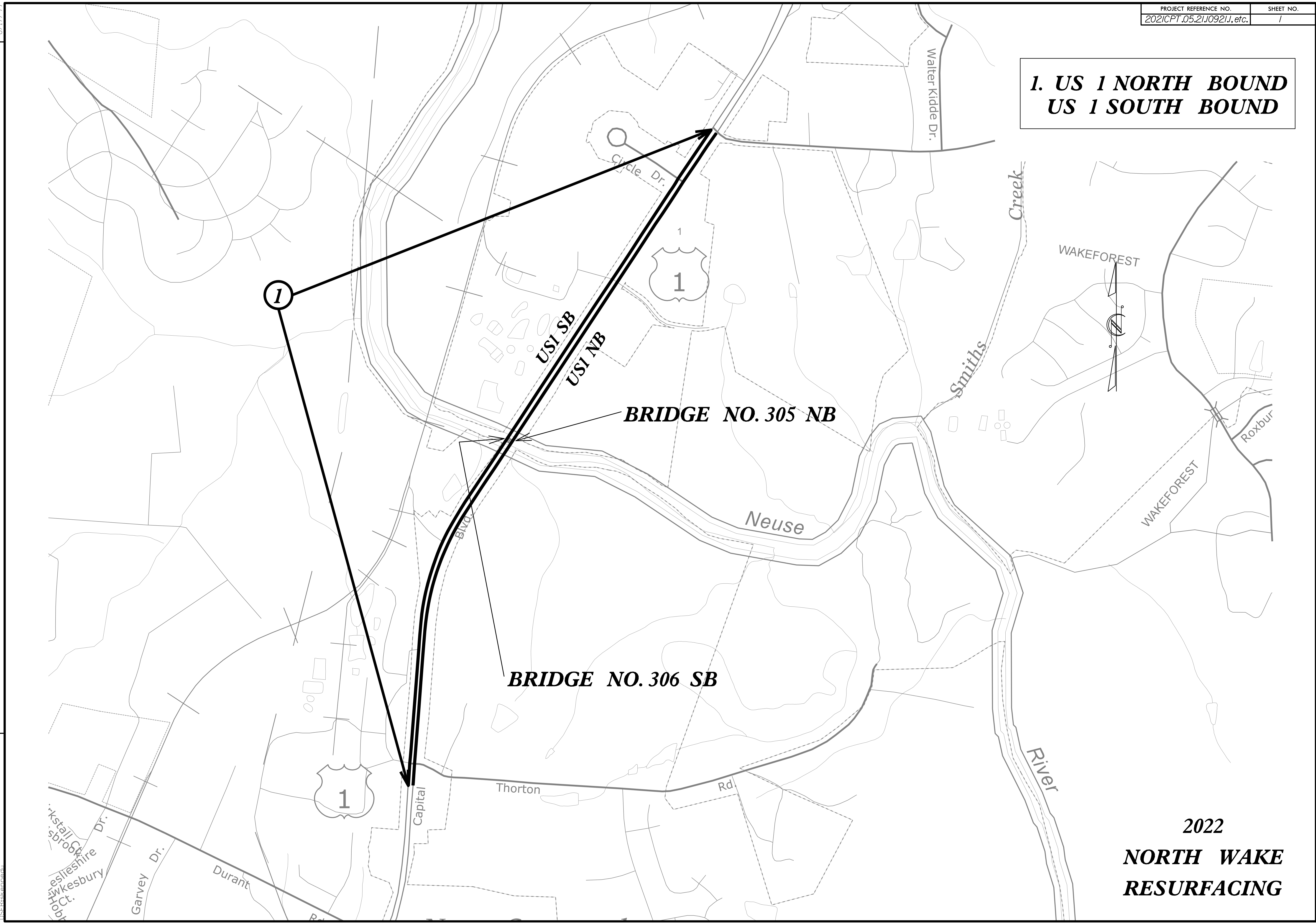


**1. US 1 NORTH BOUND
US 1 SOUTH BOUND**



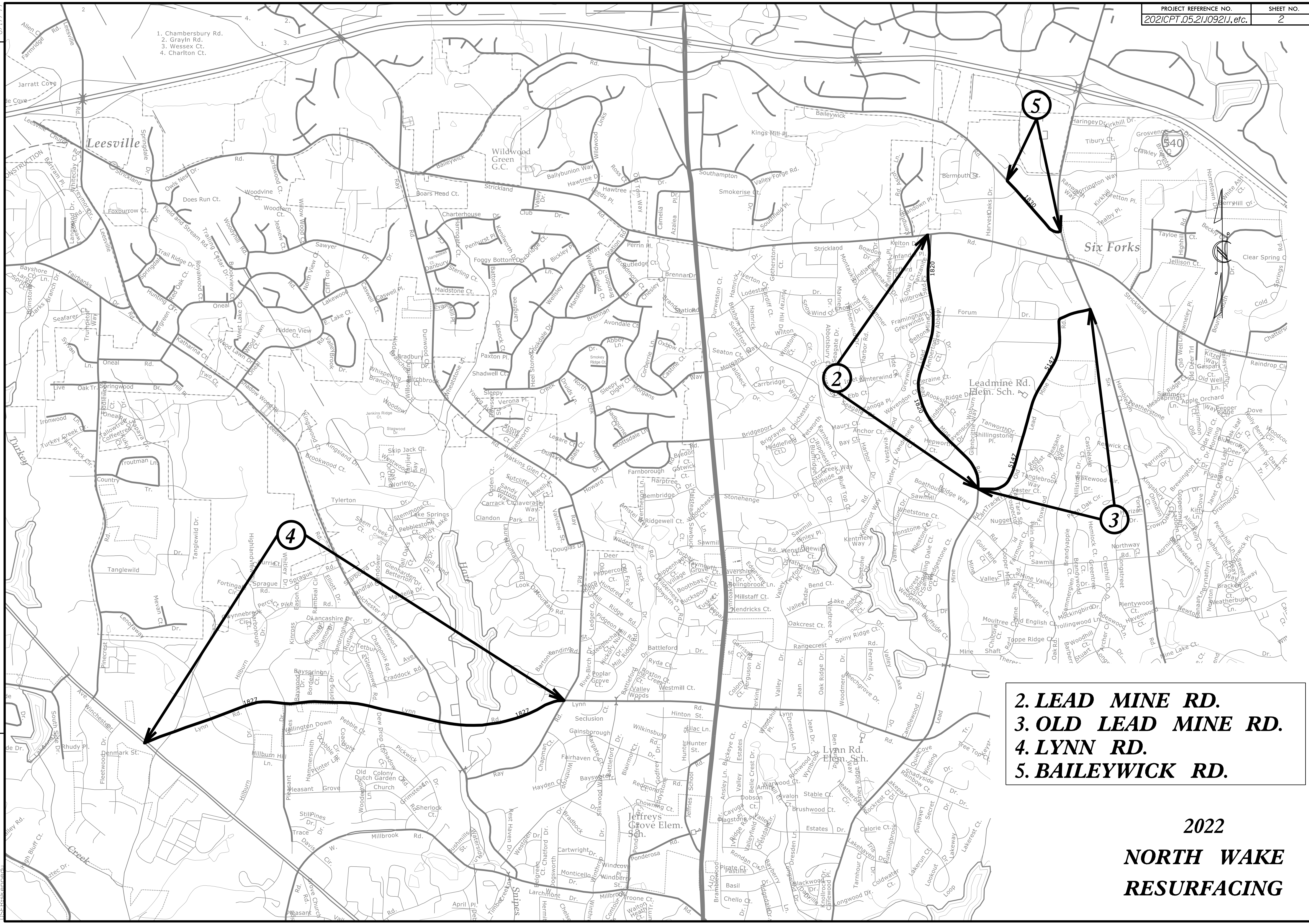
**2022
NORTH WAKE
RESURFACING**

REVISIONS

3/22/2021
I:\Projects\2021\20210521\11_etc_TSH_01.dgn
8/17/99

1. Chambersbury Rd.
2. GrayIn Rd.
3. Wessex Ct.
4. Charlton Ct.

REVISIONS

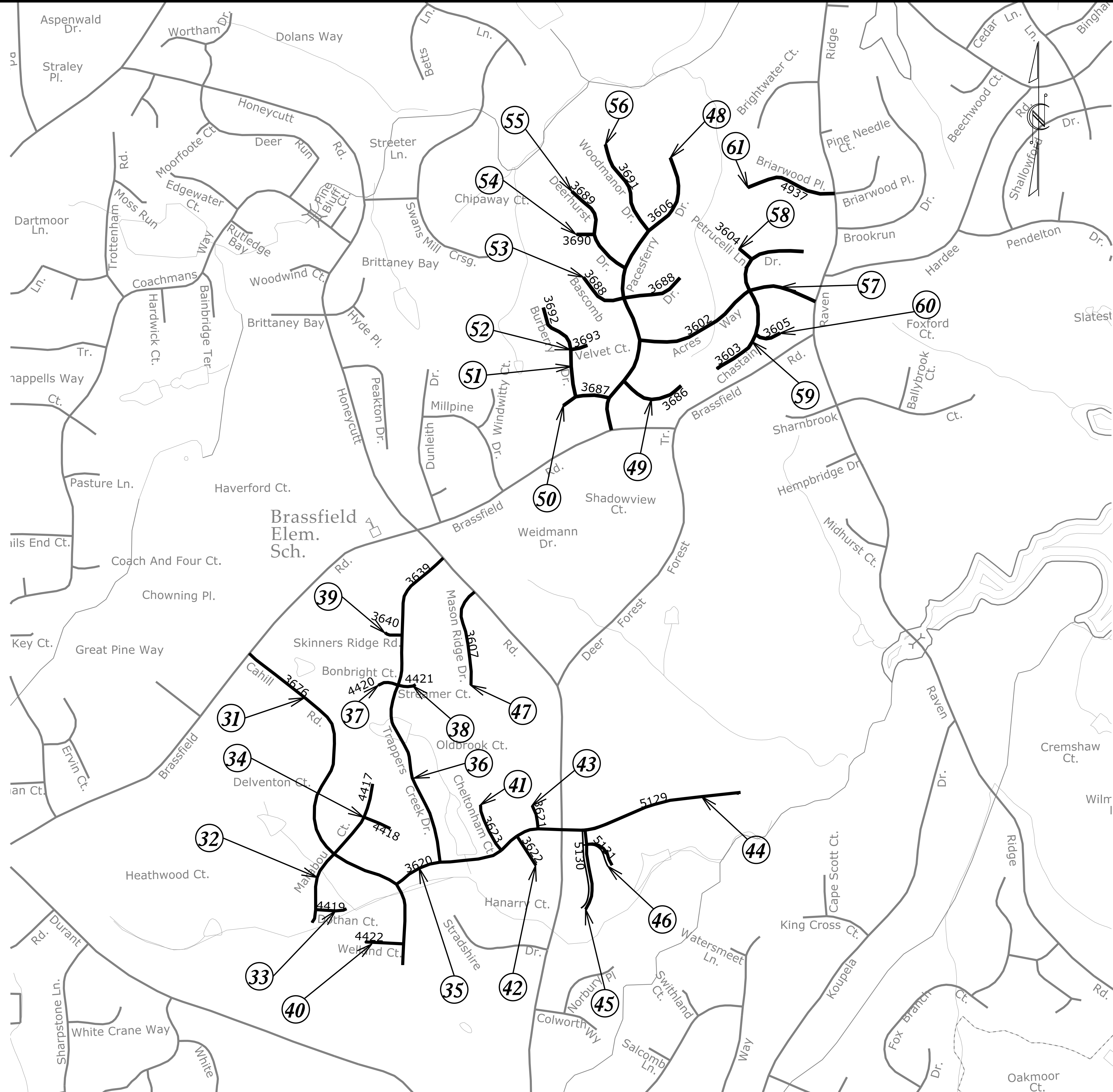


2. LEAD MINE RD.
3. OLD LEAD MINE RD.
4. LYNN RD.
5. BAILEYWICK RD.

**2022
NORTH WAKE
RESURFACING**

3/15/2021 P:\05.04.109211, etc. TSH 02 .dgn

REVISIONS

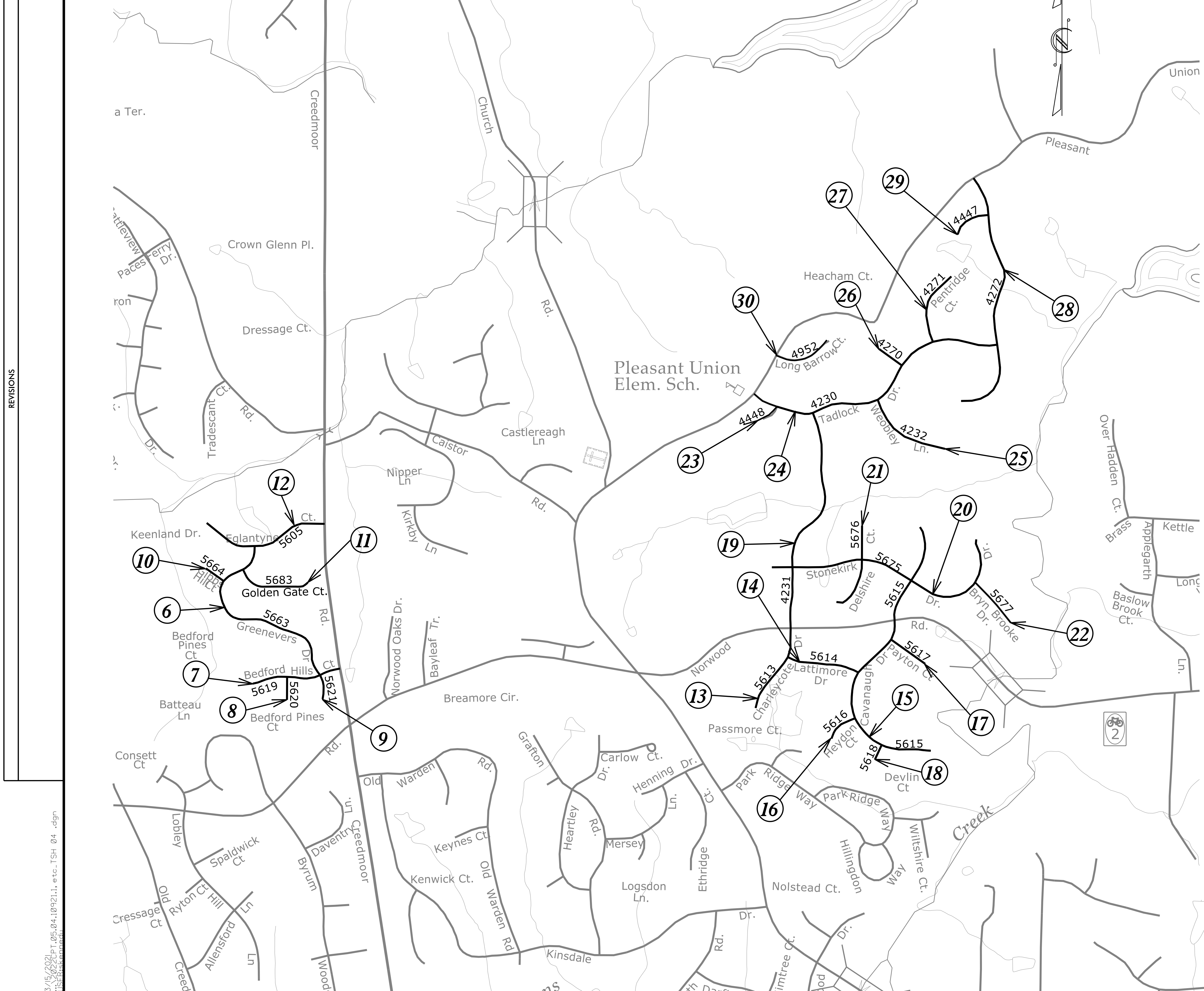


- 31. CAHILL RD.
- 32. MARABOU CT.
- 33. DOTHAN CT.
- 34. DELVENTON CT.
- 35. ENDERBURY DR.
- 36. TRAPPER'S CREEK DR.
- 37. BONBRIGHT CT.
- 38. STREAMER CT.
- 39. SKINNERS RIDGE RD.
- 40. WELLAND CT.
- 41. CHELTONHAM CT.
- 42. HANARRY CT.
- 43. OLD BROOK CT.
- 44. ENDERBURY DR.
- 45. SOMERFORD LN.
- 46. BILBURY CT.
- 47. MASON RIDGE DR.

- 48. PACESFERRY DR.
- 49. SHADOWVIEW CT.
- 50. WEIDMANN DR.
- 51. BURBERRY DR.
- 52. VELVET CT.
- 53. BASCOMB DR.
- 54. CHIPAWAY CT.
- 55. DEERHURST DR.
- 56. WOODMANOR DR.
- 57. ACRES WAY
- 58. PETRUCELLI LN.
- 59. CHASTAIN DR.
- 60. FOXFORD CT.
- 61. BRIARWOOD PL.

2022
**NORTH WAKE
RESURFACING**

4/26/2021
2021CPT.05.21J0921I, etc. TSH 03 .dgn
JTB/ESK/med



- 6. **GREENEVERS DR.**
- 7. **BEDFORD HILLS CT.**
- 8. **BEDFORD PINES CT.**
- 9. **GREENEVERS DR.**
- 10. **GIBBS HILL CT.**
- 11. **GOLDENGATE CT.**
- 12. **EGLANTYNE CT.**

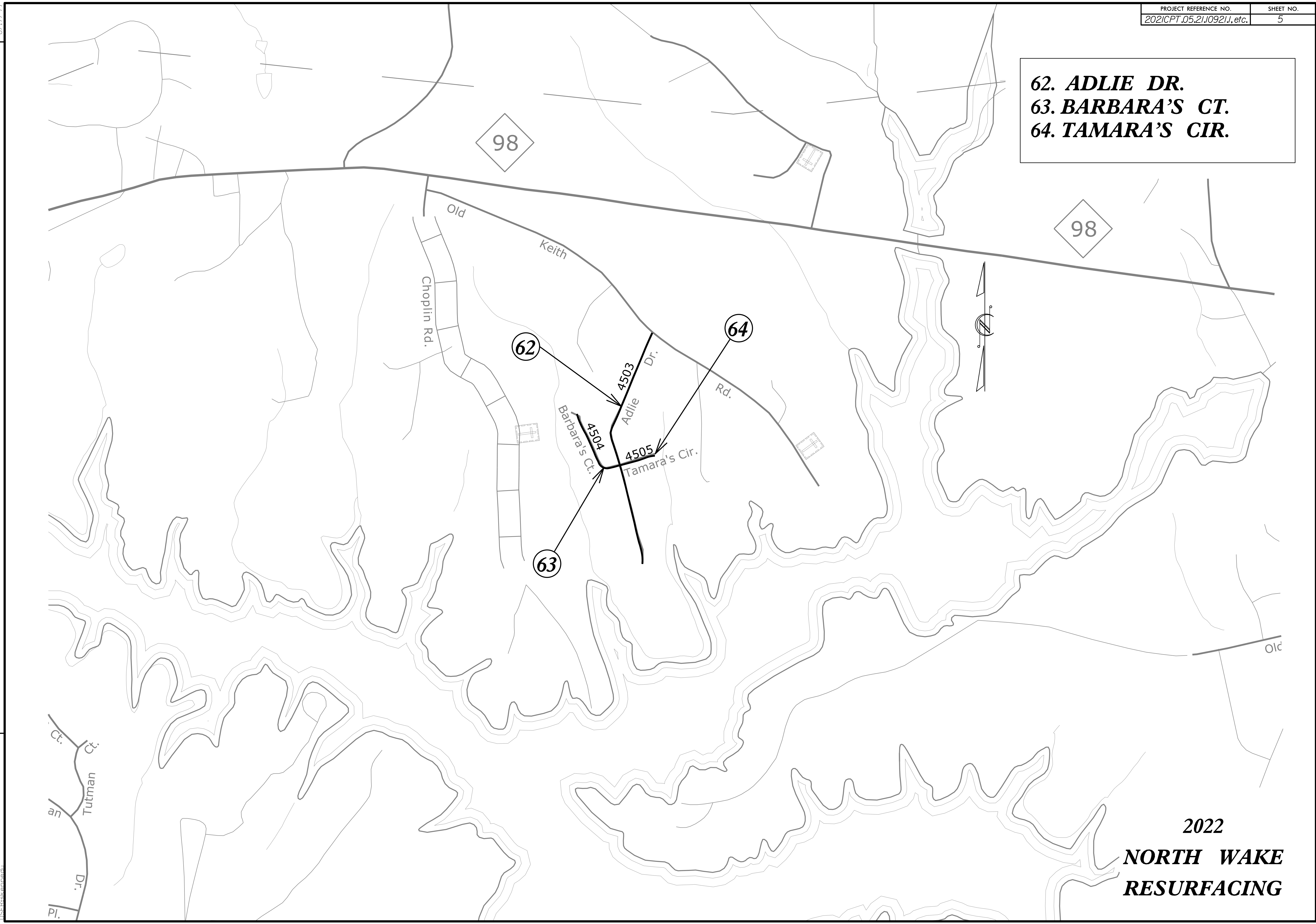
- 13. **CHARLEYCOTE DR.**
- 14. **LATTIMORE DR.**
- 15. **CAVANAUGH DR.**
- 16. **HEYDON CT.**
- 17. **PAYTON CT.**
- 18. **DEVLIN CT.**
- 19. **CHARLEYCOTE DR.**
- 20. **STONEKIRK DR.**
- 21. **DELSHIRE CT.**
- 22. **BRYN BROOKE DR.**
- 23. **BARMOUTH CT.**
- 24. **TADLOCK DR.**
- 25. **WEOBLEY LN.**
- 26. **HEACHAM CT.**
- 27. **PENTRIDGE CT.**
- 28. **THERFIELD DR.**
- 29. **LOCHGARTON LN.**
- 30. **LONG BARROW CT.**

**2022
NORTH WAKE
RESURFACING**

REVISIONS

3/15/2021
PT_05.21.0921.1, etc. TSH_04.dgn
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62. ADLIE DR.
63. BARBARA'S CT.
64. TAMARA'S CIR.



REVISIONS

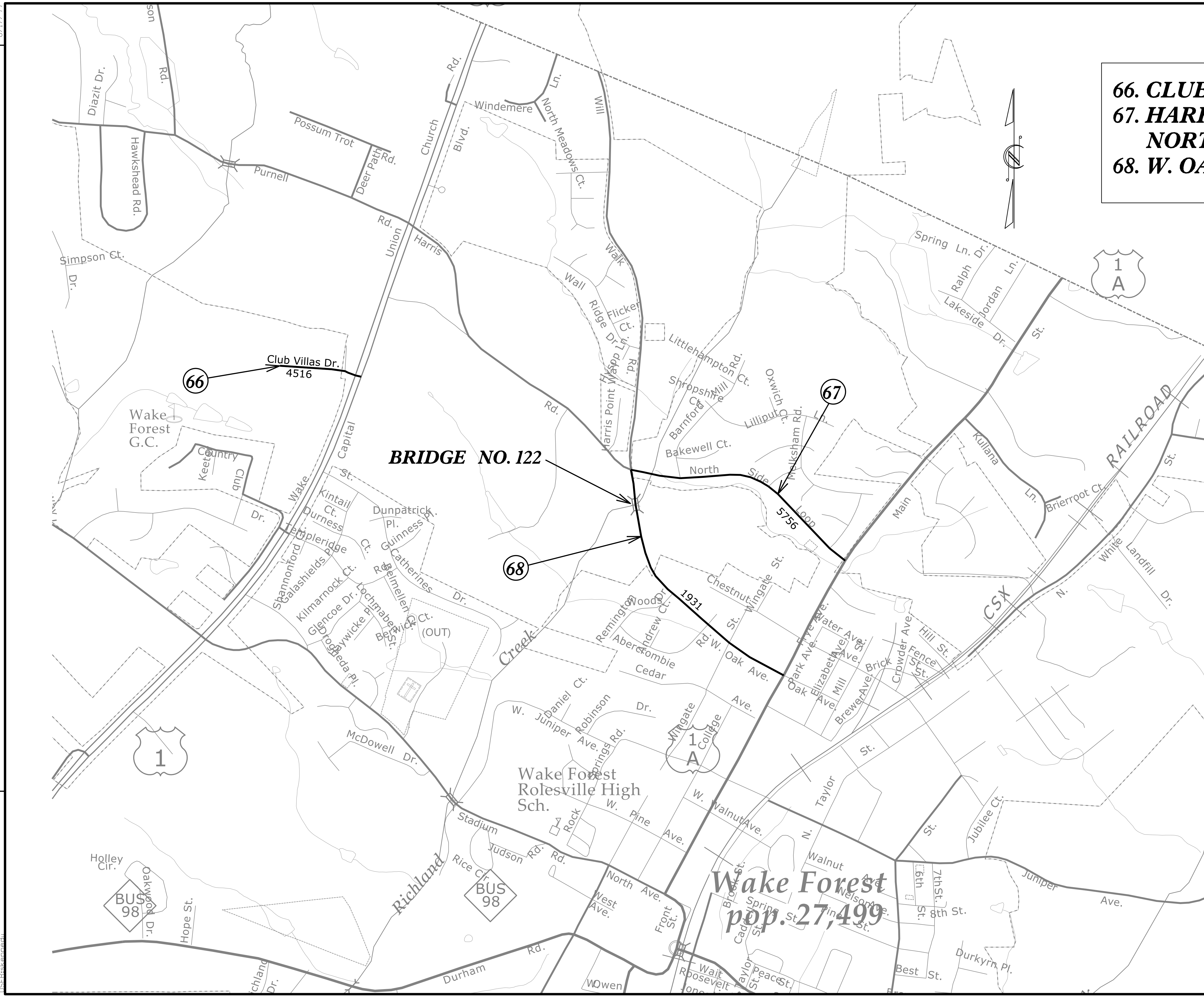
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I:\Projects\2021\PT.05.21.109211, etc.\TSH 05 .dgn
11:13:13 AM
kenneth

Pi. Dr.
an
Tutman Ct.
Ct.

2022
**NORTH WAKE
RESURFACING**

**66. CLUB VILLAS DR.
67. HARRIS RD. /
NORTH SIDE LOOP
68. W. OAK AVE.**

REVISIONS

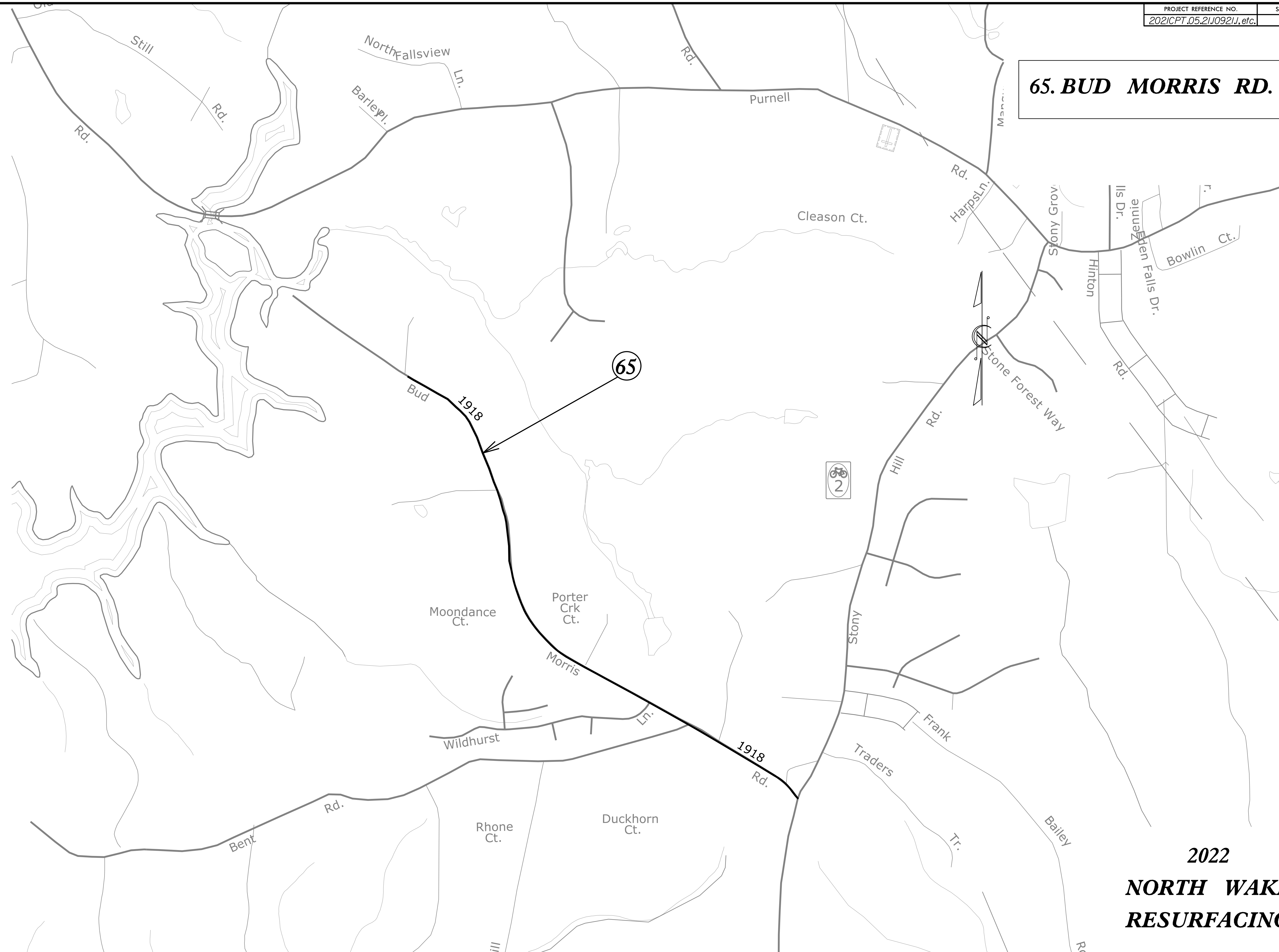


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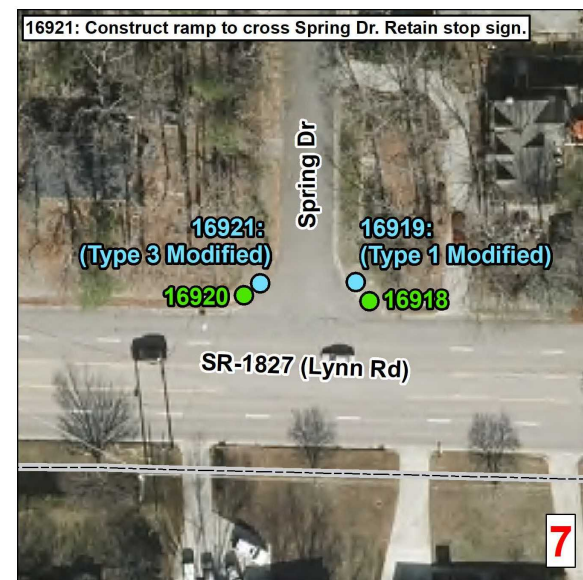
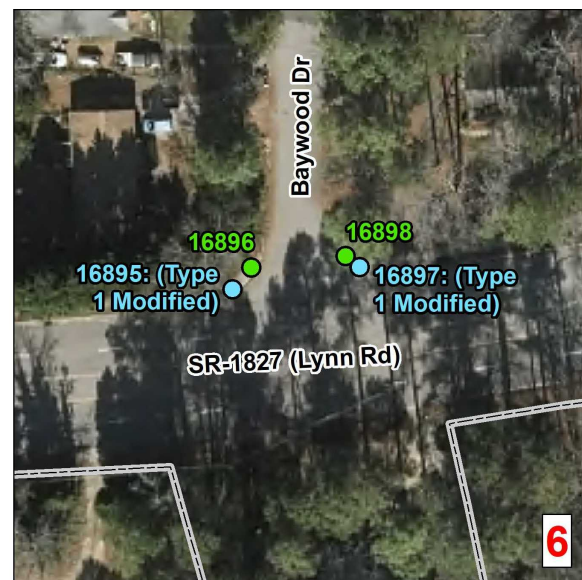
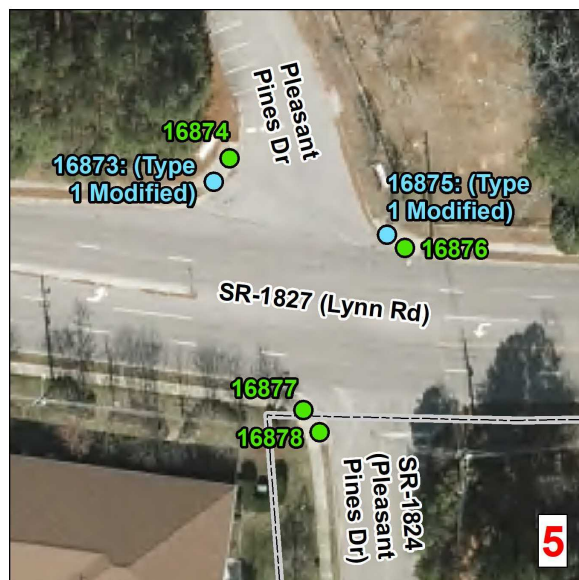
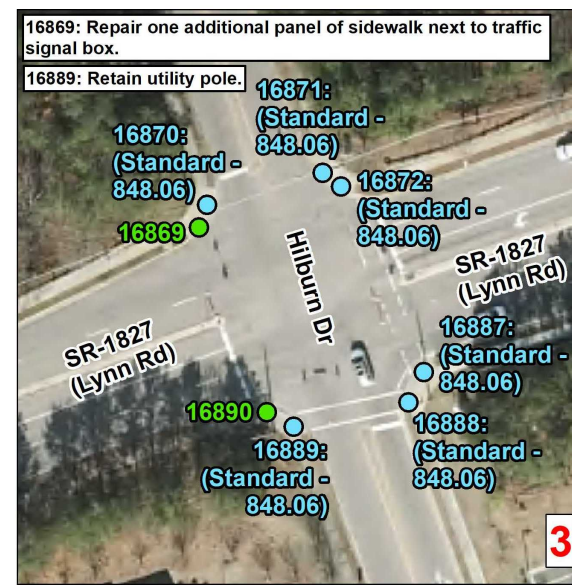
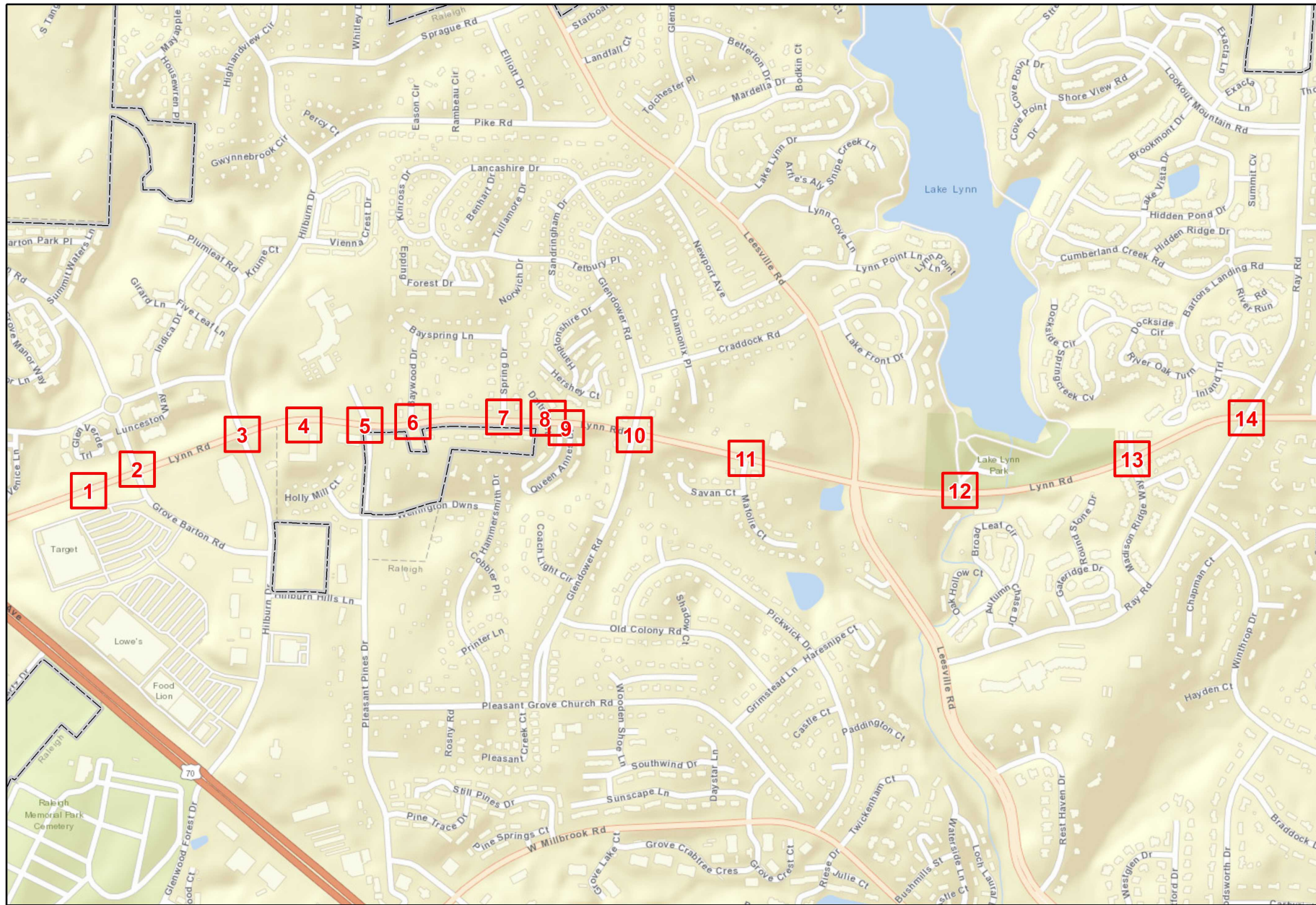
**2022
NORTH WAKE
RESURFACING**

65. BUD MORRIS RD.

8/17/99
3/15/2021
2021CPT.05.21109211, etc. TSH 07 .dgn
11:51:33 AM
REVISIONS



2022
NORTH WAKE
RESURFACING



Curb Ramps To Be Repaired

- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

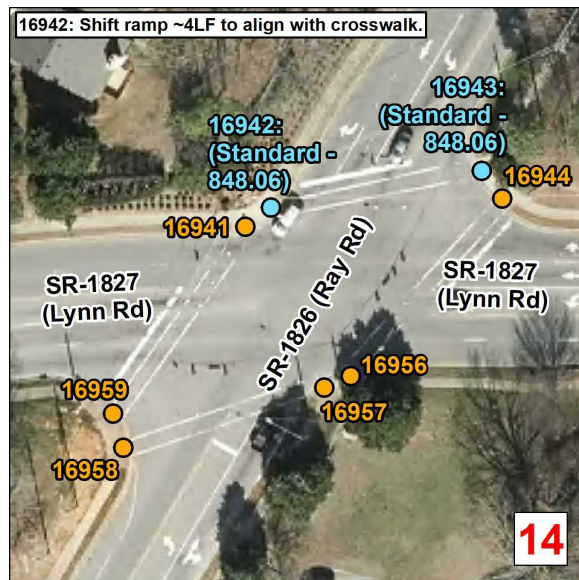
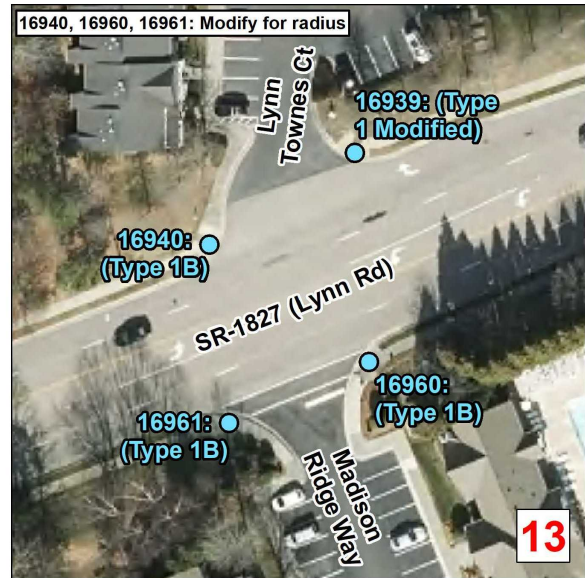
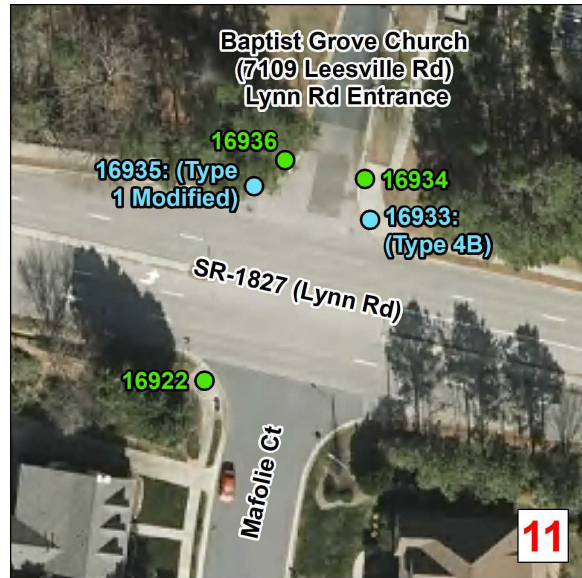
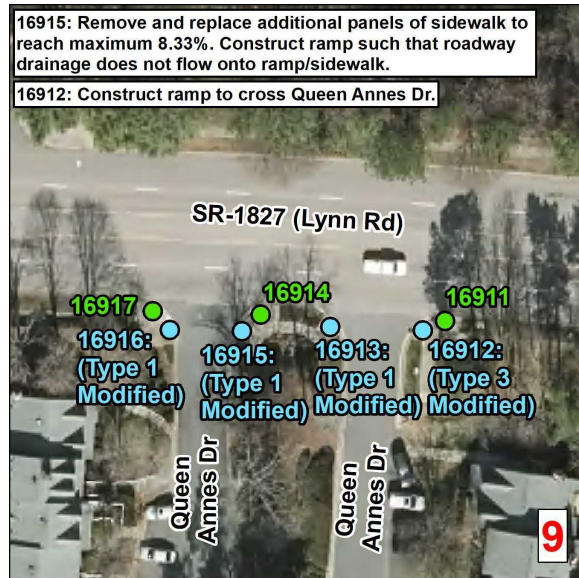
Municipal Boundary
 NCHPO Historic Boundary (NR and LHD)

2022 North
WBS: 2021CPT.05.21.20921.1

Lynn Rd
From SR 1826 To US 70

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION 5

Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO



Curb Ramps To Be Repaired

- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

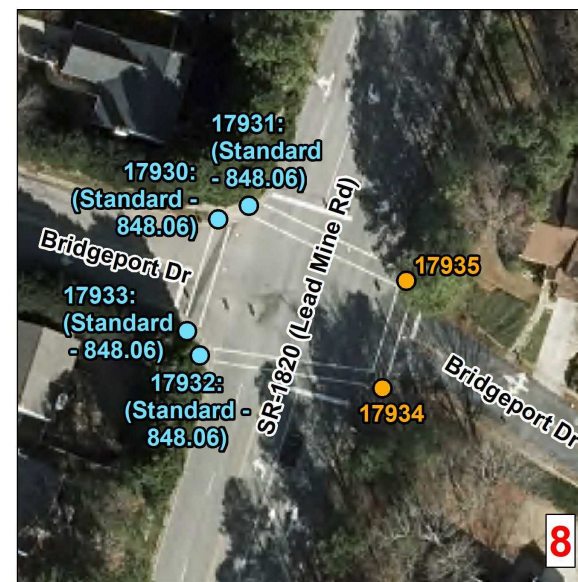
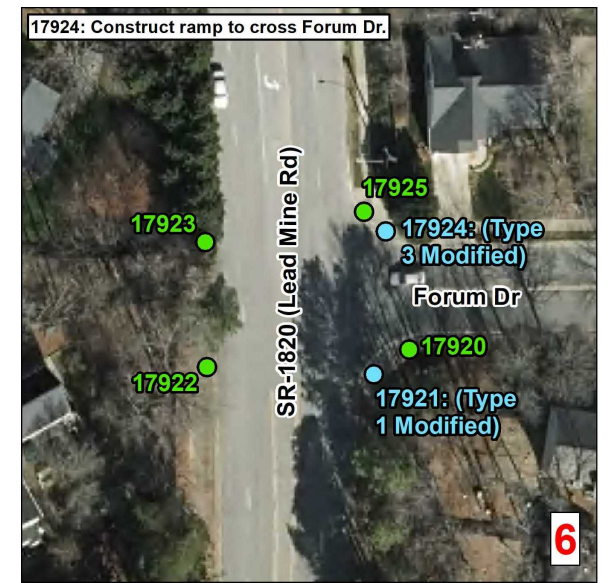
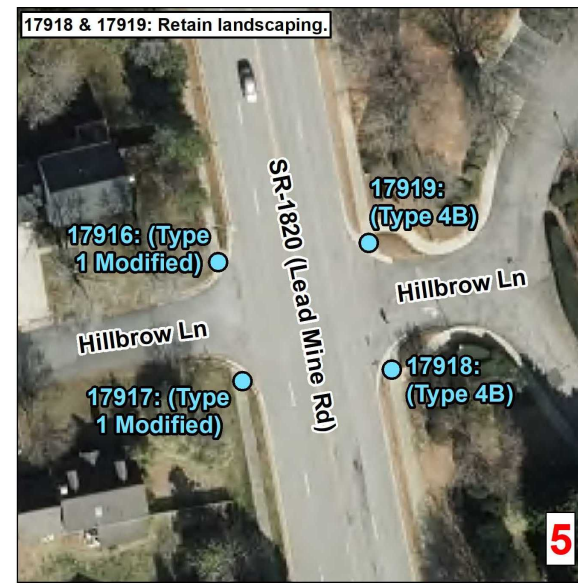
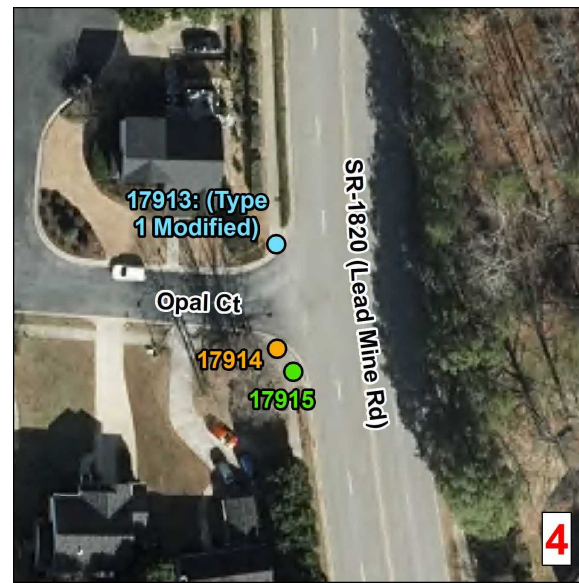
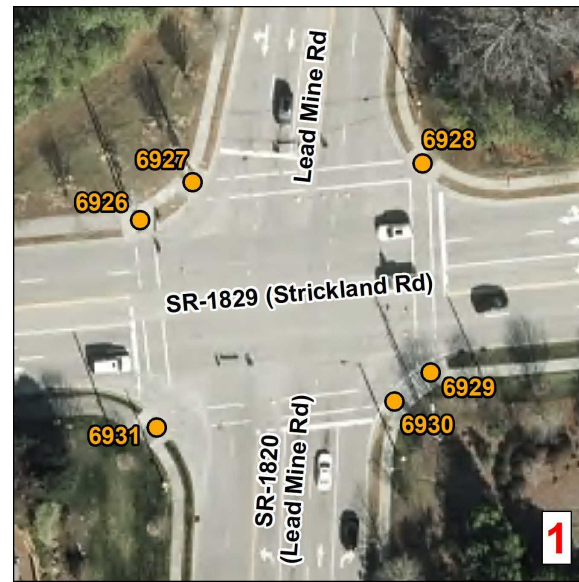
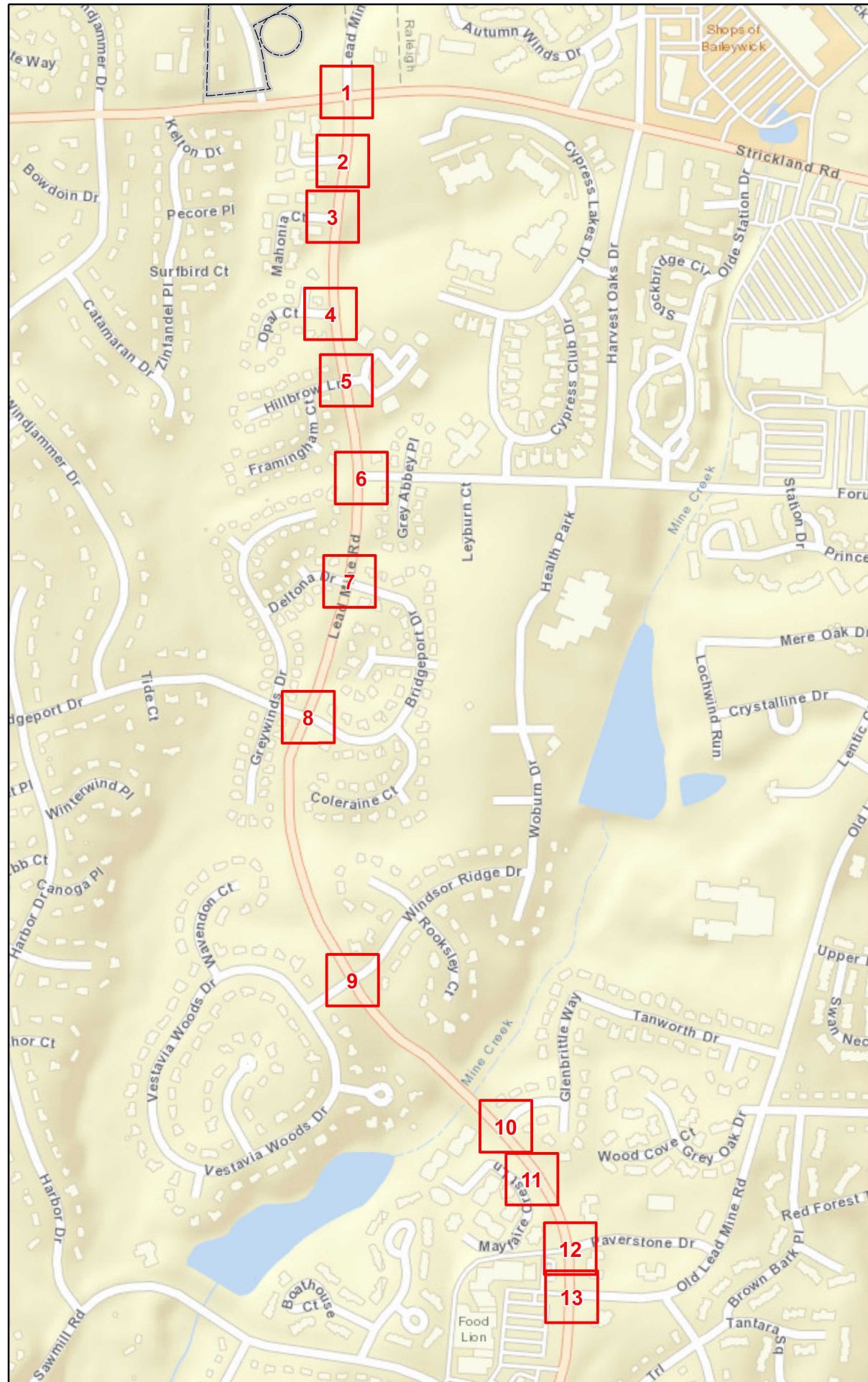
Municipal Boundary
 NCHPO Historic Boundary (NR and LHD)

2022 North
WBS: 2021CPT.05.21.20921.1

Lynn Rd
From SR 1826 To US 70

NORTH CAROLINA DEPARTMENT
 OF TRANSPORTATION
 DIVISION 5

Source: NV5 Engineers and Consultants Inc, ESRI, NC OneMap, NCDOT, NCHPO



Curb Ramps To Be Repaired

- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

Municipal Boundary

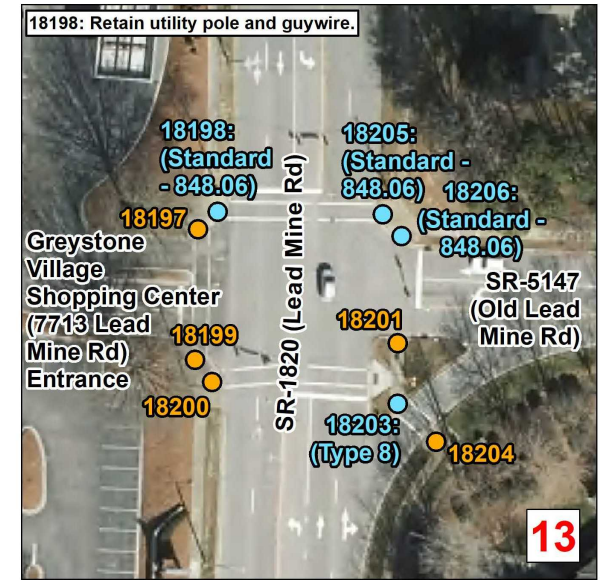
NCHPO Historic Boundary (NR and LHD)

2022 North
WBS: 2021CPT.05.21.20921.1

Lead Mine Rd
From SR 5147 To SR 1829

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 5

Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO




Curb Ramps To Be Repaired

- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp


Municipal Boundary

NCHPO Historic Boundary (NR and LHD)



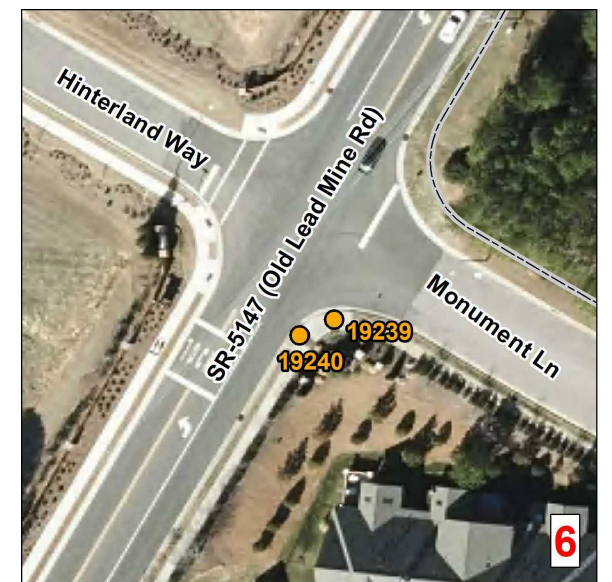
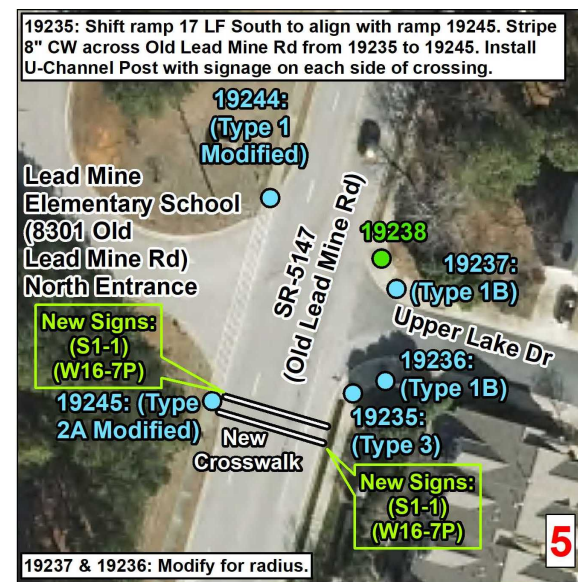
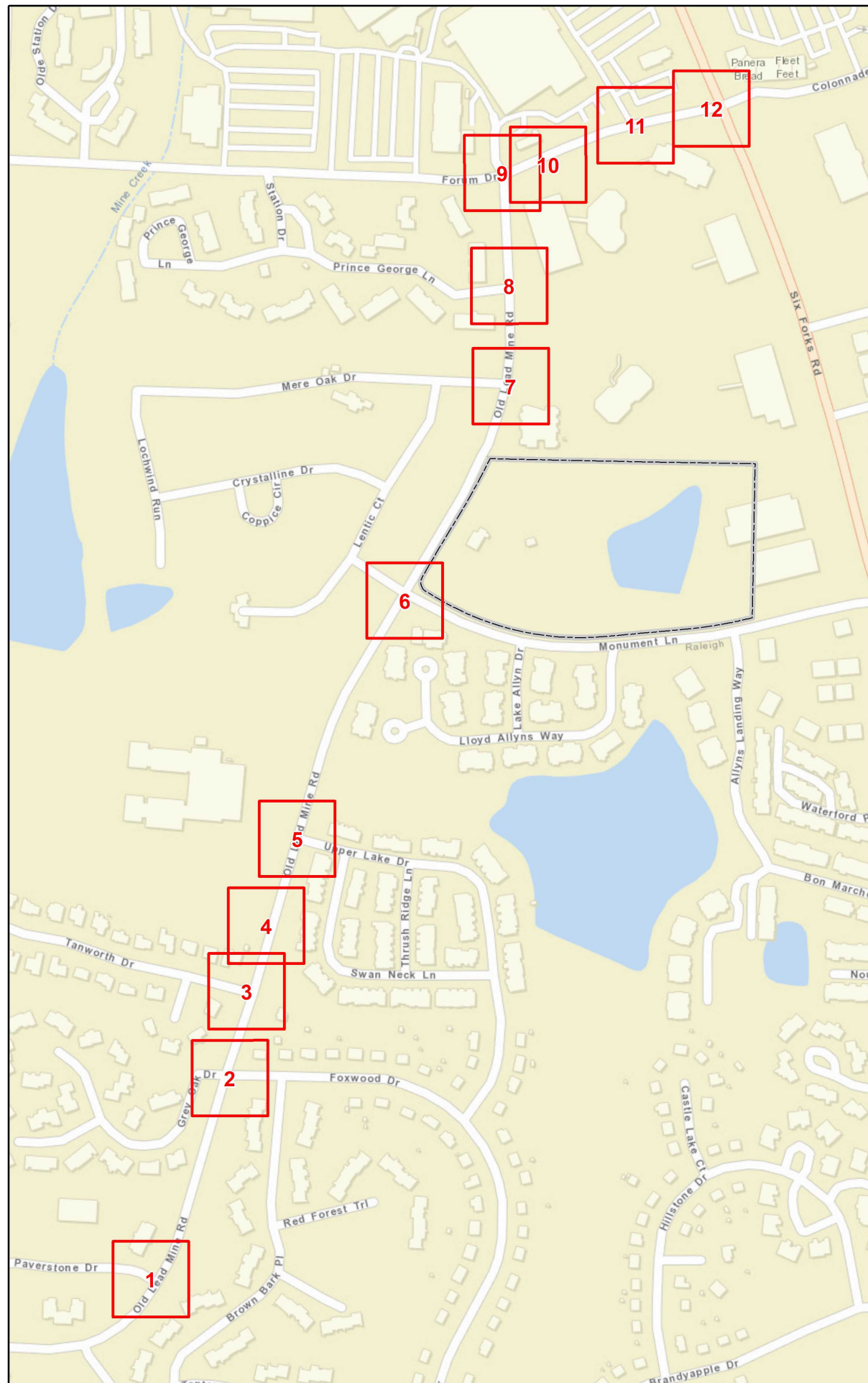
2022 North
WBS: 2021CPT.05.21.20921.1

Lead Mine Rd
From SR 5147 To SR 1829



NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 5

Source: NV5 Engineers and Consultants Inc, ESRI, NC OneMap, NCDOT, NCHPO



Curb Ramps To Be Repaired

- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

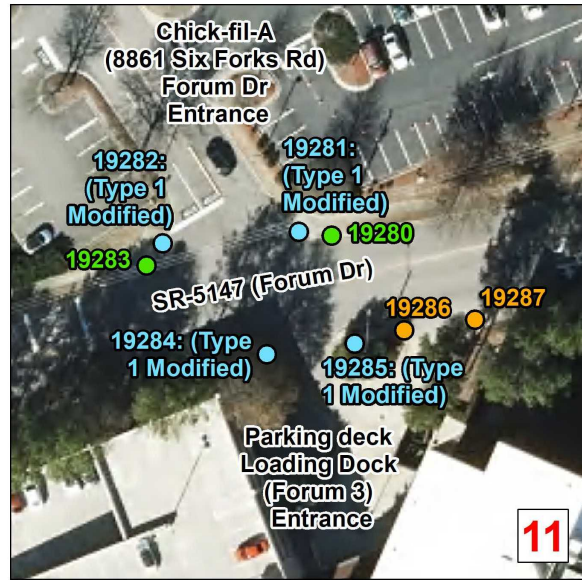
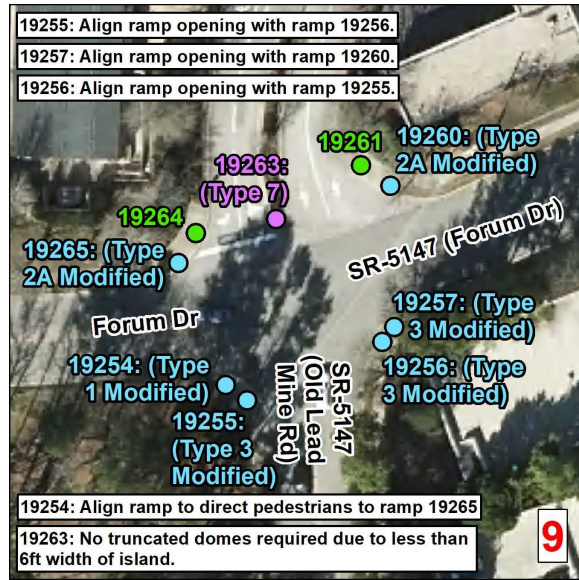
▭ Municipal Boundary
▭ NCHPO Historic Boundary (NR and LHD)

**2022 North
WBS: 2021CPT.05.21.20921.1**

**Old Lead Mine Rd
From SR 1820 To SR 1005**

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5

Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO



Curb Ramps To Be Repaired

- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

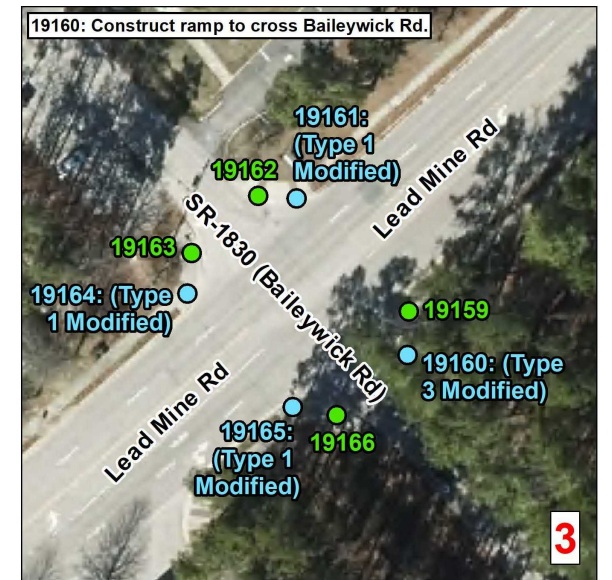
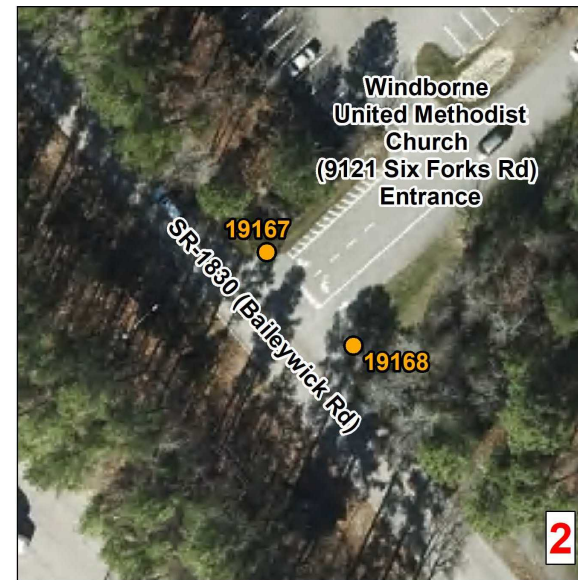
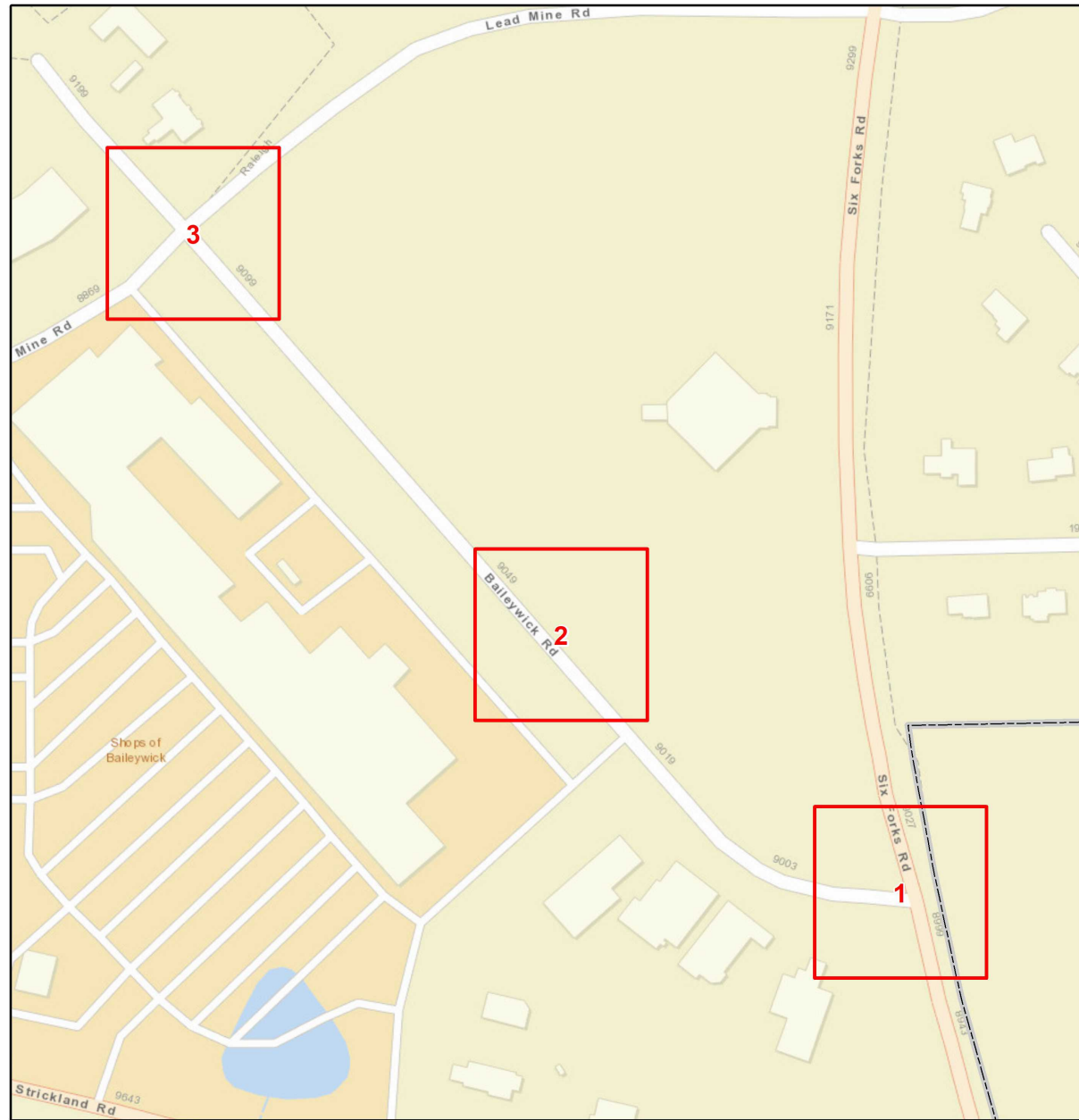
Municipal Boundary
 NCHPO Historic Boundary (NR and LHD)

2022 North
WBS: 2021CPT.05.21.20921.1

Old Lead Mine Rd
From SR 1820 To SR 1005

NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 5

Source: NV5 Engineers and Consultants Inc, ESRI, NC OneMap, NCDOT, NCHPO



Curb Ramps To Be Repaired

- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

Municipal Boundary

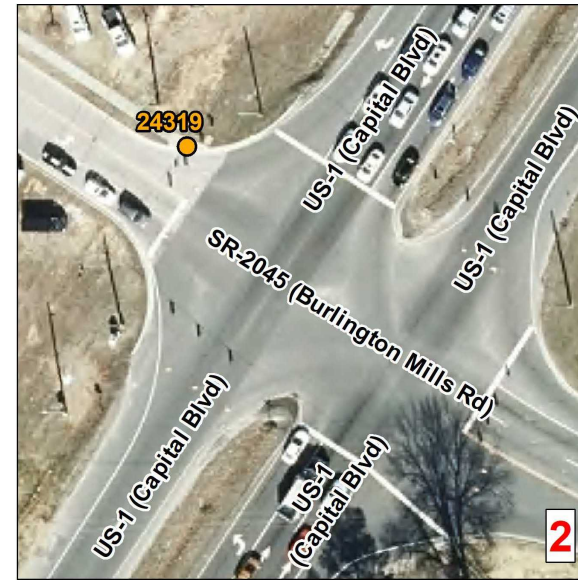
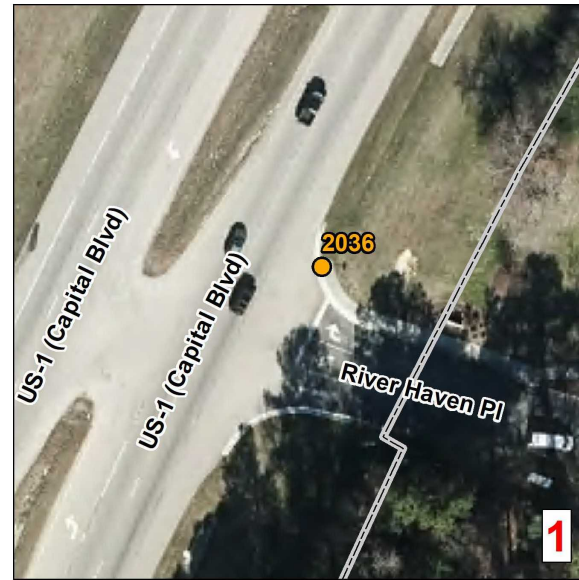
NCHPO Historic Boundary (NR and LHD)

2022 North
WBS: 2021CPT.05.21.10921.1

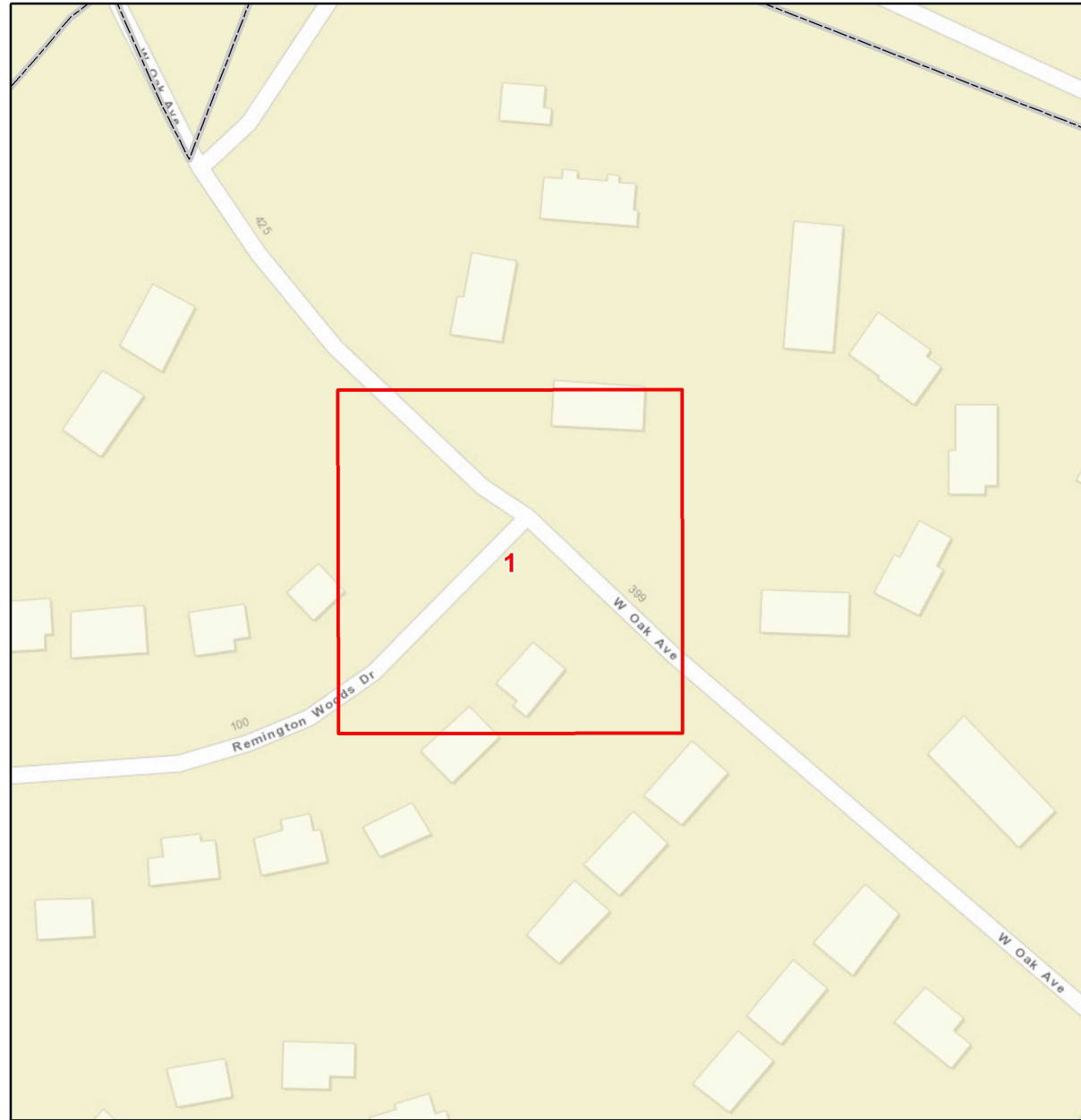
Baileywick Rd
From SR 1005 To Dead End

NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 5

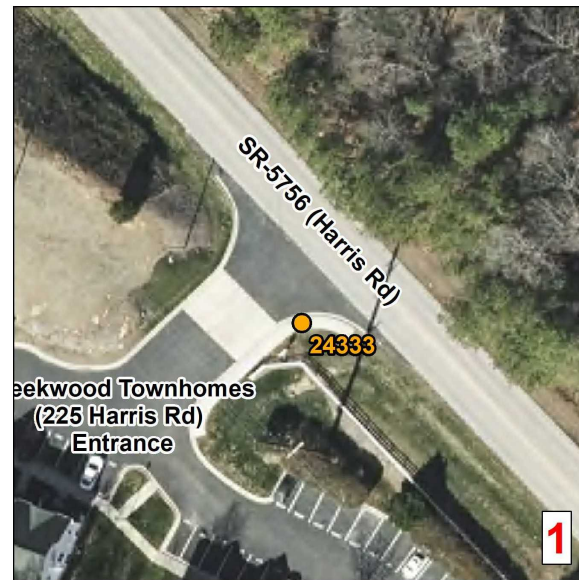
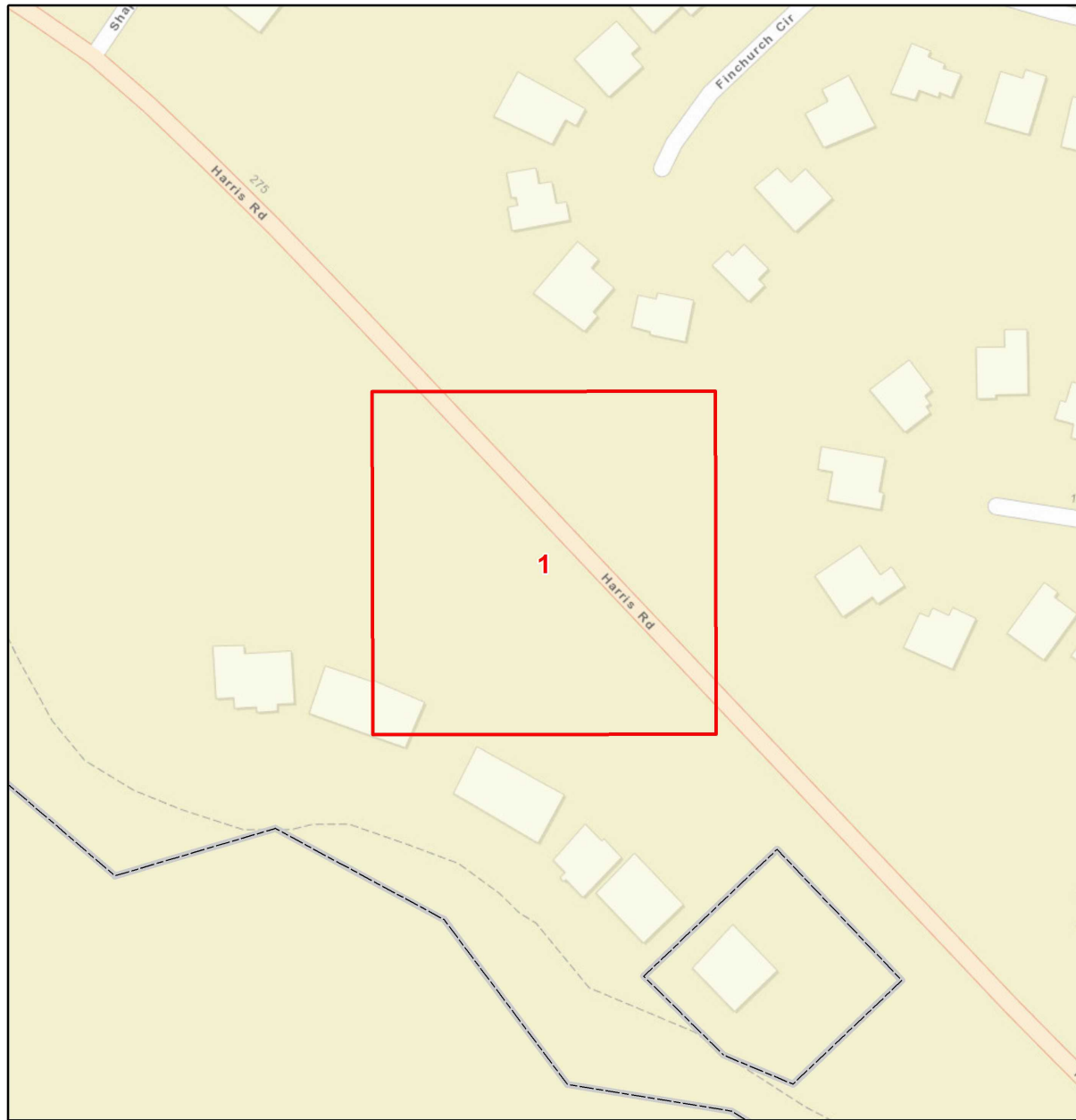
Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO



Curb Ramps To Be Repaired		
<ul style="list-style-type: none"> ● Retrofit ● Remove and Replace ● New Curb Ramp ● Remove Ramp 	<ul style="list-style-type: none"> Municipal Boundary NCHPO Historic Boundary (NR and LHD) 	
<p>2022 North WBS: 2021CPT.05.21.10921.1 US 1 NB From / To U-5307A Limits To / From SR 2045</p>		
		<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5</p>
Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO		



Curb Ramps To Be Repaired		
	Retrofit	
	Remove and Replace	
	New Curb Ramp	
	Remove Ramp	
	Municipal Boundary	
	NCHPO Historic Boundary (NR and LHD)	
2022 North		
WBS: 2021CPT.05.21.20921.1		
W Oak Ave		
From US 1 ALT To END C&G		
	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5	
Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO		




Curb Ramps To Be Repaired

- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp


Municipal Boundary

NCHPO Historic Boundary (NR and LHD)

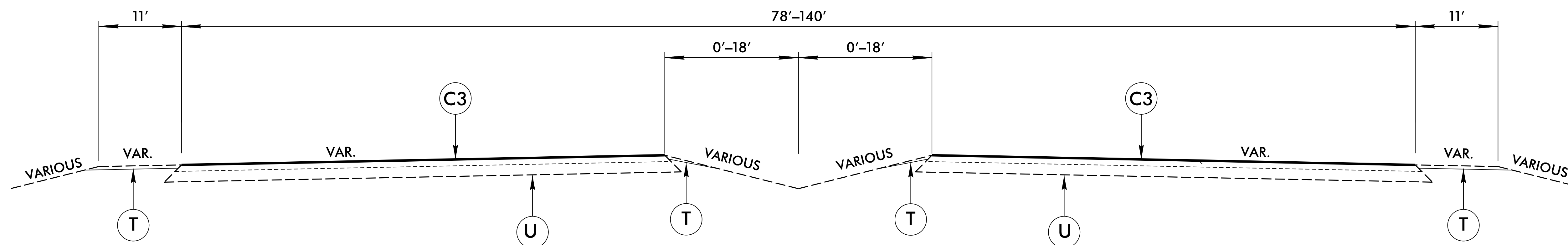


**2022 North
WBS: 2021CPT.05.21.20921.1**

**Harris Rd
From SR 1931 To US 1 BUS**

 NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 5

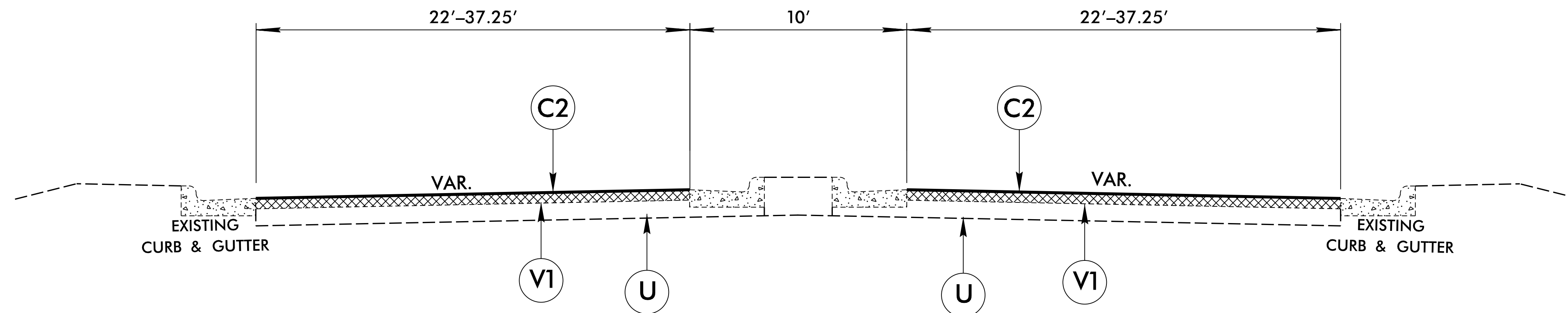
Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO



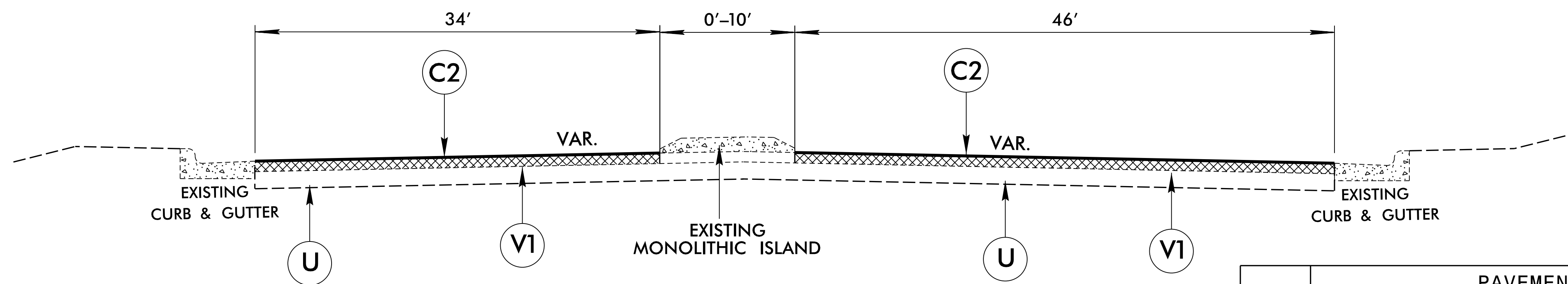
TYPICAL SECTION NO. 1

NOTE:
MILL 1.5" +/- ON MAP NO. 1 BRIDGE NO. 305 NB AND BRIDGE NO. 306 SB AS DIRECTED BY THE ENGINEER TO RESURFACE AND NOT ADD ANY ADDITIONAL WEIGHT ON THE BRIDGE.

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1 1/2"

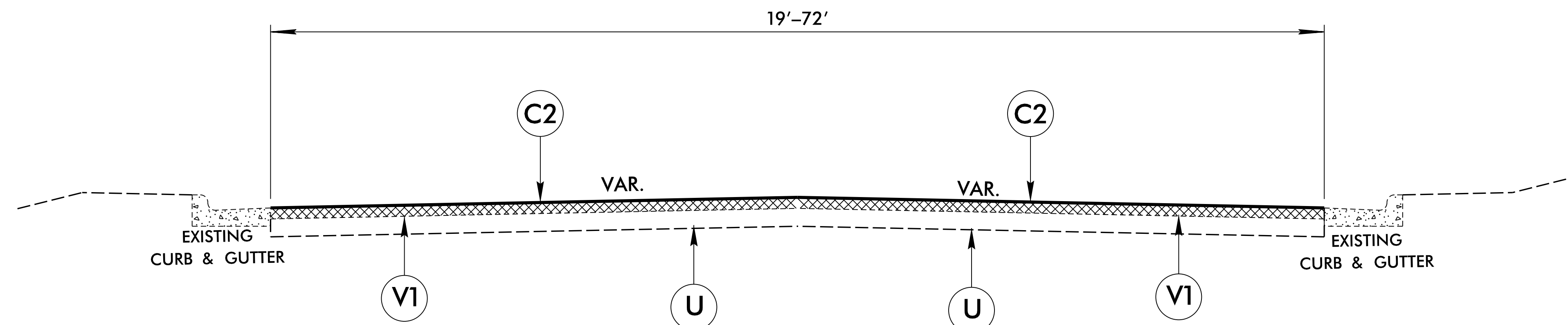


TYPICAL SECTION NO. 2



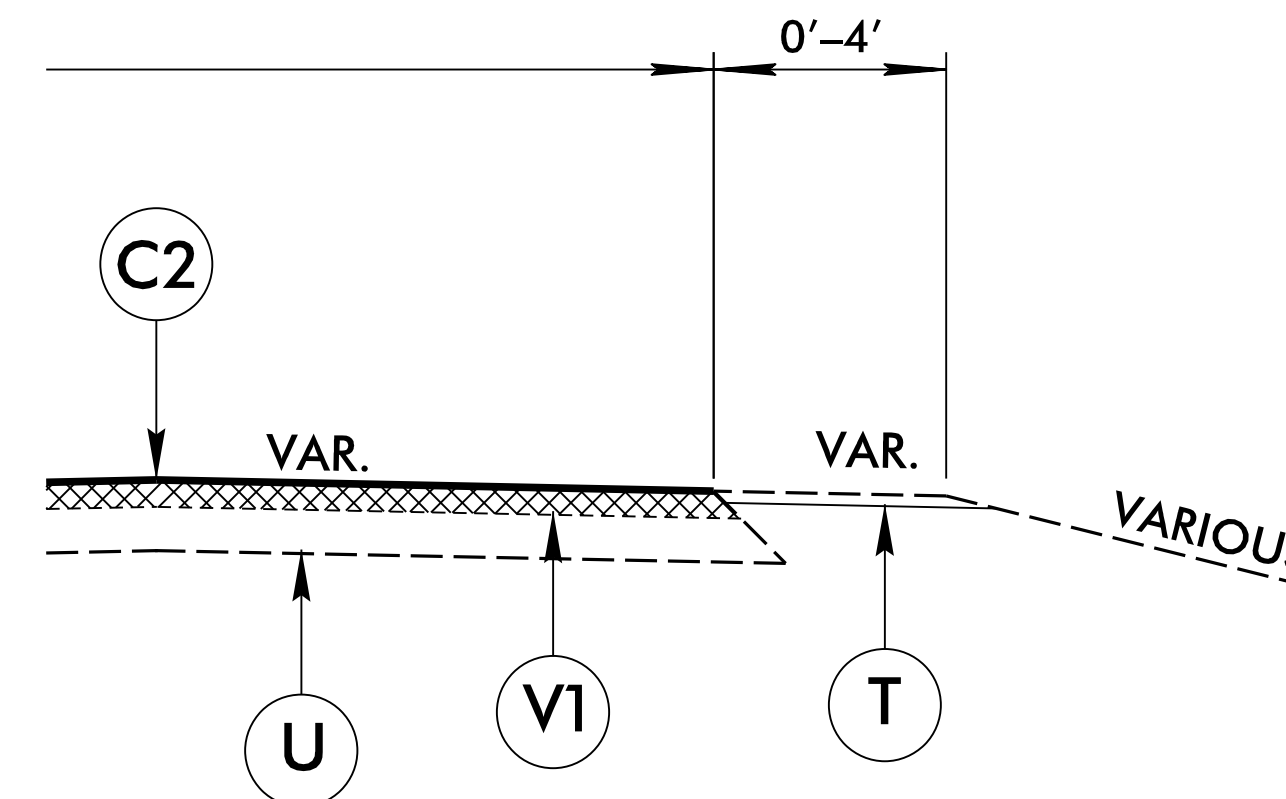
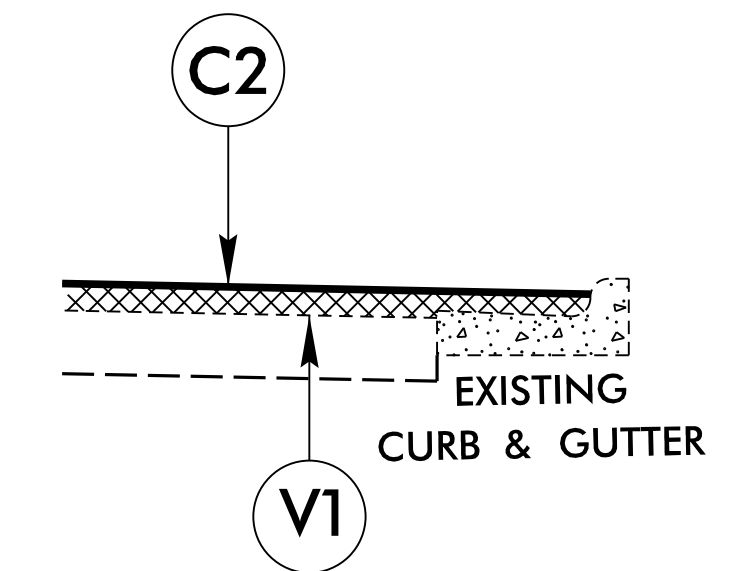
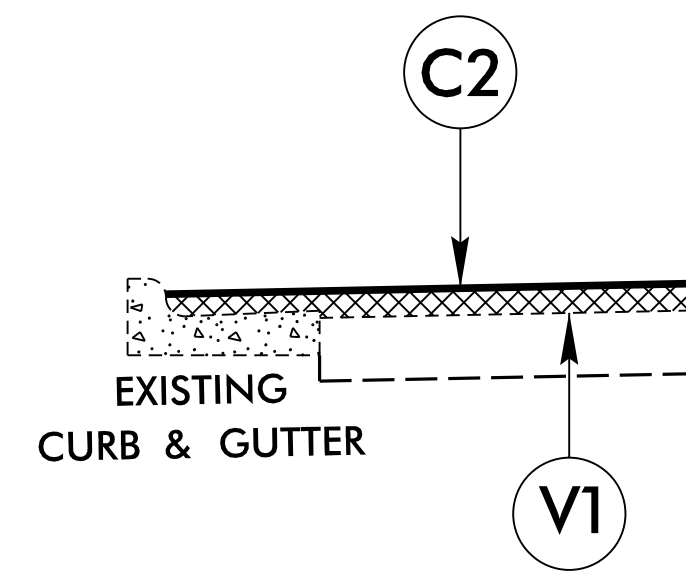
TYPICAL SECTION NO. 3

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1 1/2"



TYPICAL SECTION NO. 4

MAP 68 (SR 1931) – FROM US 1A TO END CURB & GUTTER – 0.36 MILES

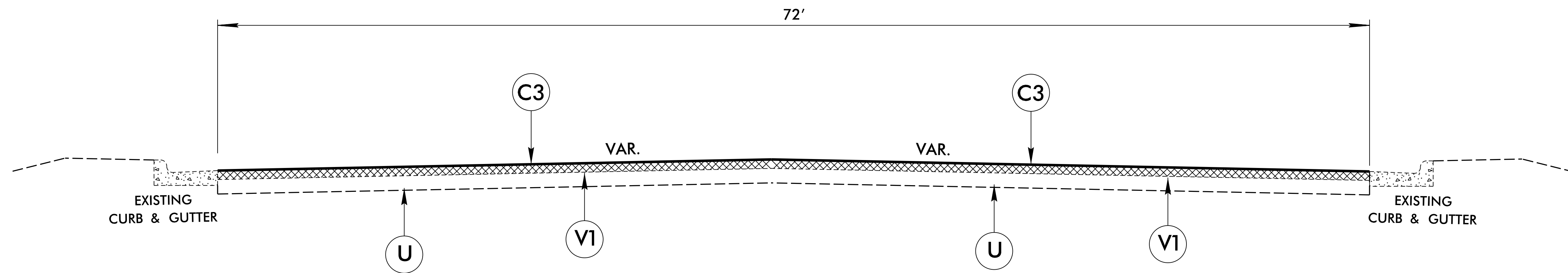


MAP 3 – SHOULDER SECTION
FROM INTERSECTION PAVER STONE DR.
TO GREY OAK DR. 725 LF RT.

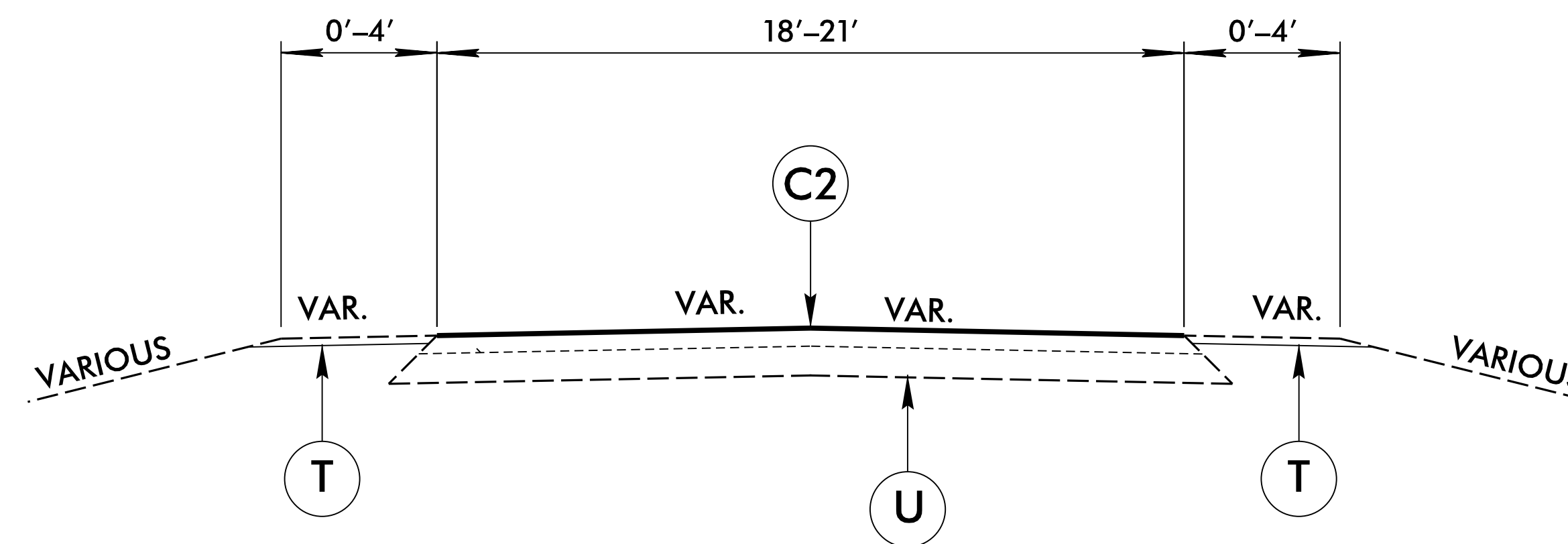
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C3	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"
V2	MILLING OF EXISTING ASPHALT PAVEMENT 0" - 1.25"

NOTE:

MAP 68 – MILL 1.5" +/- ON MAP NO. 10 BRIDGE NO. 122 AS DIRECTED BY THE ENGINEER TO RESURFACE AND NOT ADD ANY ADDITIONAL WEIGHT ON THE BRIDGE.



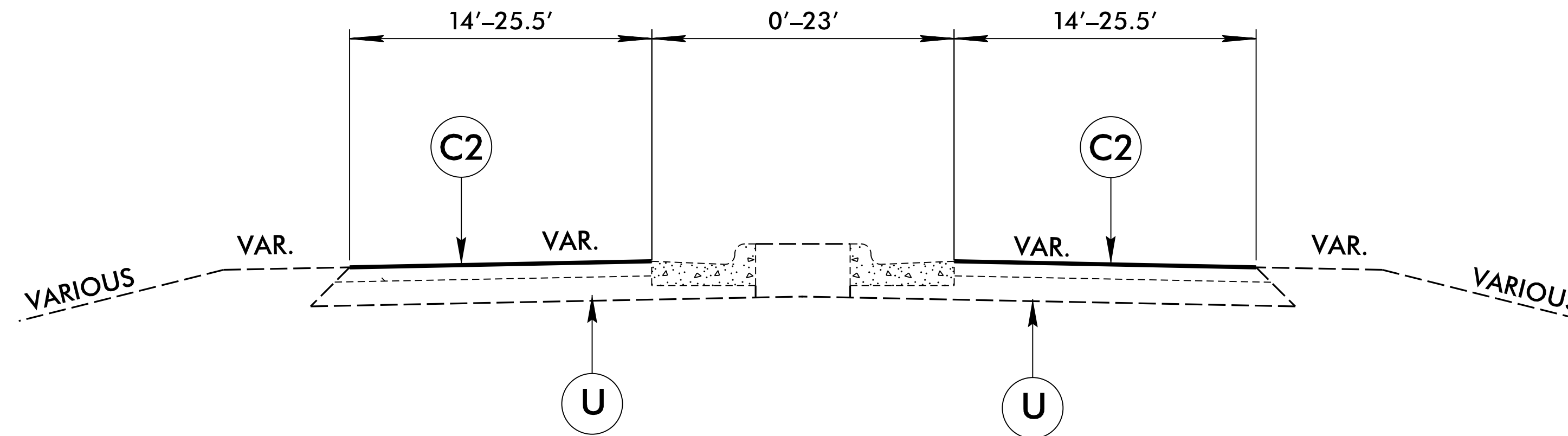
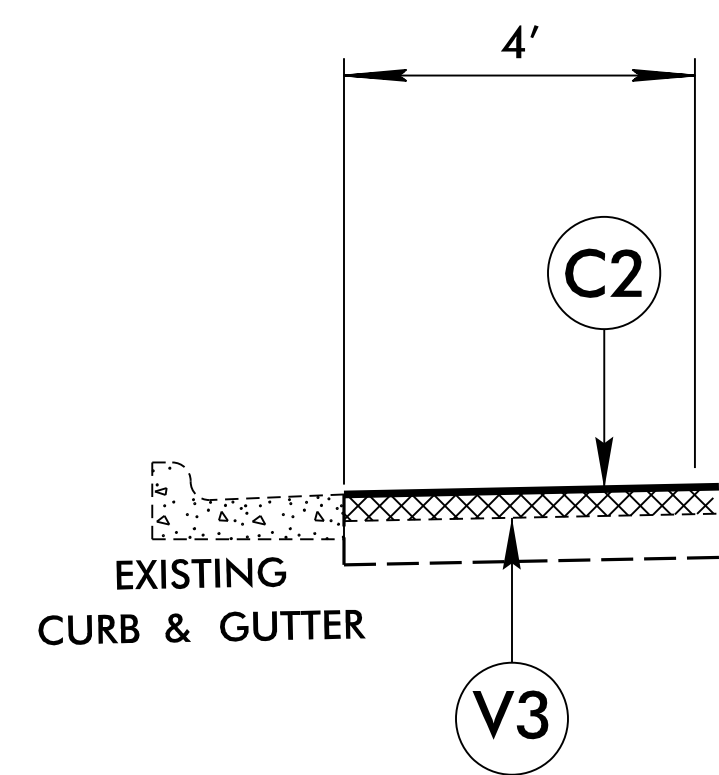
TYPICAL SECTION NO. 5



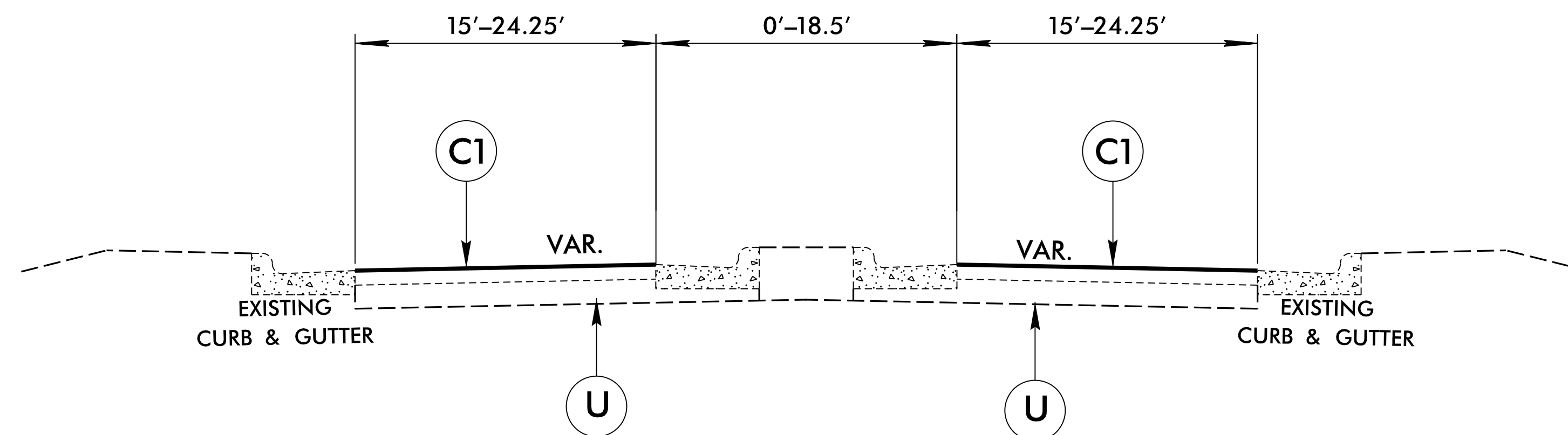
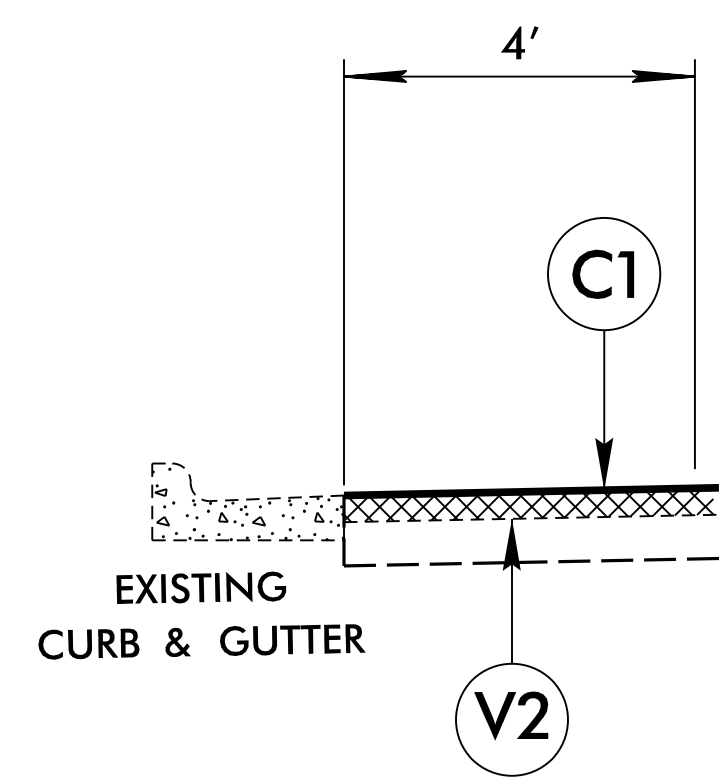
TYPICAL SECTION NO. 6

MAP 68 (SR 1931) – FROM END CURB & GUTTER TO SR 5756 – 0.30 MILES

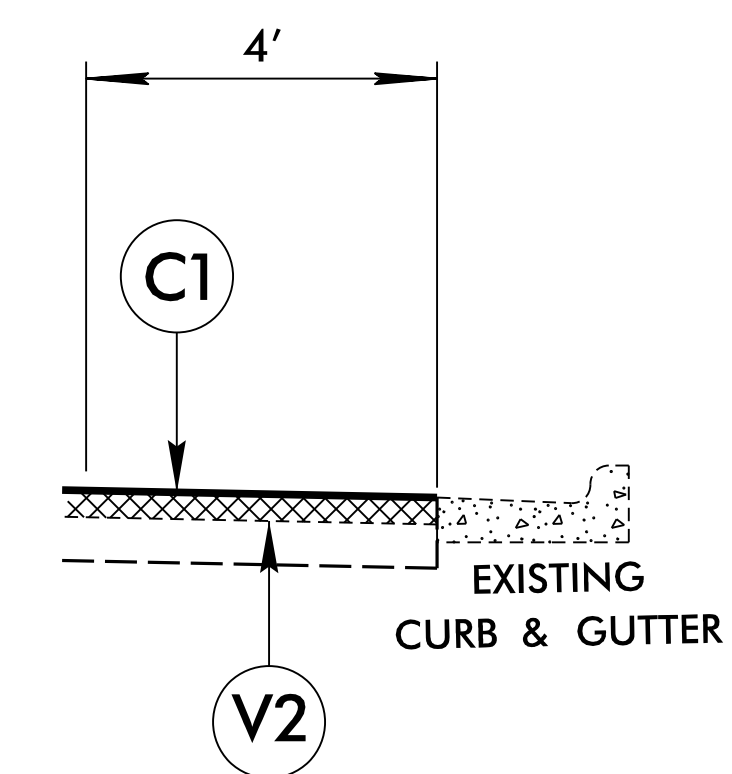
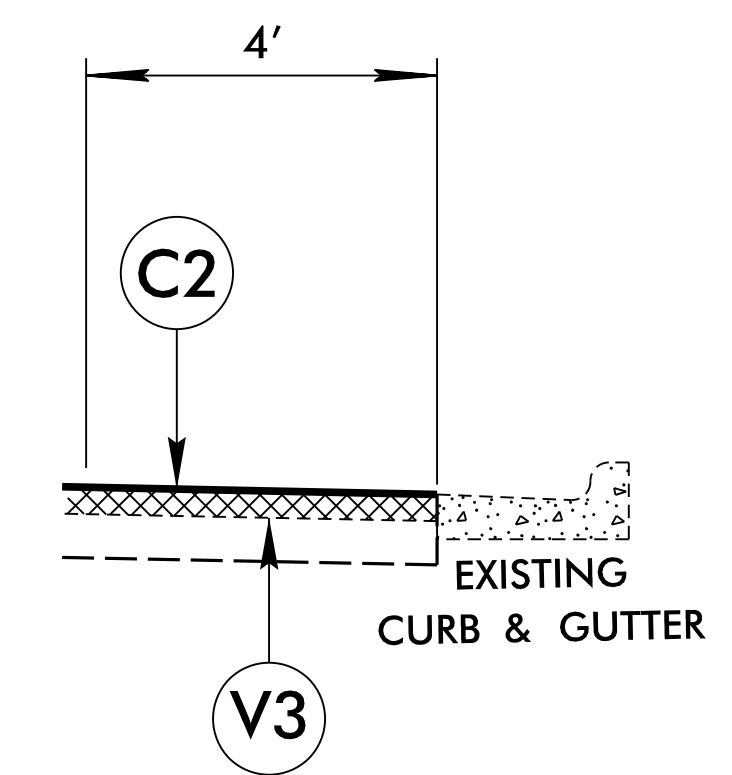
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C3	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1 1/2"



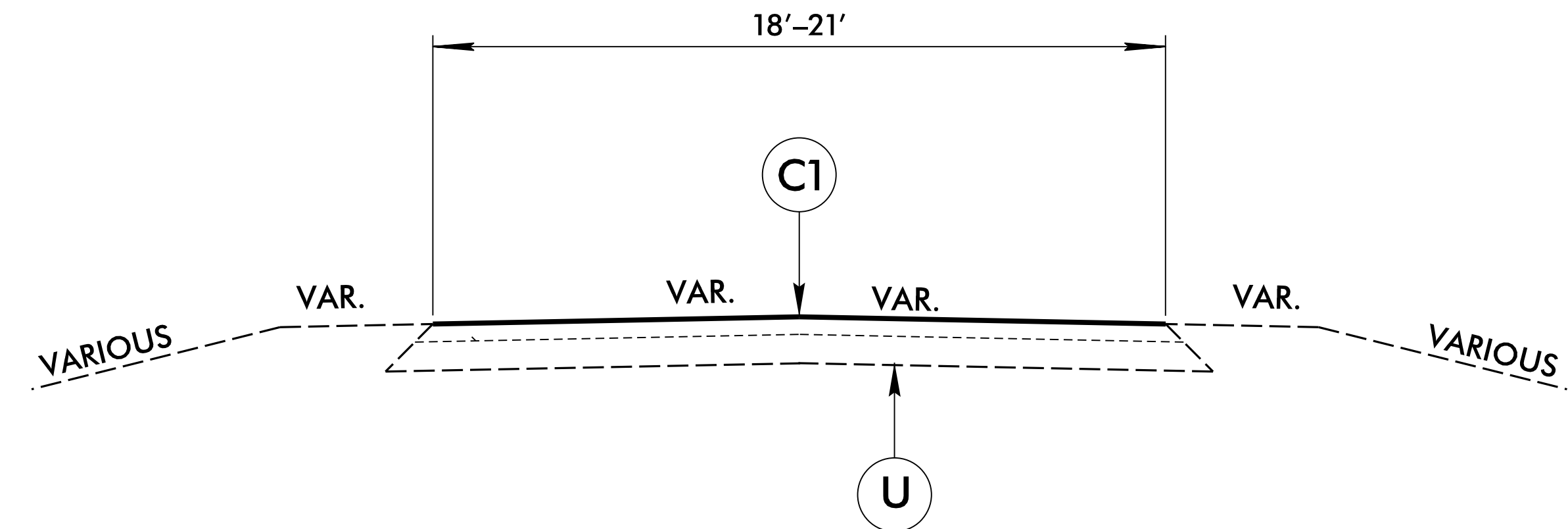
TYPICAL SECTION NO. 7



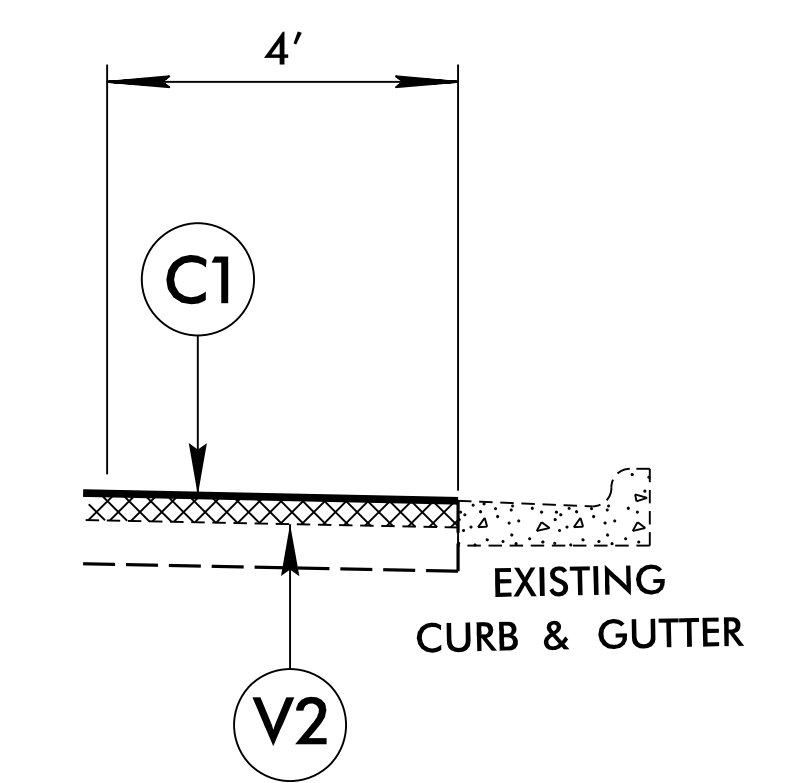
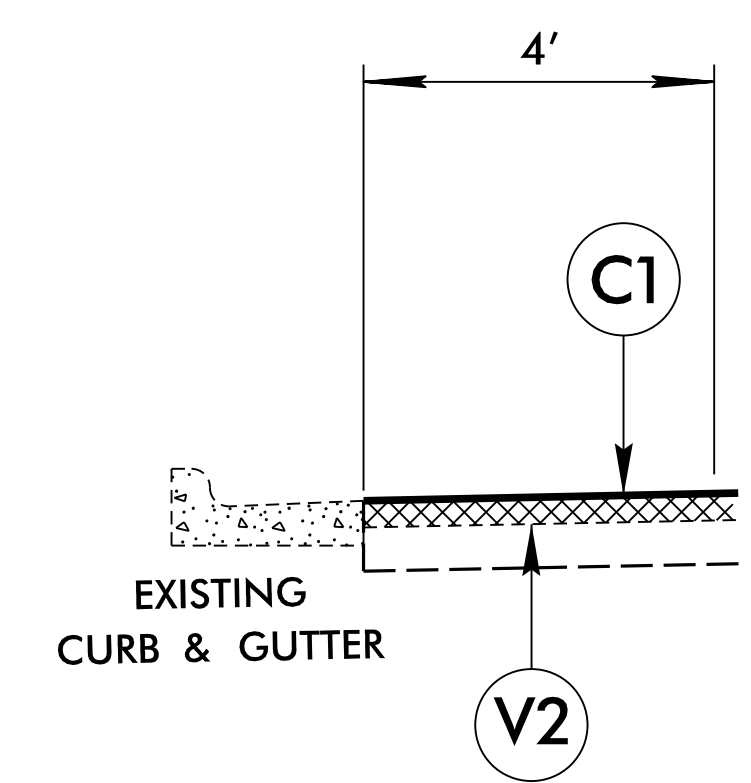
TYPICAL SECTION NO. 8



PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C3	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"
V2	MILLING OF EXISTING ASPHALT PAVEMENT 0" - 1.25"
V3	MILLING OF EXISTING ASPHALT PAVEMENT 0" - 1.5"



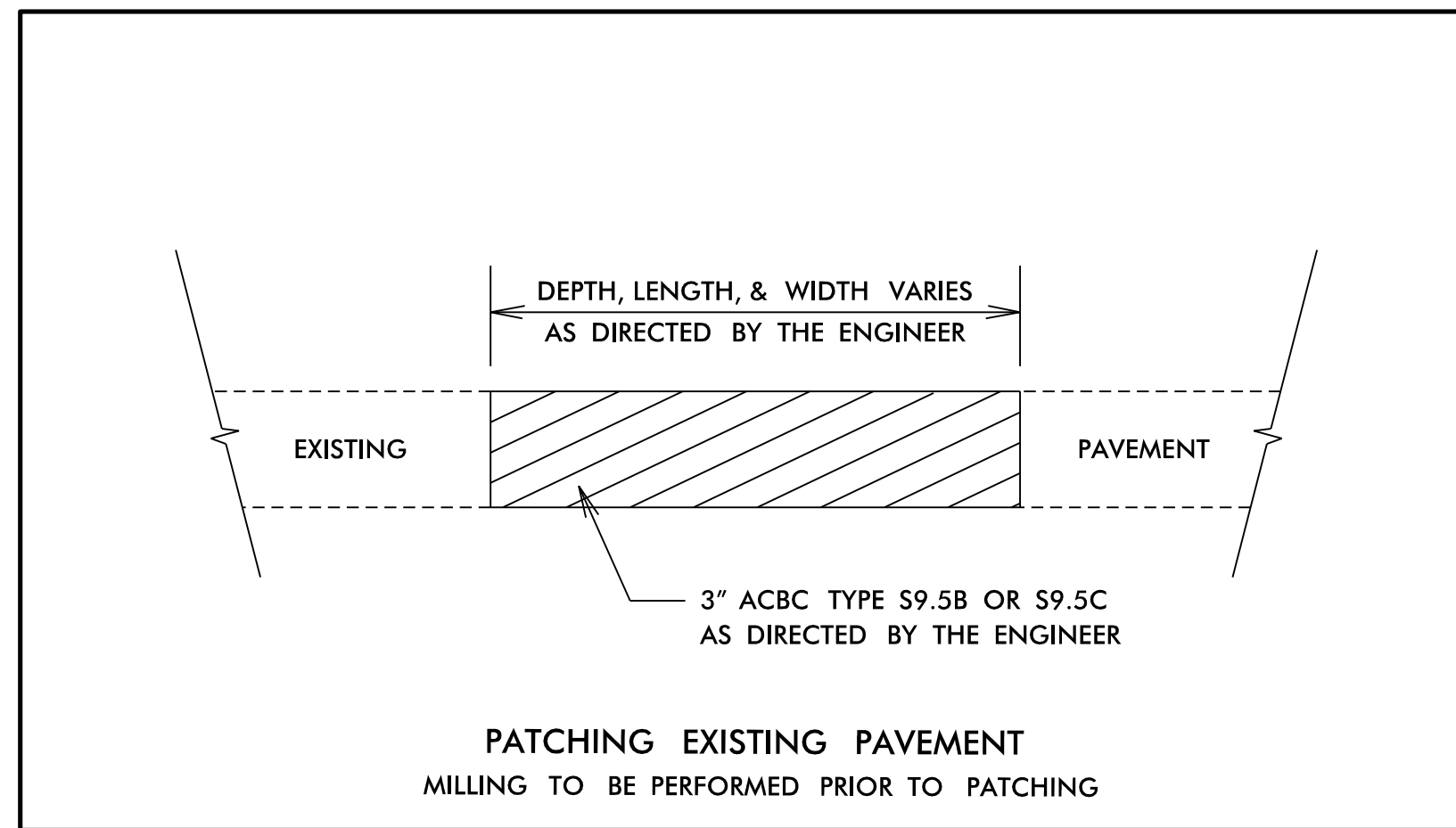
TYPICAL SECTION NO. 9



NOTE:
 USE **C2** FOR MAPS 48 - 61

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C3	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"
V2	MILLING OF EXISTING ASPHALT PAVEMENT 0" - 1.25"
V3	MILLING OF EXISTING ASPHALT PAVEMENT 0" - 1.5"

8/17/99

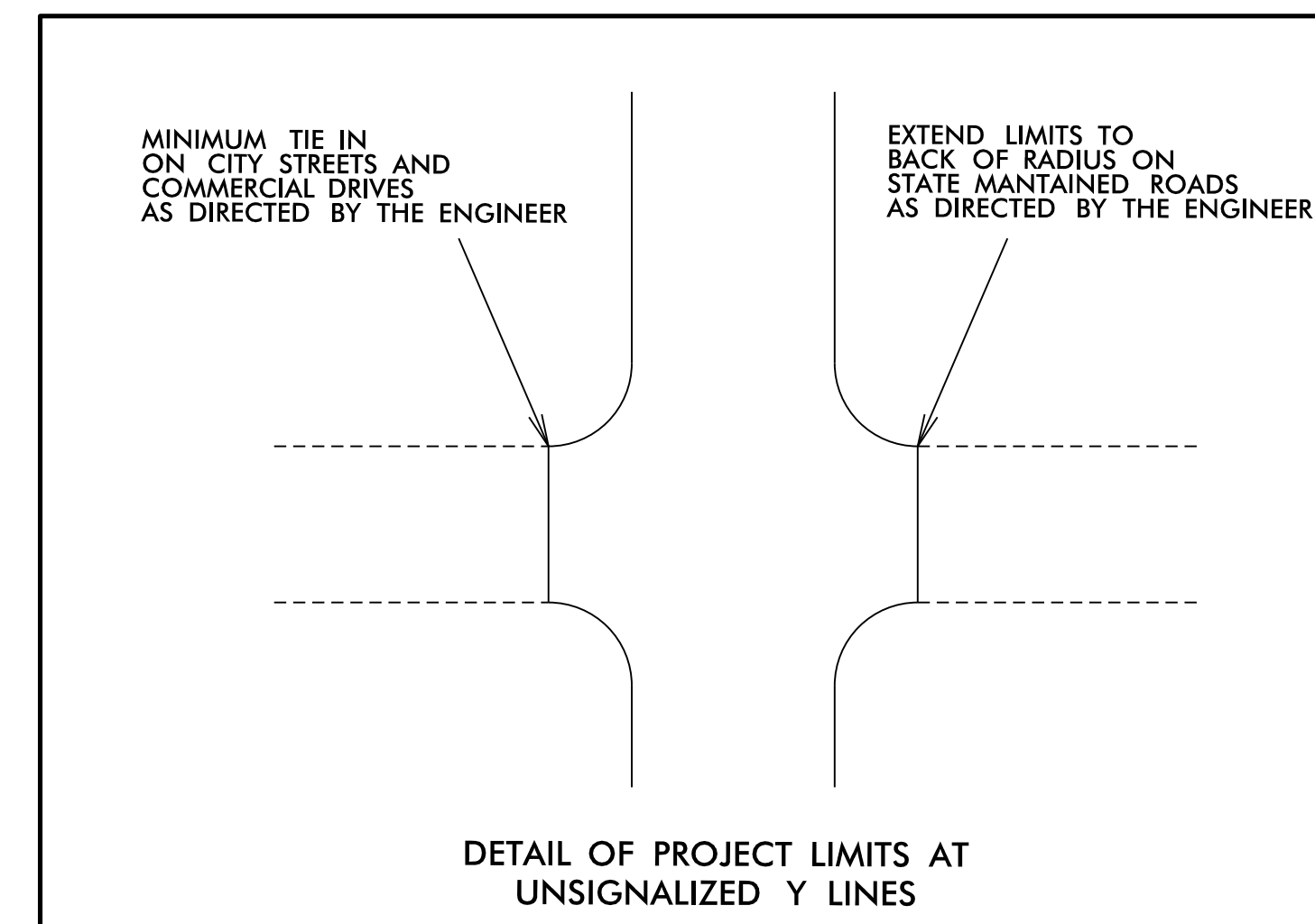
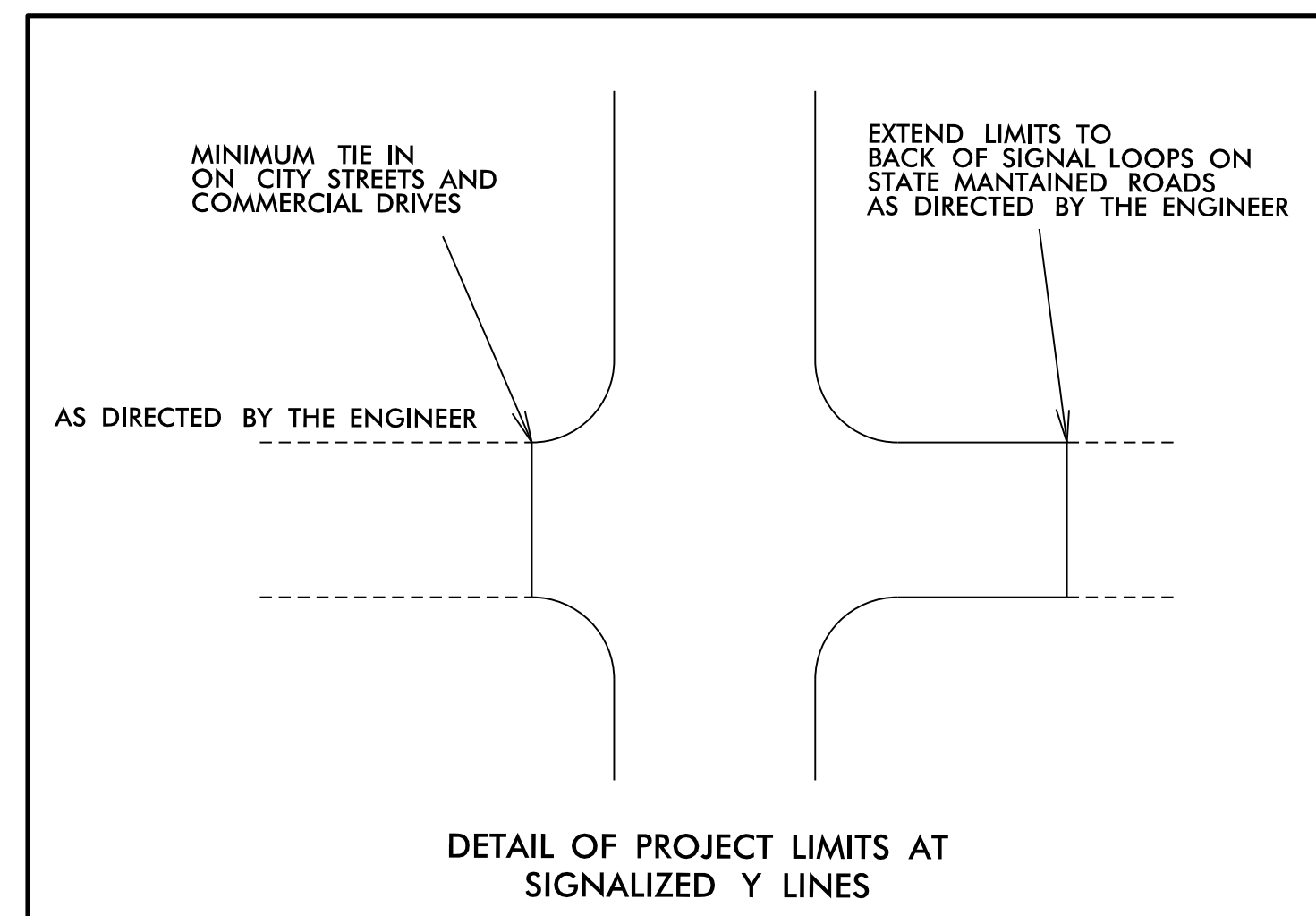
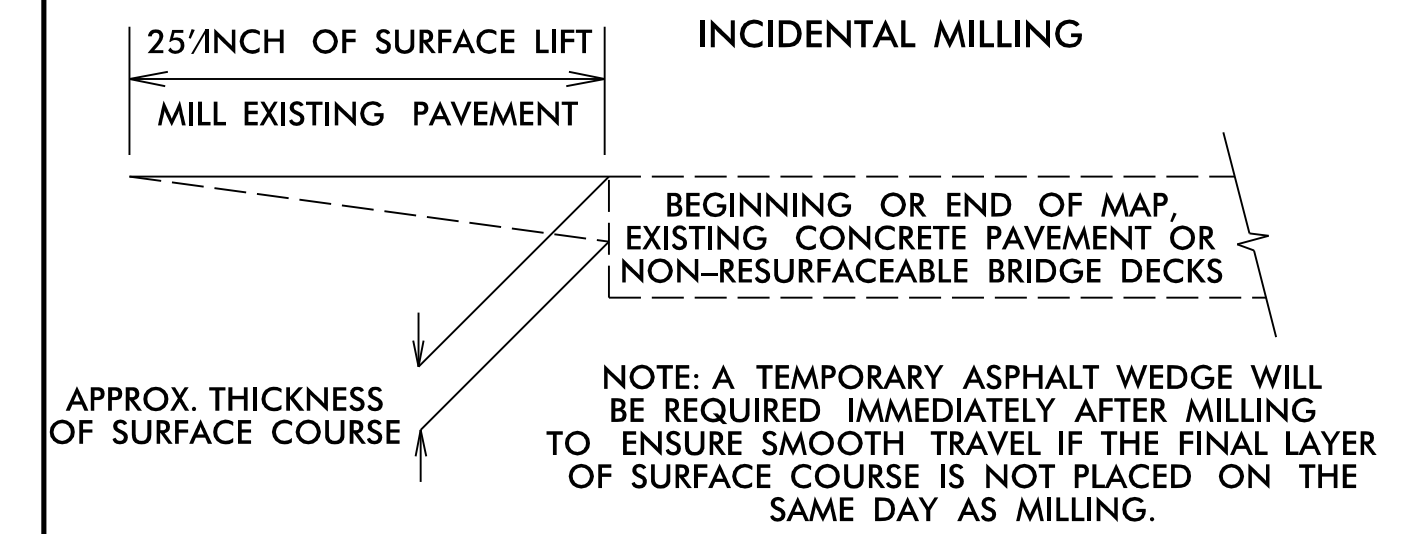


NOTES

ALL UNPAVED S.R. ROADS TO BE RESURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT.
 ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.
 EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.
 BRIDGES TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.

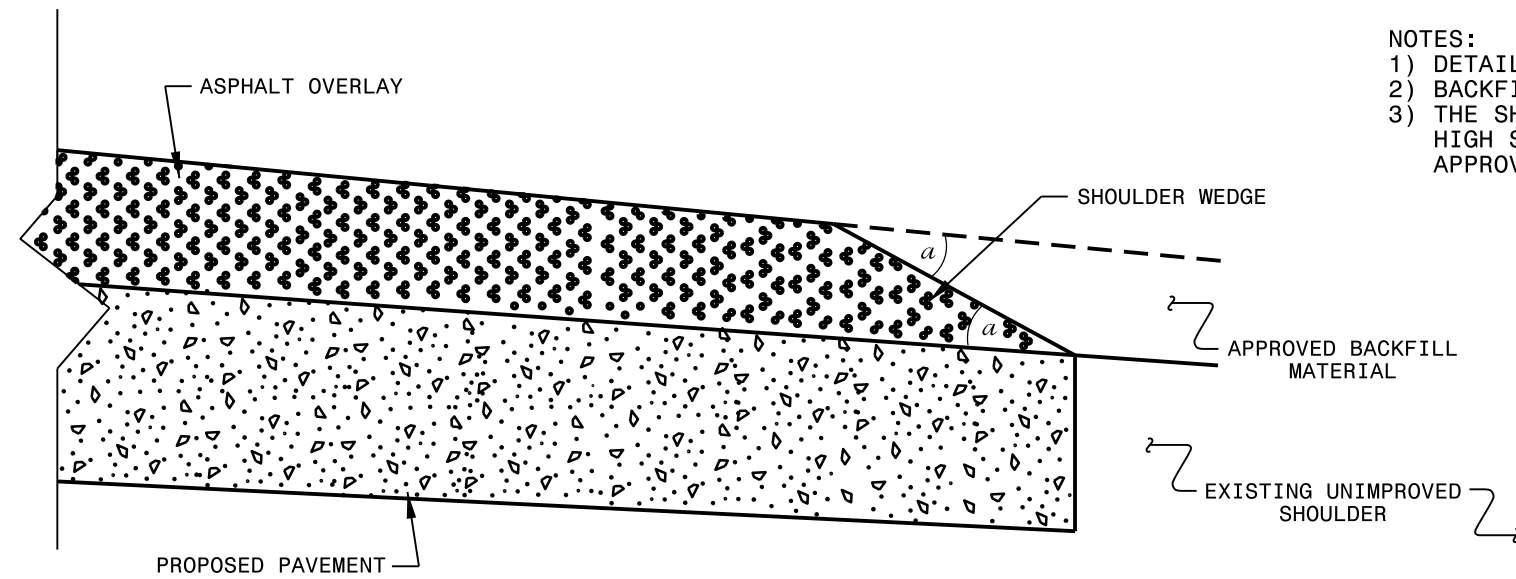
NOTES TO CONTRACTOR

Perform the work in accordance with Section 607 of the January 2018 North Carolina Department of Transportation Standard Specifications for Roads and Structures. Resurfacing will be accomplished at the same time as the milling operation.



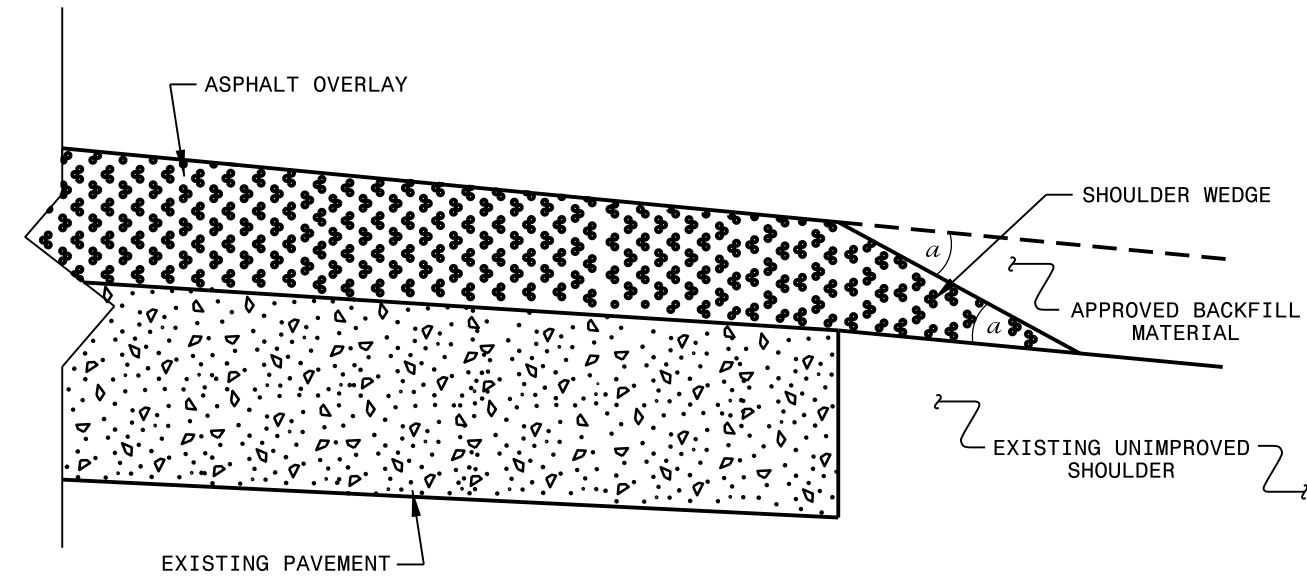
NOTES:

- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
- 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
- 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



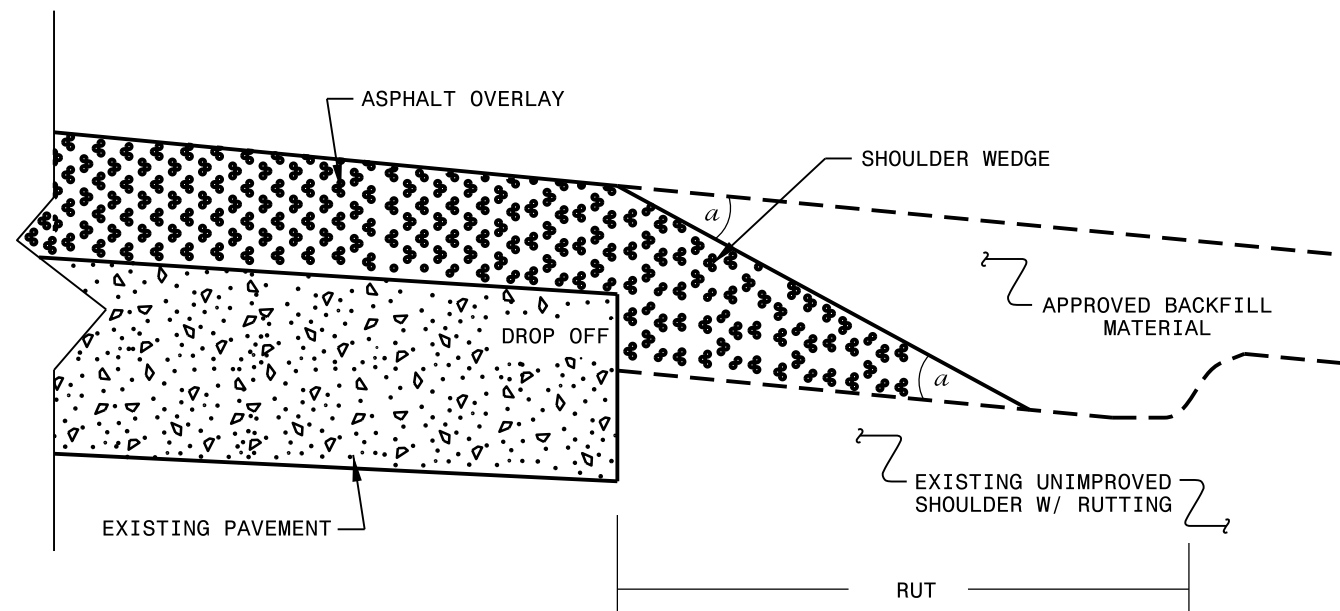
SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)

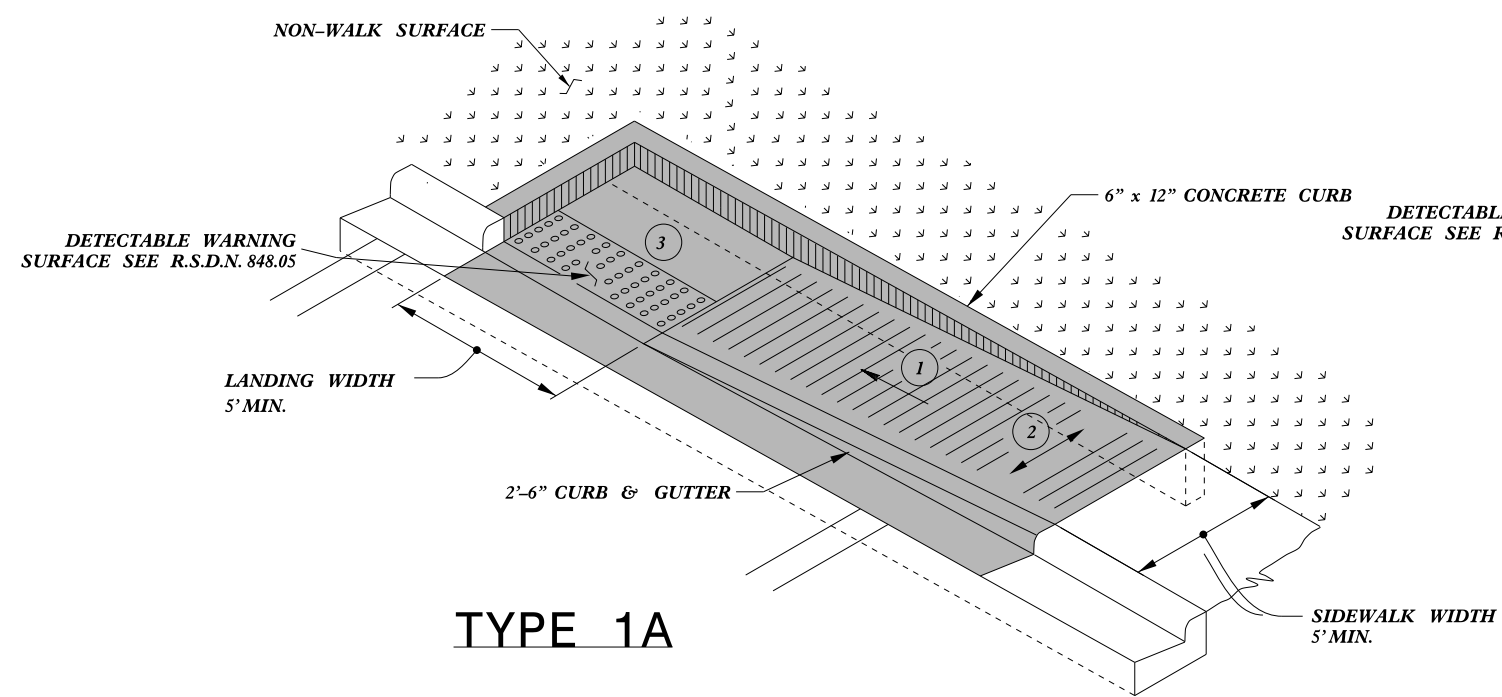


SHOULDER WEDGE DETAIL

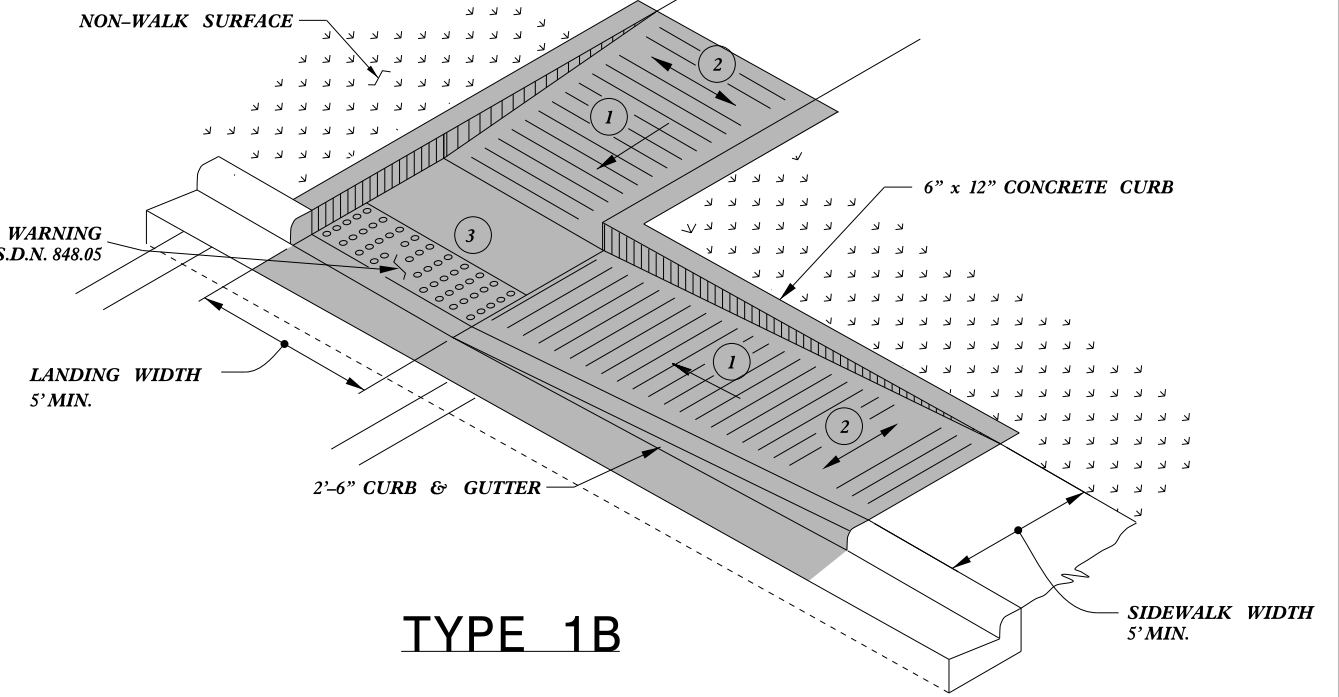
(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

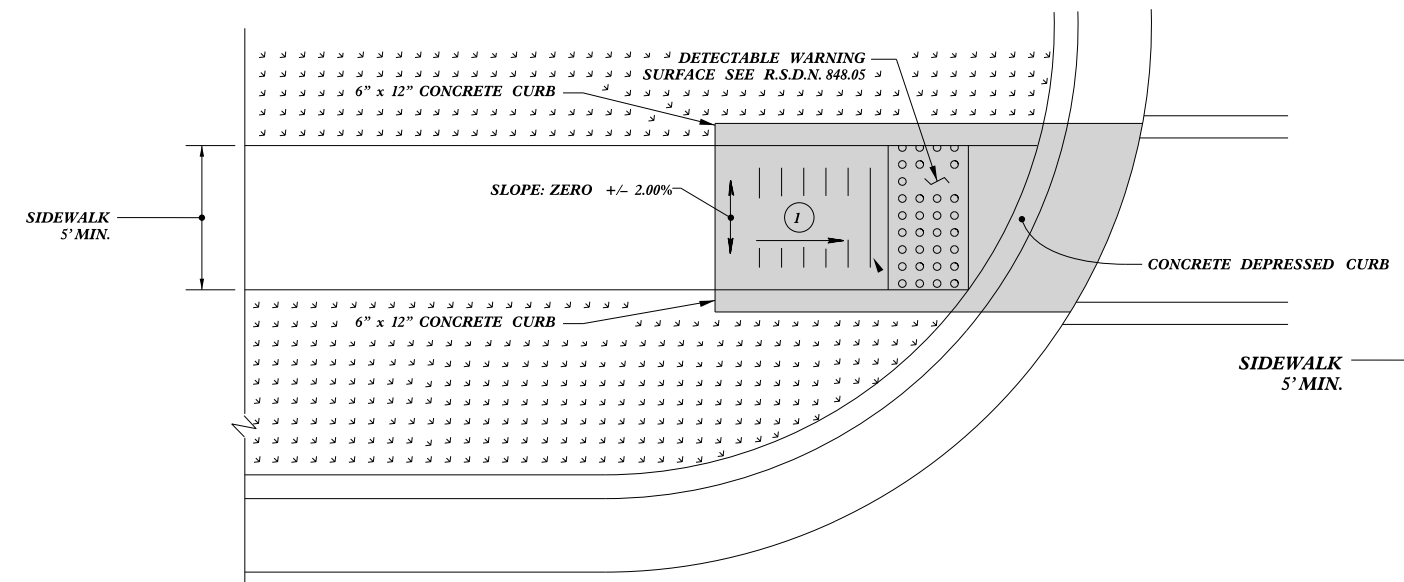
CONTRACT STANDARDS AND DEVELOPMENT UNIT		
Office 919-707-6950 FAX 919-250-4119		
SHOULDER WEDGE DETAILS		
ORIGINAL BY: T.SPELL	DATE: 7-19-11	
MODIFIED BY:	DATE: 2/2/16	
CHECKED BY:	DATE:	
FILE SPEC.: szusr/details/stand/shoulderwedgedetail.dgn		



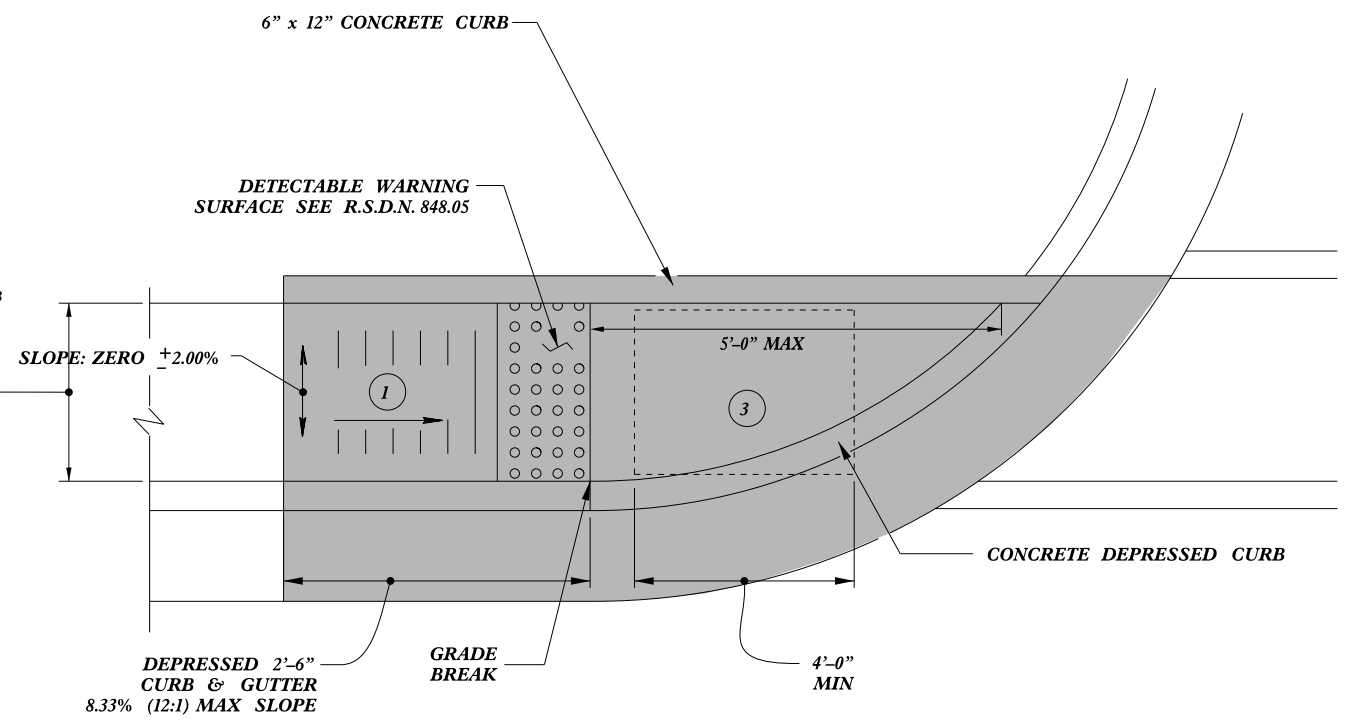
TYPE 1A



TYPE 1B



TYPE 1 Modified



TYPE 1

- 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 1 CURB RAMP

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



DocuSigned by:
J.S. Howerton

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

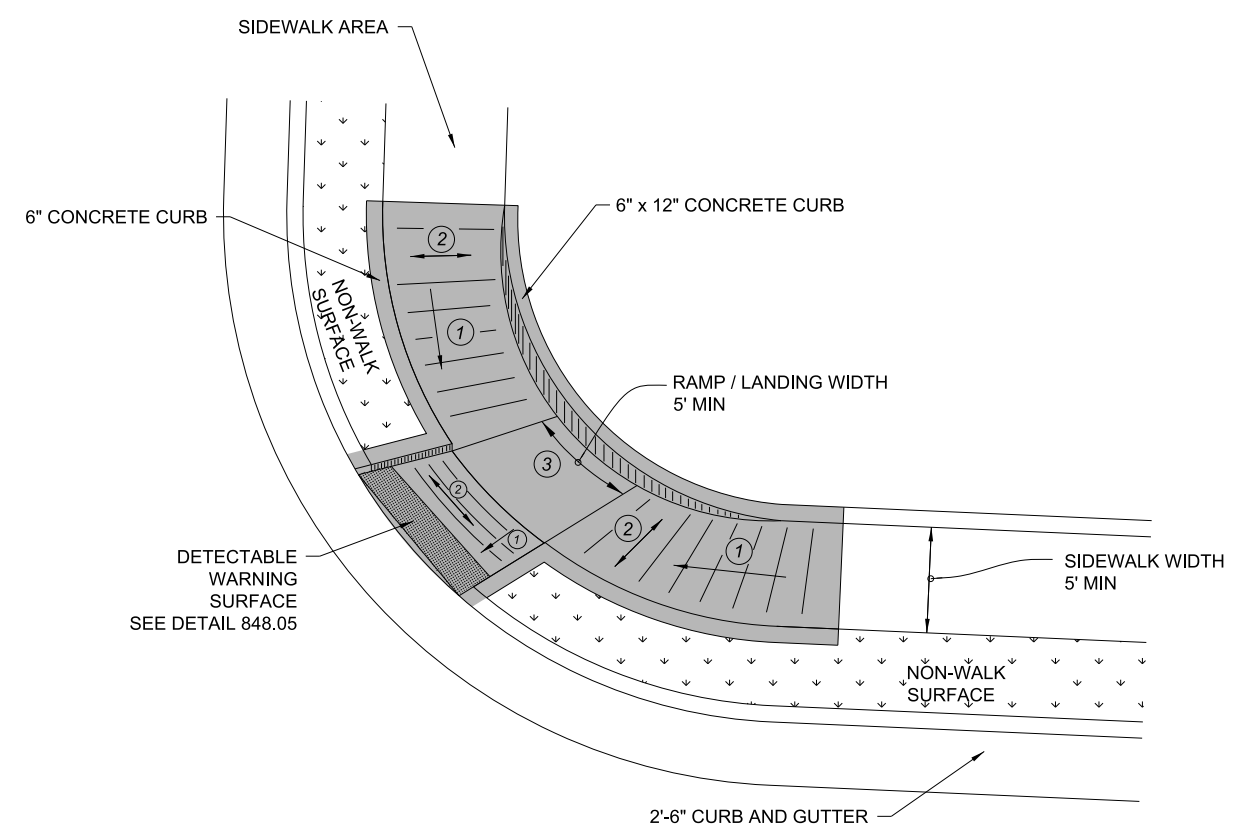
CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS
Directional Ramps

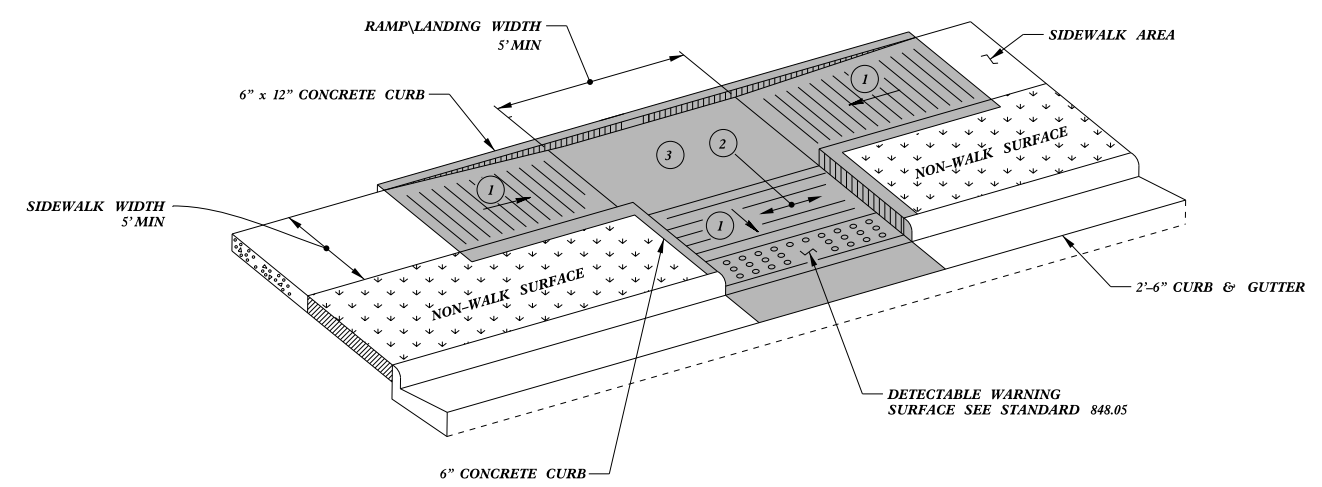
DESIGNED BY: J.S. HOWERTON DATE: 7/7/11
CHECKED BY: DATE:
FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dgn

5/14/99
SYTIME\$\$\$\$
CON\$\$\$\$
SERNAME\$\$\$\$

PAY LIMITS FOR 1 CURB RAMP



TYPE 3 MODIFIED
INSTALLATION IN A RADIUS



TYPE 3

- 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.

1/8/2020



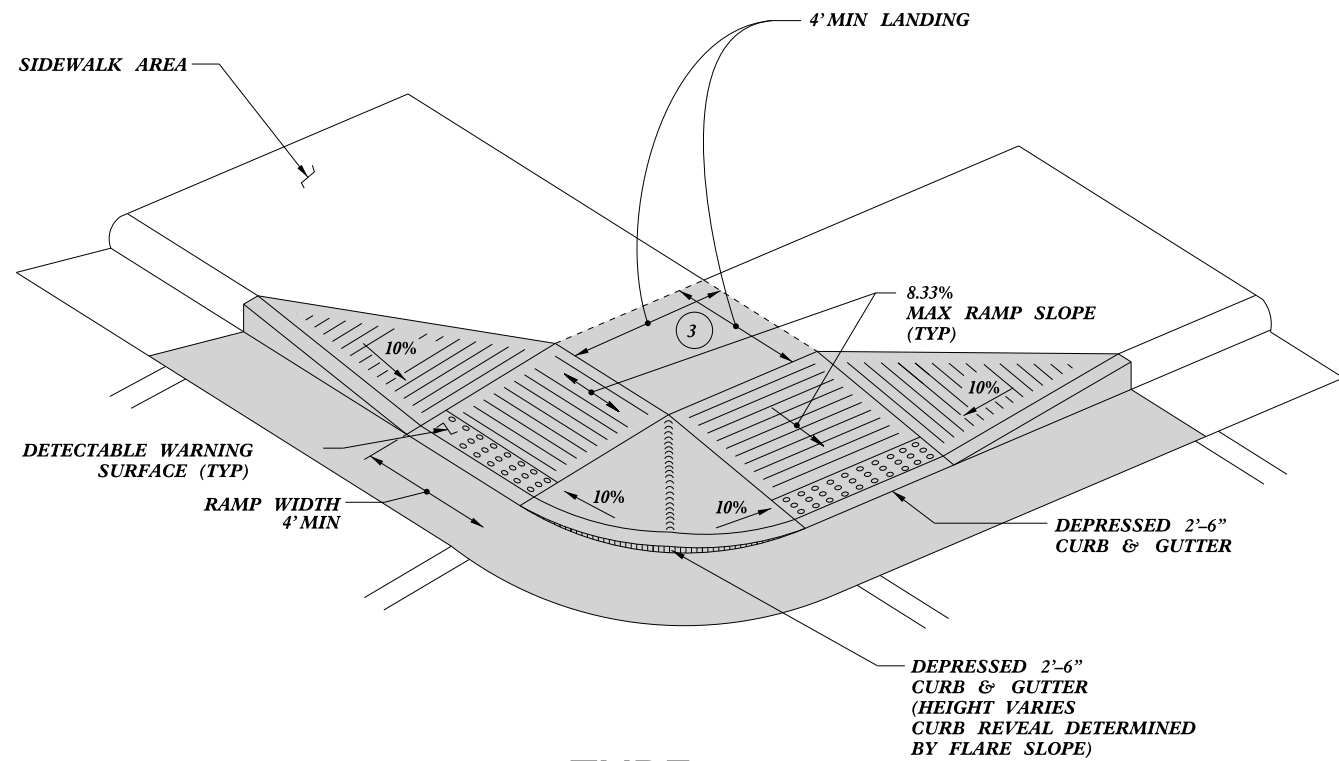
DocuSigned by:
J.S. Howerton
873F3D17DCDC45F

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

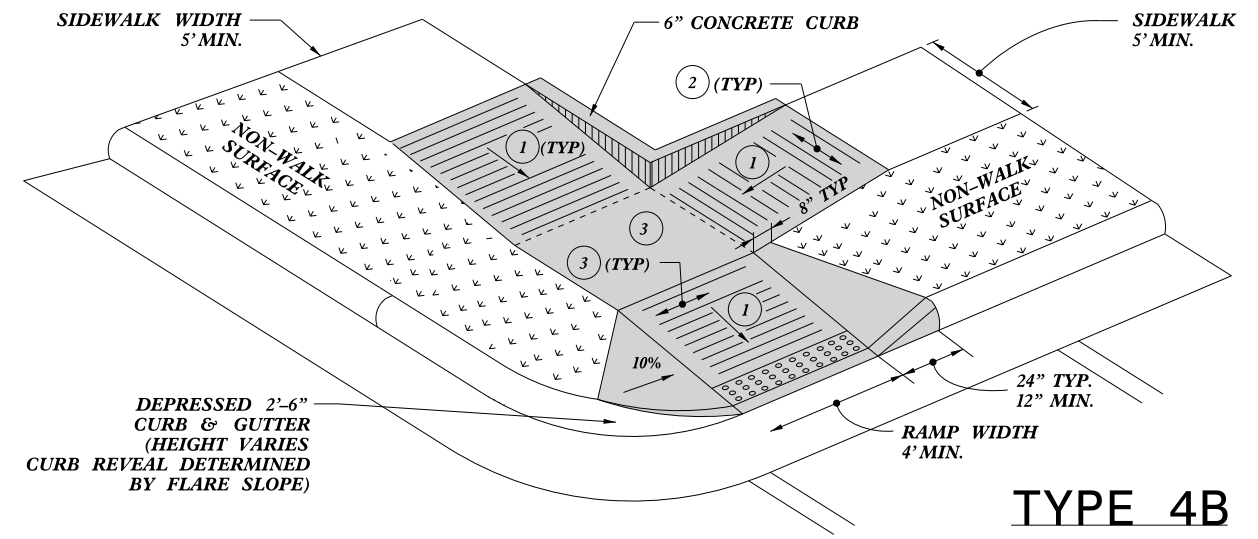
CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
CURB RAMPS	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC: sids/2012CurbRamp/CurbRampDetails.dgn	

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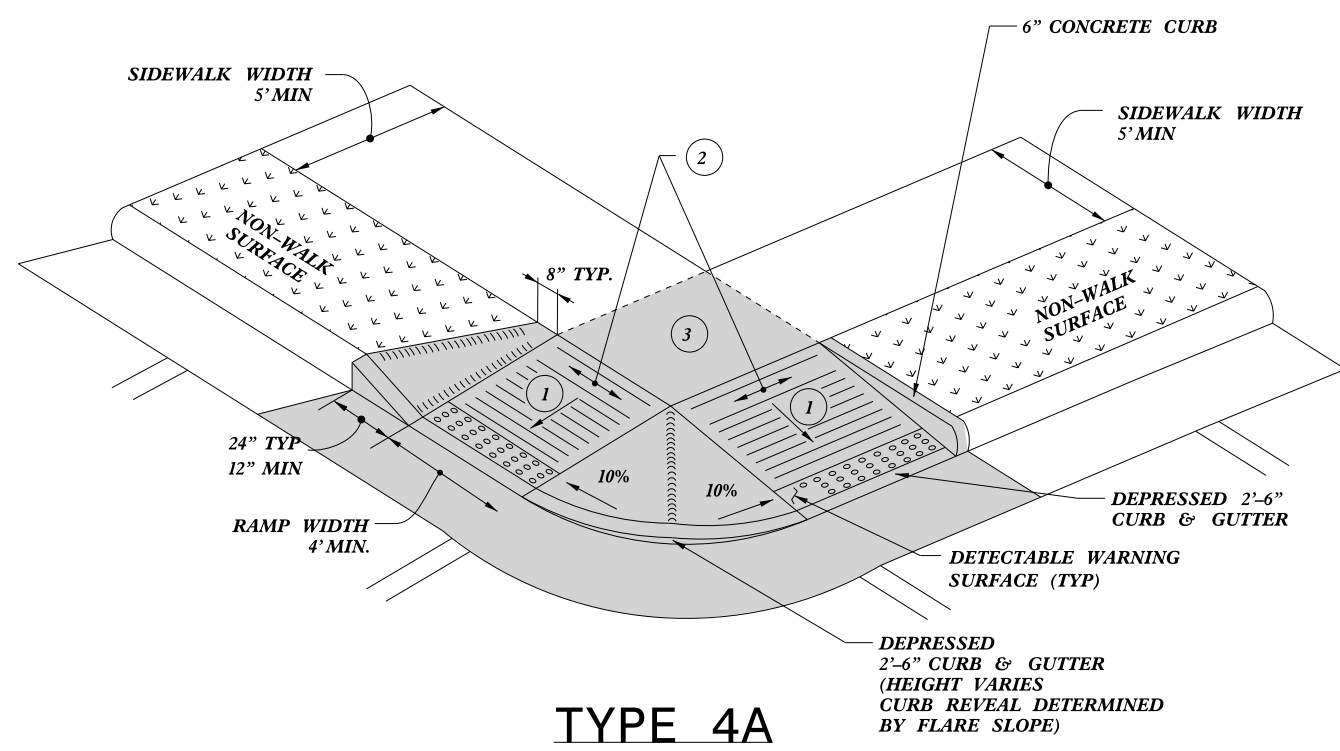
PAY LIMITS FOR 1 OR 2 CURB RAMPS
(CALCULATE BASED ON NUMBER OF SETS
OF TRUNCATED DOMES)



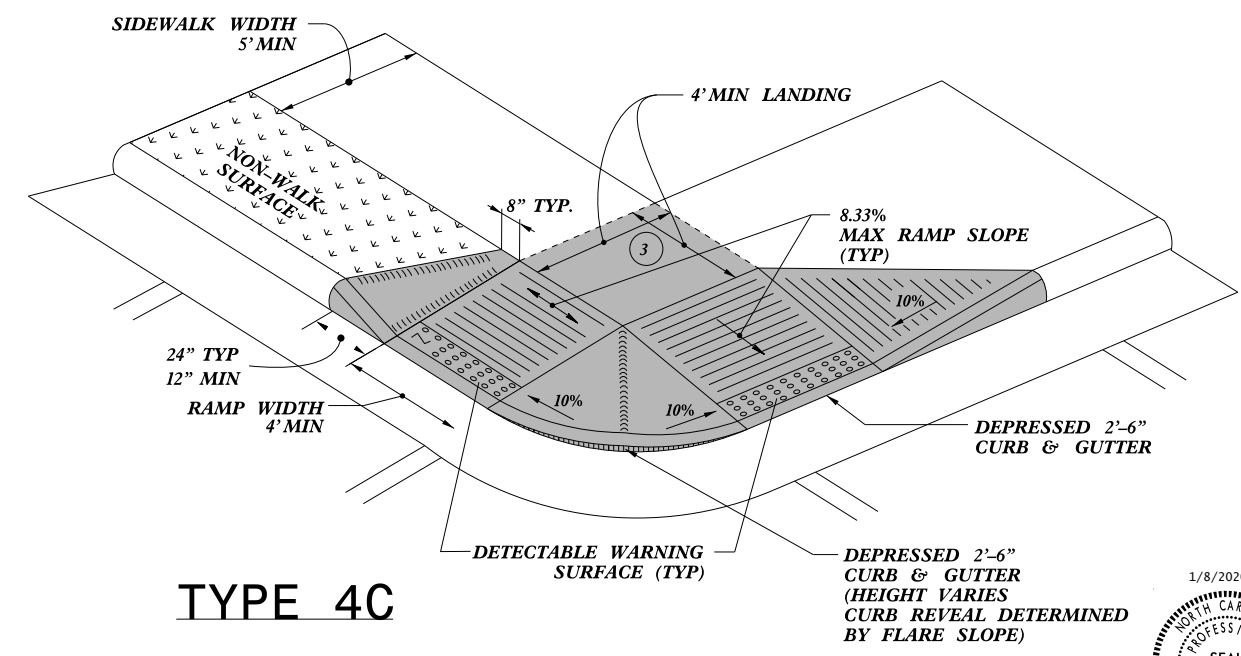
TYPE 4



TYPE 4B

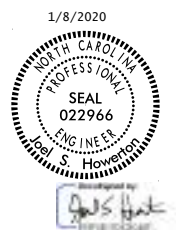


TYPE 4A



TYPE 4C

- 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.



CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

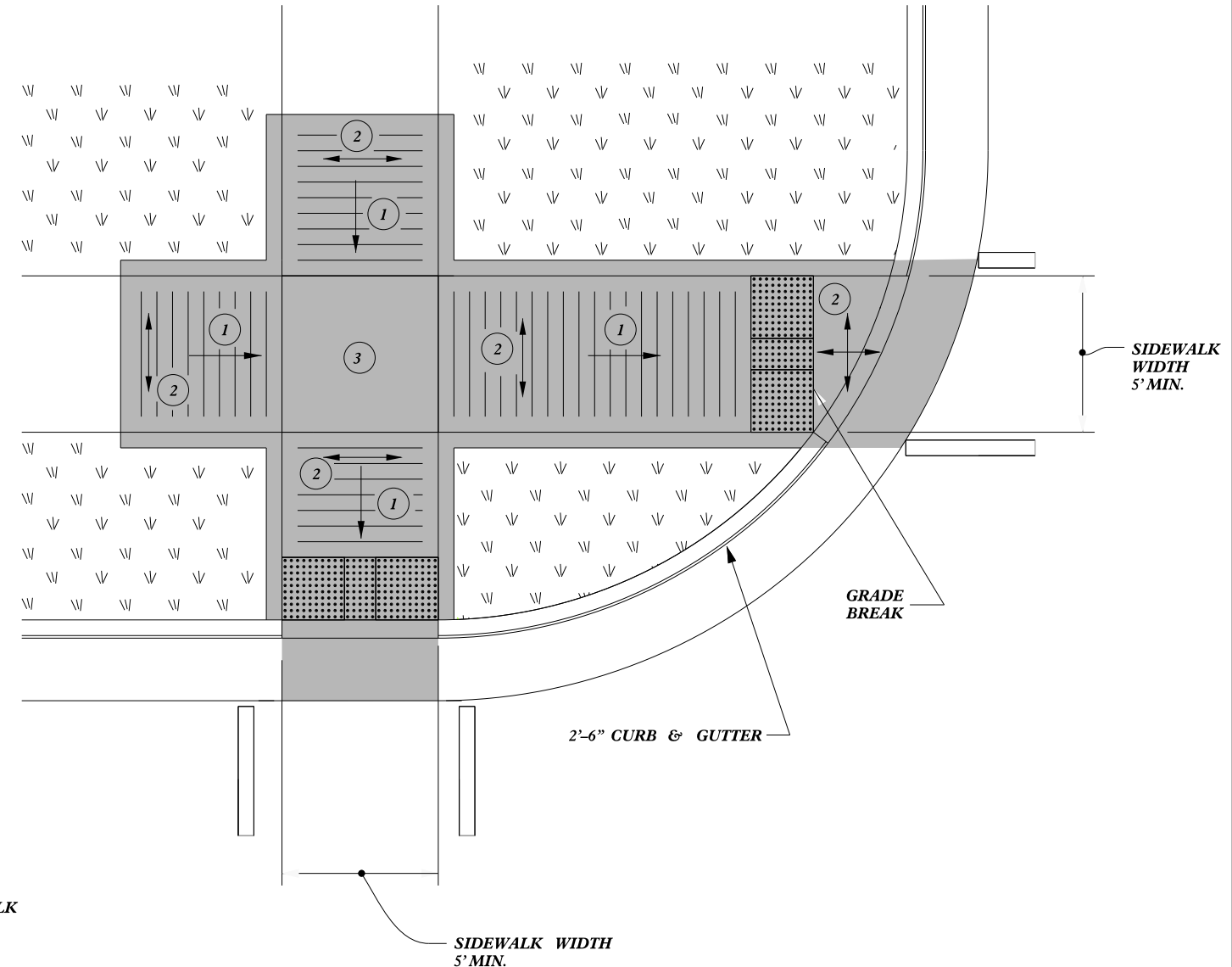
CURB RAMPS

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
 MODIFIED BY: DATE: _____
 CHECKED BY: DATE: _____
 FILE SPEC: stds/2012CurbRamp/CurbRampDetails.dgn

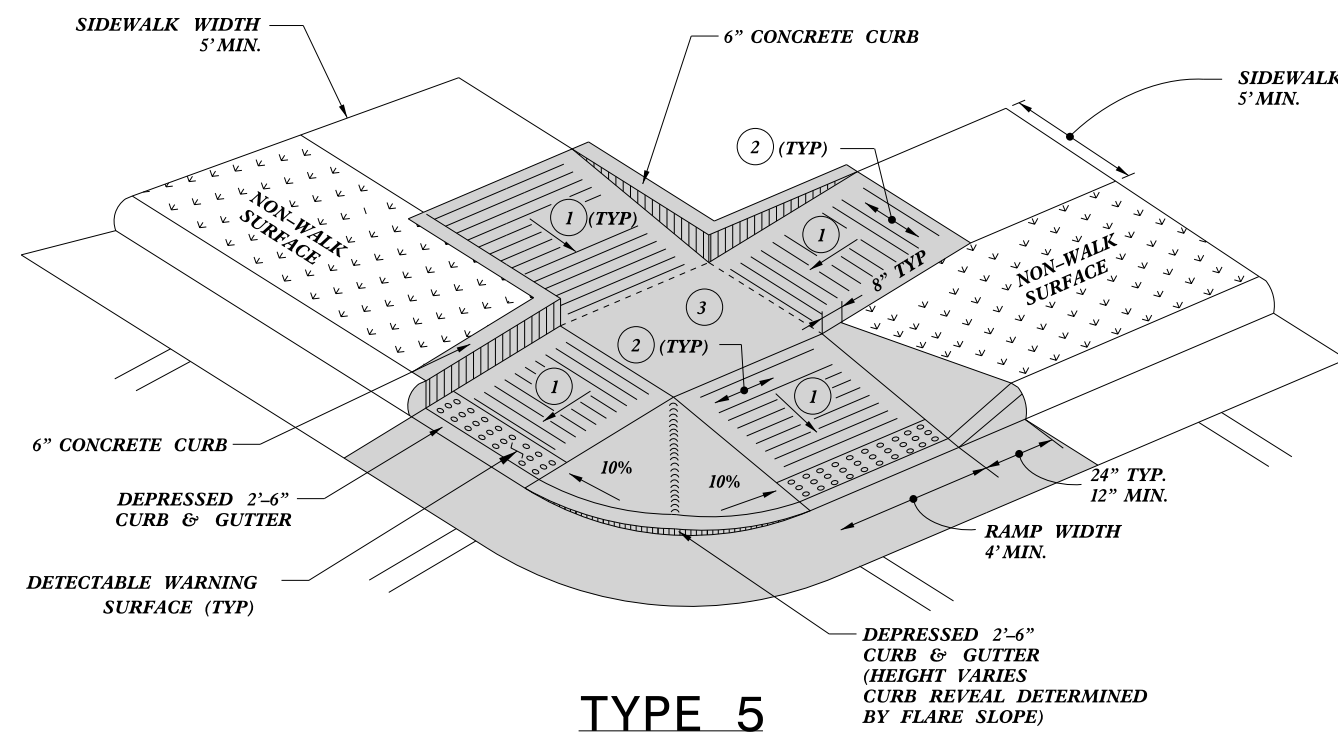
REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

5/14/99
 \$\$\$\$SYTIME\$\$\$\$
 \$\$\$\$CON\$\$\$\$
 \$\$\$\$SERNAME\$\$\$\$

PAY LIMITS FOR 1 OR 2 CURB RAMPS
 (CALCULATE BASED ON NUMBER OF SETS
 OF TRUNCATED DOMES)



TYPE 5A



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.

1/8/2020



DocuSigned by:
J. S. Howerton
 073F3D170C0C45F...

CONTRACT STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

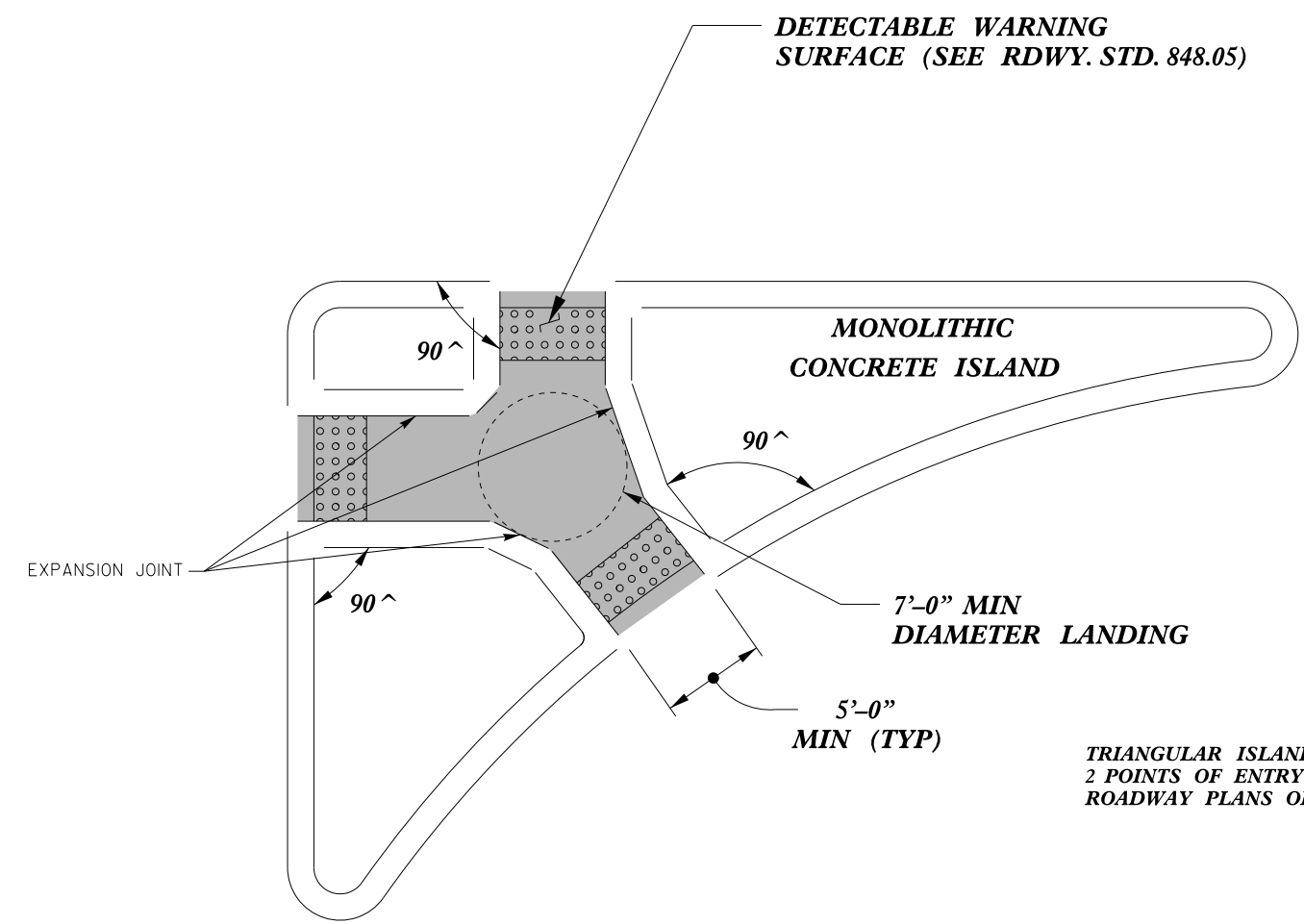
CURB RAMPS

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
 MODIFIED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 FILE SPEC: sids/2012CurbRamp/CurbRampDetails.dgn

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

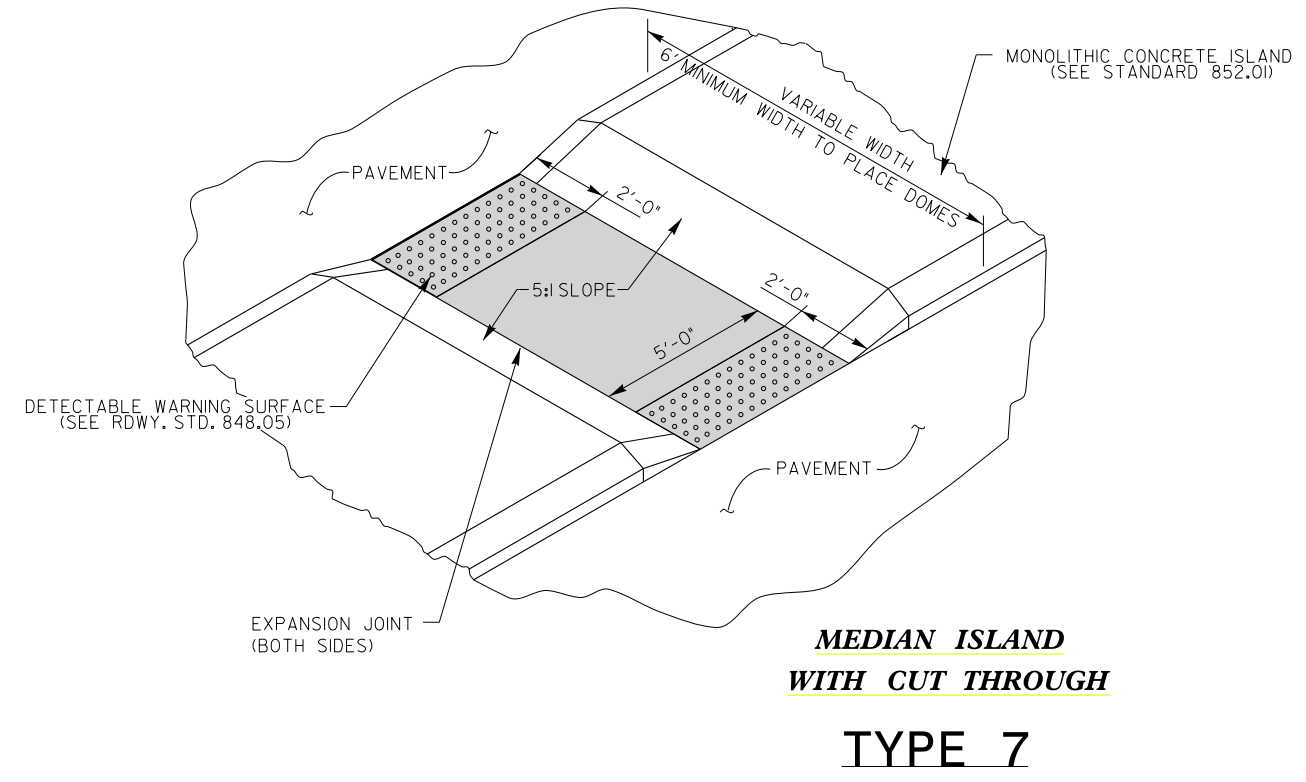
5/14/99
 \$\$\$\$\$\$SYTIME\$\$\$\$\$
 \$\$\$\$\$\$CON\$\$\$\$\$
 \$\$\$\$\$\$SERNAME\$\$\$\$\$

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

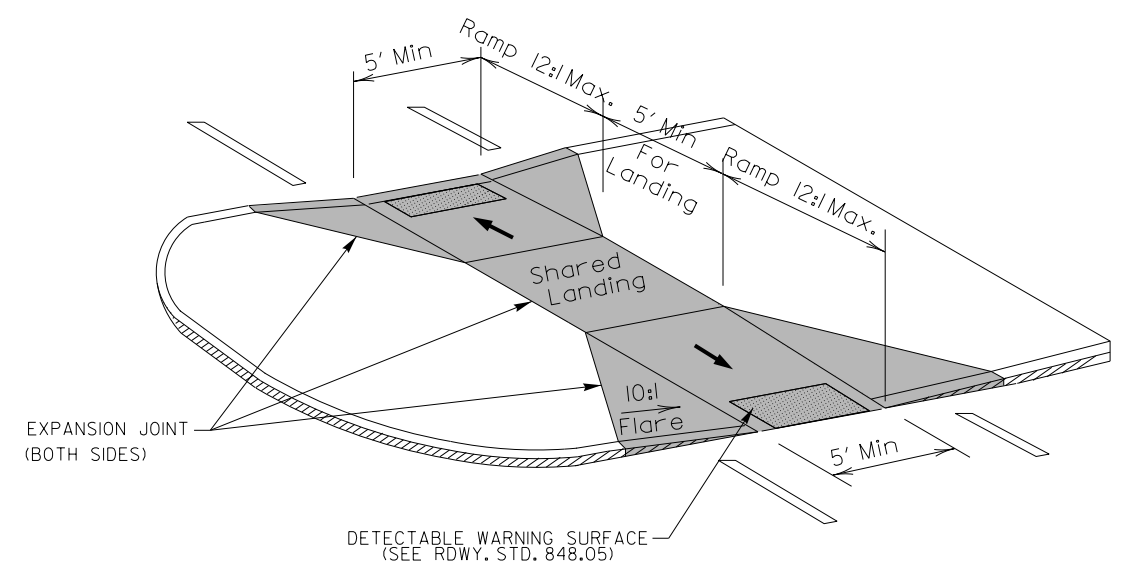


TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY
2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE
ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

**TRIANGULAR ISLAND
WITH CUT THROUGH
TYPE 6**



**MEDIAN ISLAND
WITH CUT THROUGH
TYPE 7**



**MEDIAN ISLAND
CURB RAMPS
TYPE 8**

1/8/2020

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

**CONTRACT STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS
Median or Turn Lane Islands

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC: sids/2012CurbRamp/CurbRampDetails.dgn



5/14/99
\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$CON\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

SUMMARY OF QUANTITIES

Project Number:	2022 North
WBS Number:	2021CPT.05.21.20921.1 2021CPT.05.21.10921.1
County:	Wake

Project Number	County	Municipality	Resurfacing Route	2549000000-E	2591000000-E	4695000000-E	4025000000-E	4102000000-N	4072000000-E	2600000000-N	2613000000-N	2605000000-N	2759000000-E
				2'-6" Concrete Curb & Gutter	4" Concrete Sidewalk	8" X 90 MIL White Thermo	Contractor Furnished, Type E Sign	Sign Erection, Type E	Supports, 3-lb Steel U-Channel	Retrofit Existing Curb Ramps	Remove and Replace Curb Ramps	Concrete Curb Ramps	Remove Curb Ramps
				LF	SY	LF	SF	EA	LF	EA	EA	EA	EA
2022 North	Wake	Raleigh	Lynn Rd From SR 1826 To US 70	302	103	0	0	0	0	14	32	0	22
2022 North	Wake	Raleigh	Lead Mine Rd From SR 5147 To SR 1829	270	84	0	0	0	0	14	34	0	17
2022 North	Wake	Raleigh	Old Lead Mine Rd From SR 1820 To SR 1005	206	58	106	22	2	25	5	30	2	13
2022 North	Wake	Raleigh	Baileywick Rd From SR 1005 To Dead End	142	45	0	0	0	0	4	4	0	8
2022 North	Wake	Raleigh / Wake Forest	US 1 NB From / To U-5307A Limits To / From SR 2045	0	0	0	0	0	0	2	0	0	0
2022 North	Wake	Wake Forest	W Oak Ave From US 1 ALT To END C&G	0	0	0	0	0	0	0	0	1	0
2022 North	Wake	Wake Forest	Harris Rd From SR 1931 To US 1 BUS	0	0	0	0	0	0	1	0	0	0
GRAND TOTAL				920	290	106	22	2	25	40	100	3	60

SUMMARY OF QUANTITIES - LYNN RD FROM SR 1826 TO US 70

Municipality:	Raleigh
Project Number:	2022 North
WBS Number:	2021CPT.05.21.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	4695000000-E	4025000000-E	4102000000-N	4072000000-E	2600000000-N	2613000000-N	2605000000-N	2759000000-E	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	8" X 90 MIL White Thermo LF	Contractor Furnished, Type E Sign SF	Sign Erection, Type E EA	Supports, 3-lb Steel U-Channel LF	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
16861	1	SR-1827 (Lynn Rd)	End of Sidewalk (400ft West of Grove Barton Rd)	17									1	Remove Ramp
16862	1	SR-1827 (Lynn Rd)	End of Sidewalk (400ft West of Grove Barton Rd)									1		Type1Modified
16860	1	SR-1827 (Lynn Rd)	End of Sidewalk (400ft West of Grove Barton Rd)	15									1	Remove Ramp
16865	2	SR-1827 (Lynn Rd)	Grove Barton Rd									1		Standard - 848.06
16866	2	SR-1827 (Lynn Rd)	Grove Barton Rd							1				RetrofitWarnings
16867	2	SR-1827 (Lynn Rd)	Grove Barton Rd							1				RetrofitWarnings
16868	2	SR-1827 (Lynn Rd)	Grove Barton Rd							1				RetrofitWarnings
16869	3	SR-1827 (Lynn Rd)	Hilburn Dr	14	7								1	Remove Ramp
16870	3	SR-1827 (Lynn Rd)	Hilburn Dr									1		Standard - 848.06
16871	3	SR-1827 (Lynn Rd)	Hilburn Dr									1		Standard - 848.06
16872	3	SR-1827 (Lynn Rd)	Hilburn Dr									1		Standard - 848.06
16887	3	SR-1827 (Lynn Rd)	Hilburn Dr									1		Standard - 848.06
16888	3	SR-1827 (Lynn Rd)	Hilburn Dr									1		Standard - 848.06
16889	3	SR-1827 (Lynn Rd)	Hilburn Dr									1		Standard - 848.06
16890	3	SR-1827 (Lynn Rd)	Hilburn Dr	14	6								1	Remove Ramp
16881	4	SR-1827 (Lynn Rd)	Lynnwood Plaza (3721 Lynn Rd) Entrance									1		Type1Modified
16882	4	SR-1827 (Lynn Rd)	Lynnwood Plaza (3721 Lynn Rd) Entrance									1		Type1Modified
16873	5	SR-1827 (Lynn Rd)	Pleasant Pines Dr									1		Type1Modified
16874	5	SR-1827 (Lynn Rd)	Pleasant Pines Dr	14									1	Remove Ramp
16875	5	SR-1827 (Lynn Rd)	Pleasant Pines Dr									1		Type1Modified
16876	5	SR-1827 (Lynn Rd)	Pleasant Pines Dr	14	5								1	Remove Ramp
16877	5	SR-1827 (Lynn Rd)	SR-1824 (Pleasant Pines Dr)	15	8								1	Remove Ramp
16878	5	SR-1827 (Lynn Rd)	SR-1824 (Pleasant Pines Dr)	12	6								1	Remove Ramp
16895	6	SR-1827 (Lynn Rd)	Baywood Dr									1		Type1Modified
16896	6	SR-1827 (Lynn Rd)	Baywood Dr	13									1	Remove Ramp
16897	6	SR-1827 (Lynn Rd)	Baywood Dr									1		Type1Modified
16898	6	SR-1827 (Lynn Rd)	Baywood Dr	13									1	Remove Ramp
16919	7	SR-1827 (Lynn Rd)	Spring Dr									1		Type1Modified
16918	7	SR-1827 (Lynn Rd)	Spring Dr	12	6								1	Remove Ramp
16920	7	SR-1827 (Lynn Rd)	Spring Dr	13	5								1	Remove Ramp
16921	7	SR-1827 (Lynn Rd)	Spring Dr									1		Type3Modified
16899	8	SR-1827 (Lynn Rd)	Daltrey Ct	12	4								1	Remove Ramp
16900	8	SR-1827 (Lynn Rd)	Daltrey Ct									1		Type1Modified
16901	8	SR-1827 (Lynn Rd)	Daltrey Ct									1		Type1Modified
16902	8	SR-1827 (Lynn Rd)	Daltrey Ct	18	8								1	Remove Ramp
16913	9	SR-1827 (Lynn Rd)	Queen Anne's Dr (East Entrance)									1		Type1Modified
16915	9	SR-1827 (Lynn Rd)	Queen Anne's Dr (West Entrance)		12							1		Type1Modified
16916	9	SR-1827 (Lynn Rd)	Queen Anne's Dr (West Entrance)									1		Type1Modified
16917	9	SR-1827 (Lynn Rd)	Queen Anne's Dr (West Entrance)	14	7								1	Remove Ramp
16914	9	SR-1827 (Lynn Rd)	Queen Anne's Dr (West Entrance)	16	6								1	Remove Ramp
16911	9	SR-1827 (Lynn Rd)	Queen Anne's Dr (East Entrance)	13	6								1	Remove Ramp
16912	9	SR-1827 (Lynn Rd)	Queen Anne's Dr (East Entrance)									1		Type3Modified
16906	10	SR-1827 (Lynn Rd)	Glendower Rd	11	6								1	Remove Ramp
16907	10	SR-1827 (Lynn Rd)	Glendower Rd	15									1	Remove Ramp
16904	10	SR-1827 (Lynn Rd)	Glendower Rd							1				RetrofitWarnings
16903	10	SR-1827 (Lynn Rd)	Glendower Rd							1				RetrofitWarnings
16908	10	SR-1827 (Lynn Rd)	Glendower Rd							1				RetrofitWarnings
16905	10	SR-1827 (Lynn Rd)	Glendower Rd							1				RetrofitWarnings
16909	10	SR-1827 (Lynn Rd)	Glendower Rd							1				RetrofitWarnings
16922	11	SR-1827 (Lynn Rd)	Mafole Ct	13									1	Remove Ramp
16933	11	SR-1827 (Lynn Rd)	Baptist Grove Church (7109 Leesville Rd) Lynn Rd Entrance									1		Type4B
16935	11	SR-1827 (Lynn Rd)	Baptist Grove Church (7109 Leesville Rd) Lynn Rd Entrance									1		Type1Modified
16936	11	SR-1827 (Lynn Rd)	Baptist Grove Church (7109 Leesville Rd) Lynn Rd Entrance	10									1	Remove Ramp
16934	11	SR-1827 (Lynn Rd)	Baptist Grove Church (7109 Leesville Rd) Lynn Rd Entrance	10	8								1	Remove Ramp
16937	12	SR-1827 (Lynn Rd)	Lake Lynn Park (7370 Leesville Rd) Entrance									1		Type1B
16938	12	SR-1827 (Lynn Rd)	Lake Lynn Park (7370 Leesville Rd) Entrance									1		Type1Modified
16939	13	SR-1827 (Lynn Rd)	Lynn Townes Ct									1		Type1Modified
16940	13	SR-1827 (Lynn Rd)	Lynn Townes Ct									1		Type1B
16960	13	SR-1827 (Lynn Rd)	Madison Ridge Way									1		Type1B
Sub-Total for Lynn Rd From SR 1826 To US 70				298	100	0	0	0	0	8	29	0	22	

SUMMARY OF QUANTITIES - LYNN RD FROM SR 1826 TO US 70

Municipality:	Raleigh
Project Number:	2022 North
WBS Number:	2021CPT.05.21.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	4695000000-E	4025000000-E	4102000000-N	4072000000-E	2600000000-N	2613000000-N	2605000000-N	2759000000-E	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	8" X 90 MIL White Thermo LF	Contractor Furnished, Type E Sign SF	Sign Erection, Type E EA	Supports, 3-lb Steel U-Channel LF	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
16961	13	SR-1827 (Lynn Rd)	Madison Ridge Way									1		Type1B
16941	14	SR-1827 (Lynn Rd)	SR-1826 (Ray Rd)							1				RetrofitWarnings
16942	14	SR-1827 (Lynn Rd)	SR-1826 (Ray Rd)	4	3							1		Standard - 848.06
16944	14	SR-1827 (Lynn Rd)	SR-1826 (Ray Rd)							1				RetrofitWarnings
16956	14	SR-1827 (Lynn Rd)	SR-1826 (Ray Rd)							1				RetrofitWarnings
16957	14	SR-1827 (Lynn Rd)	SR-1826 (Ray Rd)							1				RetrofitWarnings
16958	14	SR-1827 (Lynn Rd)	SR-1826 (Ray Rd)							1				RetrofitWarnings
16959	14	SR-1827 (Lynn Rd)	SR-1826 (Ray Rd)							1				RetrofitWarnings
16943	14	SR-1827 (Lynn Rd)	SR-1826 (Ray Rd)								1			Standard - 848.06
Sub-Total				4	3	0	0	0	0	6	3	0	0	
Sub-Total for Lynn Rd From SR 1826 To US 70				302	103	0	0	0	0	14	32	0	22	

SUMMARY OF QUANTITIES - LEAD MINE RD FROM SR 5147 TO SR 1829

Municipality: Raleigh
 Project Number: 2022 North
 WBS Number: 2021CPT.05.21.20921.1
 County: Wake

Ramp ID	Inset Map Number	Route 1	Route 2	254900000-E	259100000-E	469500000-E	402500000-E	410200000-N	407200000-E	260000000-N	261300000-N	260500000-N	275900000-E	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	8" X 90 MIL White Thermo LF	Contractor Furnished, Type E Sign SF	Sign Erection, Type E EA	Supports, 3-lb Steel U-Channel LF	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
6926	1	SR-1829 (Strickland Rd)	SR-1820 (Lead Mine Rd)											RetrofitWarnings
6927	1	SR-1829 (Strickland Rd)	SR-1820 (Lead Mine Rd)											RetrofitWarnings
6928	1	SR-1829 (Strickland Rd)	SR-1820 (Lead Mine Rd)											RetrofitWarnings
6929	1	SR-1829 (Strickland Rd)	SR-1820 (Lead Mine Rd)											RetrofitWarnings
6930	1	SR-1829 (Strickland Rd)	SR-1820 (Lead Mine Rd)											RetrofitWarnings
6931	1	SR-1829 (Strickland Rd)	SR-1820 (Lead Mine Rd)											RetrofitWarnings
17909	2	SR-1820 (Lead Mine Rd)	Quarter Pt									1		Type1Modified
17910	2	SR-1820 (Lead Mine Rd)	Quarter Pt									1		Type1Modified
24328	2	SR-1820 (Lead Mine Rd)	Quarter Pt	15	9								1	Remove Ramp
24327	2	SR-1820 (Lead Mine Rd)	Quarter Pt	15	9								1	Remove Ramp
17911	3	SR-1820 (Lead Mine Rd)	Mahonia Ct									1		Type1Modified
17912	3	SR-1820 (Lead Mine Rd)	Mahonia Ct									1		Type1Modified
17913	4	SR-1820 (Lead Mine Rd)	Opal Ct									1		Type1Modified
17914	4	SR-1820 (Lead Mine Rd)	Opal Ct								1			RetrofitWarnings
17915	4	SR-1820 (Lead Mine Rd)	Opal Ct	14	5								1	Remove Ramp
17916	5	SR-1820 (Lead Mine Rd)	Hillbrow Ln									1		Type1Modified
17917	5	SR-1820 (Lead Mine Rd)	Hillbrow Ln									1		Type1Modified
17918	5	SR-1820 (Lead Mine Rd)	Hillbrow Ln									1		Type4B
17919	5	SR-1820 (Lead Mine Rd)	Hillbrow Ln									1		Type4B
17920	6	SR-1820 (Lead Mine Rd)	Forum Dr	15									1	Remove Ramp
17921	6	SR-1820 (Lead Mine Rd)	Forum Dr									1		Type1Modified
17922	6	SR-1820 (Lead Mine Rd)	Forum Dr	15	9								1	Remove Ramp
17923	6	SR-1820 (Lead Mine Rd)	Forum Dr	15	9								1	Remove Ramp
17924	6	SR-1820 (Lead Mine Rd)	Forum Dr									1		Type3Modified
17925	6	SR-1820 (Lead Mine Rd)	Forum Dr	17	9								1	Remove Ramp
17926	7	SR-1820 (Lead Mine Rd)	Bridgeport Dr									1		Type1Modified
17927	7	SR-1820 (Lead Mine Rd)	Deltona Dr									1		Type1Modified
17928	7	SR-1820 (Lead Mine Rd)	Deltona Dr									1		Type1Modified
17929	7	SR-1820 (Lead Mine Rd)	Bridgeport Dr									1		Type1Modified
17932	8	SR-1820 (Lead Mine Rd)	Bridgeport Dr									1		Standard - 848.06
17933	8	SR-1820 (Lead Mine Rd)	Bridgeport Dr									1		Standard - 848.06
17934	8	SR-1820 (Lead Mine Rd)	Bridgeport Dr								1			RetrofitWarnings
17935	8	SR-1820 (Lead Mine Rd)	Bridgeport Dr								1			RetrofitWarnings
17930	8	SR-1820 (Lead Mine Rd)	Bridgeport Dr									1		Standard - 848.06
17931	8	SR-1820 (Lead Mine Rd)	Bridgeport Dr									1		Standard - 848.06
18222	9	SR-1820 (Lead Mine Rd)	Windsor Ridge Dr	16	7								1	Remove Ramp
18223	9	SR-1820 (Lead Mine Rd)	Windsor Ridge Dr									1		Type1Modified
18224	9	SR-1820 (Lead Mine Rd)	Windsor Ridge Dr	18	7								1	Remove Ramp
18225	9	SR-1820 (Lead Mine Rd)	Vestavia Woods Dr	13									1	Remove Ramp
18226	9	SR-1820 (Lead Mine Rd)	Vestavia Woods Dr									1		Type1Modified
18227	9	SR-1820 (Lead Mine Rd)	Vestavia Woods Dr	13									1	Remove Ramp
18228	9	SR-1820 (Lead Mine Rd)	Vestavia Woods Dr									1		Type1Modified
18217	10	SR-1820 (Lead Mine Rd)	Ravenscar Dr	16									1	Remove Ramp
18218	10	SR-1820 (Lead Mine Rd)	Ravenscar Dr									1		Type1Modified
18219	10	SR-1820 (Lead Mine Rd)	Ravenscar Dr									1		Type3Modified
18220	10	SR-1820 (Lead Mine Rd)	Ravenscar Dr	22	11								1	Remove Ramp
18215	11	SR-1820 (Lead Mine Rd)	Mayfaire Crest Ln									1		Type1Modified
18216	11	SR-1820 (Lead Mine Rd)	Mayfaire Crest Ln									1		Type1Modified
18207	12	SR-1820 (Lead Mine Rd)	Paverstone Dr									1		Type1Modified
18208	12	SR-1820 (Lead Mine Rd)	Paverstone Dr	15	5								1	Remove Ramp
18209	12	SR-1820 (Lead Mine Rd)	Paverstone Dr									1		Type1Modified
18210	12	SR-1820 (Lead Mine Rd)	Paverstone Dr	15	4								1	Remove Ramp
18211	12	SR-1820 (Lead Mine Rd)	Exxon Gas Station (7713 Lead Mine Rd) Entrance	18									1	Remove Ramp
18212	12	SR-1820 (Lead Mine Rd)	Exxon Gas Station (7713 Lead Mine Rd) Entrance									1		Type1Modified
18214	12	SR-1820 (Lead Mine Rd)	Exxon Gas Station (7713 Lead Mine Rd) Entrance									1		Type1Modified
18213	12	SR-1820 (Lead Mine Rd)	Exxon Gas Station (7713 Lead Mine Rd) Entrance	18									1	Remove Ramp
18199	13	SR-1820 (Lead Mine Rd)	Greystone Village Shopping Center (7713 Lead Mine Rd) Entrance									1		RetrofitWarnings
18200	13	SR-1820 (Lead Mine Rd)	Greystone Village Shopping Center (7713 Lead Mine Rd) Entrance									1		RetrofitWarnings
18201	13	SR-1820 (Lead Mine Rd)	SR-5147 (Old Lead Mine Rd)									1		RetrofitWarnings
18203	13	SR-1820 (Lead Mine Rd)	SR-5147 (Old Lead Mine Rd)									1		Type8
18204	13	SR-1820 (Lead Mine Rd)	SR-5147 (Old Lead Mine Rd)									1		RetrofitWarnings
Sub-Total				270	84	0	0	0	0	0	13	31	0	17

SUMMARY OF QUANTITIES - LEAD MINE RD FROM SR 5147 TO SR 1829

Municipality:	Raleigh
Project Number:	2022 North
WBS Number:	2021CPT.05.21.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	4695000000-E	4025000000-E	4102000000-N	4072000000-E	2600000000-N	2613000000-N	2605000000-N	2759000000-E	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	8" X 90 MIL White Thermo LF	Contractor Furnished, Type E Sign SF	Sign Erection, Type E EA	Supports, 3-lb Steel U-Channel LF	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
18205	13	SR-1820 (Lead Mine Rd)	SR-5147 (Old Lead Mine Rd)									1		Standard - 848.06
18206	13	SR-1820 (Lead Mine Rd)	SR-5147 (Old Lead Mine Rd)									1		Standard - 848.06
18197	13	SR-1820 (Lead Mine Rd)	Greystone Village Shopping Center (7713 Lead Mine Rd) Entrance							1				RetrofitWarnings
18198	13	SR-1820 (Lead Mine Rd)	Greystone Village Shopping Center (7713 Lead Mine Rd) Entrance									1		Standard - 848.06
Sub-Total				0	0	0	0	0	0	0	1	3	0	
Sub-Total for Lead Mine Rd From SR 5147 To SR 1829				270	84	0	0	0	0	0	14	34	0	17

SUMMARY OF QUANTITIES - OLD LEAD MINE RD FROM SR 1820 TO SR 1005

Municipality: Raleigh
 Project Number: 2022 North
 WBS Number: 2021CPT.05.21.20921.1
 County: Wake

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	4695000000-E	4025000000-E	4102000000-N	4072000000-E	2600000000-N	2613000000-N	2605000000-N	2759000000-E	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	8" X 90 MIL White Thermo LF	Contractor Furnished, Type E Sign SF	Sign Erection, Type E EA	Supports, 3-lb Steel U-Channel LF	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
19223	1	SR-5147 (Old Lead Mine Rd)	Paverstone Dr									1		Type1Modified
19224	1	SR-5147 (Old Lead Mine Rd)	Paverstone Dr	15									1	Remove Ramp
19225	1	SR-5147 (Old Lead Mine Rd)	Paverstone Dr	15									1	Remove Ramp
19226	1	SR-5147 (Old Lead Mine Rd)	Paverstone Dr									1		Type1Modified
19233	2	SR-5147 (Old Lead Mine Rd)	Grey Oak Dr									1		Type2AModified
19234	2	SR-5147 (Old Lead Mine Rd)	Grey Oak Dr									1		Type1Modified
24343	2	Old Lead Mine Rd	Foxwood Dr									1		Type2B
19229	3	SR-5147 (Old Lead Mine Rd)	Tanworth Dr	17	7								1	Remove Ramp
19232	3	SR-5147 (Old Lead Mine Rd)	Tanworth Dr	15	8								1	Remove Ramp
19227	4	SR-5147 (Old Lead Mine Rd)	Lead Mine Elementary School (8301 Old Lead Mine Rd) South Entrance							1				RetrofitWarnings
19228	4	SR-5147 (Old Lead Mine Rd)	Lead Mine Elementary School (8301 Old Lead Mine Rd) South Entrance									1		Type1Modified
19235	5	SR-5147 (Old Lead Mine Rd)	Upper Lake Dr	17	9	106	22	2	25			1		Type3
19236	5	SR-5147 (Old Lead Mine Rd)	Upper Lake Dr									1		Type1B
19237	5	SR-5147 (Old Lead Mine Rd)	Upper Lake Dr									1		Type1B
19238	5	SR-5147 (Old Lead Mine Rd)	Upper Lake Dr	17	9								1	Remove Ramp
19244	5	SR-5147 (Old Lead Mine Rd)	Lead Mine Elementary School (8301 Old Lead Mine Rd) North Entrance									1		Type1Modified
19245	5	SR-5147 (Old Lead Mine Rd)	Lead Mine Elementary School (8301 Old Lead Mine Rd) North Entrance									1		Type2AModified
19239	6	SR-5147 (Old Lead Mine Rd)	Monument Ln							1				RetrofitWarnings
19240	6	SR-5147 (Old Lead Mine Rd)	Monument Ln							1				RetrofitWarnings
19246	7	SR-5147 (Old Lead Mine Rd)	Bright Horizons (8516 Old Lead Mine Rd) Entrance									1		Type1Modified
19247	7	SR-5147 (Old Lead Mine Rd)	Bright Horizons (8516 Old Lead Mine Rd) Entrance									1		Type1B
19250	8	SR-5147 (Old Lead Mine Rd)	Prince George Ln	14	6								1	Remove Ramp
19251	8	SR-5147 (Old Lead Mine Rd)	Prince George Ln									1		Type2AModified
19252	8	SR-5147 (Old Lead Mine Rd)	Prince George Ln									1		Type1Modified
19253	8	SR-5147 (Old Lead Mine Rd)	Prince George Ln	14	6								1	Remove Ramp
19268	8	SR-5147 (Old Lead Mine Rd)	The Forum at six forks Old Lead Mine Rd Entrance									1		Type2AModified
19266	8	SR-5147 (Old Lead Mine Rd)	The Forum at six forks Old Lead Mine Rd Entrance									1		Type1Modified
19267	8	SR-5147 (Old Lead Mine Rd)	The Forum at six forks Old Lead Mine Rd Entrance	10									1	Remove Ramp
19269	8	SR-5147 (Old Lead Mine Rd)	The Forum at six forks Old Lead Mine Rd Entrance	15									1	Remove Ramp
19260	9	SR-5147 (Old Lead Mine Rd)	SR-5147 (Forum Dr)									1		Type2AModified
19261	9	SR-5147 (Old Lead Mine Rd)	SR-5147 (Forum Dr)	15									1	Remove Ramp
19263	9	SR-5147 (Old Lead Mine Rd)	SR-5147 (Forum Dr)									1		Type7
19264	9	SR-5147 (Old Lead Mine Rd)	SR-5147 (Forum Dr)	17									1	Remove Ramp
19265	9	SR-5147 (Old Lead Mine Rd)	SR-5147 (Forum Dr)									1		Type2AModified
19256	9	SR-5147 (Old Lead Mine Rd)	SR-5147 (Forum Dr)									1		Type3Modified
19257	9	SR-5147 (Old Lead Mine Rd)	SR-5147 (Forum Dr)									1		Type3Modified
19254	9	SR-5147 (Old Lead Mine Rd)	SR-5147 (Forum Dr)									1		Type1Modified
19255	9	SR-5147 (Old Lead Mine Rd)	SR-5147 (Forum Dr)									1		Type3Modified
19259	10	SR-5147 (Forum Dr)	Parking deck (Forum 3) Entrance									1		Type1Modified
19258	10	SR-5147 (Forum Dr)	Parking deck (Forum 3) Entrance									1		Type1Modified
19280	11	SR-5147 (Forum Dr)	Chick-fil-A (8861 Six Forks Rd) Forum Dr Entrance	12	7								1	Remove Ramp
19281	11	SR-5147 (Forum Dr)	Chick-fil-A (8861 Six Forks Rd) Forum Dr Entrance									1		Type1Modified
19282	11	SR-5147 (Forum Dr)	Chick-fil-A (8861 Six Forks Rd) Forum Dr Entrance									1		Type1Modified
19284	11	SR-5147 (Forum Dr)	Parking deck Loading Dock (Forum 3) Entrance									1		Type1Modified
19285	11	SR-5147 (Forum Dr)	Parking deck Loading Dock (Forum 3) Entrance									1		Type1Modified
19286	11	SR-5147 (Forum Dr)	Parking deck Loading Dock (Forum 3) Entrance							1				RetrofitWarnings
19287	11	SR-5147 (Forum Dr)	Parking deck Loading Dock (Forum 3) Entrance							1				RetrofitWarnings
19283	11	SR-5147 (Forum Dr)	Chick-fil-A (8861 Six Forks Rd) Forum Dr Entrance	13	6								1	Remove Ramp
19279	12	SR-1005 (Six Forks Rd)	SR-5147 (Forum Dr)									1		Standard - 848.06
19289	12	SR-1005 (Six Forks Rd)	SR-5147 (Forum Dr)									1		Standard - 848.06
Sub-Total for Old Lead Mine Rd From SR 1820 To SR 1005				206	58	106	22	2	25	5	30	2	13	

SUMMARY OF QUANTITIES - BAILEYWICK RD FROM SR 1005 TO DEAD END

Municipality:	Raleigh
Project Number:	2022 North
WBS Number:	2021CPT.05.21.10921.1
County:	Raleigh

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	4695000000-E	4025000000-E	4102000000-N	4072000000-E	2600000000-N	2613000000-N	2605000000-N	2759000000-E	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	8" X 90 MIL White Thermo LF	Contractor Furnished, Type E Sign SF	Sign Erection, Type E EA	Supports, 3-lb Steel U-Channel LF	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
6916	1	SR-1005 (Six Forks Rd)	SR-1830 (Baileywick Rd)	16	9								1	Remove Ramp
6917	1	SR-1005 (Six Forks Rd)	SR-1830 (Baileywick Rd)							1				RetrofitWarnings
6918	1	SR-1005 (Six Forks Rd)	SR-1830 (Baileywick Rd)							1				RetrofitWarnings
6919	1	SR-1005 (Six Forks Rd)	SR-1830 (Baileywick Rd)	15	9								1	Remove Ramp
6920	1	SR-1005 (Six Forks Rd)	SR-1830 (Baileywick Rd)	15	9								1	Remove Ramp
24326	1	SR-1005 (Six Forks Rd)	SR-1830 (Baileywick Rd)	15	9								1	Remove Ramp
19167	2	SR-1830 (Baileywick Rd)	Windborne United Methodist church (9121 Six Forks Rd) Entrance							1				RetrofitWarnings
19168	2	SR-1830 (Baileywick Rd)	Windborne United Methodist church (9121 Six Forks Rd) Entrance							1				RetrofitWarnings
19159	3	SR-1830 (Baileywick Rd)	Lead Mine Rd	17	9								1	Remove Ramp
19160	3	SR-1830 (Baileywick Rd)	Lead Mine Rd								1			Type3Modified
19161	3	SR-1830 (Baileywick Rd)	Lead Mine Rd								1			Type1Modified
19162	3	SR-1830 (Baileywick Rd)	Lead Mine Rd	22									1	Remove Ramp
19163	3	SR-1830 (Baileywick Rd)	Lead Mine Rd	22									1	Remove Ramp
19164	3	SR-1830 (Baileywick Rd)	Lead Mine Rd								1			Type1Modified
19165	3	SR-1830 (Baileywick Rd)	Lead Mine Rd								1			Type1Modified
19166	3	SR-1830 (Baileywick Rd)	Lead Mine Rd	20									1	Remove Ramp
Sub-Total for Baileywick Rd From SR 1005 To Dead End				142	45	0	0	0	0	4	4	0	8	

SUMMARY OF QUANTITIES - US 1 NB FROM / TO U-5307A LIMITS TO / FROM SR 2045

Municipality:	Raleigh / Wake Forest
Project Number:	2022 North
WBS Number:	2021CPT.05.04.10391.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	4695000000-E	4025000000-E	4102000000-N	4072000000-E	2600000000-N	2613000000-N	2605000000-N	2759000000-E	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	8" X 90 MIL White Thermo LF	Contractor Furnished, Type E Sign SF	Sign Erection, Type E EA	Supports, 3-lb Steel U-Channel LF	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
2036	1	US-1 (Capital Blvd)	River Haven Pl										1	RetrofitWarnings
24319	2	US-1 (Capital Blvd)	SR-2045 (Burlington Mills Rd)										1	RetrofitWarnings
Sub-Total for US 1 NB From / To U-5307A Limits To / From SR 2045				0	0	0	0	0	0	0	2	0	0	

SUMMARY OF QUANTITIES - W OAK AVE FROM US 1 ALT TO END C&G

Municipality:	Wake Forest
Project Number:	2022 North
WBS Number:	2021CPT.05.21.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	4695000000-E	4025000000-E	4102000000-N	4072000000-E	2600000000-N	2613000000-N	2605000000-N	2759000000-E	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	8" X 90 MIL White Thermo LF	Contractor Furnished, Type E Sign SF	Sign Erection, Type E EA	Supports, 3-lb Steel U-Channel LF	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
24334	1	SR-1931 (W Oak Ave)	Remington Woods Dr										1	Type1Modified
Sub-Total for W Oak Ave From US 1 ALT To END C&G				0	0	0	0	0	0	0	0	0	1	

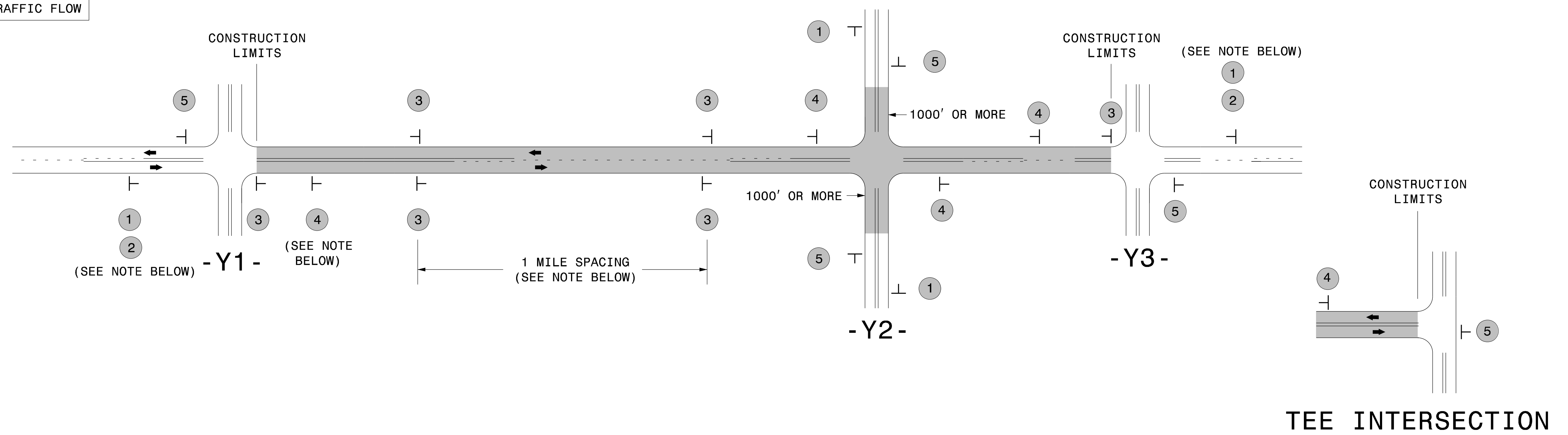
SUMMARY OF QUANTITIES - HARRIS RD FROM SR 1931 TO US 1 BUS

Municipality:	Wake Forest
Project Number:	2022 North
WBS Number:	2021CPT.05.21.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	4695000000-E	4025000000-E	4102000000-N	4072000000-E	2600000000-N	2613000000-N	2605000000-N	2759000000-E	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	8" X 90 MIL White Thermo LF	Contractor Furnished, Type E Sign SF	Sign Erection, Type E EA	Supports, 3-lb Steel U-Channel LF	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
24333	1	SR-5756 (Harris Rd)	Creekwood Townhomes (225 Harris Rd) Entrance							1				RetrofitWarnings
Sub-Total for Harris Rd From SR 1931 To US 1 BUS				0	0	0	0	0	0	1	0	0	0	

SIGNING FOR RESURFACING PROJECTS

LEGEND
 ┆ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

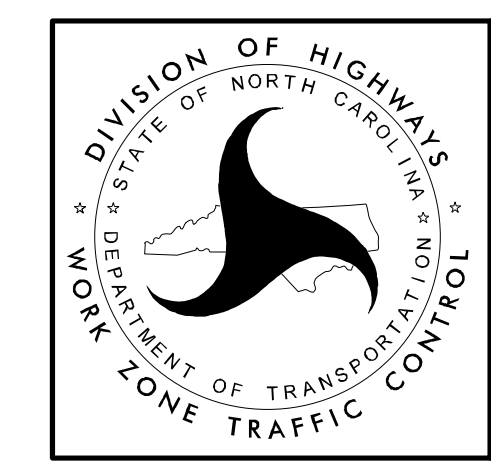
-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1		PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS <p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> W20-1 48" X 48" PLACED 500' IN ADVANCE OF FLAGGER. </div> <div style="text-align: center;"> W20-7 A 48" X 48" PLACED 250' IN ADVANCE OF FLAGGER. </div> </div>
	2		#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)	
	3		- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.	
	4		- THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. - DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. - INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. - A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.	
	5		PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.	

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

MAPS LESS THAN 2 MILES

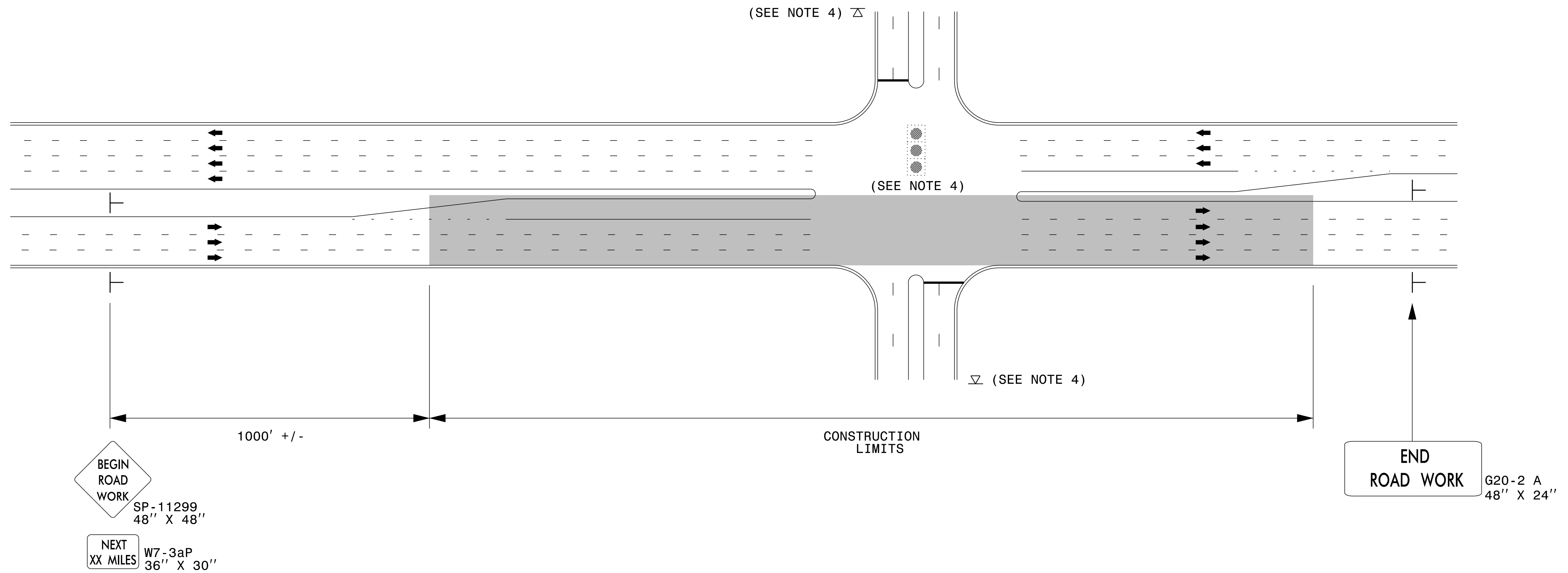
FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.



ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

5/15/2017 S:\TMU\WZTC\Resurfacing\2L2W & AST Resurfacing Details\Resurfacing_AdvWarn_2Ln.dgn User:kadai

URBAN / SUBURBAN WORKZONES

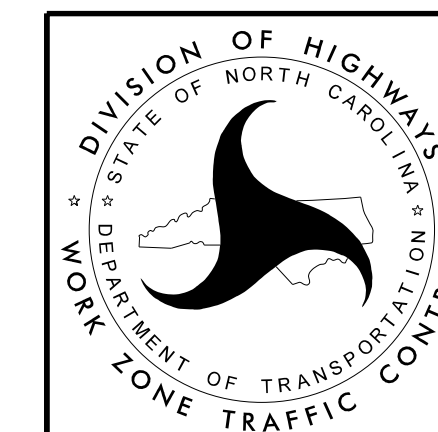


NOTES:

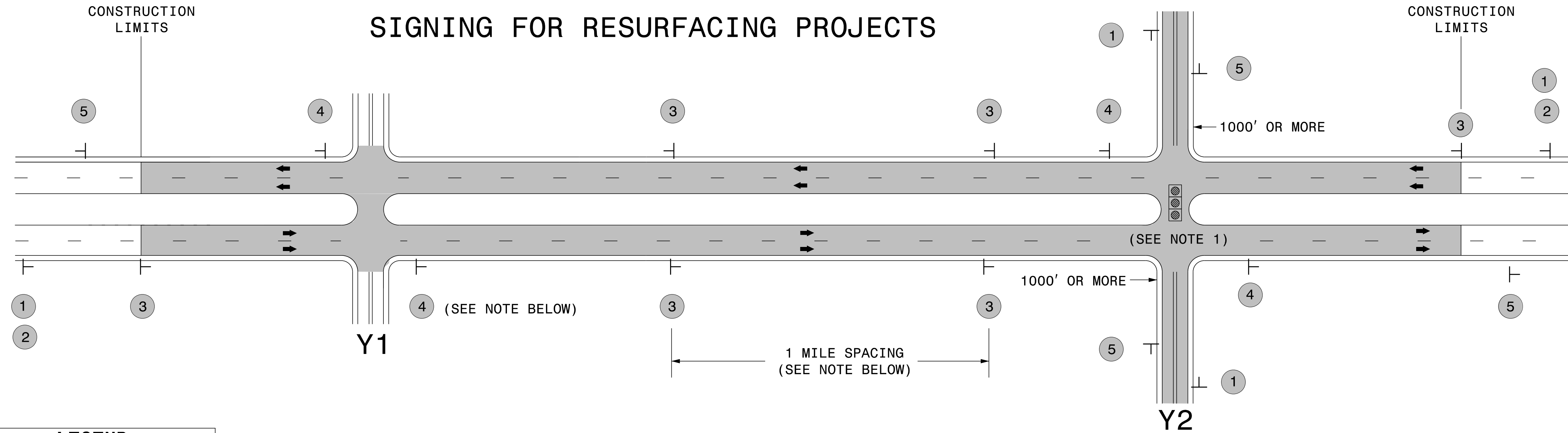
- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) ADVANCE WARNING SIGNS NOT REQUIRED ON NON-SIGNALIZED SIDE STREETS.
- 4) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.
- 5) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 2' AS MEASURED FROM THE EDGE OF PAVEMENT OR THE FACE OF THE CURB. WHEN UNABLE TO OBTAIN THE LATERAL CLEARANCE WITHIN THE MEDIAN AREA USE SHOULDER MOUNTS ONLY.
- 6) SIGN MOUNT LOCATIONS SHALL NOT BLOCK SIDEWALKS OR DRIVEWAYS.
- 7) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 8) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

LEGEND

- ┆ STATIONARY SIGN
- ➔ DIRECTION OF TRAFFIC FLOW



**RESURFACING ADVANCE
WARNING SIGNS FOR
URBAN / SUBURBAN
FACILITIES**



LEGEND
 ┆ STATIONARY SIGN
 ← DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1	 W20-1 48" X 48"	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> 1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE 2) SUBDIVISION ROADS 3) DEAD END ROADS <p>WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> W20-1 48" X 48" </div> <div style="text-align: center;"> W20-7 A 48" X 48" </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p> <p>NOTES:</p> <ol style="list-style-type: none"> 1) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.
	2	 W7-3aP 24" X 18"	#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)	
	3	 SP 13107 48" X 48"	PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.	
	4	 SP 13106 48" X 48"	THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH. A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.	
5	 G20-2 A 48" X 24"	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.		

3/23/2015
 C:\Users\rmgarrrett\Downloads\Resurfacing_AdvWarn_Ltr-Su_Shldr.dgn
 User:rmgarrrett

**RESURFACING
 ADVANCE WARNING SIGNS
 FOR RURAL AND SUBURBAN
 MULTI-LANE ROADWAYS
 W/ SHOULDER SECTIONS**

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

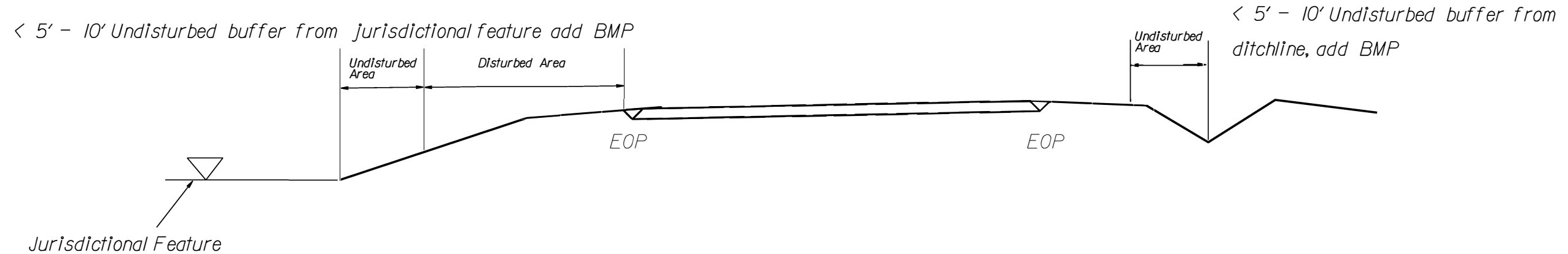
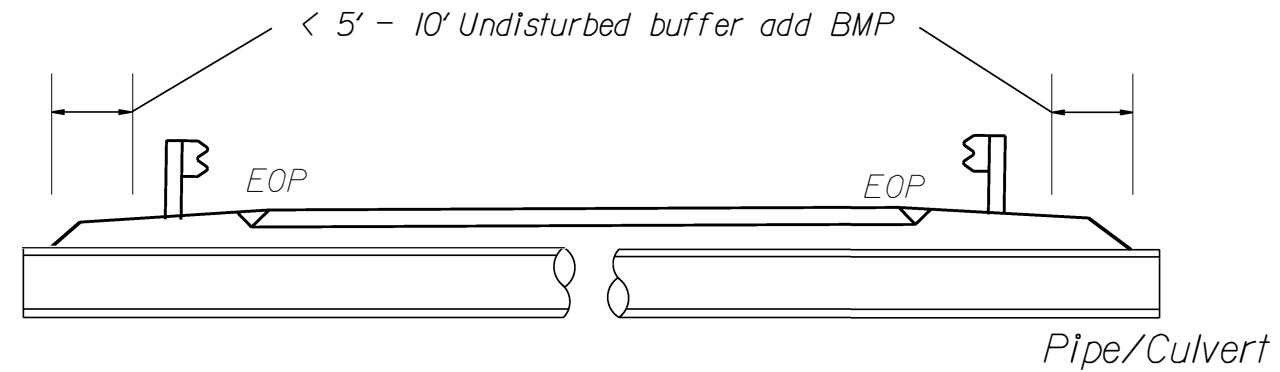
SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES.

NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle, Silt Fence or Hardened Aggregate.

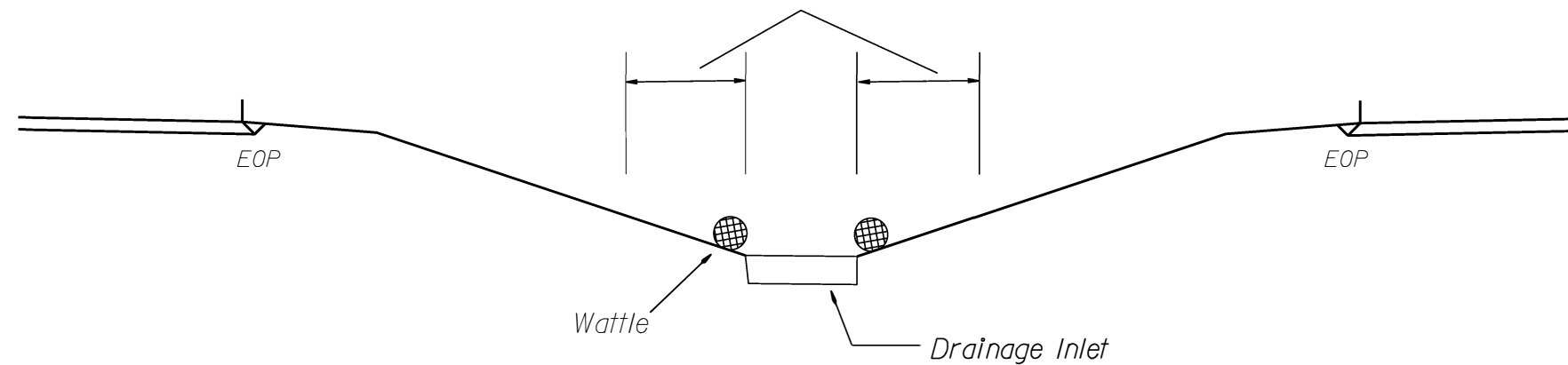
EROSION CONTROL DETAIL



Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed

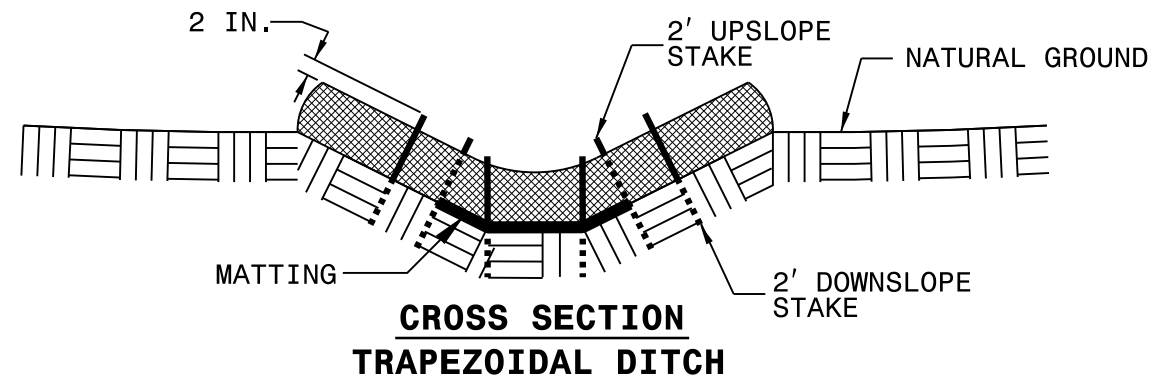
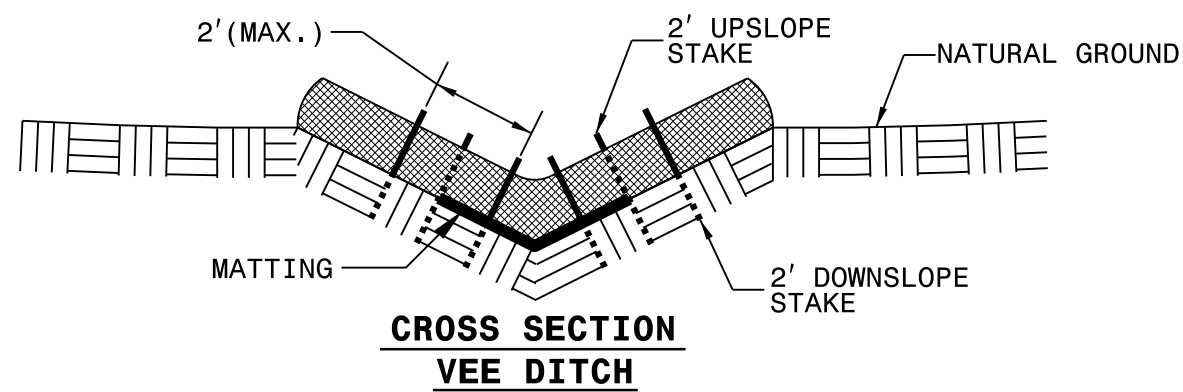
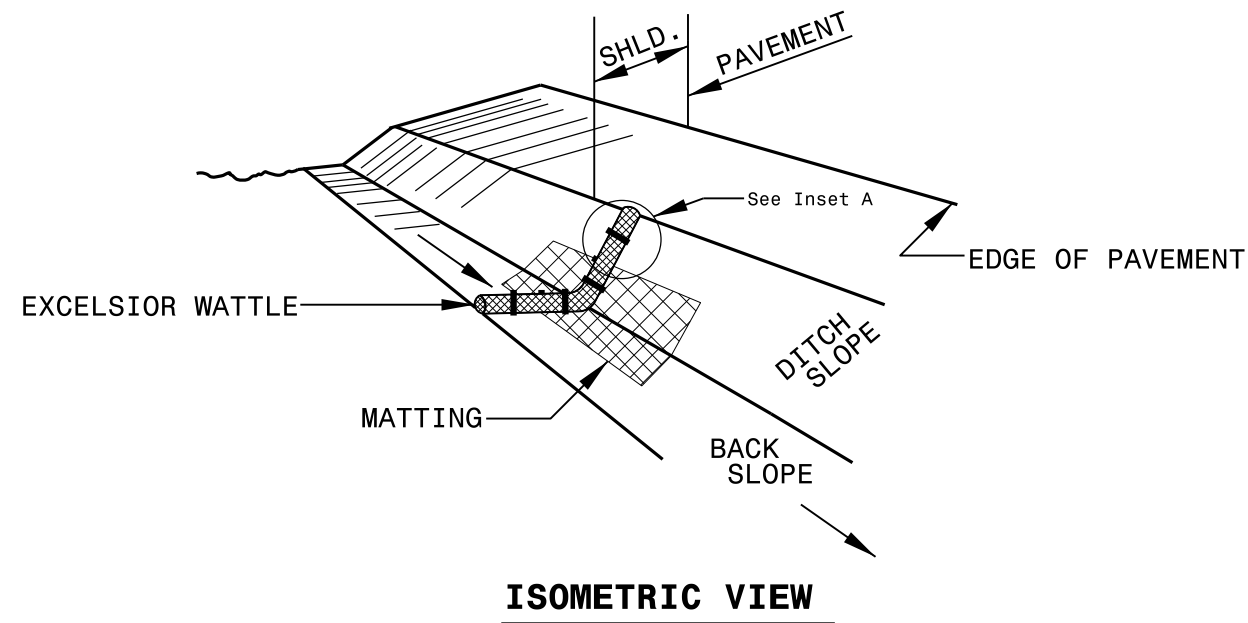


< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

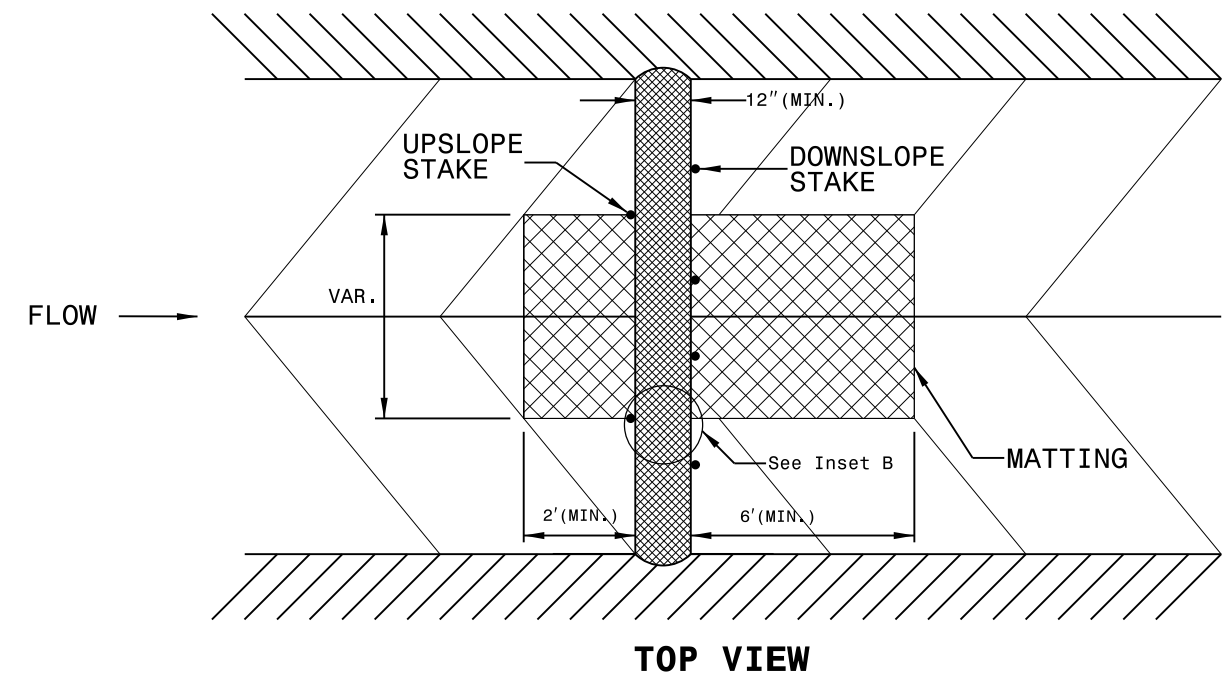
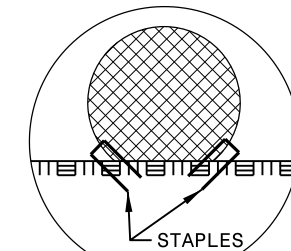
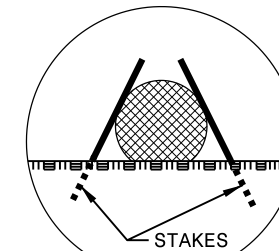
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

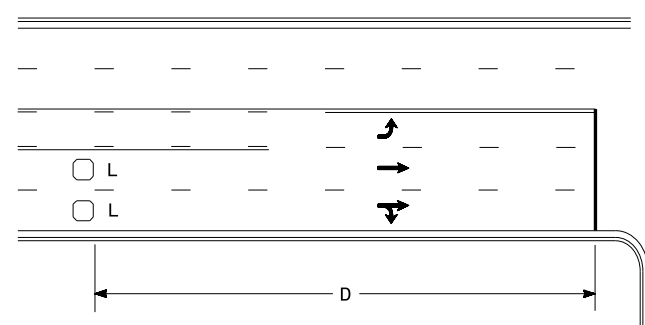
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



High Speed Detection (≥40 mph)

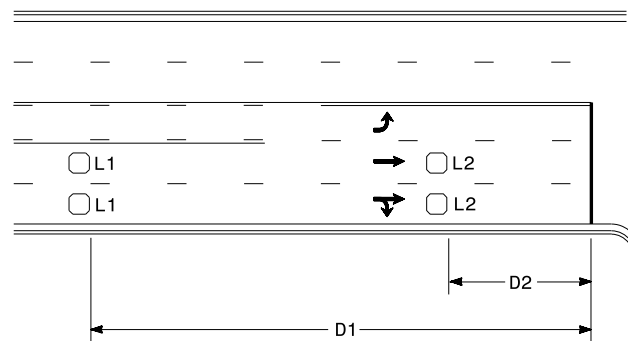


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired in series for TS1
Controllers
Wired separately for TS2,
170, and 2070L Controllers

Volume Density Operation

OR

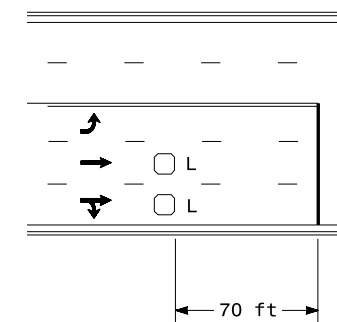


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series
L2 = 6ft X 6ft
Wired in series

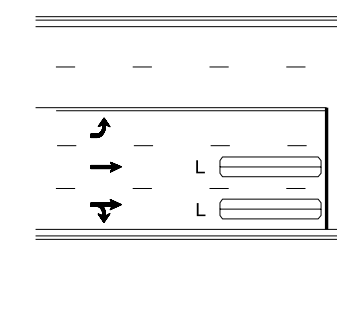
"Stretch" Operation

Low Speed Detection (≤35 mph)



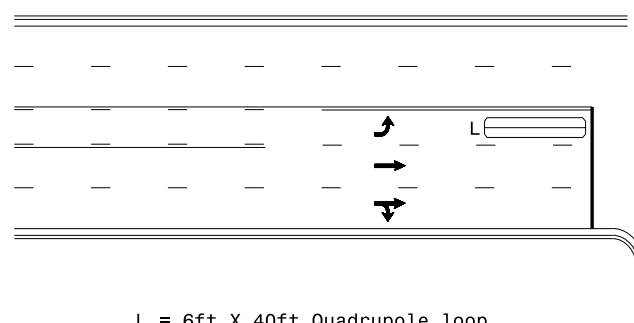
L = 6ft X 6ft
Wired in series

OR



L = 6ft X 40ft
Quadrupole loop, wired separately

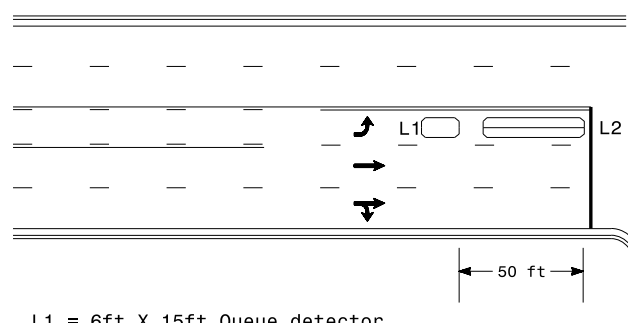
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

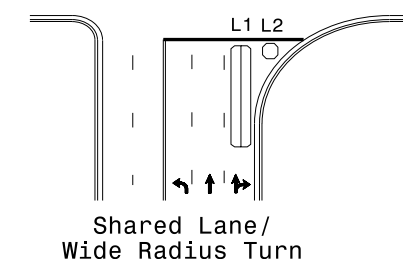
OR



L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

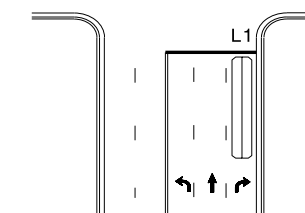
Queue Loop Detection

Right Turn Lane Detection

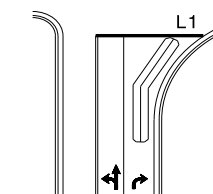


Shared Lane/
Wide Radius Turn

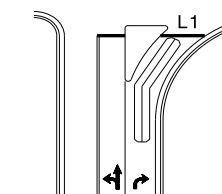
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

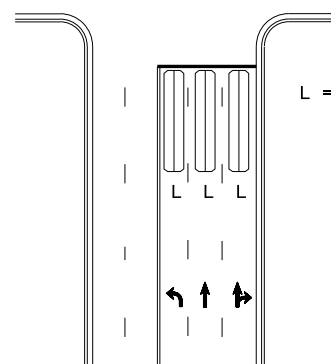


Wide Radius Turn



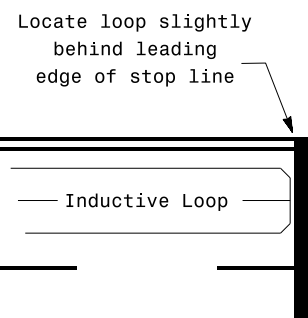
Channelized Turn

Side Street Detection



L = 6ft X 40ft
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines



Note:
Loop may be located in advance
of stop line under any of the
following conditions:
1) stop line is greater than 15'
from edge of intersecting
roadway
2) loop detects a permissive or
protected/permissive left turn
3) for an exclusive right turn
lane

Recommended Number of Turns

Single 6' X 6' loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' Loops:
Lead-in < 150', use 2 turns
Lead-in > 150', use 3 turns

750 N. Greenfield Pkwy, Garner, NC 27529

Prepared in the Offices of:

Typical Signal Loop Locations

PLAN DATE: January 2015 REVIEWED BY: JPG

PREPARED BY: PLA REVIEWED BY:

SCALE: N/A

REVISIONS: INIT. DATE

1/30/2015

SIG. INVENTORY NO.

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
ALEXANDER L. ALEXANDER