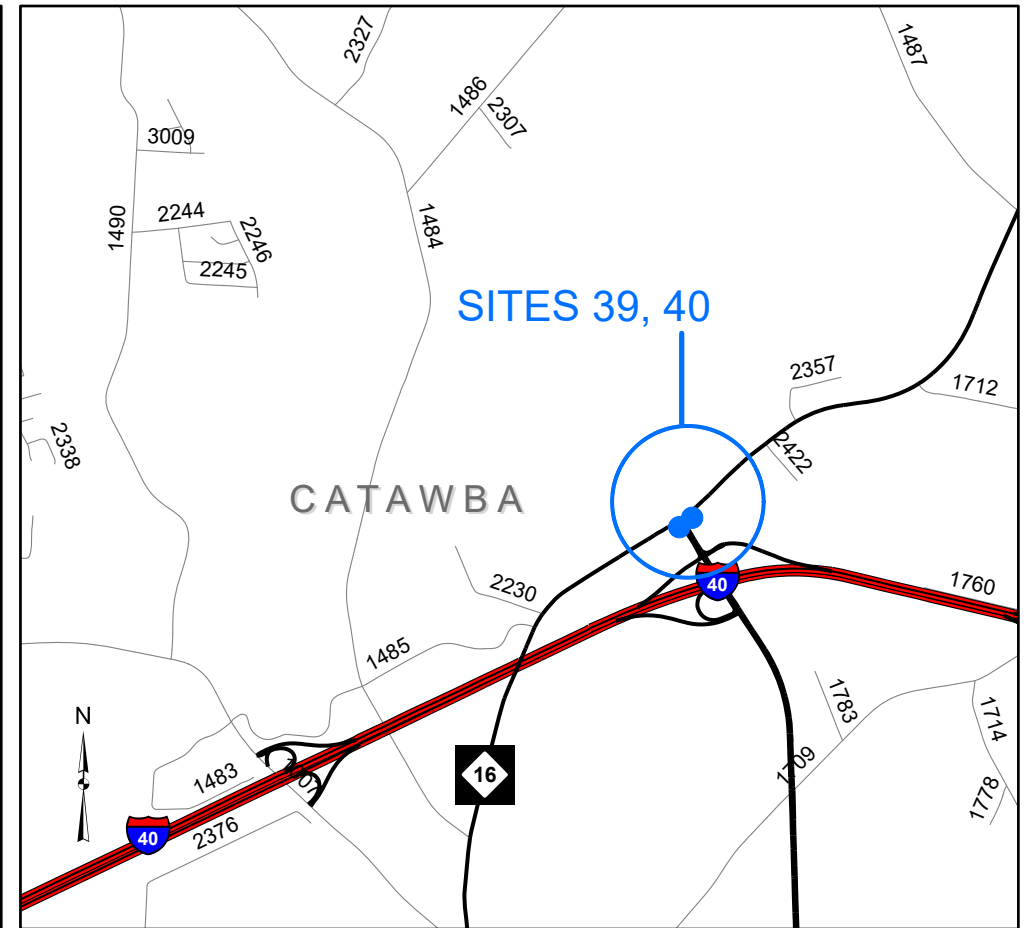
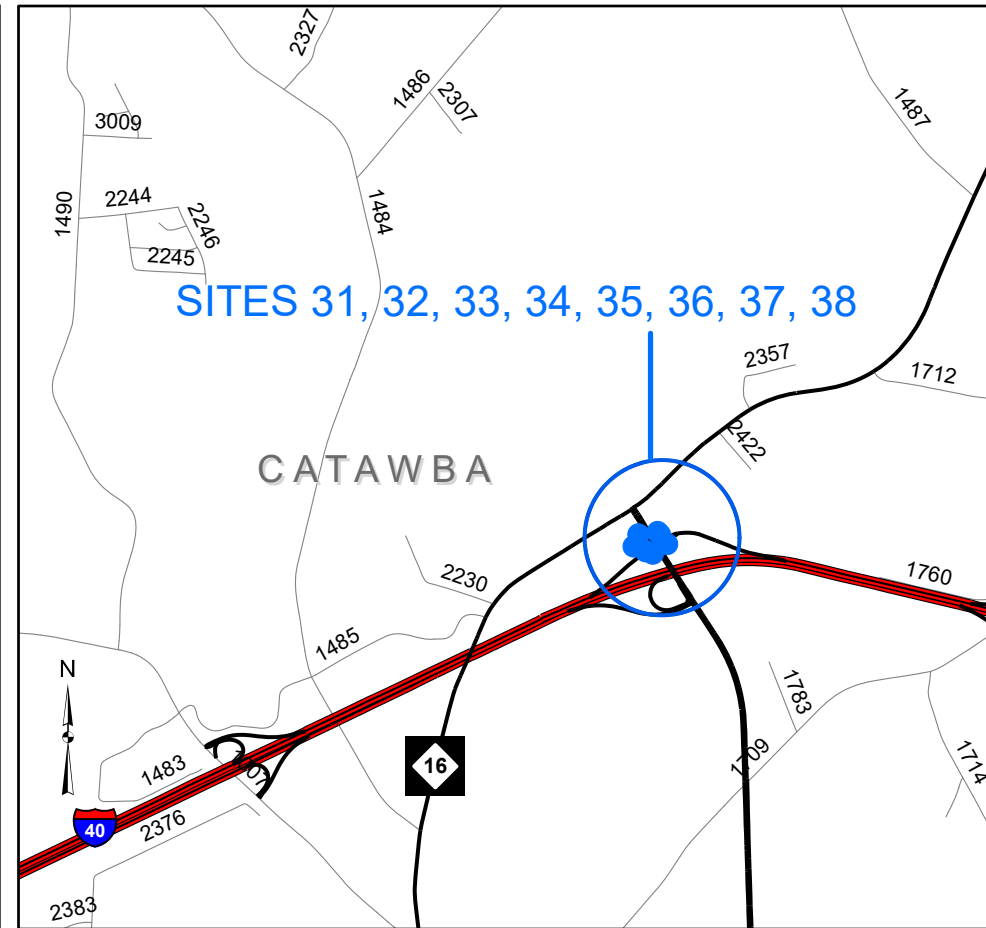
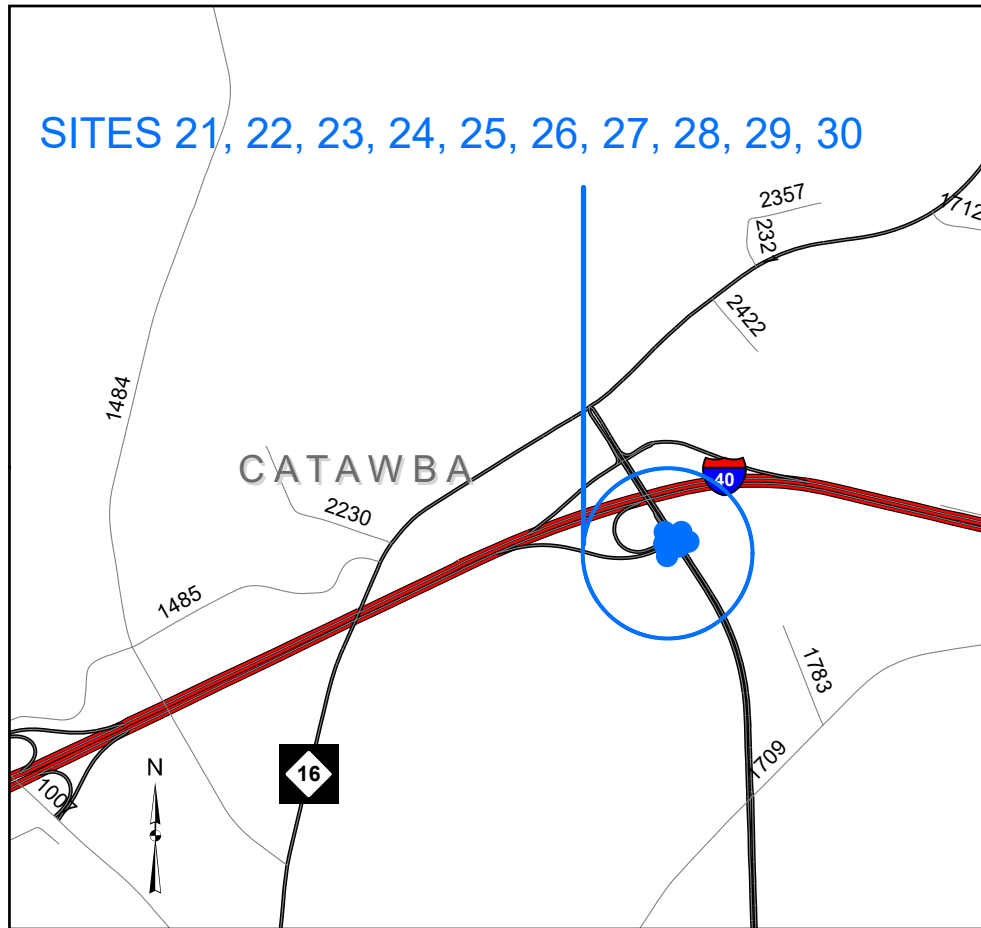


NC 10 @ 1 ST. AVE. NW

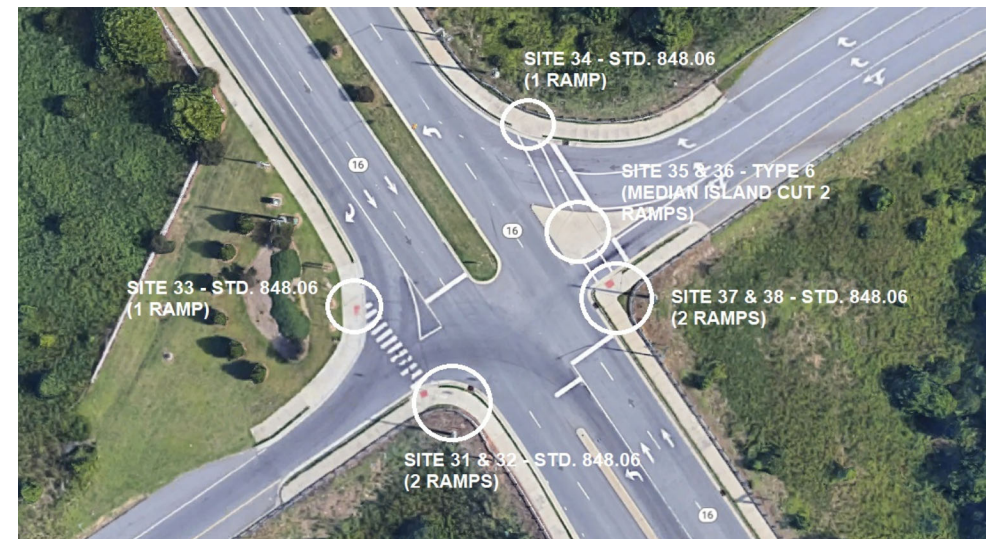


NC 16 @ HUNSUCKER DR. NE





NC 16 @ I40 RAMP

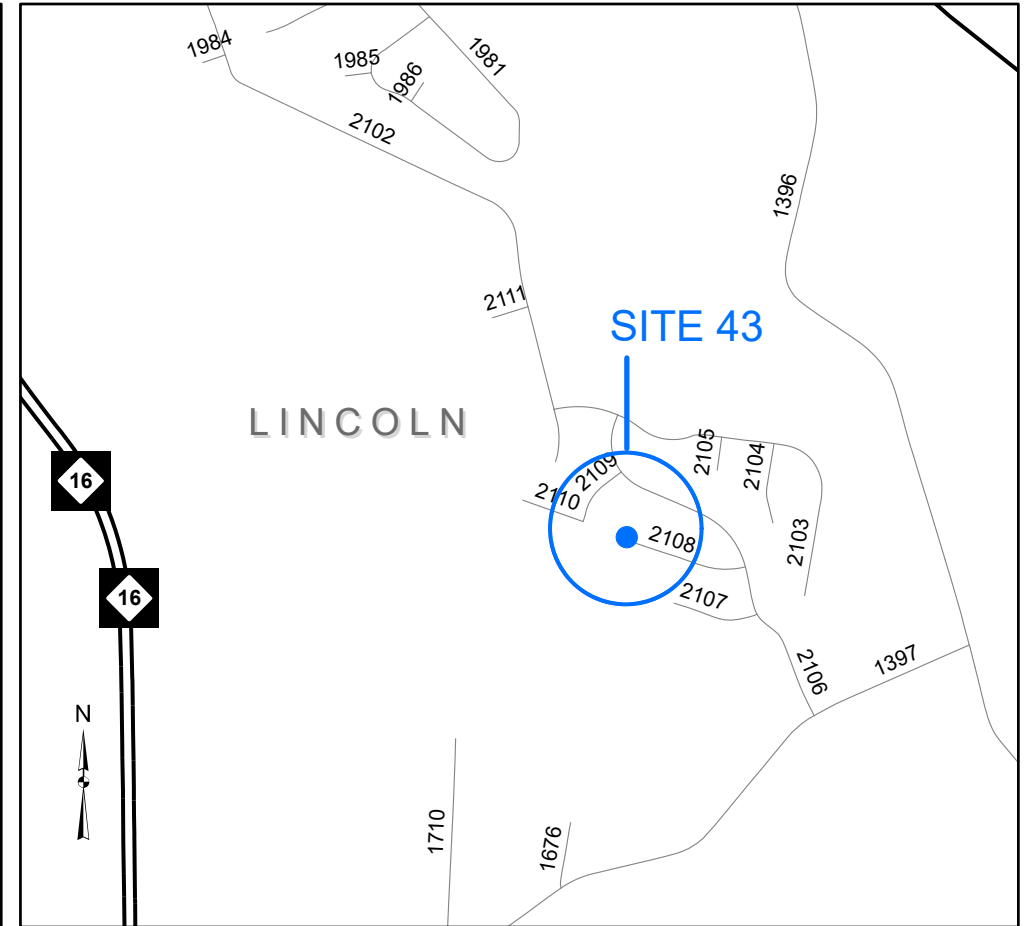
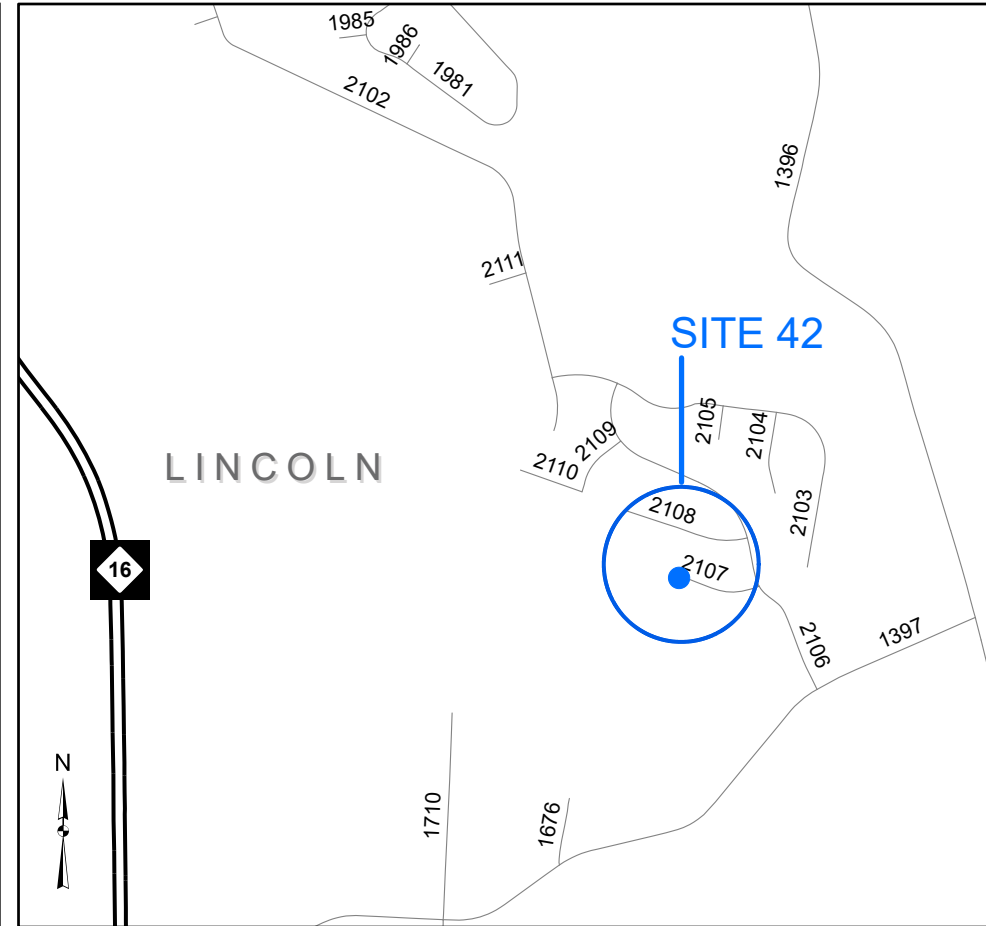
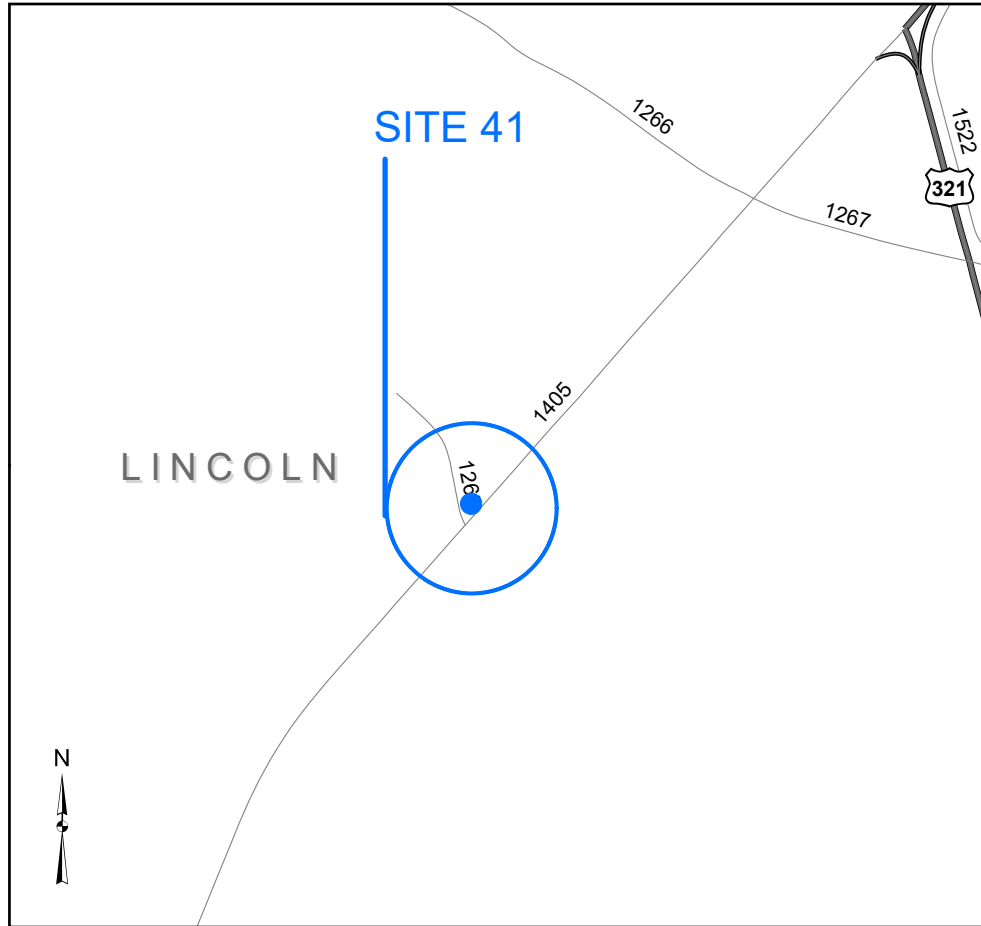


NC 16 @ I40 RAMP



NC 16 @ NC 16 BUS (1ST AVE. N)



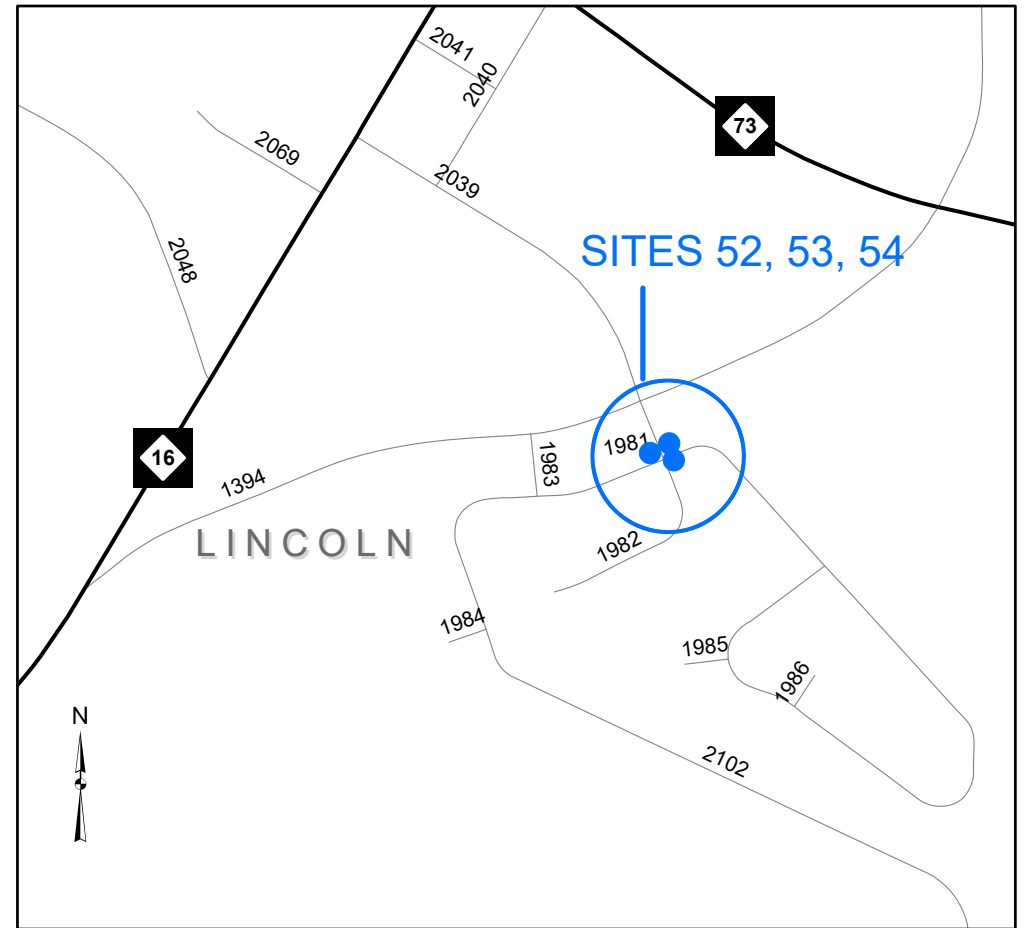
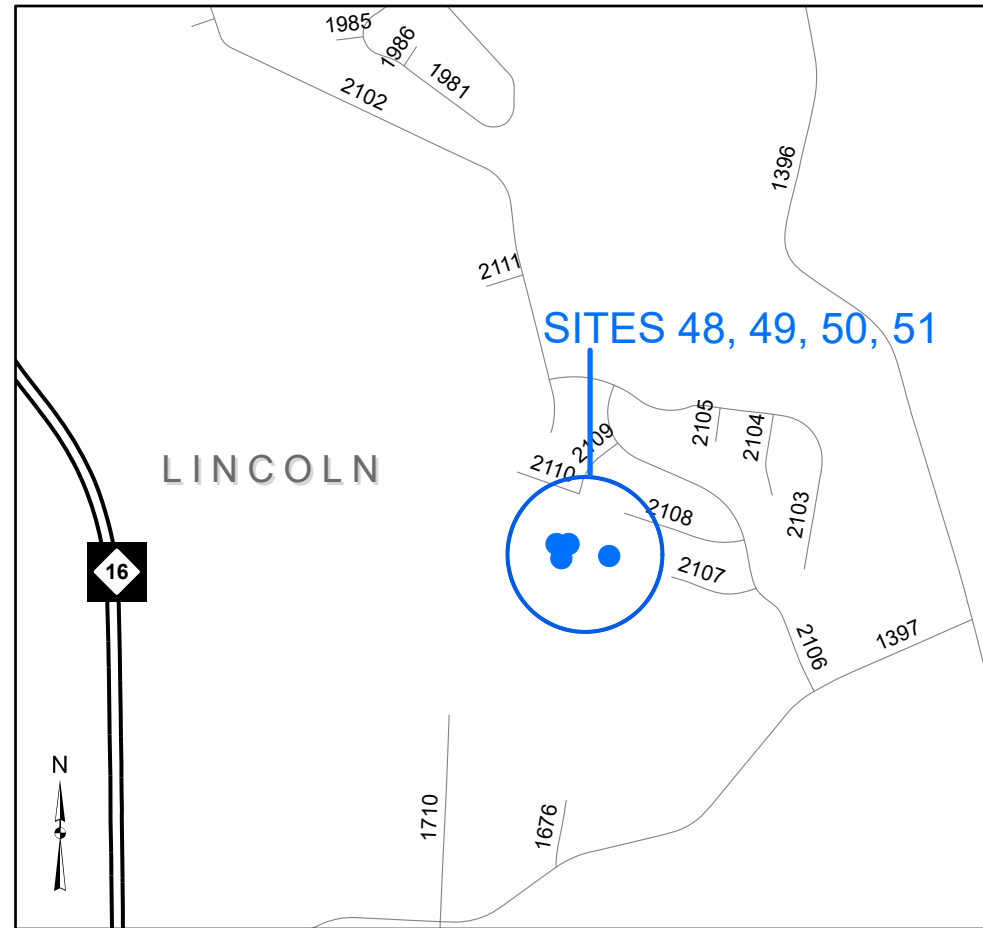
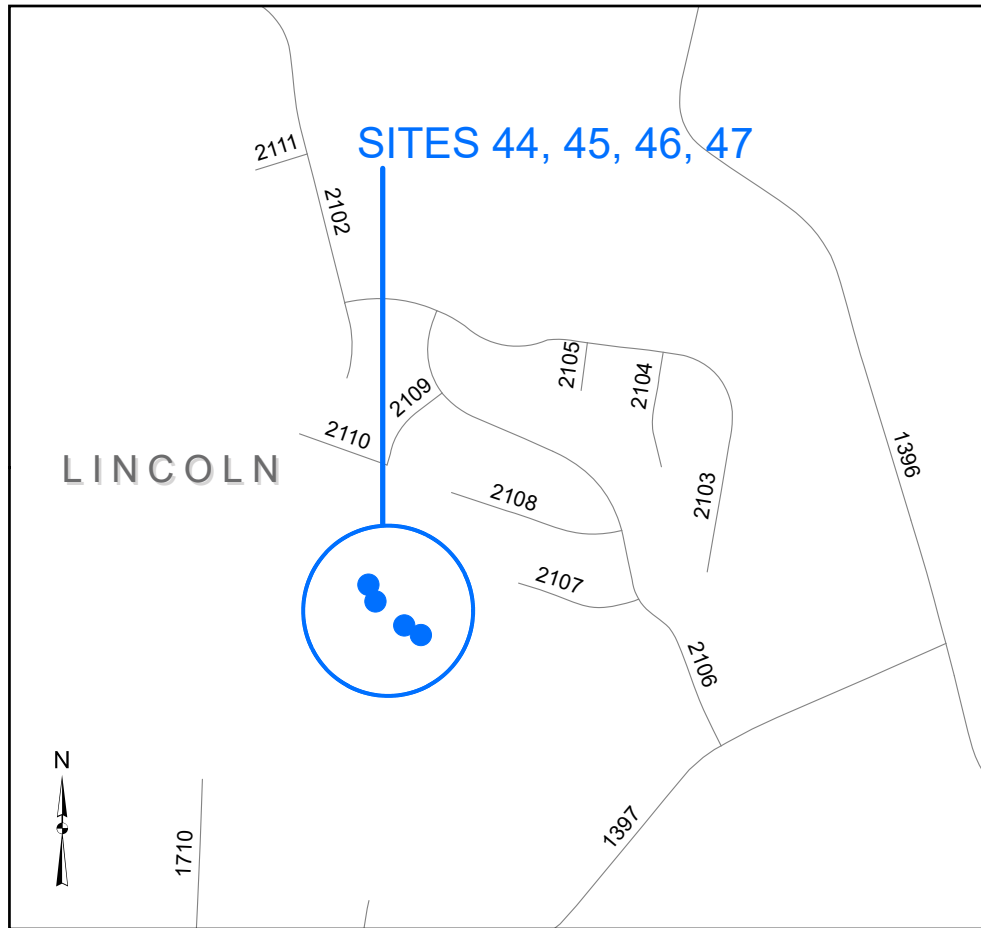


SR 1405 (N. ASPEN ST.) @ SR 1265 (WALT BURGESS RD.)

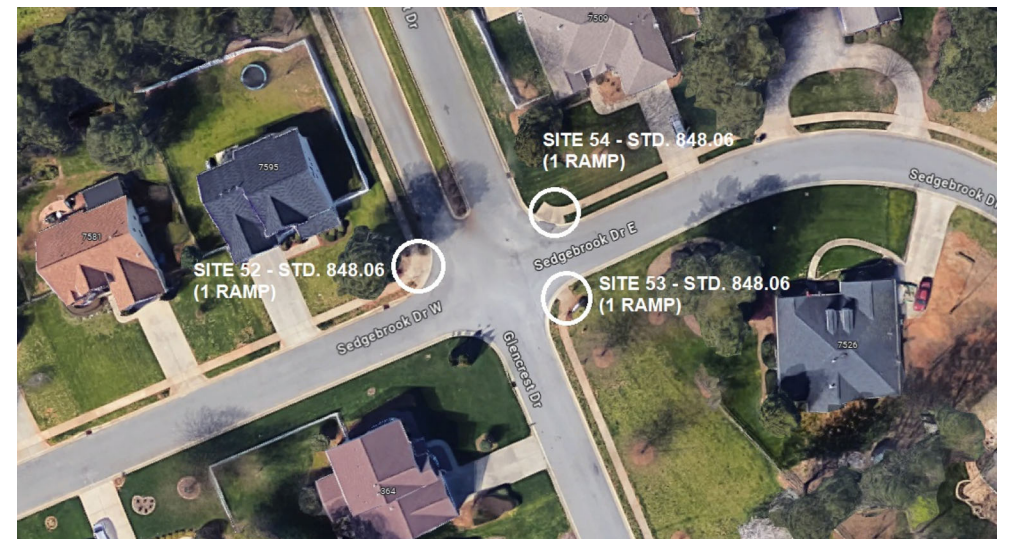
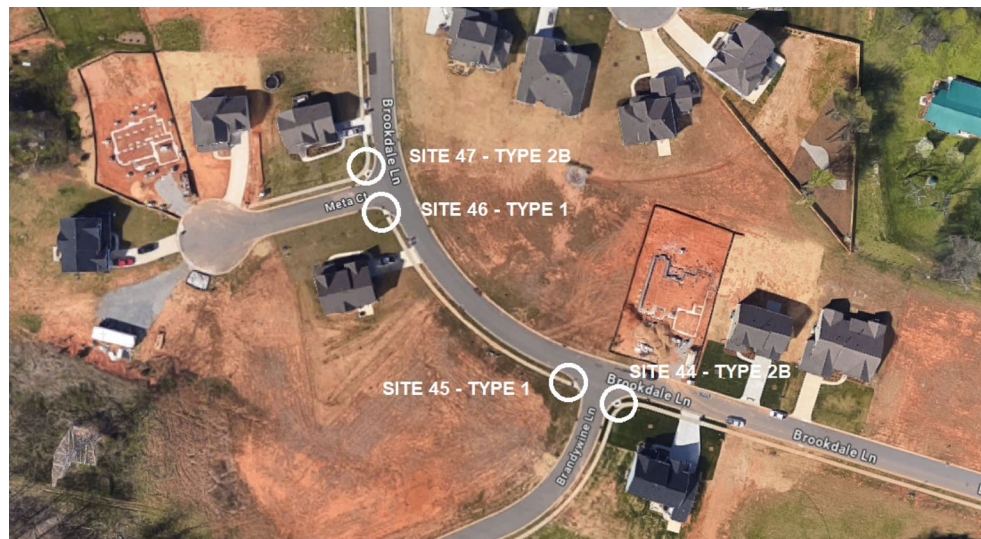
SR 2107 (TURKEY TROT DR.) @ CUL-DE-SAC

SR 2108 (COMMON OAK DR.) @ CUL-DE-SAC





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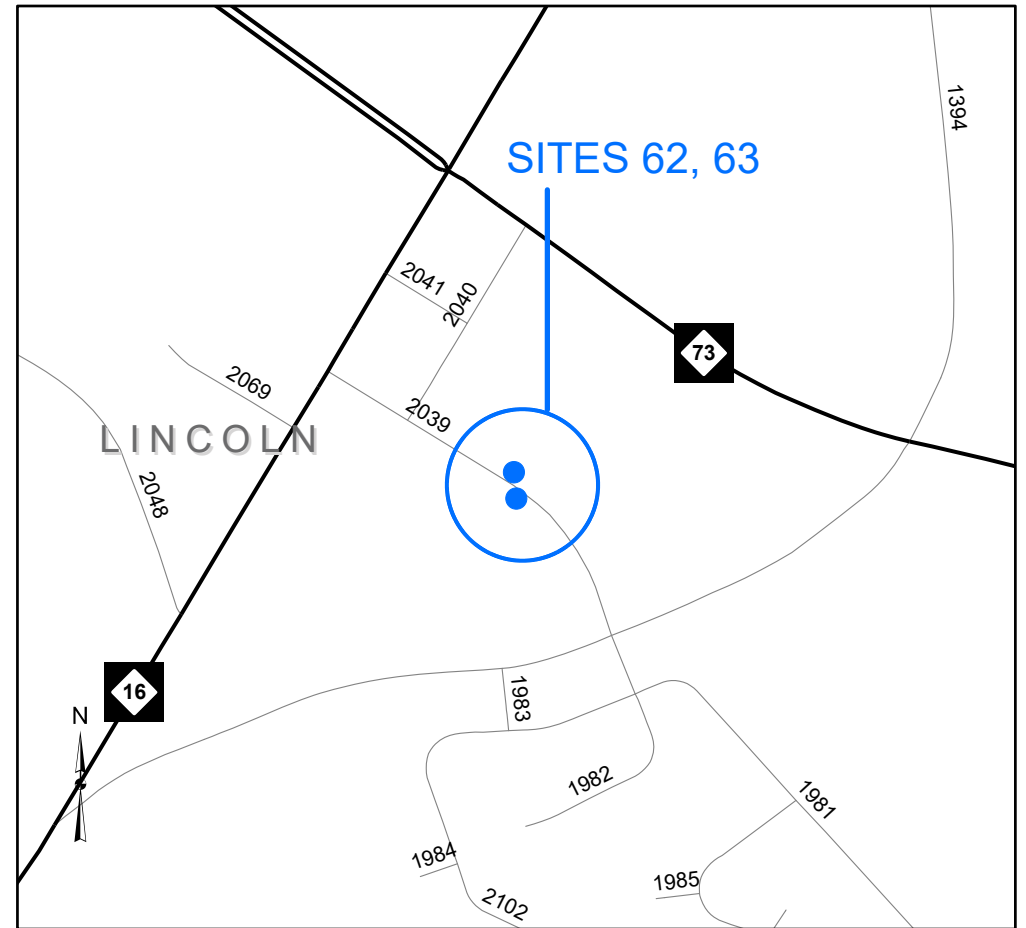
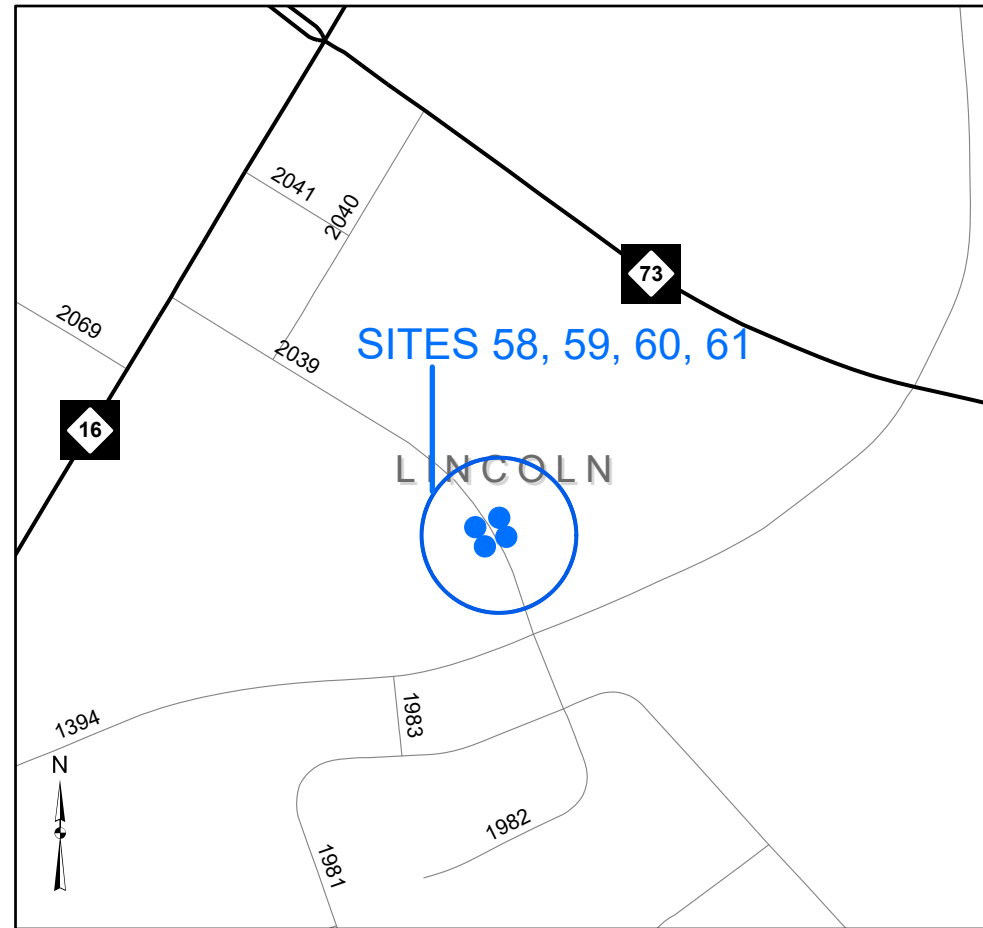
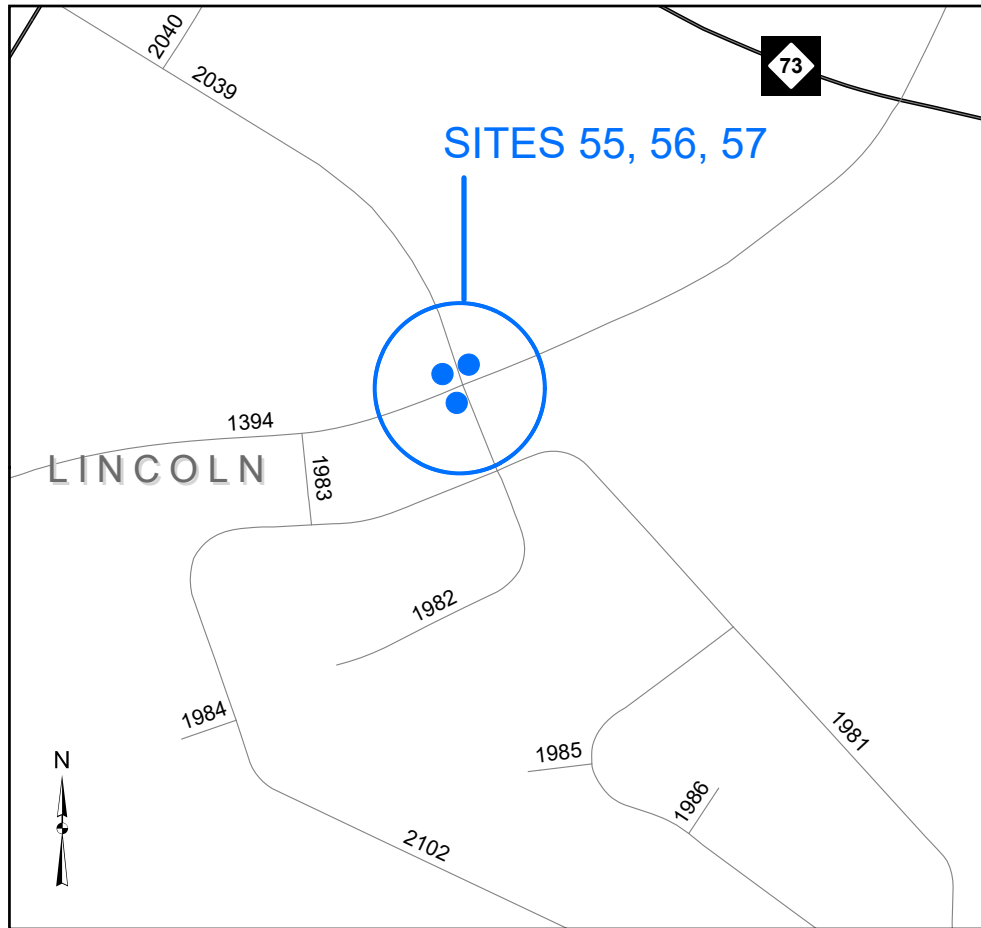


SR 2109 (BROOKDALE LN) @ SR 3066 (BRANDYWINE LN)  
& SR 3065 (META CT)

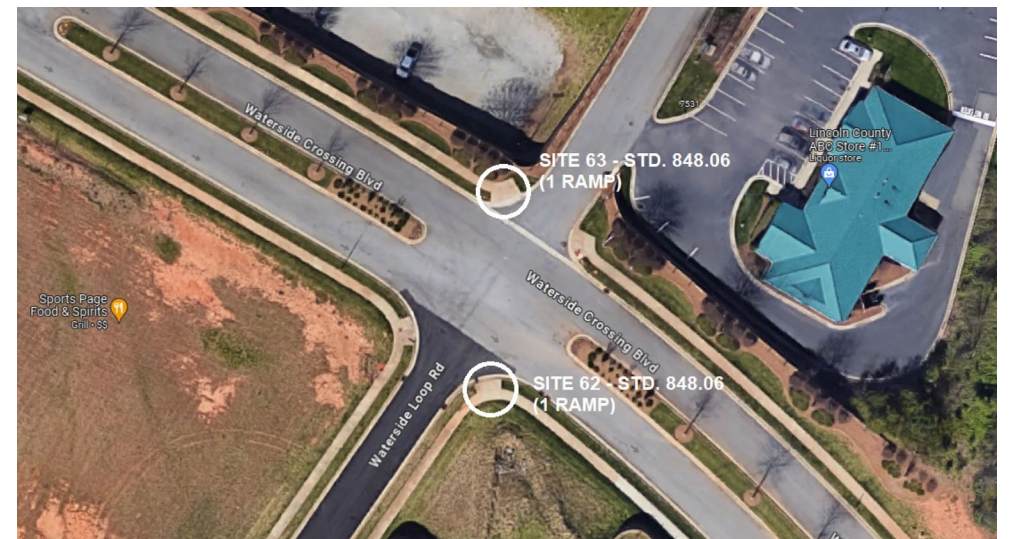
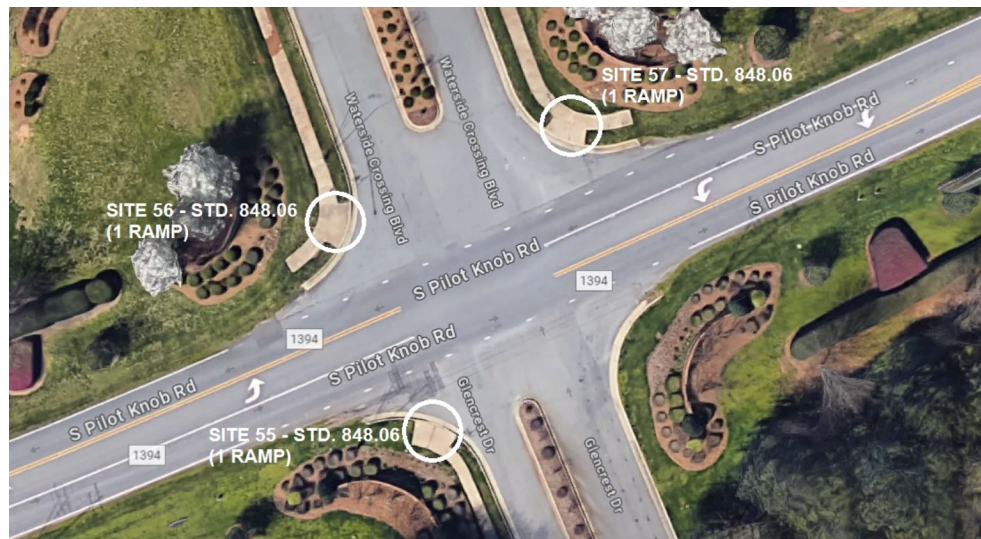
SR 2109 (BROOKDALE LN) @ SR 2106 (STABLEFORD LN)/  
(VANGUARD) CUL-DE-SAC

SR 2102 (SEDEBROOK DR E) @ SR 1982 (GLENCREST DR)





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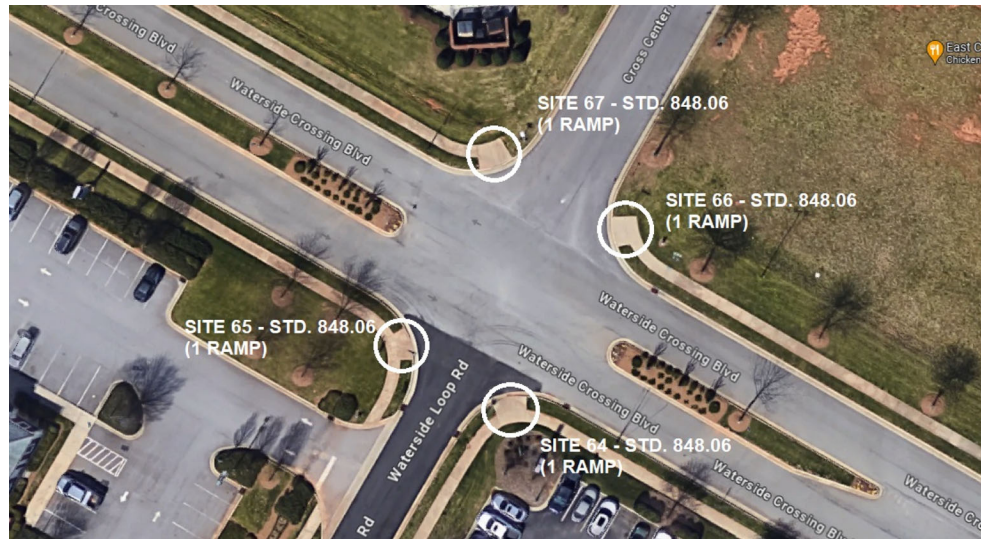
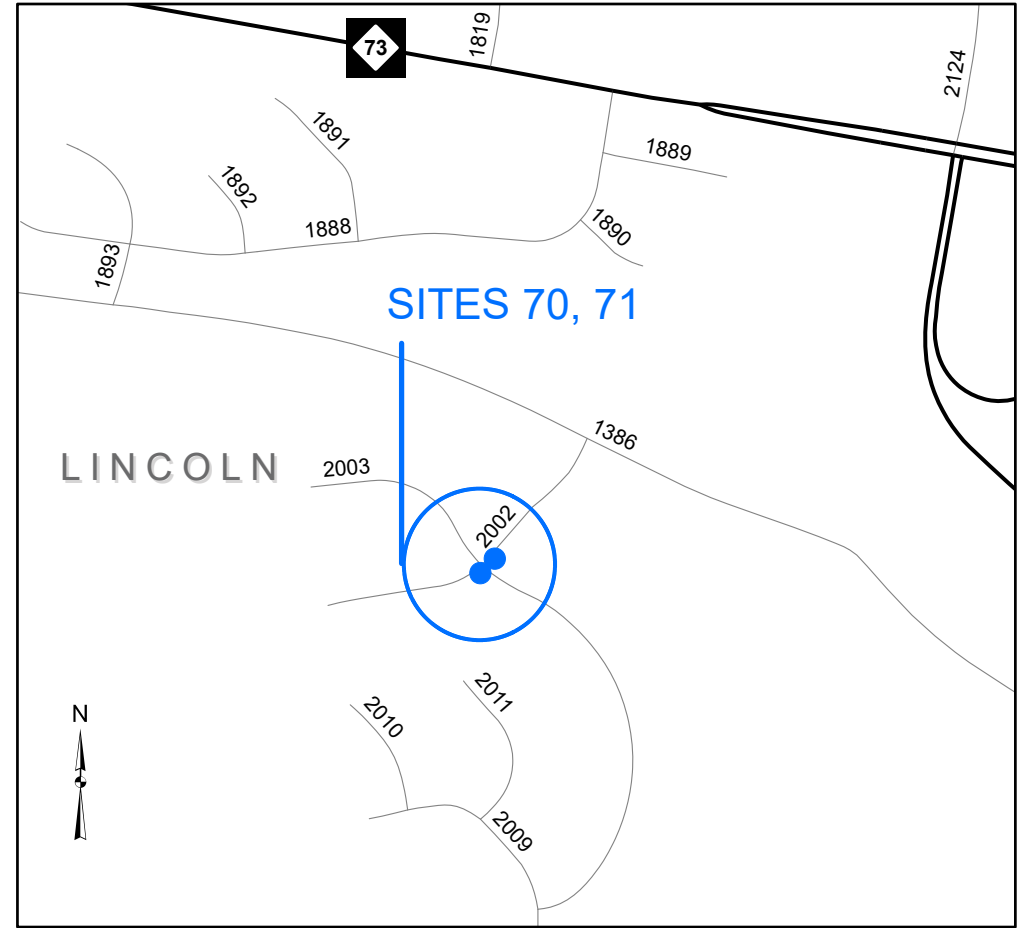
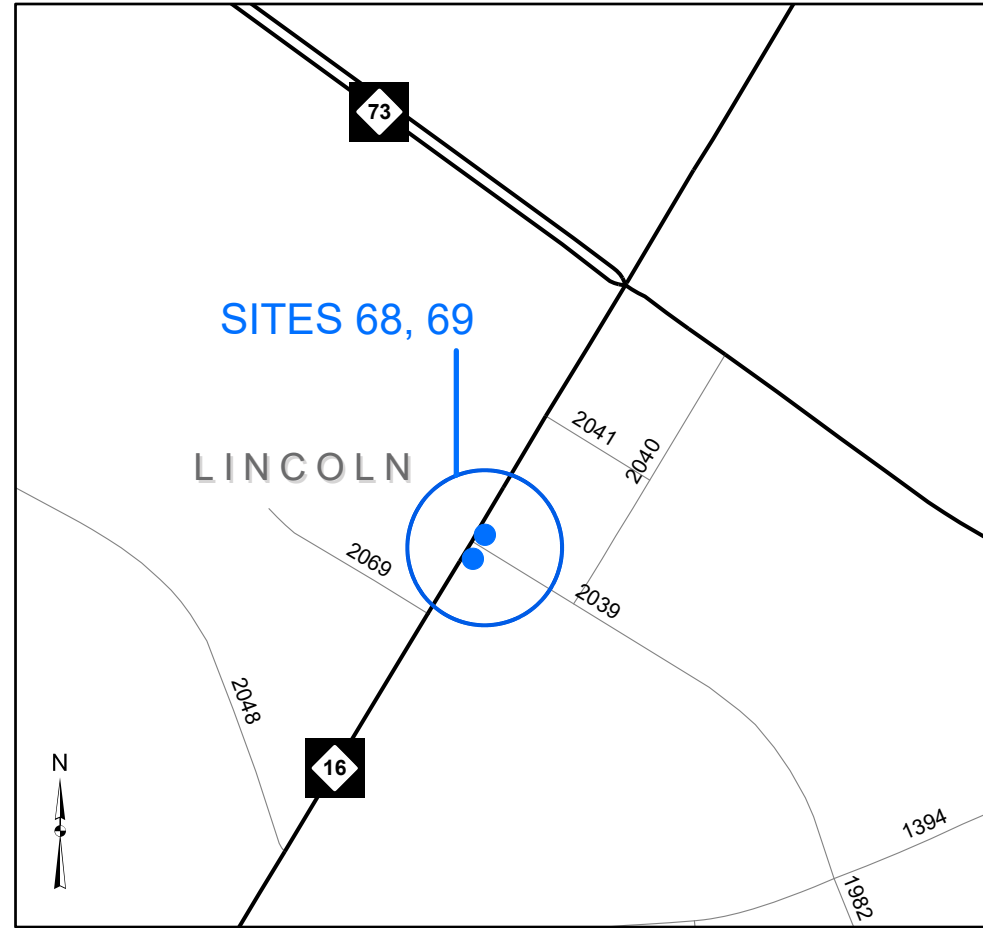
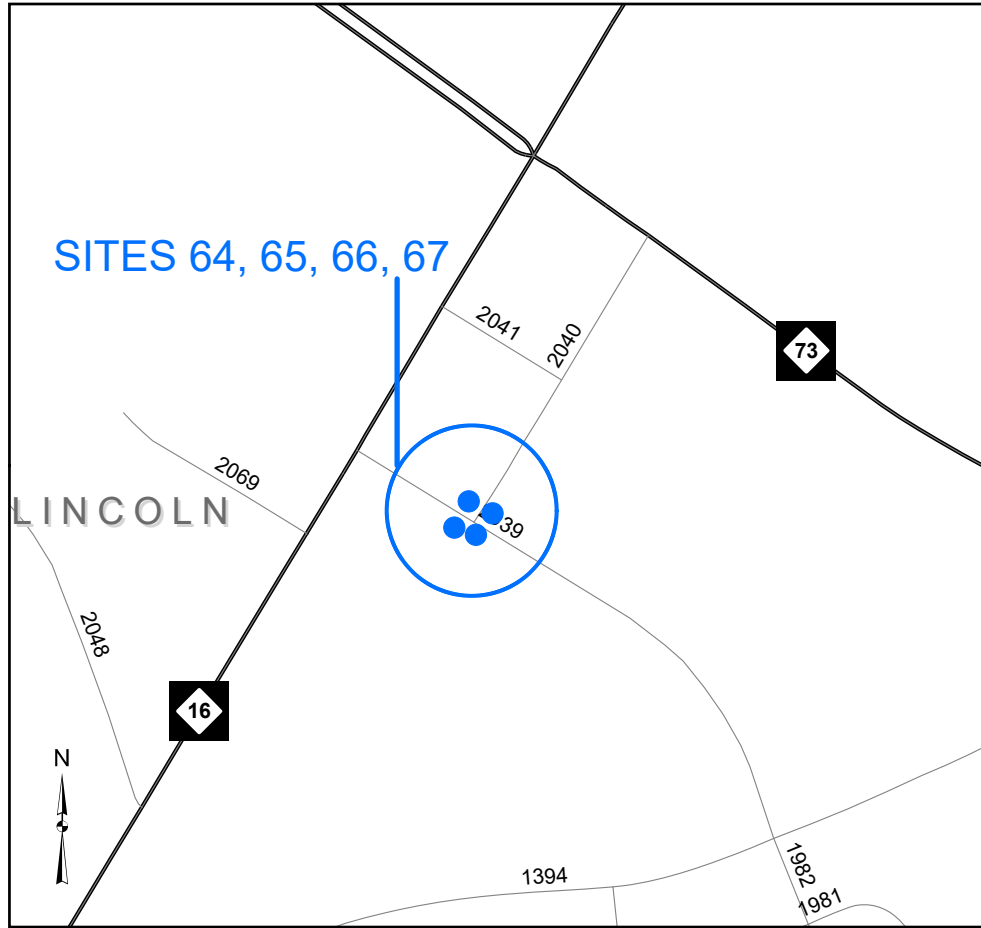


SR 1394 (S PILOT KNOB RD) @ SR 2309 (WATERSIDE CROSSING BLVD.)

SR 2039 (WATERSIDE CROSSING BLVD) @ PILOT COVE CT/BLUFF POINT LN

SR 2039 (WATERSIDE CROSSING BLVD) @ SR 2167 (WATERSIDE LOOP)

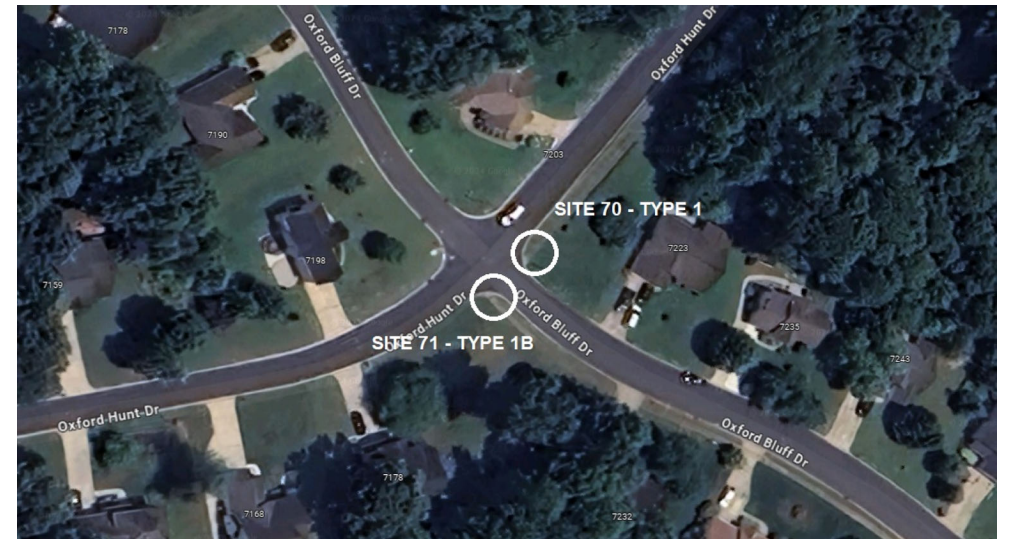




SR 2309 (WATERSIDE CROSSING BLVD) @ SR 2167 (WATERSIDE LOOP)/SR 2040 (CROSS CENTER RD)

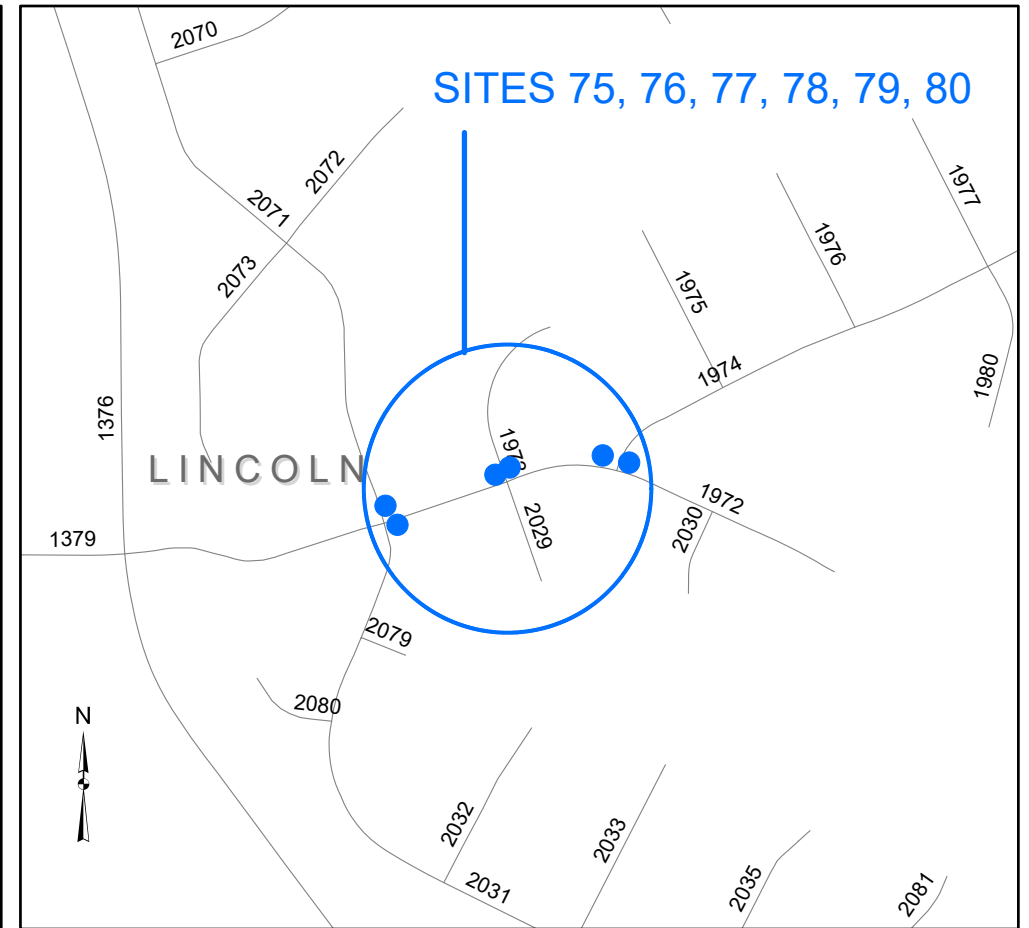
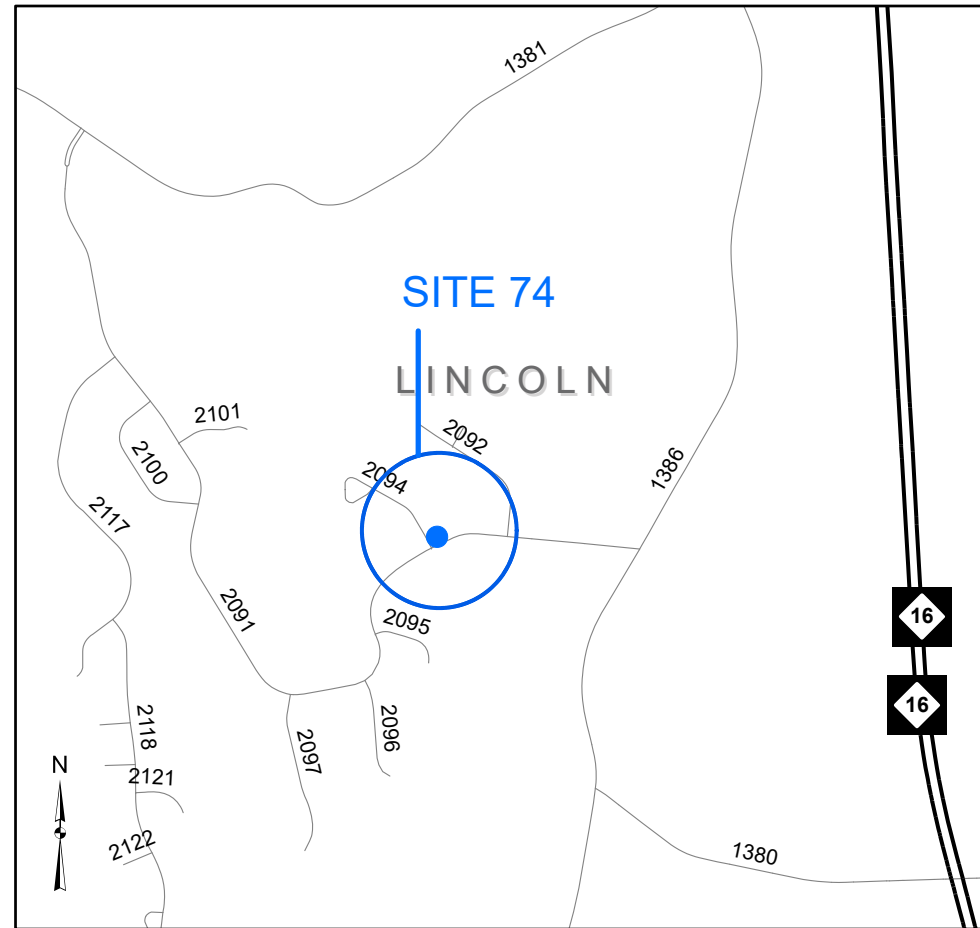
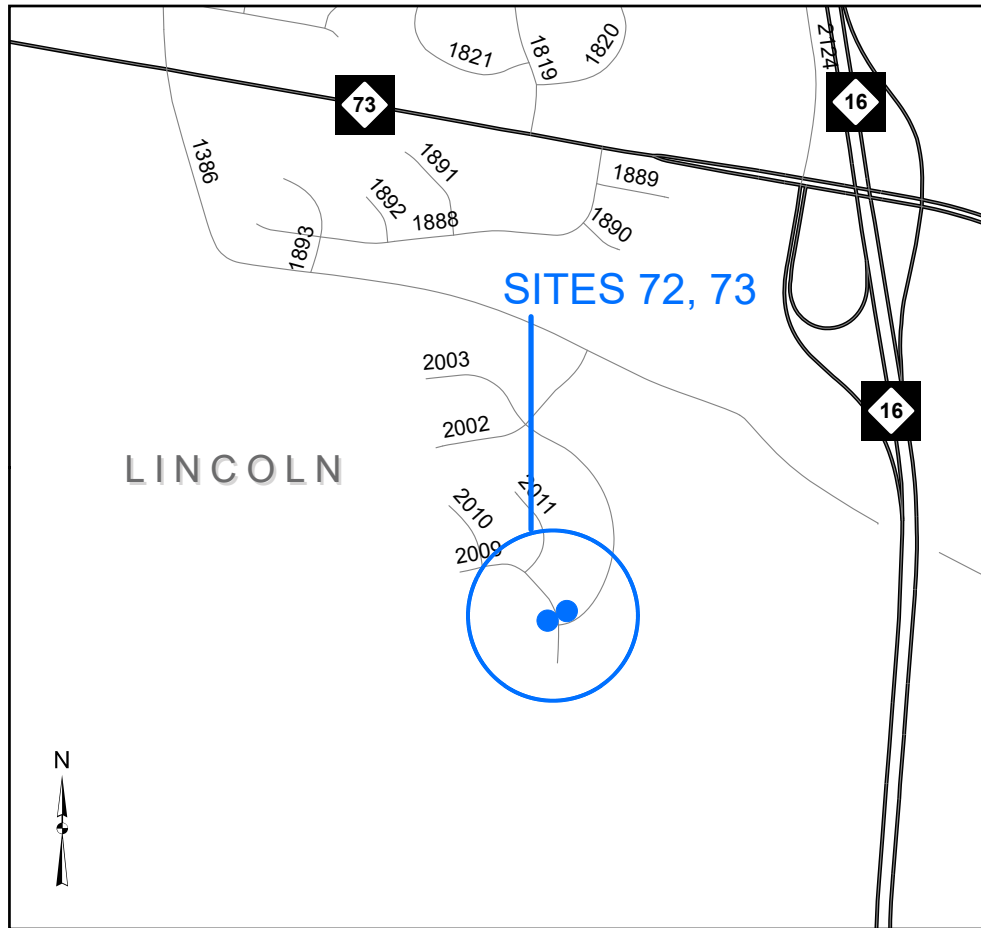


NC 16 @ SR 2039 (WATERSIDE CROSSING BLVD)

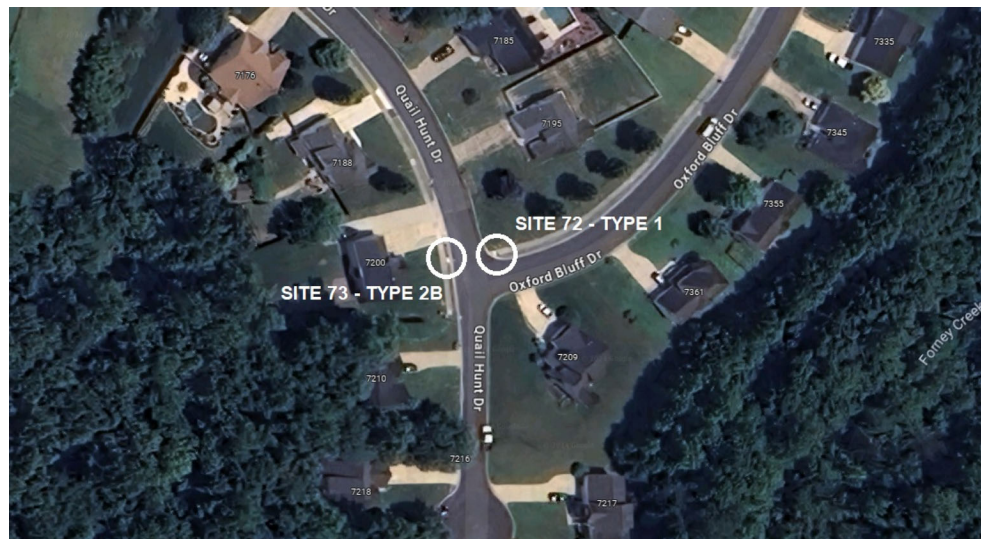


SR 2003 (OXFORD BLUFF DR) @ SR 2009 (QUAIL HUNT DR)





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SR 2003 (Oxford Bluff Dr) @ SR 2002 (Oxford Hunt Dr)



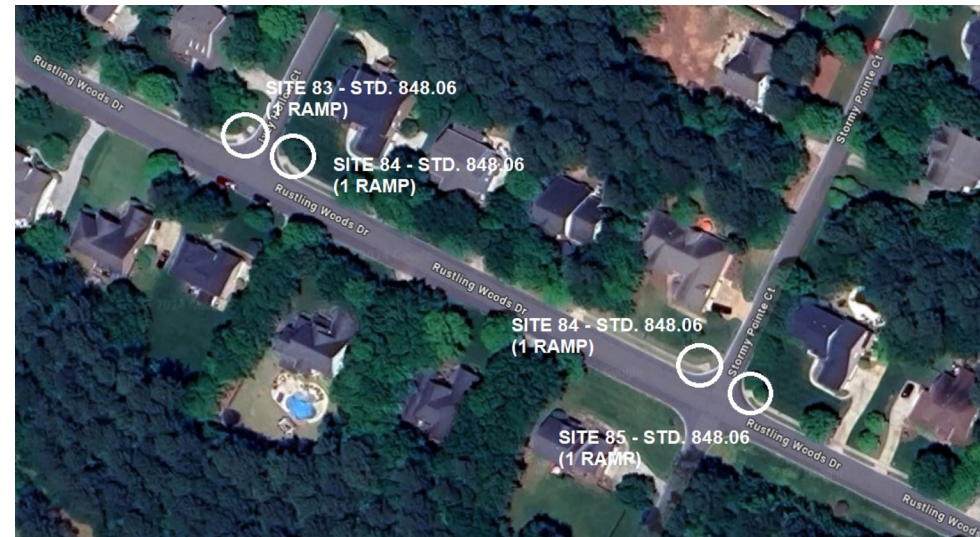
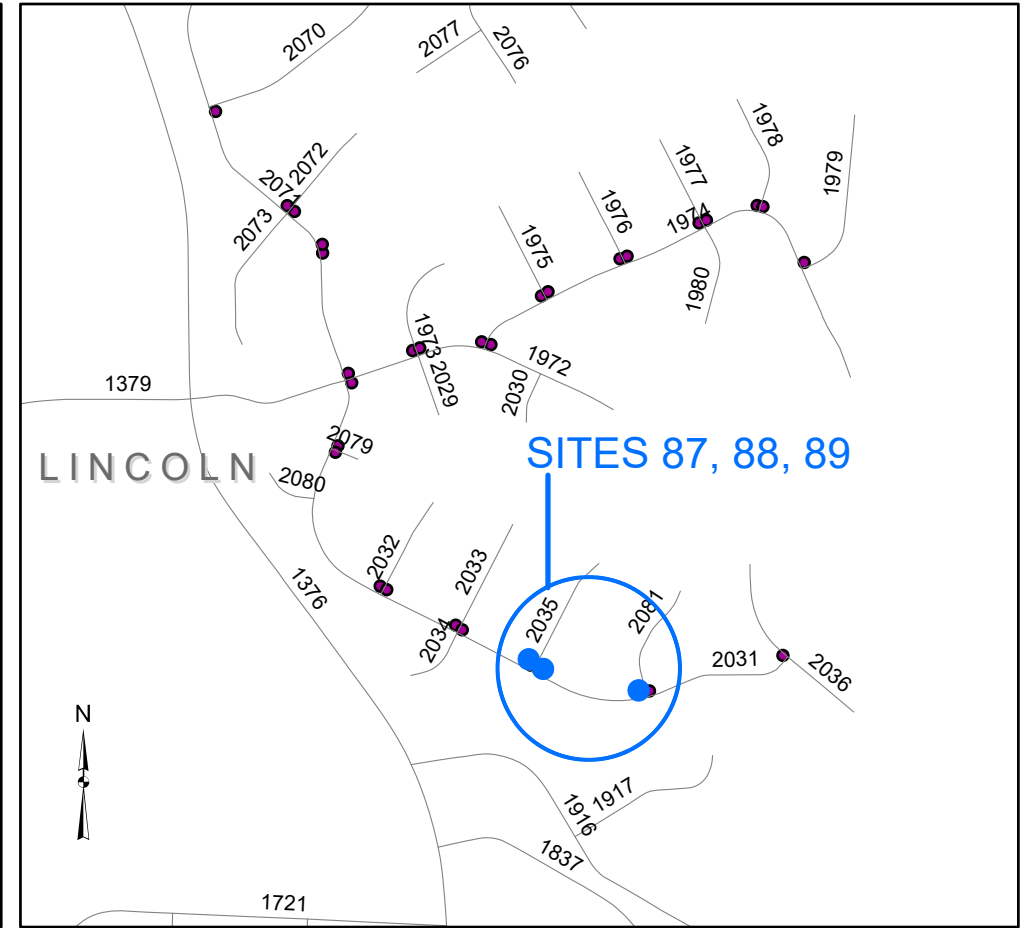
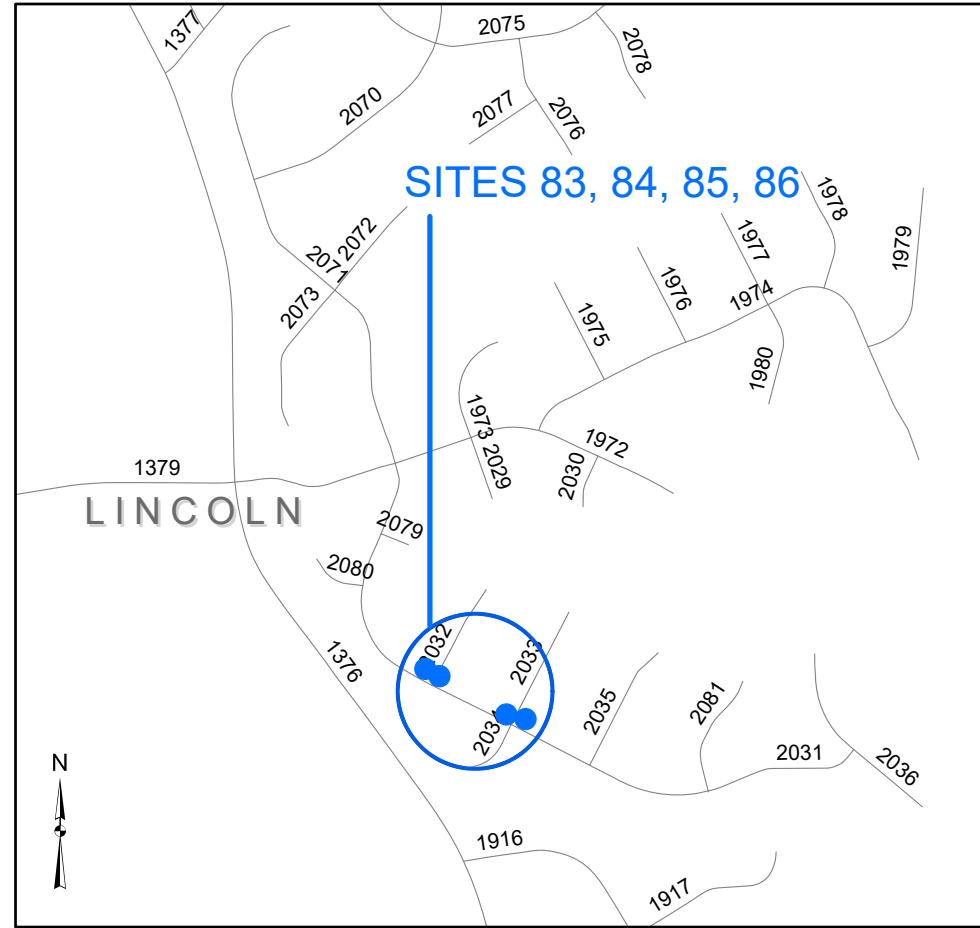
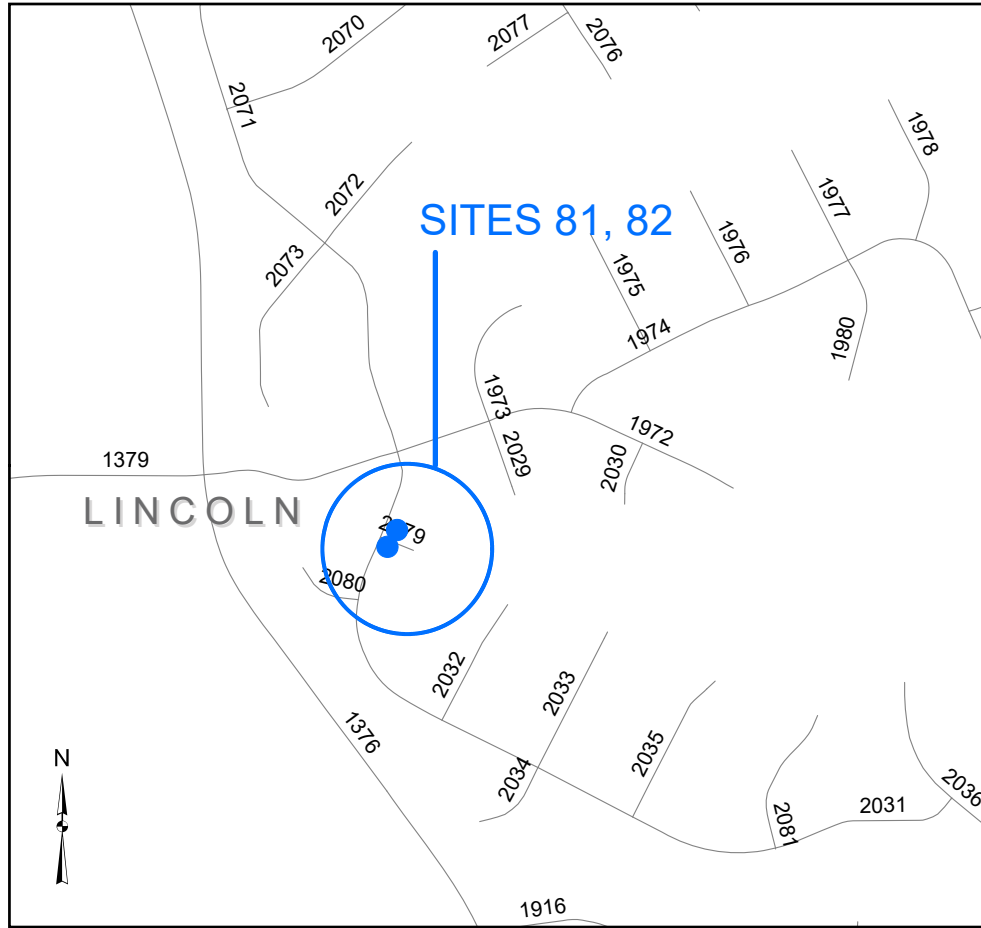
SR 2091 (Verdict Ridge Dr) @ SR 2094 (Sahalee Dr)



SR 1972 (Silver Jade Dr) @ SR 2071 (Crepe Ridge Dr)  
& SR 1973 (Augusta Ridge Ct) & SR 1974 (Buena Vista Dr)





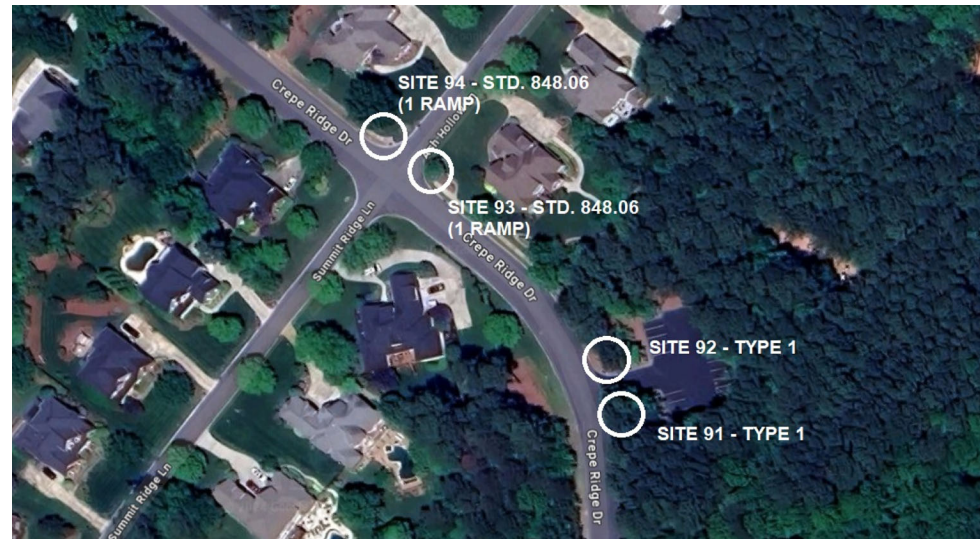
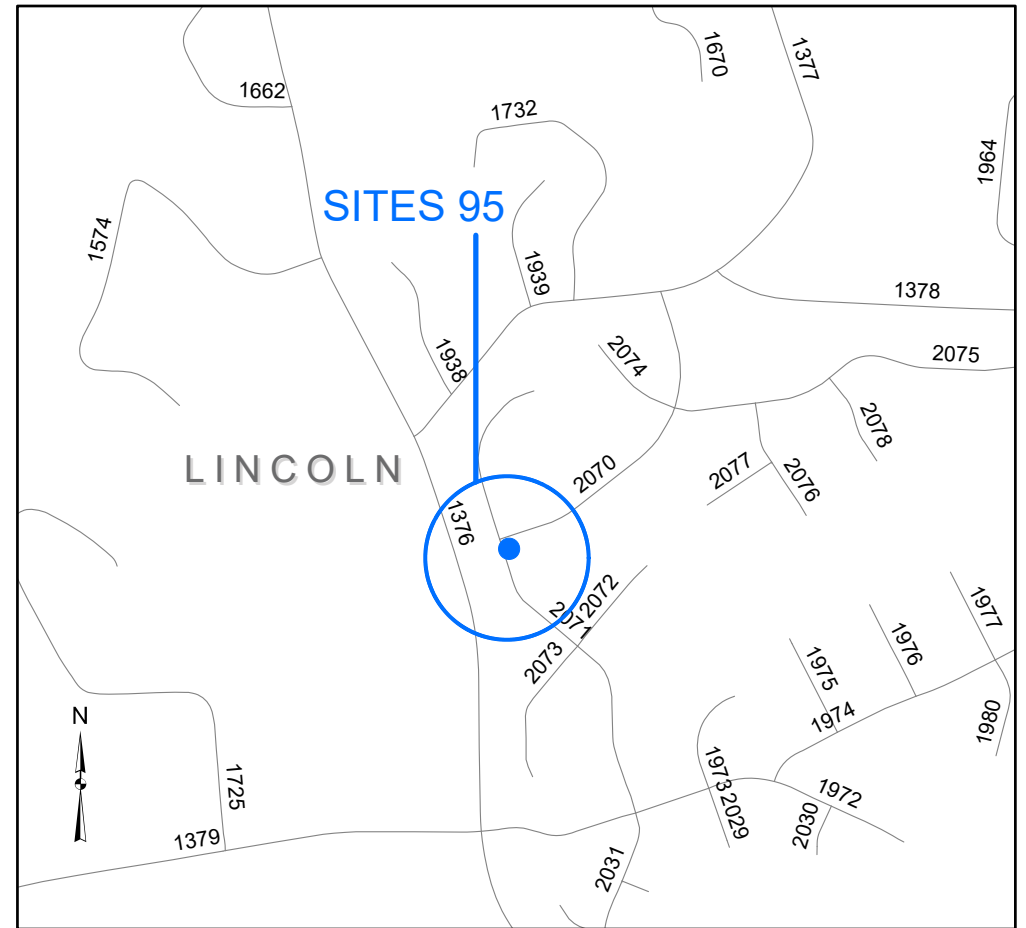
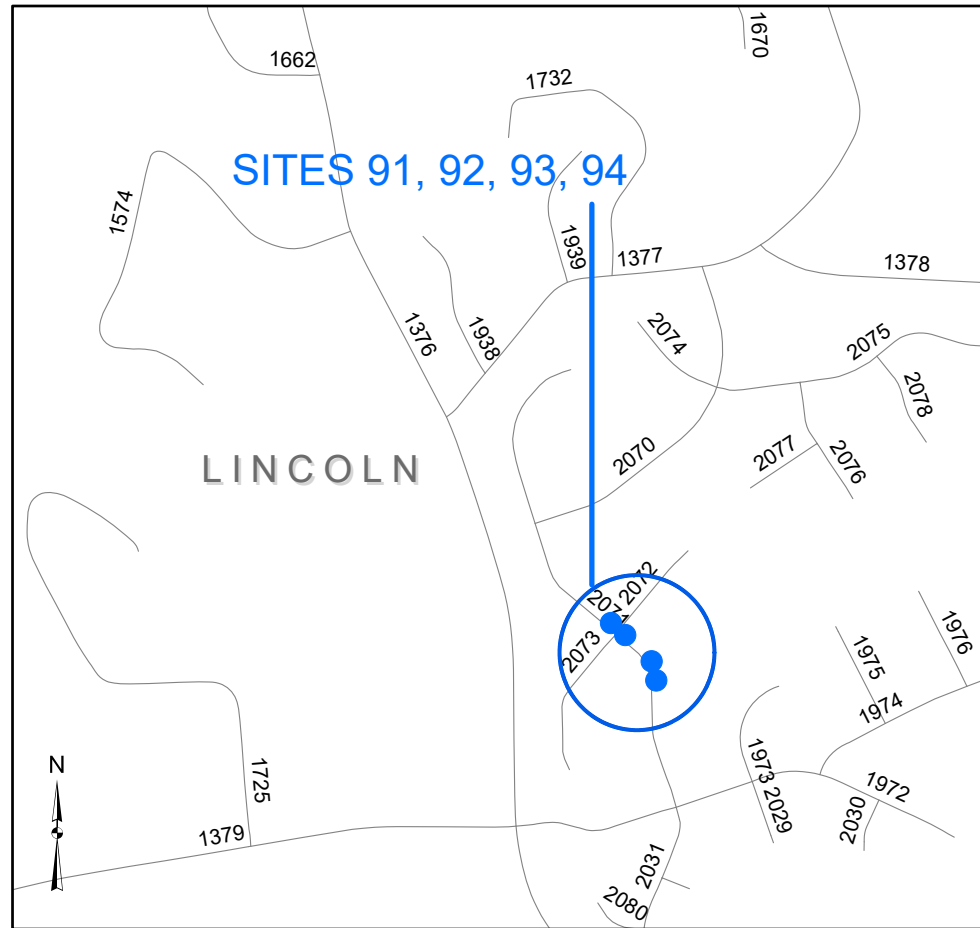
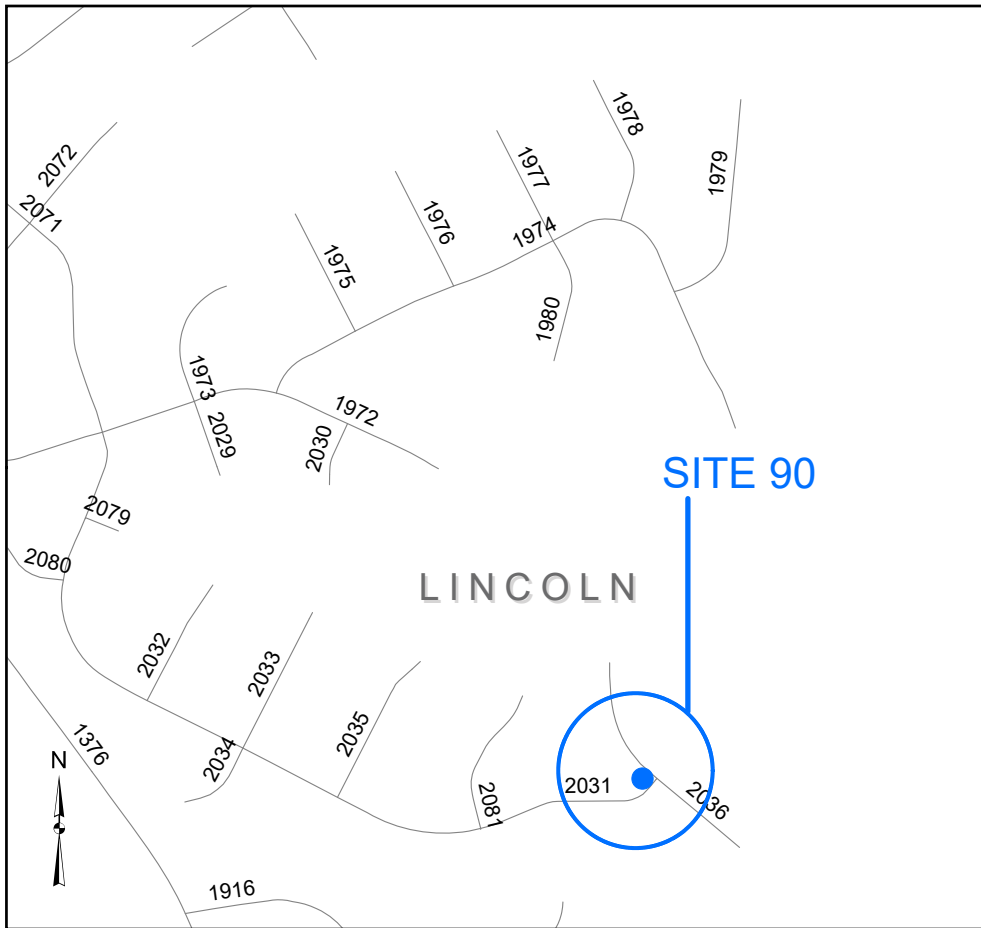


SR 2031 (Rustling Woods Dr) @ SR 2079 (Shelter Cove Ln)

SR 2031 (Rustling Woods Dr) @ SR 2032 (Ivey Hollow Ct) & SR 2033 (Stormy Pointe Ct)

SR 2031 (Rustling Woods Dr) @ SR 2035 (Silver Eagle Cove) & SR 2081 ((Lake Spring Ct)



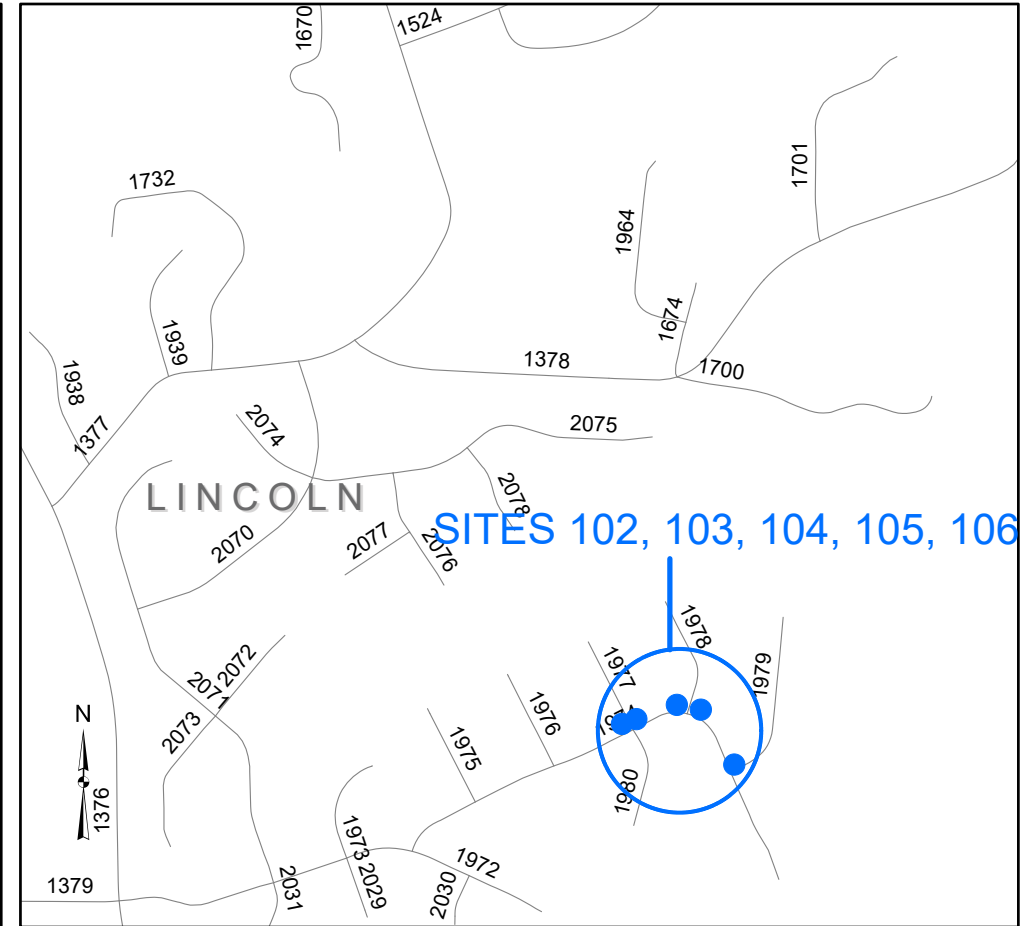
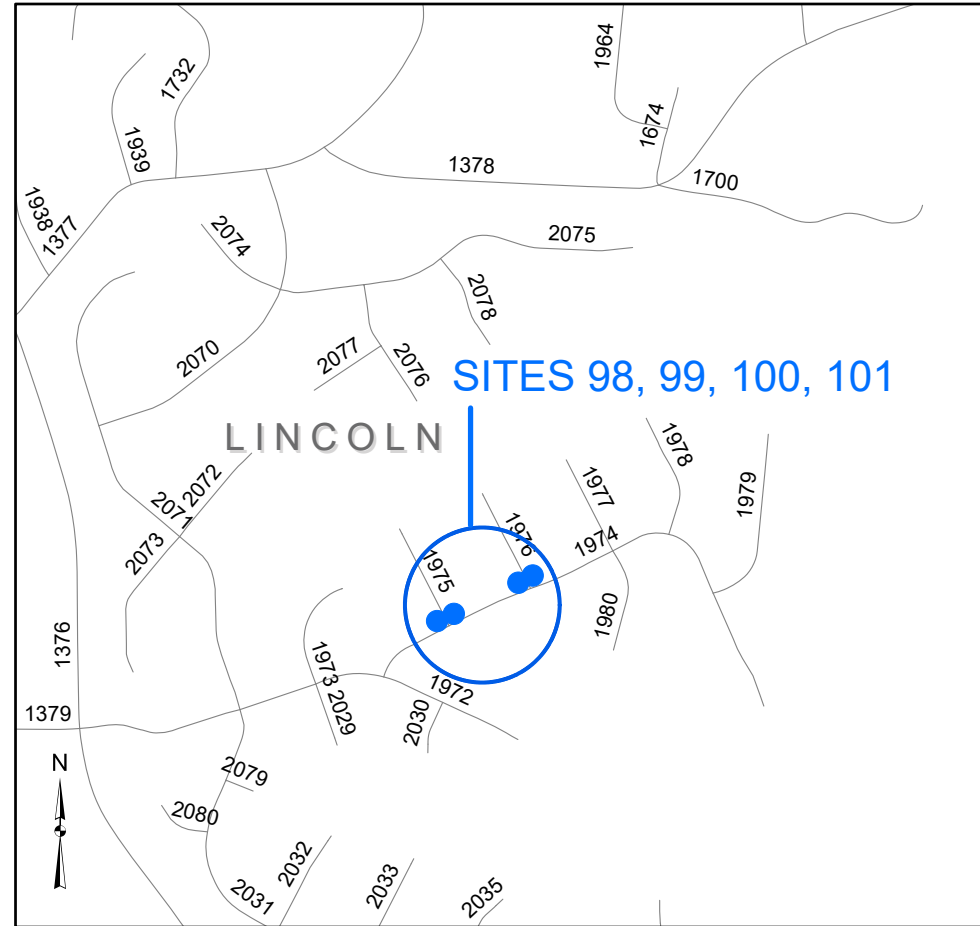
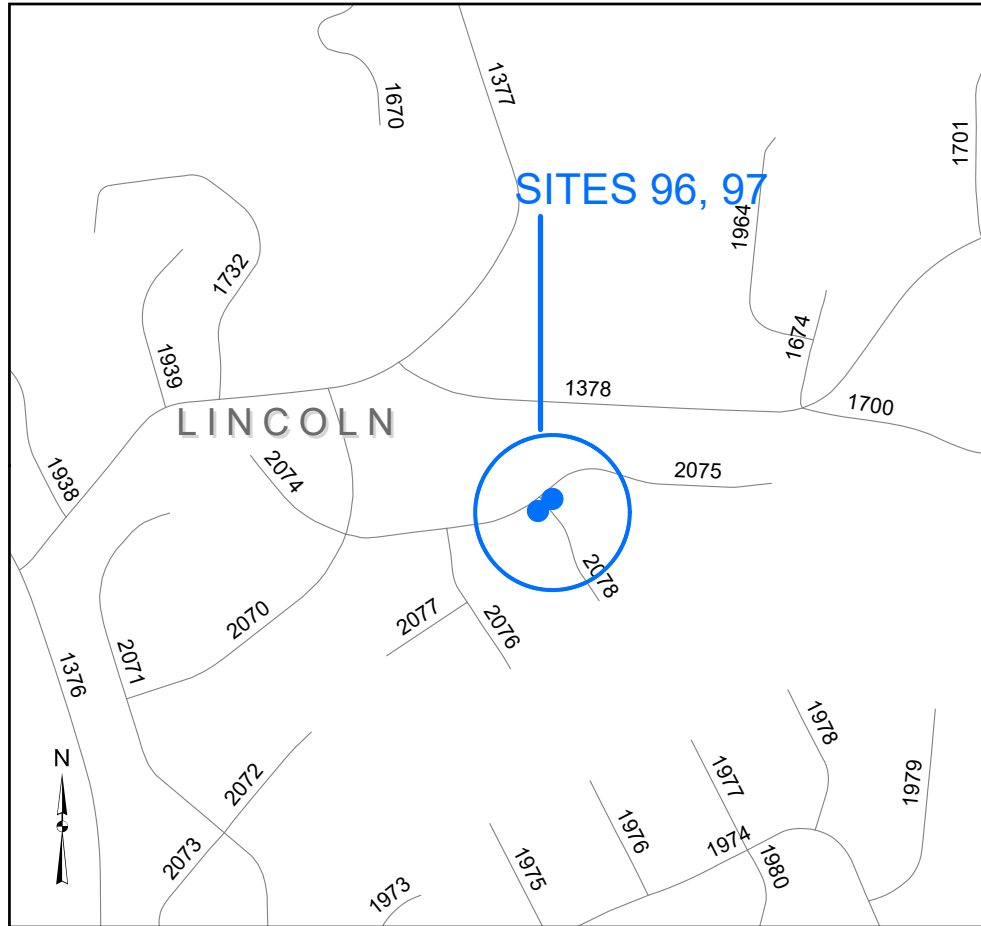


SR 2031 (Rustling Woods Dr) @ SR 2036 (Channel Point Ln)

SR 2071 (Crepe Ridge Dr) @ Parking Area @ SR 2072 (Ash Hollow Ln)

SR 2071 (Crepe Ridge Dr) @ SR 2070 (Sailview Dr)





SR 2075 (Chapel Creek Dr) @ SR 2078 (Artesian Cove Ct)



SR 1974 (Buena Vista Dr) @ SR 1975 (Morning Dove Ct)  
& SR 1976 (Osprey Run Ct)



SR 1974 (Buena Vista Dr) @ SR 1977 (Hawkes Bay Ct)  
& SR 1978 (Eagle Pointe Ct) & SR 1979 (Sierra View Dr)

