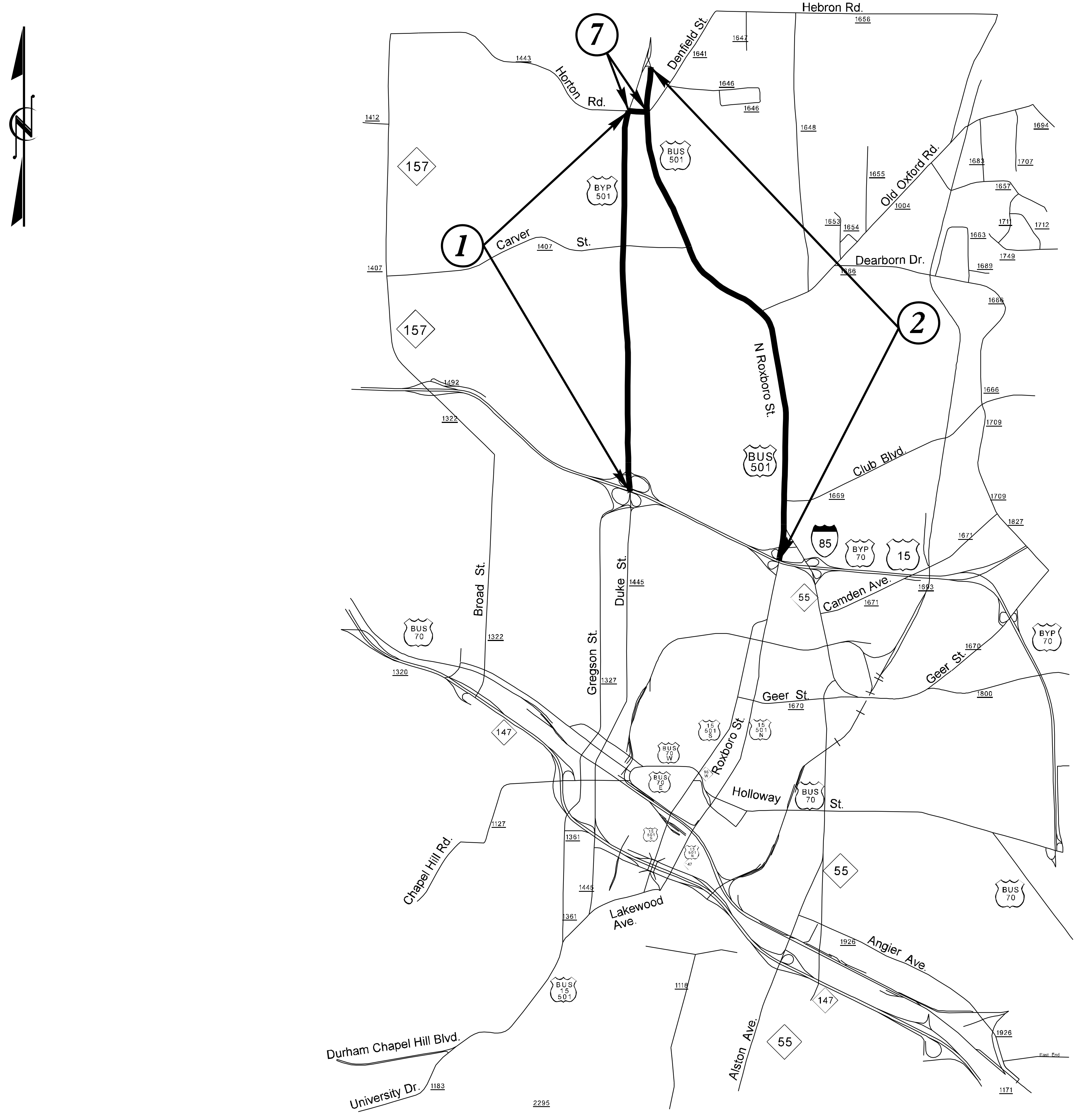
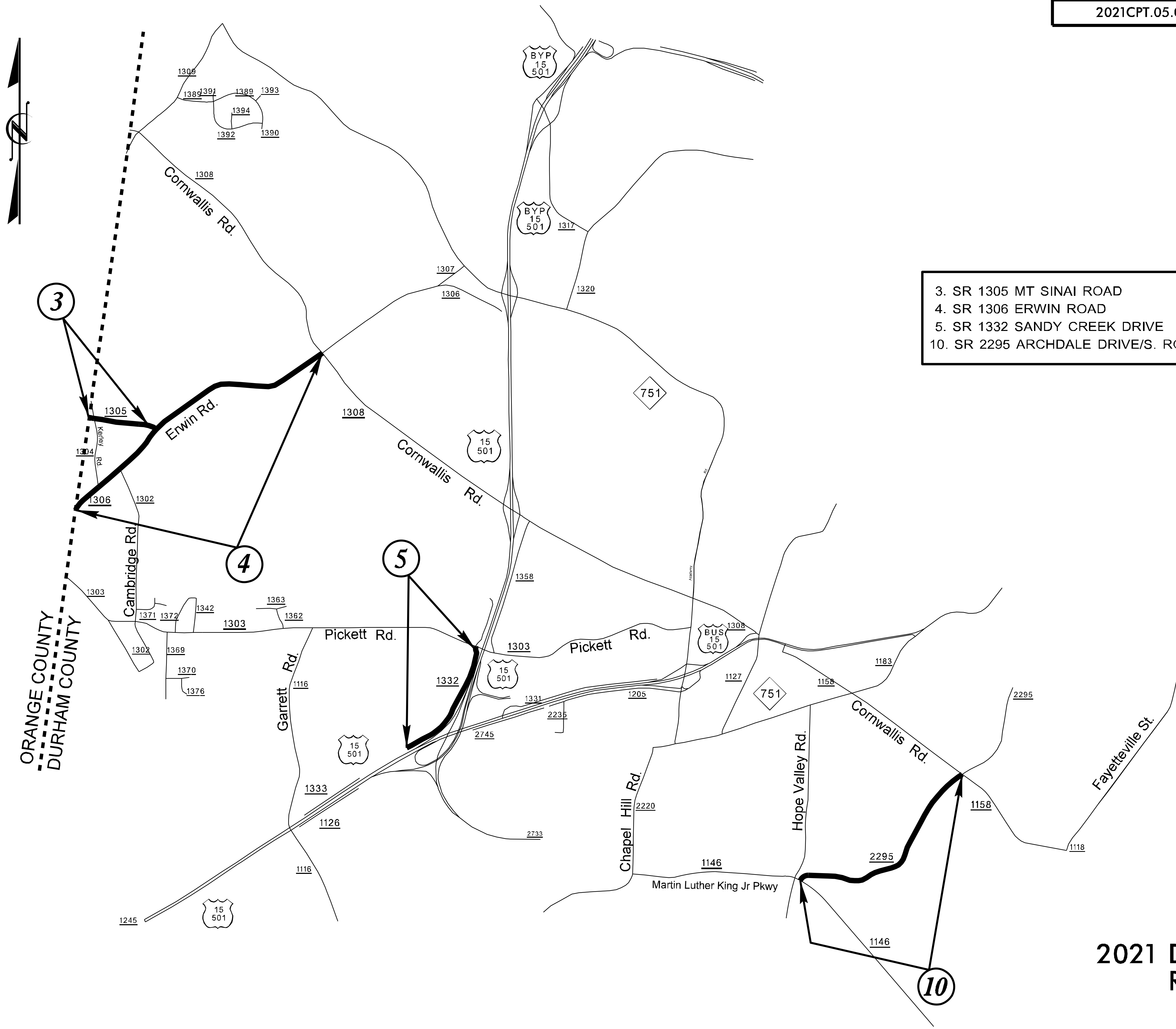
PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321.1, etc.	1

1. US 501 N. DUKE STREET
2. BUS 501 N ROXBORO STREET
7. SR 1443 HORTON ROAD



2021 DURHAM COUNTY RESURFACING

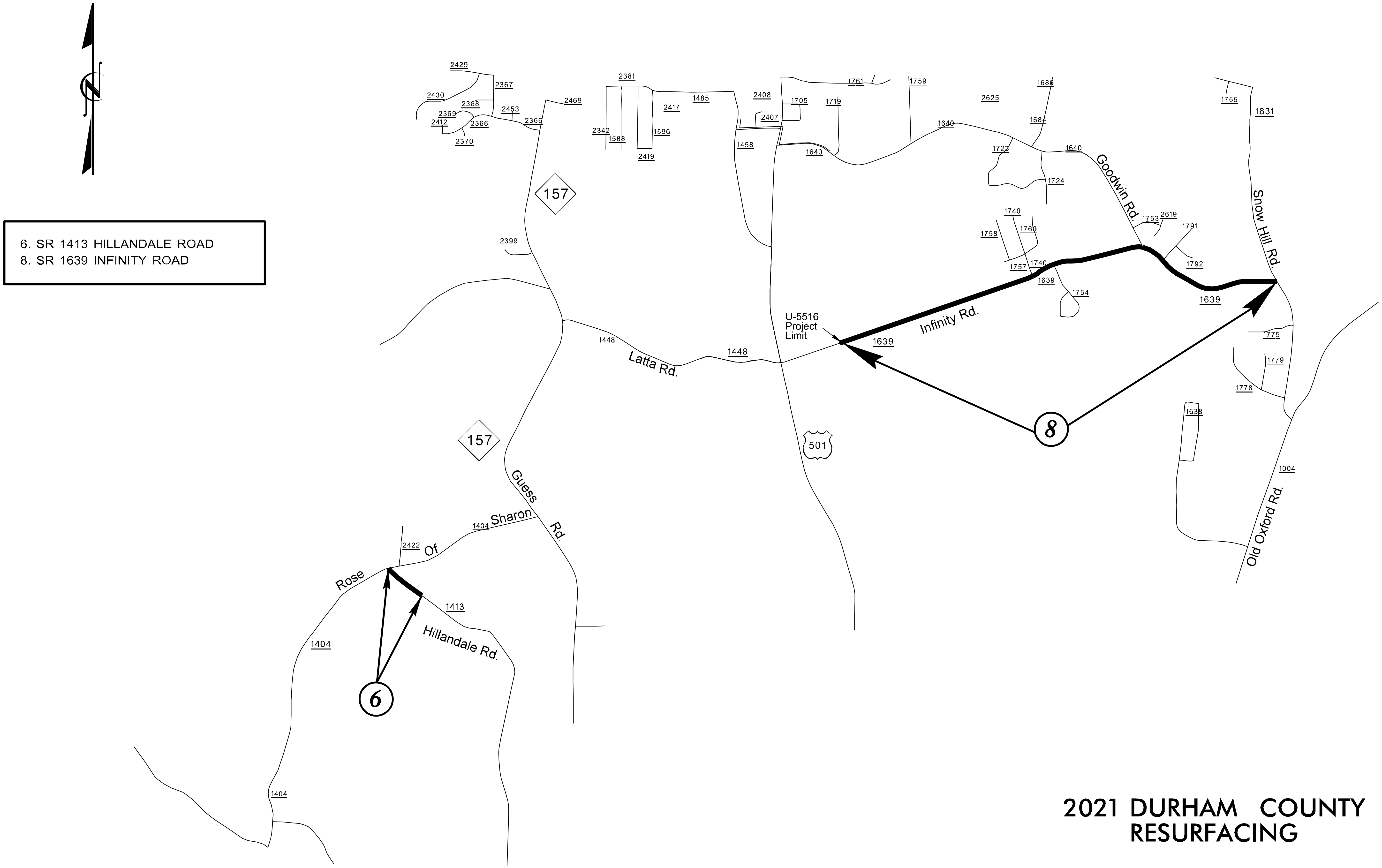
PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321.1, etc.	2



3. SR 1305 MT SINAI ROAD
4. SR 1306 ERWIN ROAD
5. SR 1332 SANDY CREEK DRIVE
10. SR 2295 ARCHDALE DRIVE/S. ROXBORO STREET

2021 DURHAM COUNTY RESURFACING

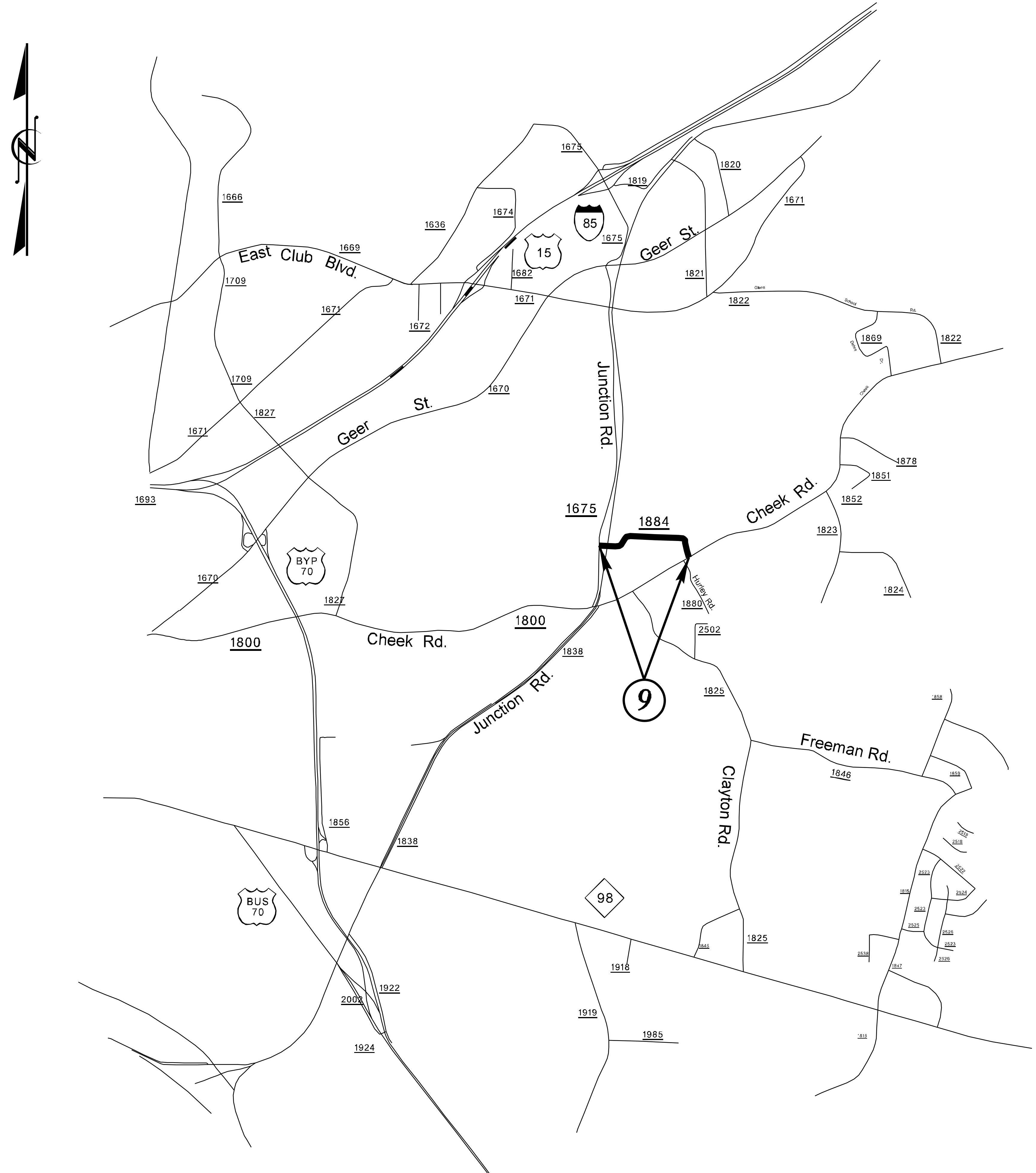
PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321.1, etc.	3



2021 DURHAM COUNTY RESURFACING

PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321.1, etc.	4

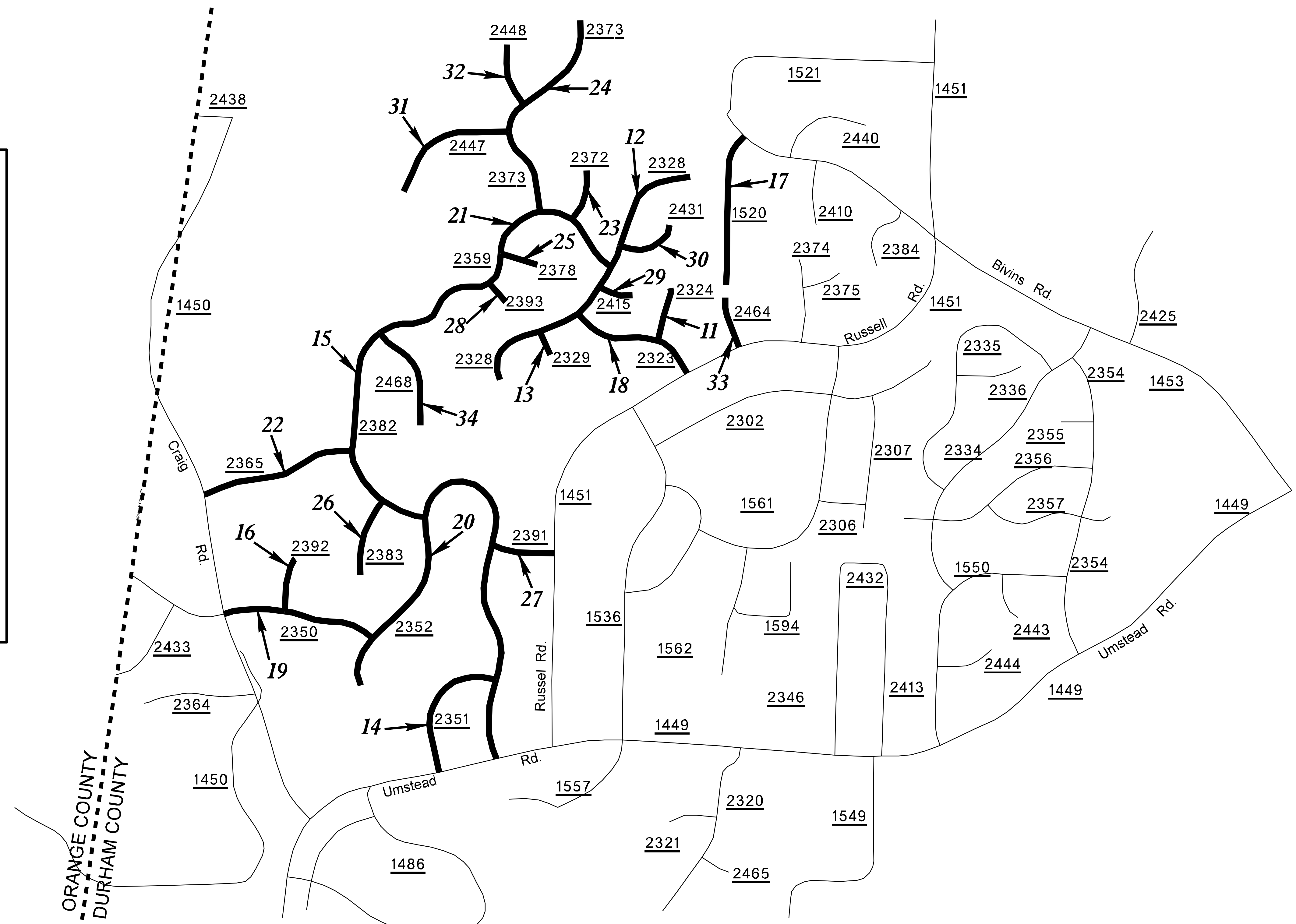
9. SR 1884 PERVIS ROAD



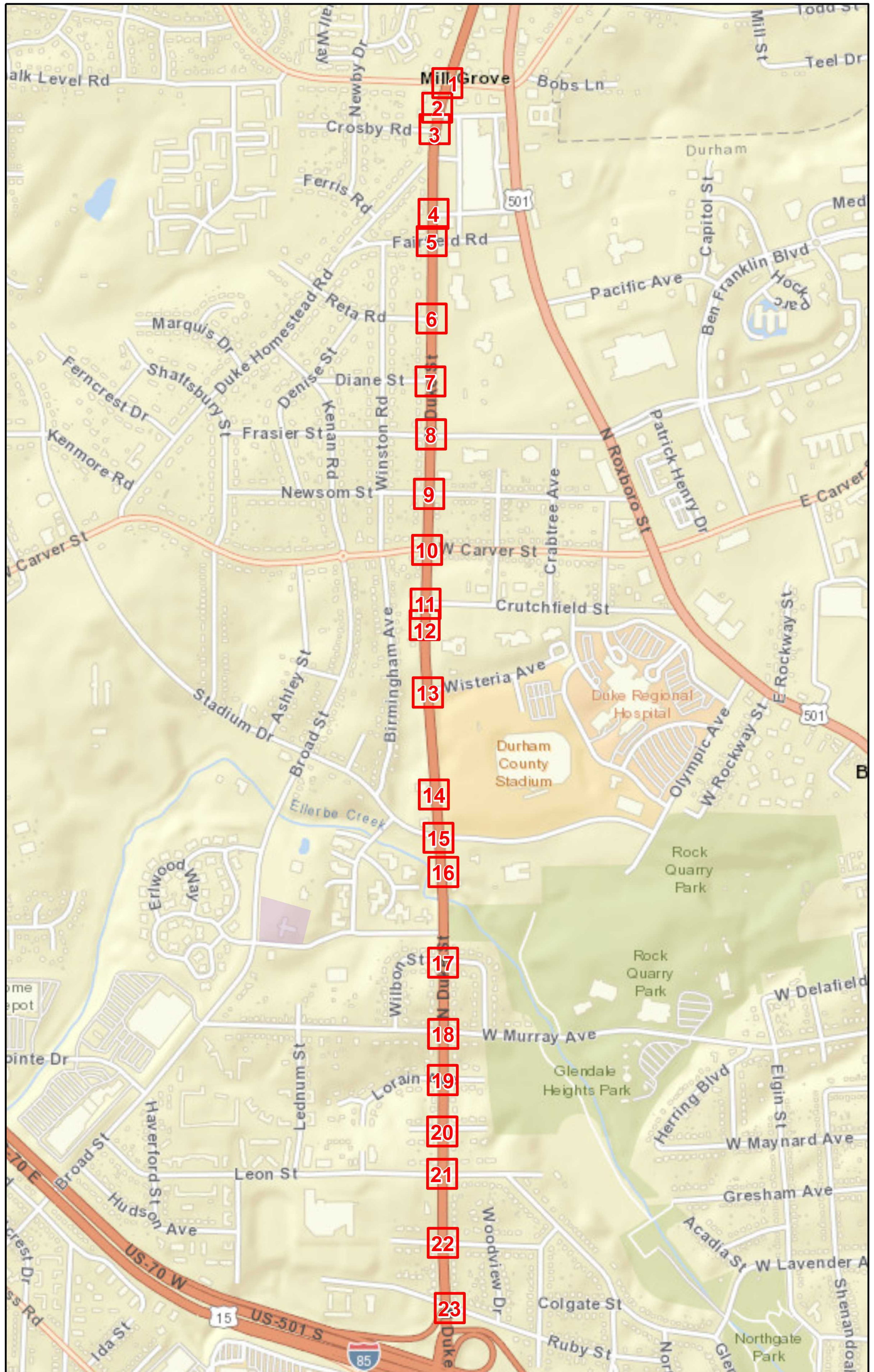
2021 DURHAM COUNTY RESURFACING

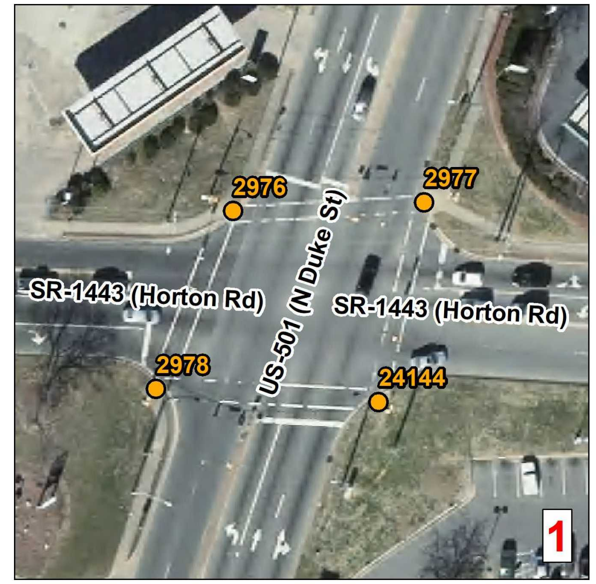
PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321.1, etc.	5

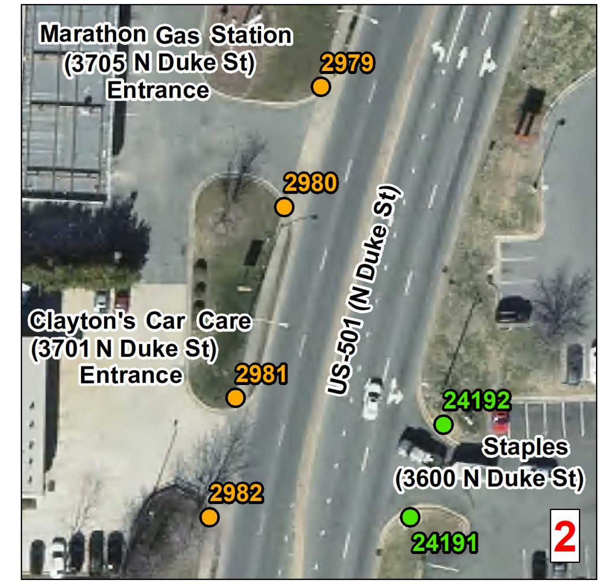
11. SR 2324 WESCOTT PLACE
12. SR 2328 FALKIRK DRIVE
13. SR 2329 ST CLAIR PLACE
14. SR 2351 TROON LANE
15. SR 2382 TAVISTOCK DRIVE
16. SR 2392 CANTER PLACE
17. SR 1520 LILLIE DRIVE
18. SR 2323 HEATHER GLEN ROAD
19. SR 2350 SADDLE DRIVE
20. SR 2352 INVERNESS DRIVE
21. SR 2359 QUINCEMOOR ROAD
22. SR 2365 SPLIT RAIL PLACE
23. SR 2372 CARDRIFF PLACE
24. SR 2373 KILTSHIRE ROAD
25. SR 2378 SHANTERCLIFF PLACE
26. SR 2383 MUIRFIELD COURT
27. SR 2391 GLENEAGLES PLACE
28. SR 2393 SONNETT PLACE
29. SR 2415 PERTH PLACE
30. SR 2431 FAIRNTOSH PLACE
31. SR 2447 PRESCOTT DRIVE
32. SR 2448 TRAWICK PLACE
33. SR 2464 ROTHBURY DRIVE
34. SR 2468 HEATHER RIDGE CT

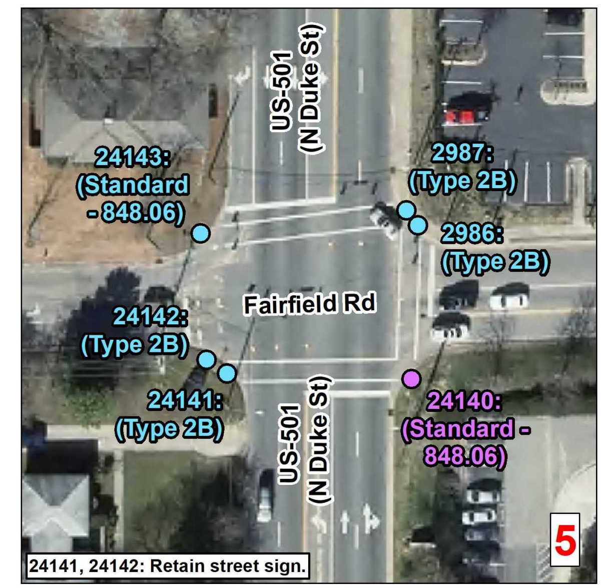


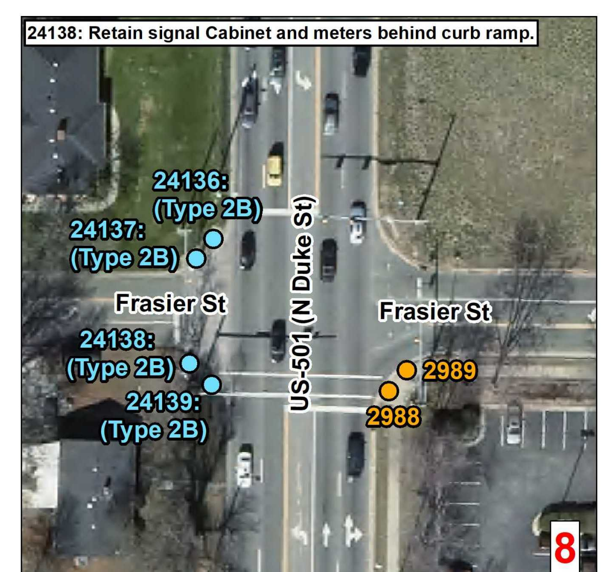
2021 DURHAM COUNTY RESURFACING











Curb Ramps To Be Repaired

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

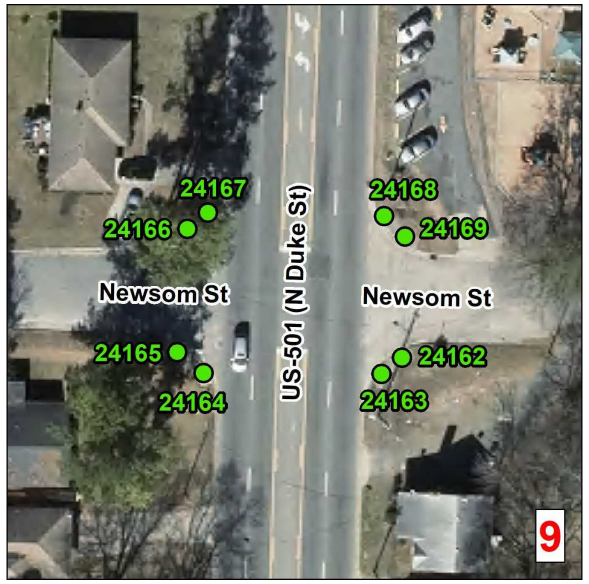
- Municipal Boundary
- NCHPO Historic Boundary (NR and LHD)

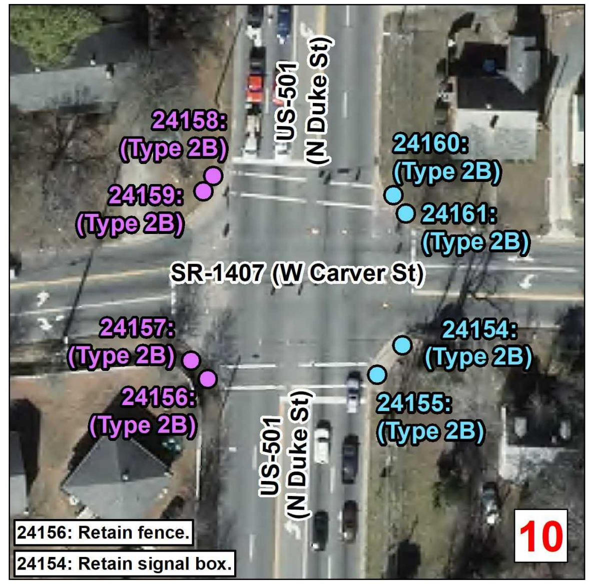
2021 Durham
WBS: 2021CPT.05.01.10321.1

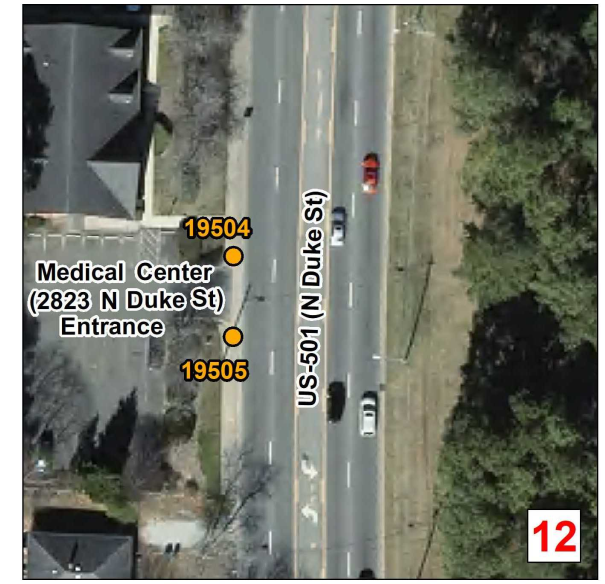
US 501 from
South End of I-85 Bridge to SR 1443

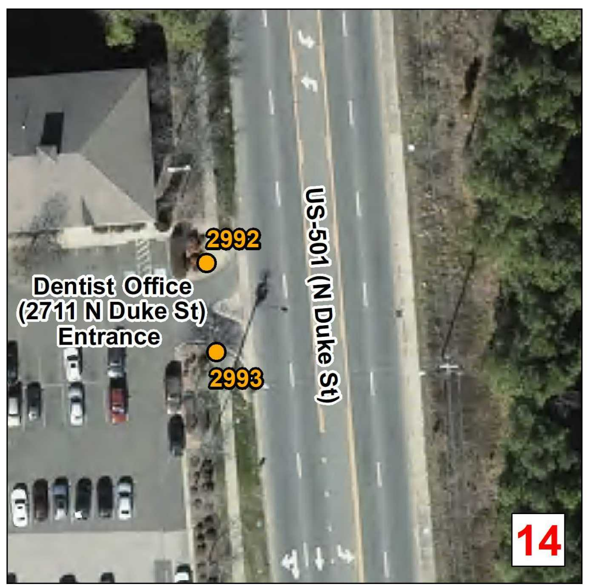
NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 5

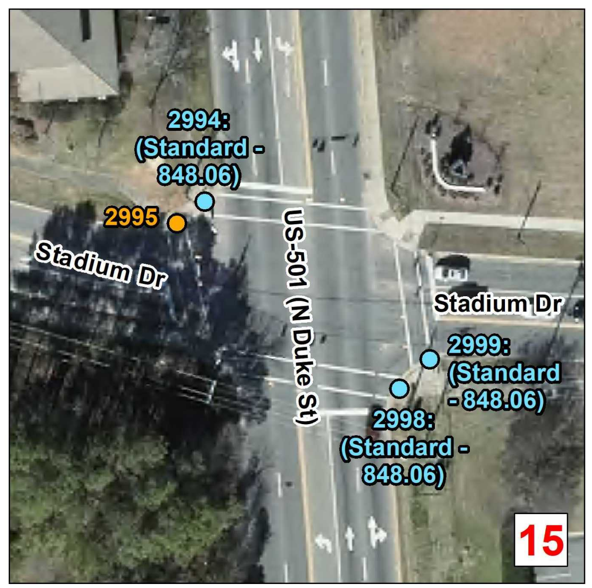
Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO

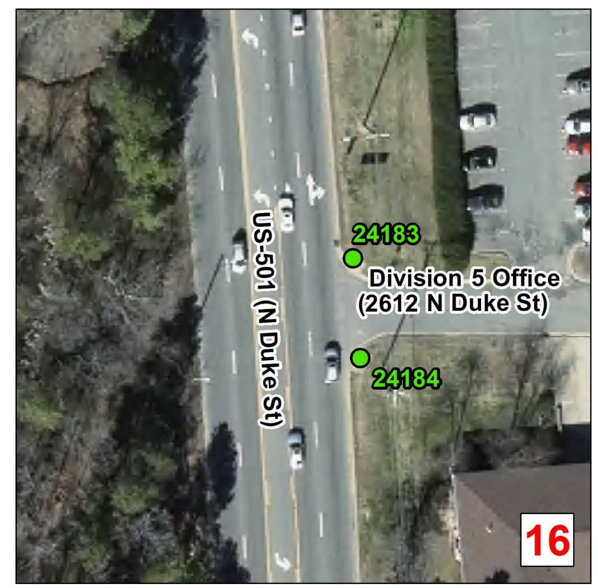


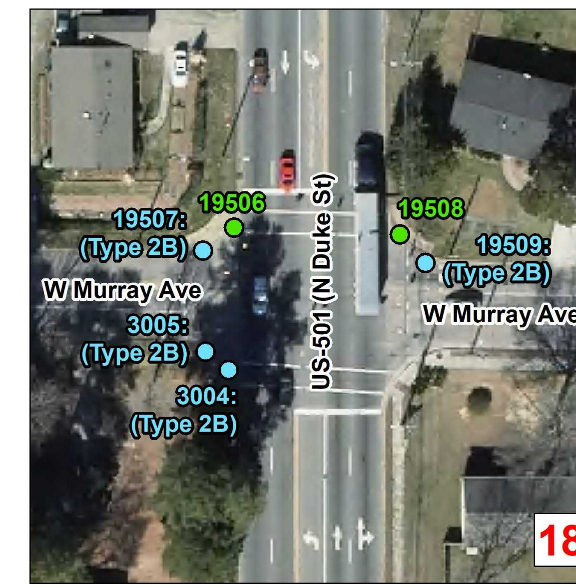


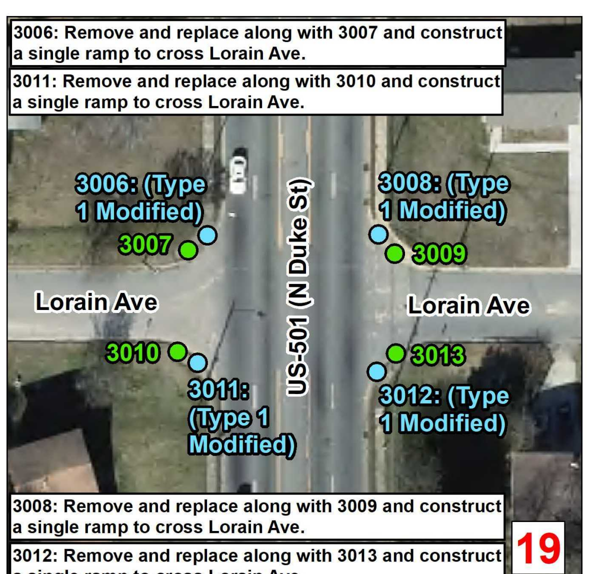


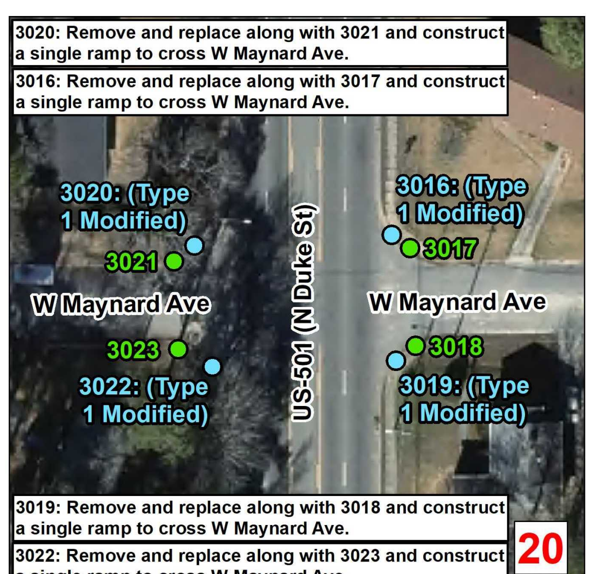


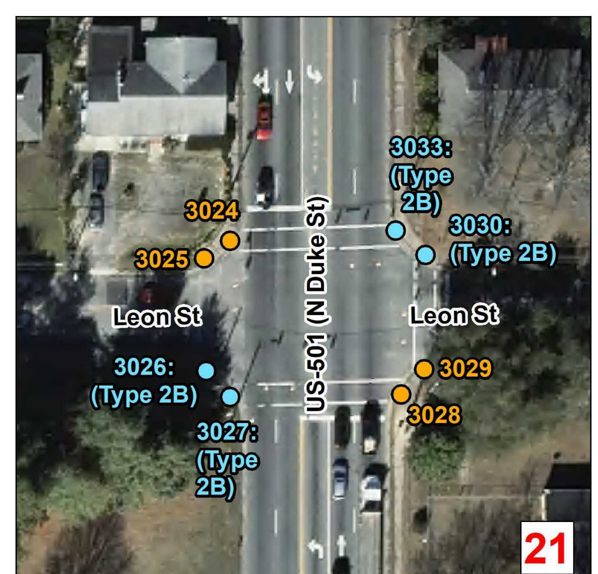


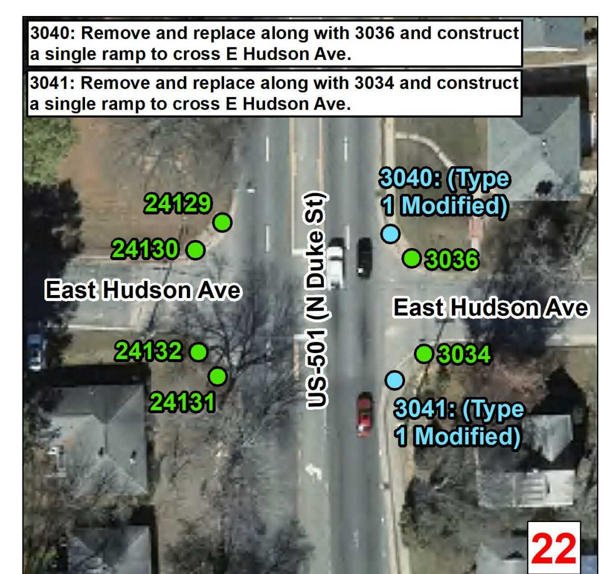












Curb Ramps To Be Repaired

- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp
- Municipal Boundary
- NCHPO Historic Boundary (NR and LHD)

2021 Durham
WBS: 2021CPT.05.01.10321.1

US 501 from
South End of I-85 Bridge to SR 1443

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO

Curb Ramps To Be Repaired

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

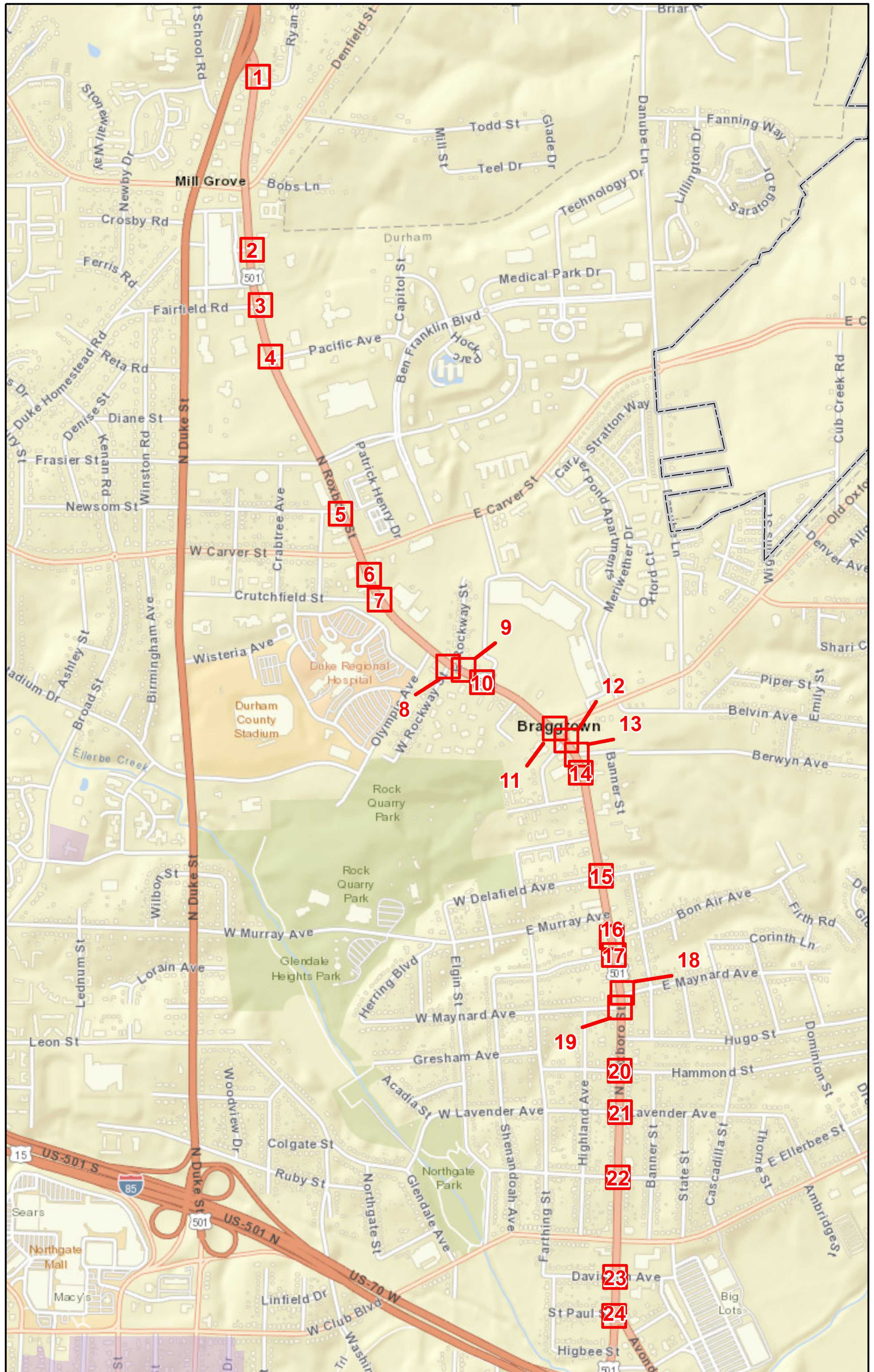
Municipal Boundary
NCHPO Historic Boundary (NR and LHD)

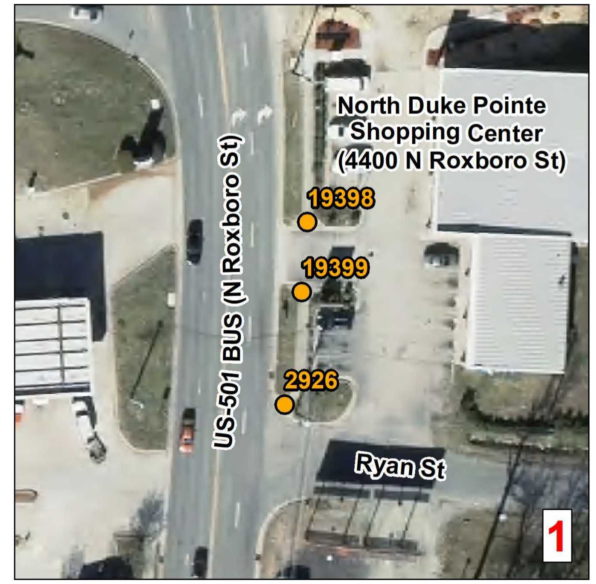
2021 Durham
WBS: 2021CPT.05.01.10321.1

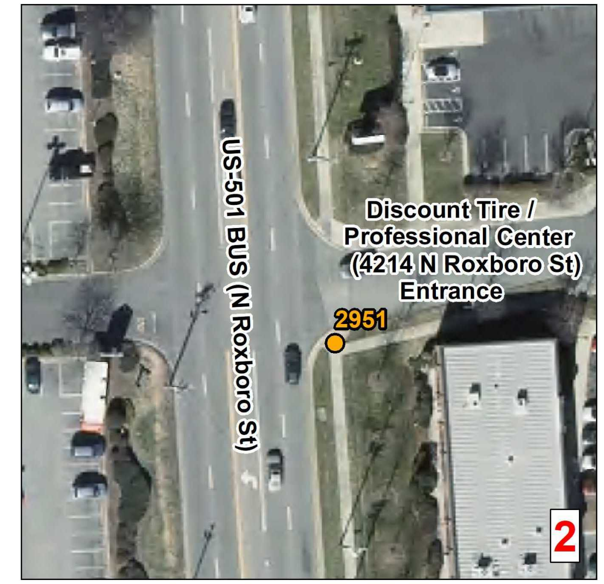
US 501 from
South End of I-85 Bridge to SR 1443

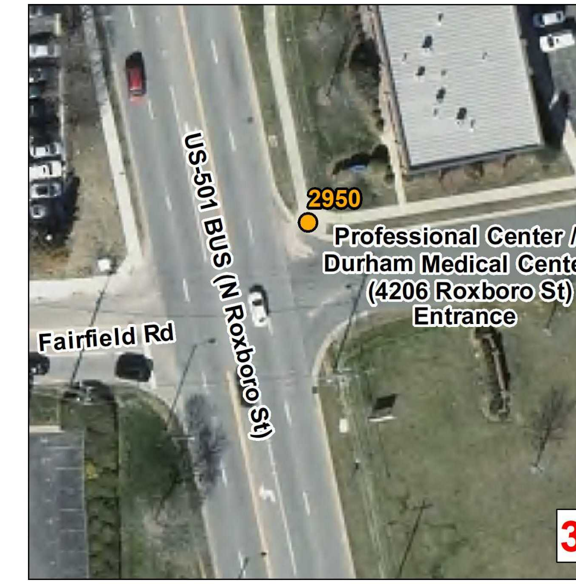
NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 5

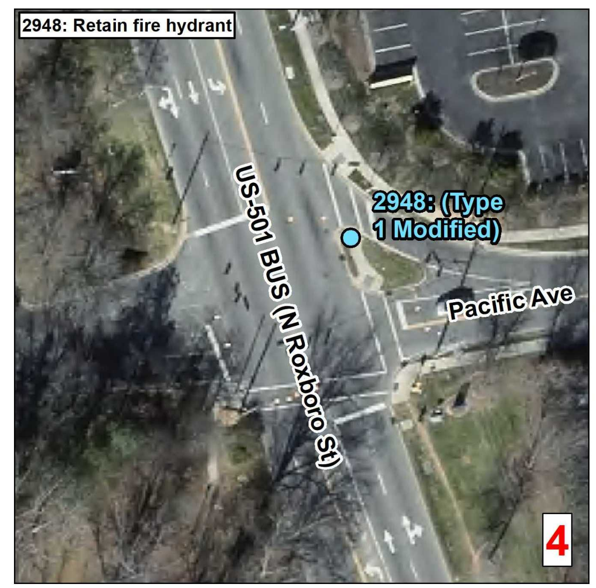
Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO

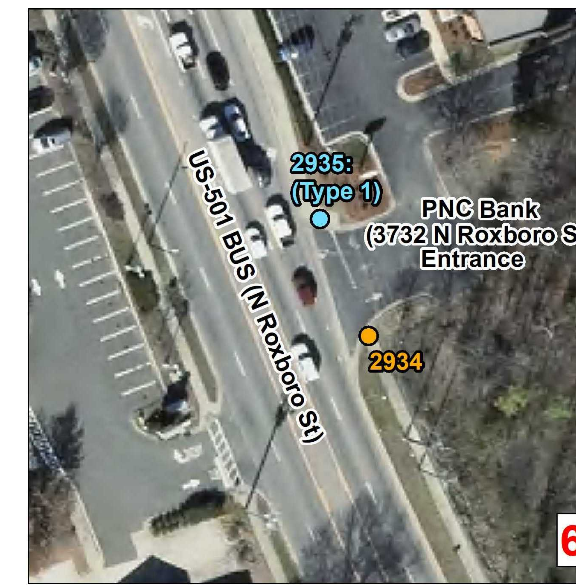












Curb Ramps To Be Repaired

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

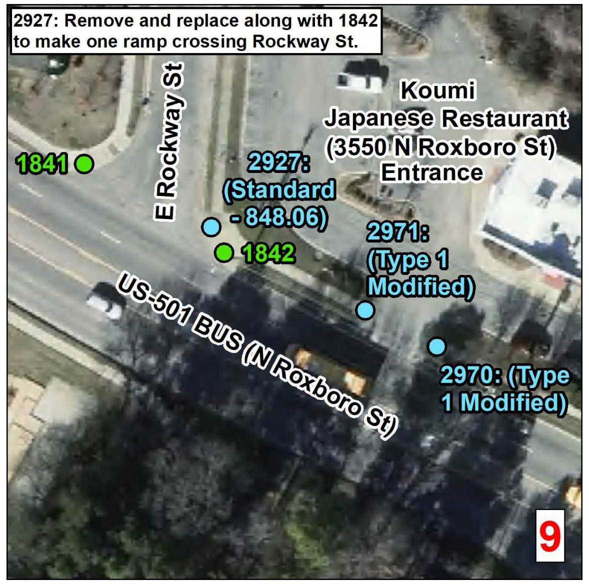
- Municipal Boundary
- NCHPO Historic Boundary (NR and LHD)

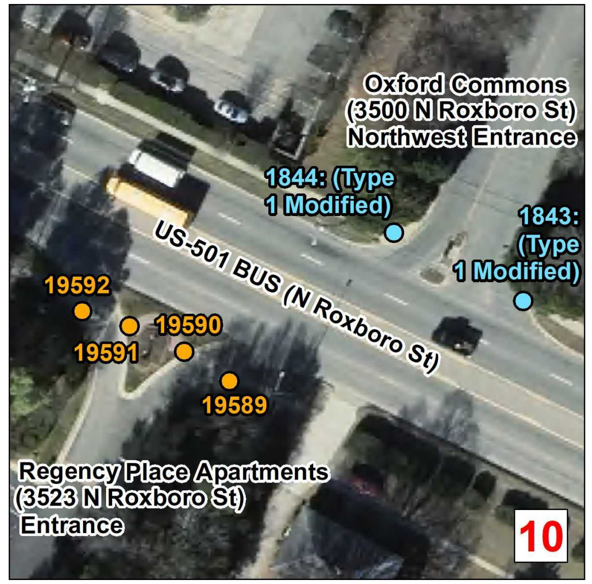
2021 Durham
WBS: 2021CPT.05.01.10321.1

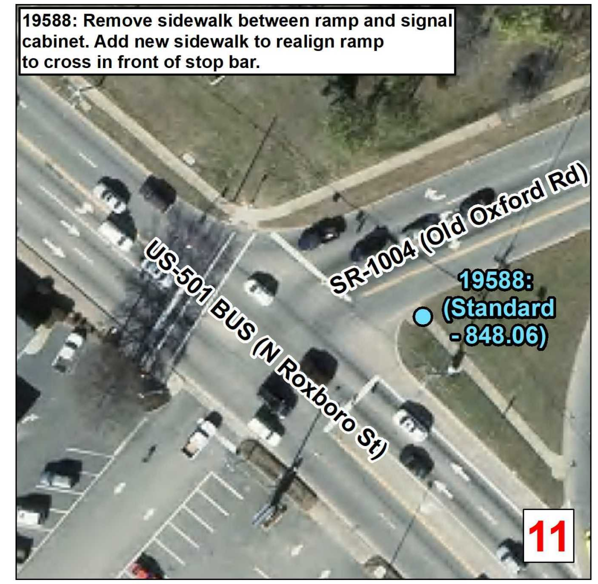
US 501 Bus from I-85 to US 501

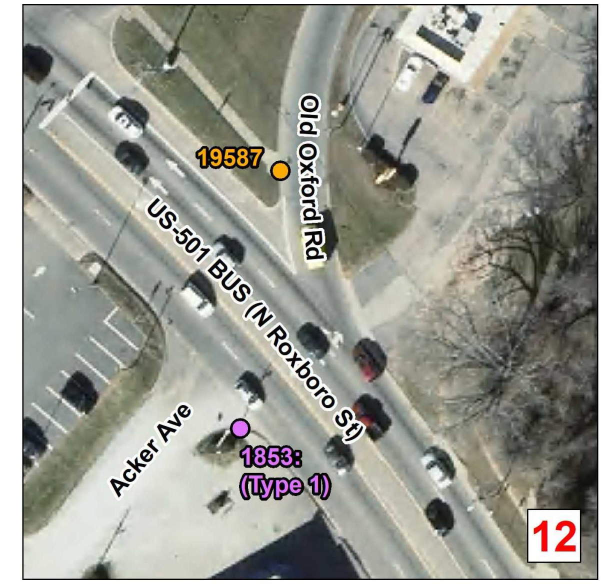
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 5

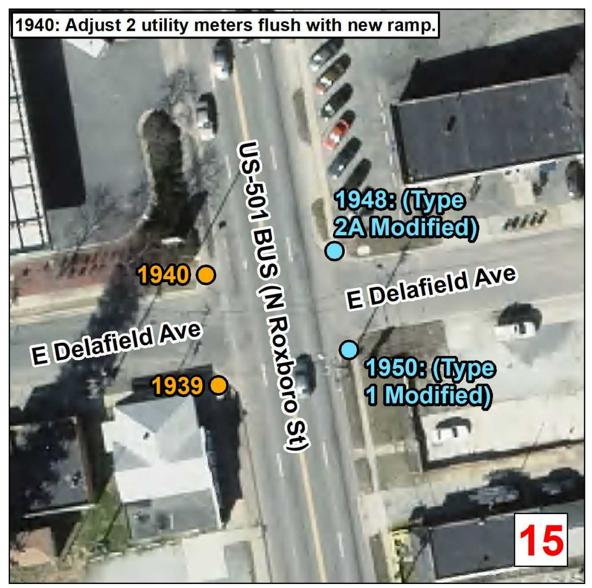
Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO

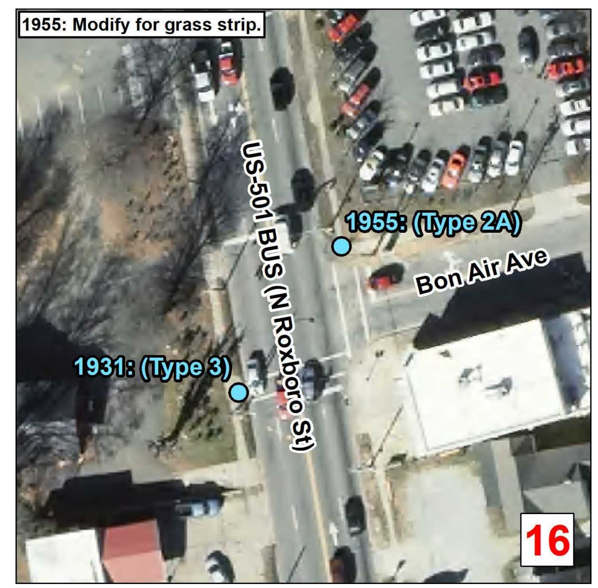


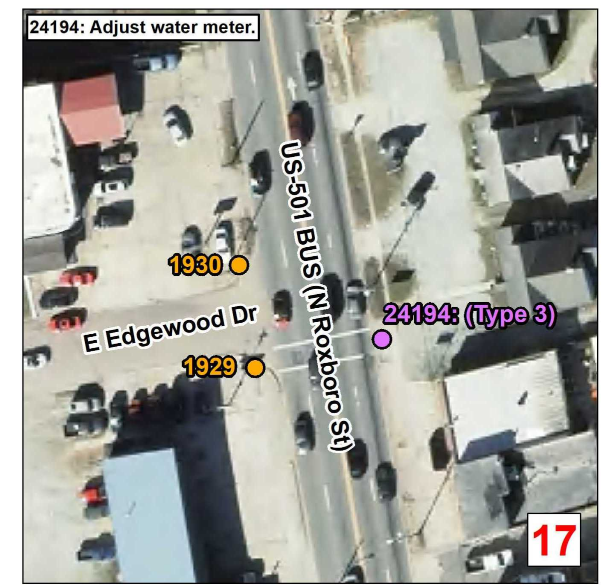


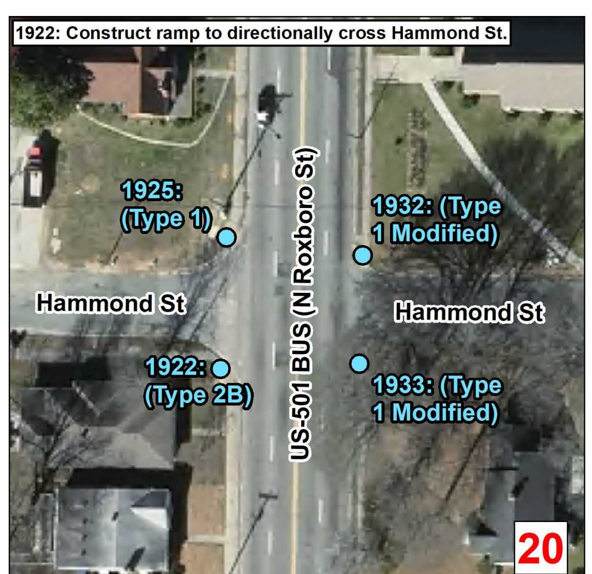


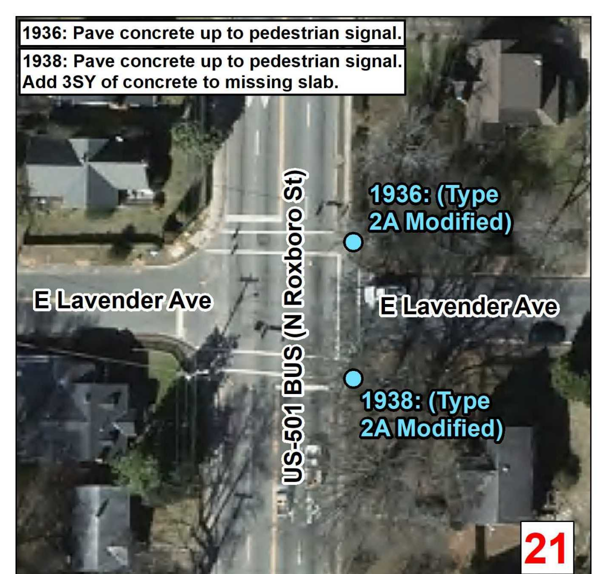


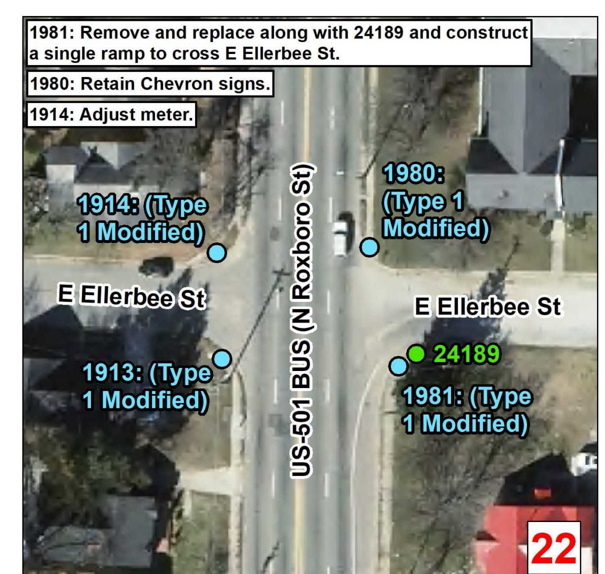












Curb Ramps To Be Repaired

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

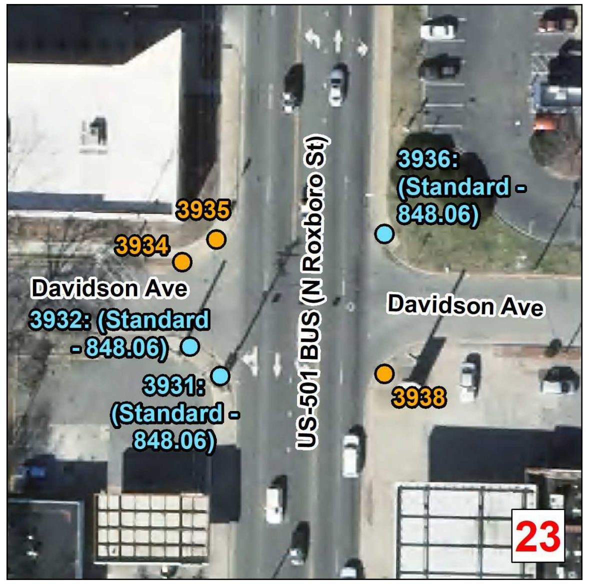
- Municipal Boundary
- NCHPO Historic Boundary (NR and LHD)

2021 Durham
WBS: 2021CPT.05.01.10321.1

US 501 Bus from I-85 to US 501

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO



Curb Ramps To Be Repaired

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

Municipal Boundary

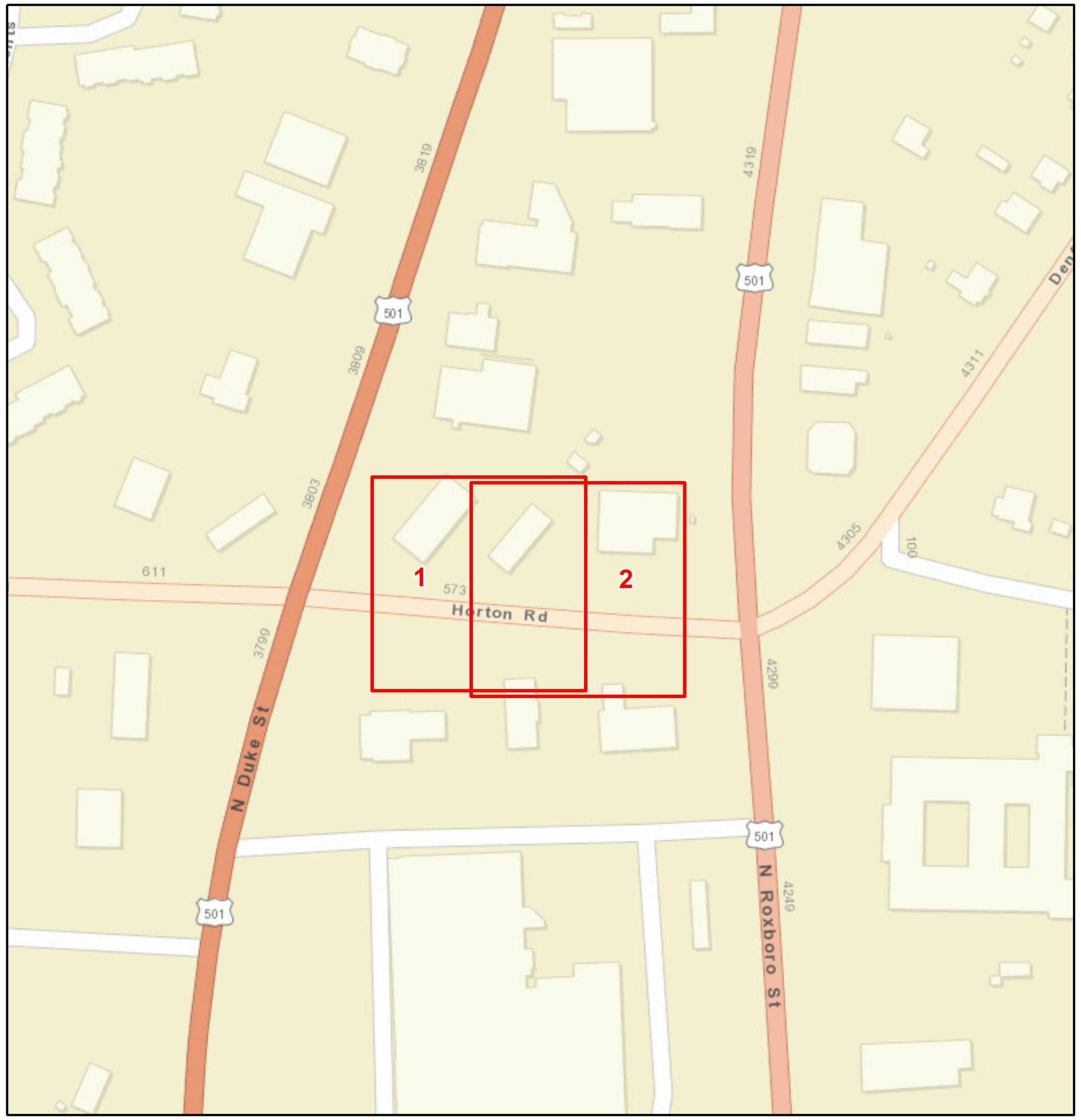
NCHPO Historic Boundary (NR and LHD)

2021 Durham
WBS: 2021CPT.05.01.10321.1

US 501 Bus from I-85 to US 501

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO



Curb Ramps To Be Repaired

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

Municipal Boundary

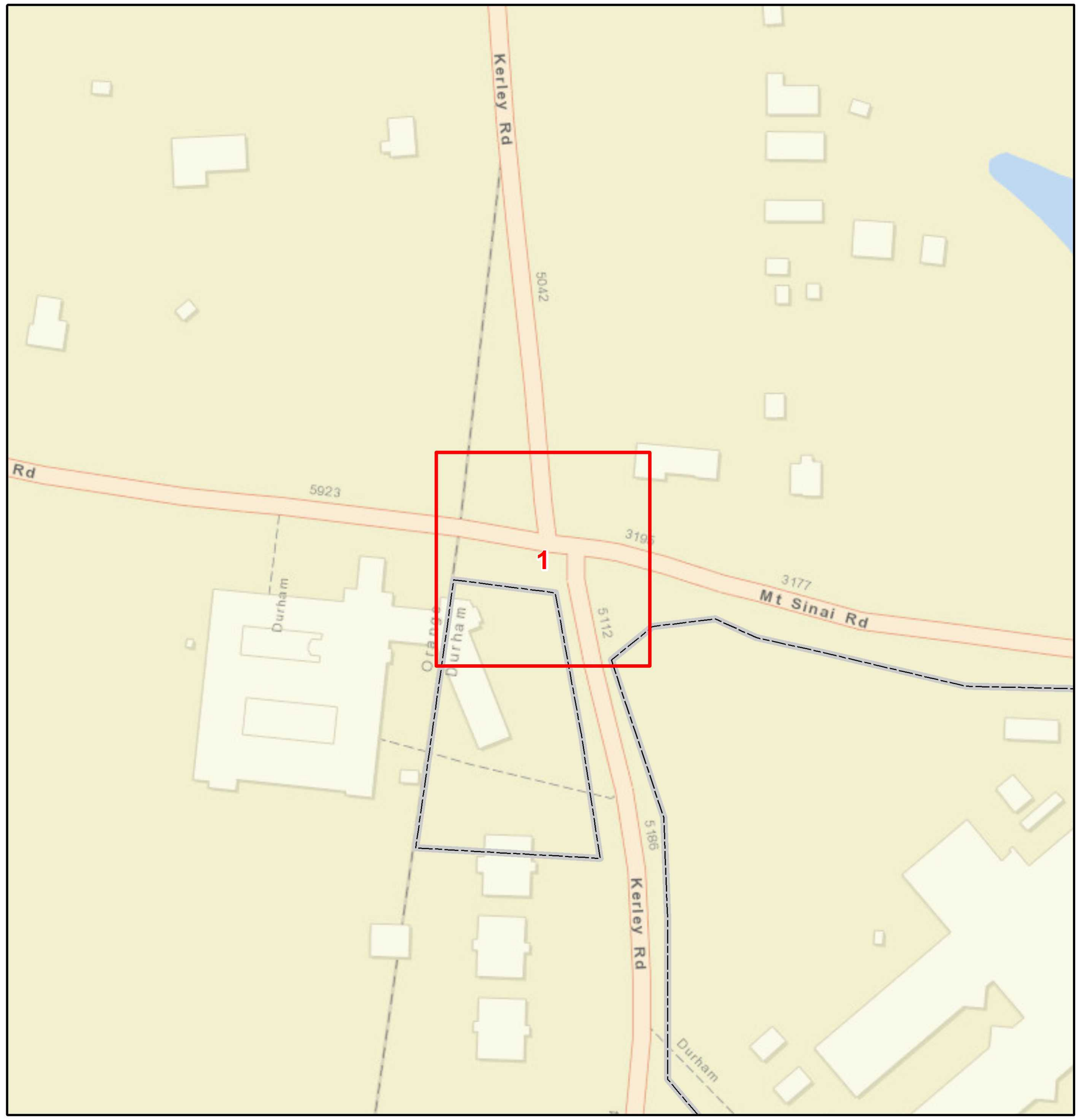
NCHPO Historic Boundary (NR and LHD)

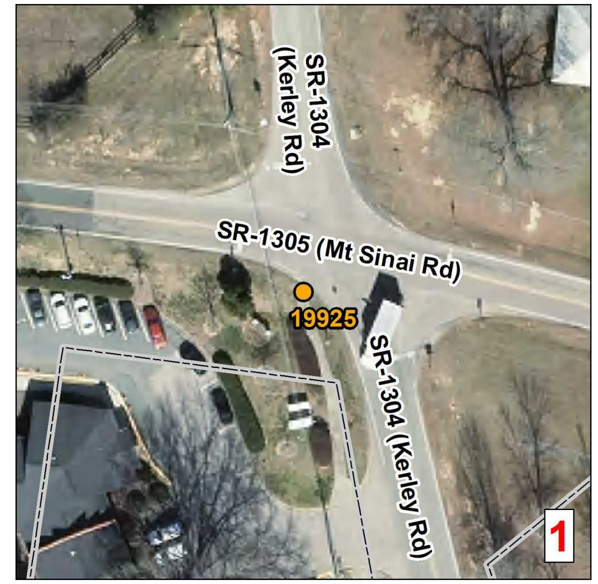
2021 Durham
WBS: 2021CPT.05.01.20321.1

Horton Rd
from US 501 to US 501 BUS

NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCPHO





Curb Ramps To Be Repaired

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

Municipal Boundary

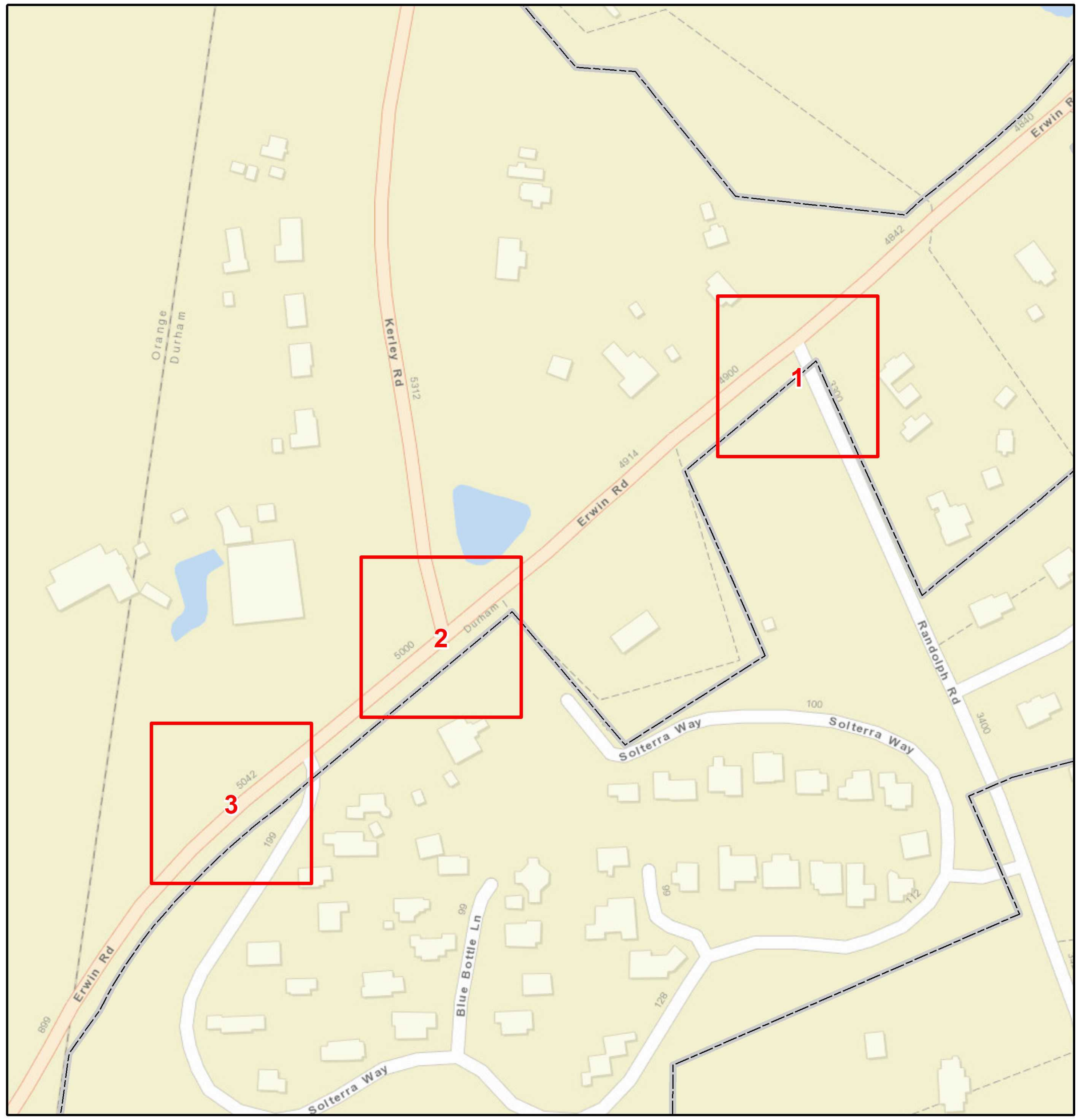
NCHPO Historic Boundary (NR and LHD)

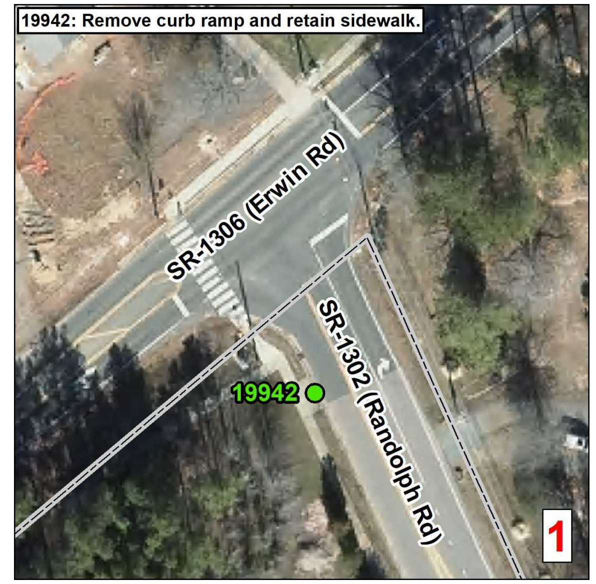
2021 Durham
WBS: 2021CPT.05.01.20321.1

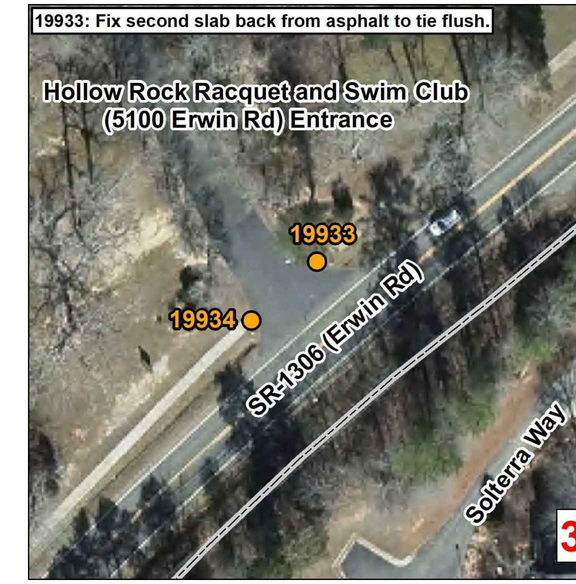
Mt Sinai Rd
from Orange Co to SR 1306

NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCPHO







Curb Ramps To Be Repaired

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

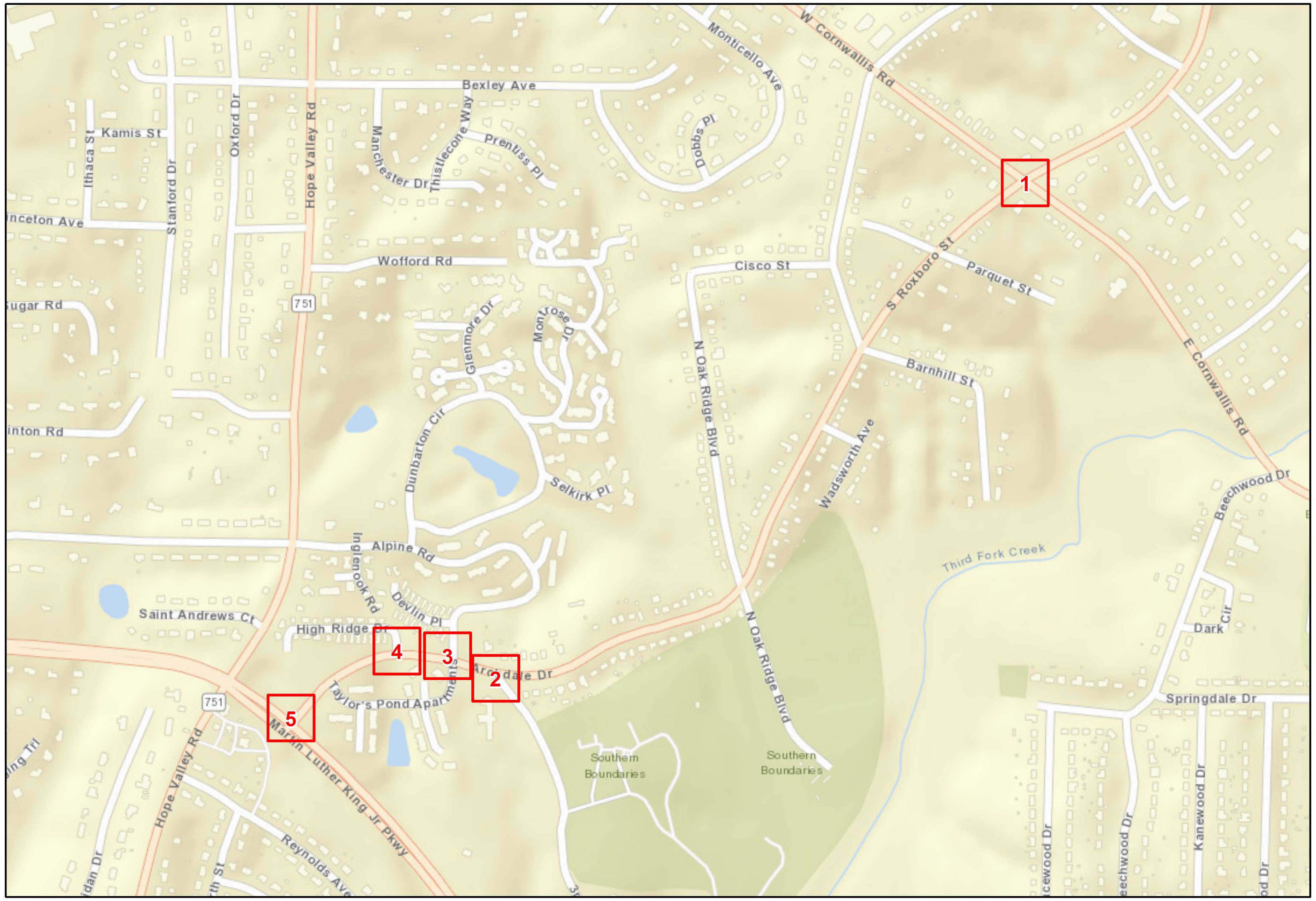
- Municipal Boundary
- NCHPO Historic Boundary (NR and LHD)

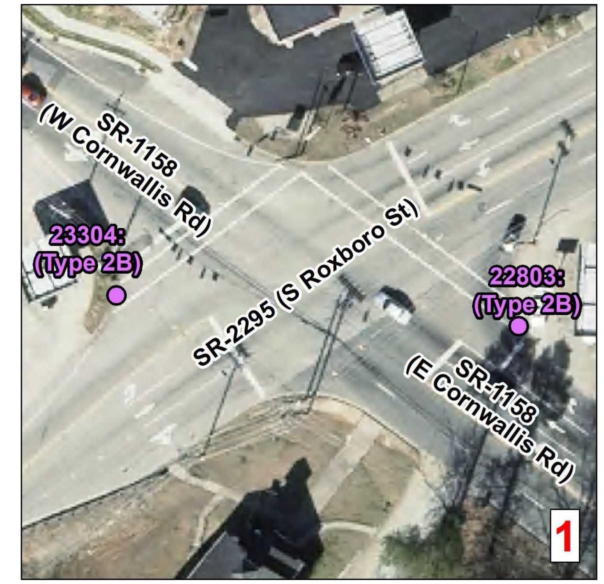
2021 Durham
WBS: 2021CPT.05.01.20321.1

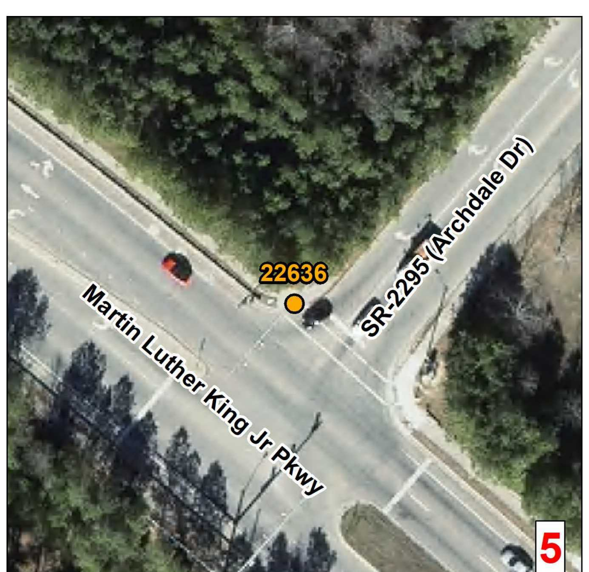
Erwin Rd
from Orange Co to SR 1308

NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO







Curb Ramps To Be Repaired

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

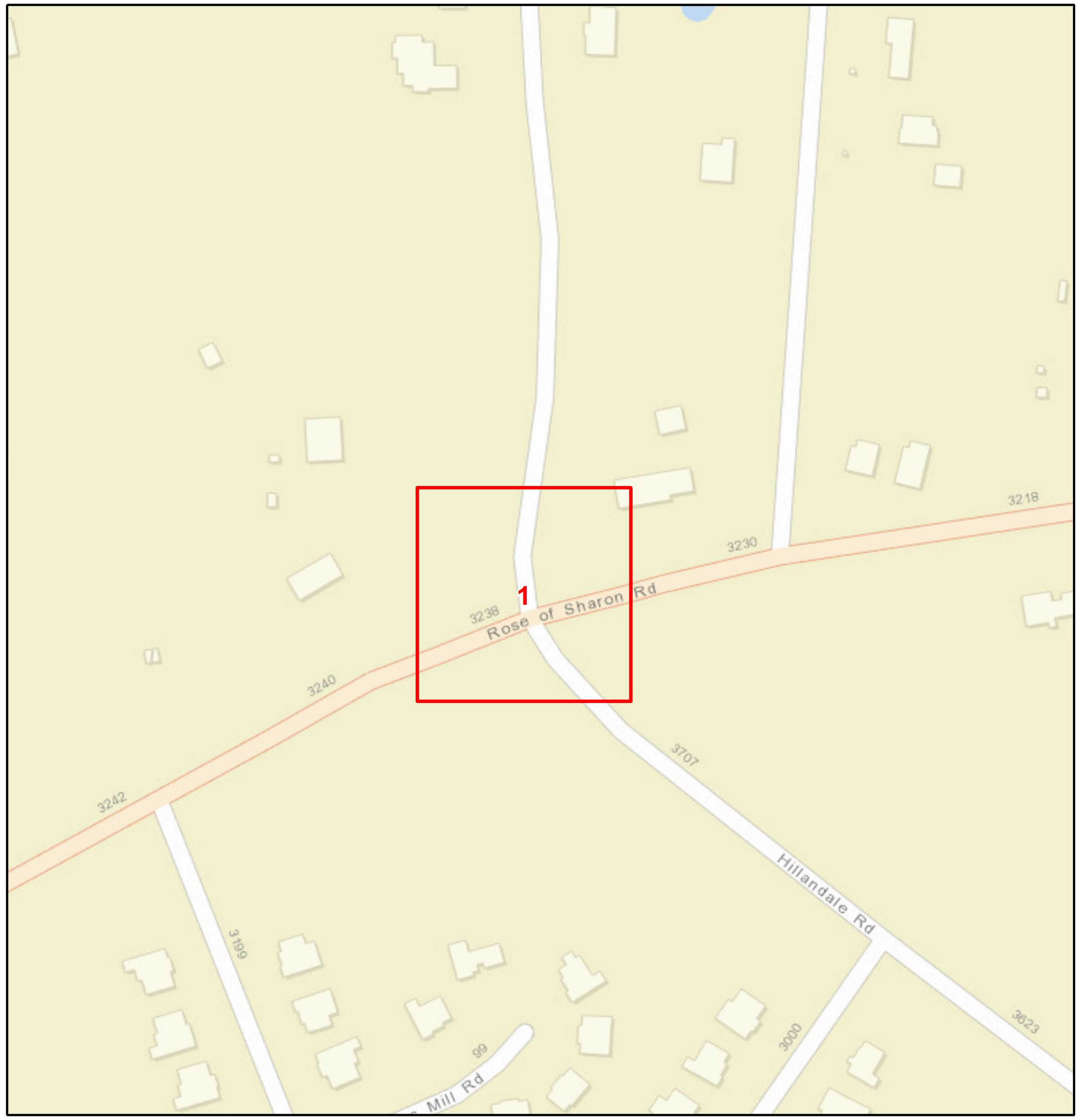
- Municipal Boundary
- NCHPO Historic Boundary (NR and LHD)

2021 Durham
WBS: 2021CPT.05.01.20321.1

S Roxboro St from MLK to SR 1158

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO



Curb Ramps To Be Repaired

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

Municipal Boundary

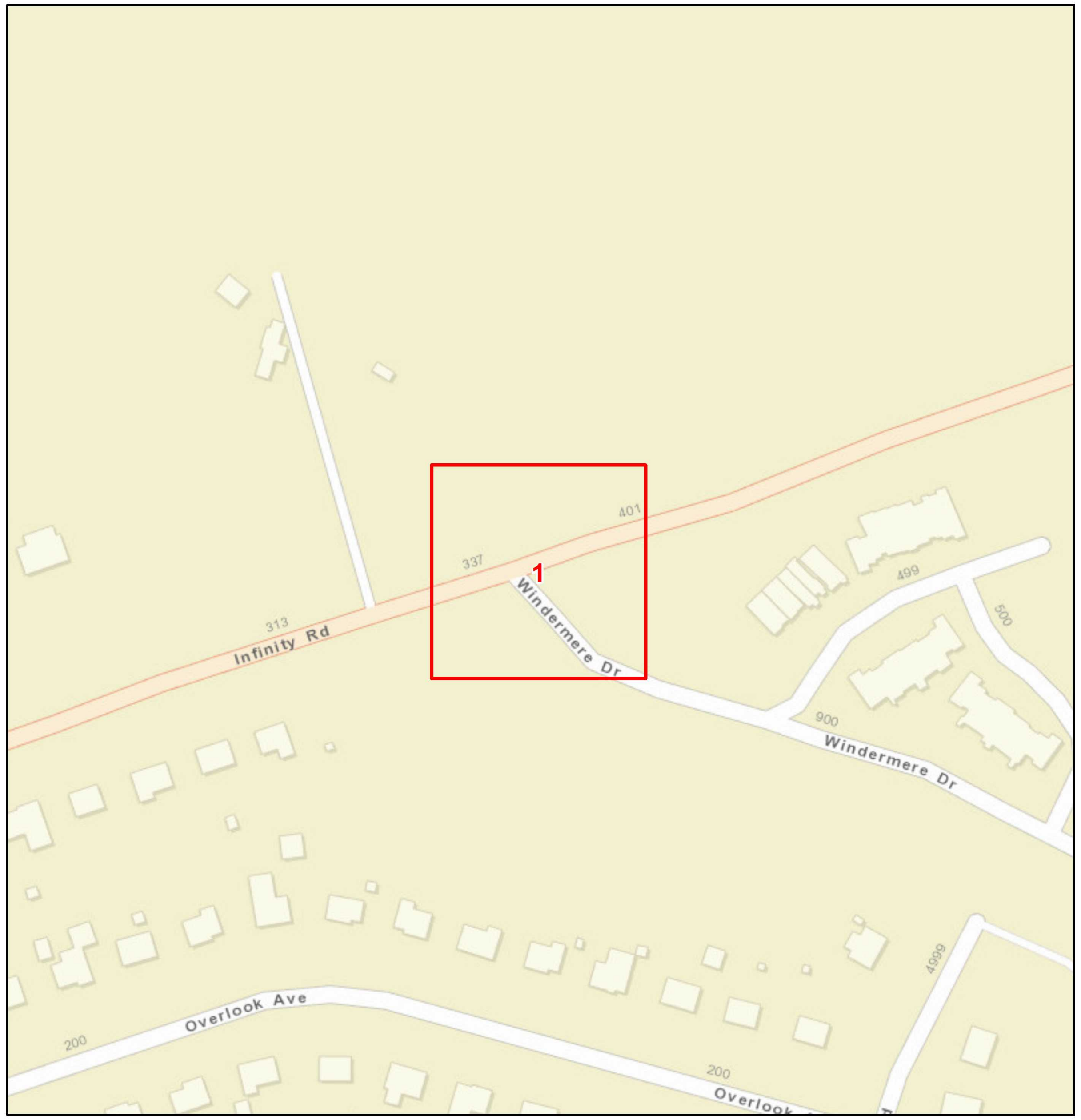
NCHPO Historic Boundary (NR and LHD)

2021 Durham
WBS: 2021CPT.05.01.20321.1

Hillandale Rd
from SR 1404 to Pvmt. Joint

NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCPHO



Curb Ramps To Be Repaired

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

Municipal Boundary

NCHPO Historic Boundary (NR and LHD)

2021 Durham
WBS: 2021CPT.05.01.20321.1

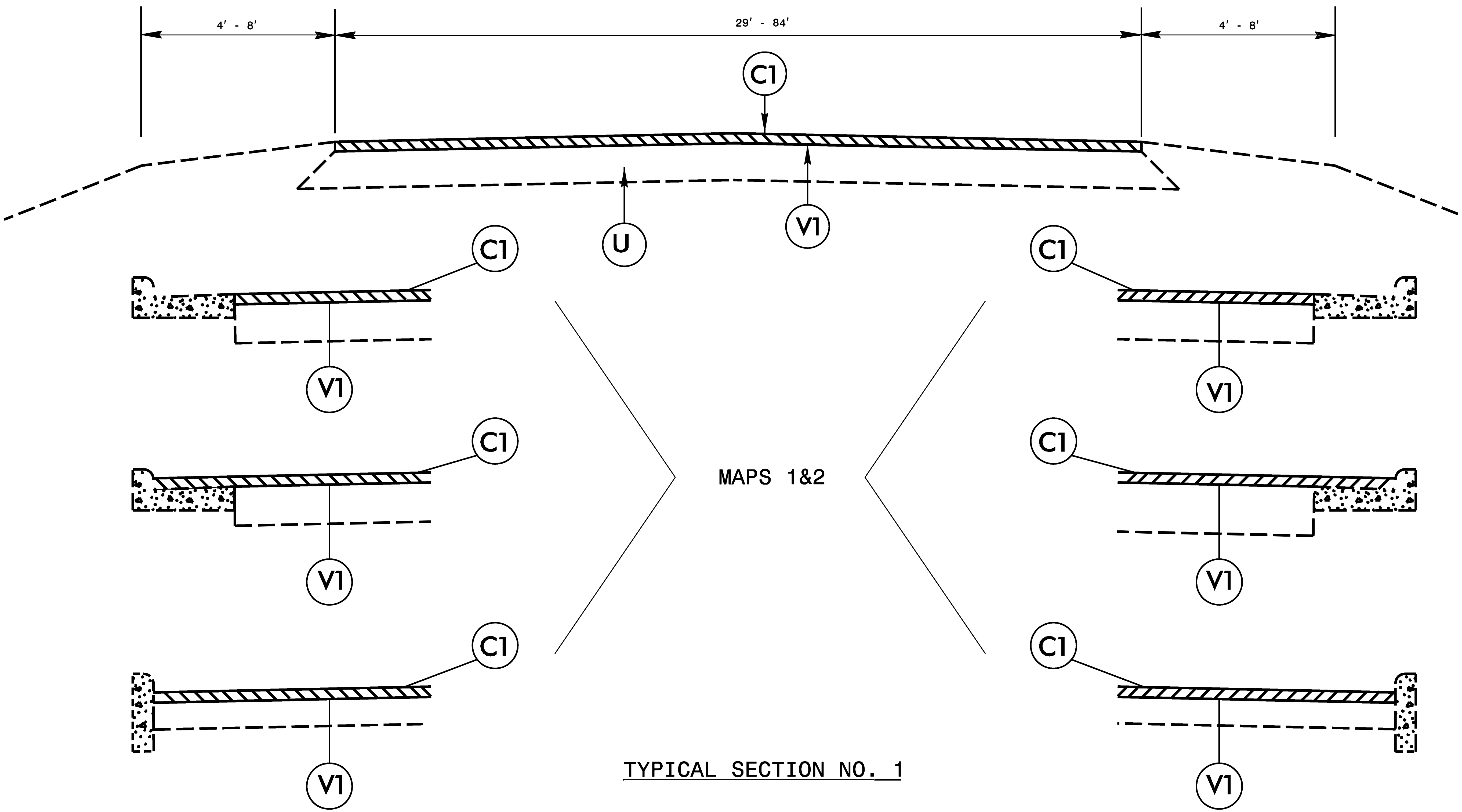
Infinity Rd from U-5516 (1800' East of US 501) to SR 1631

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO

PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321J.etc.	18

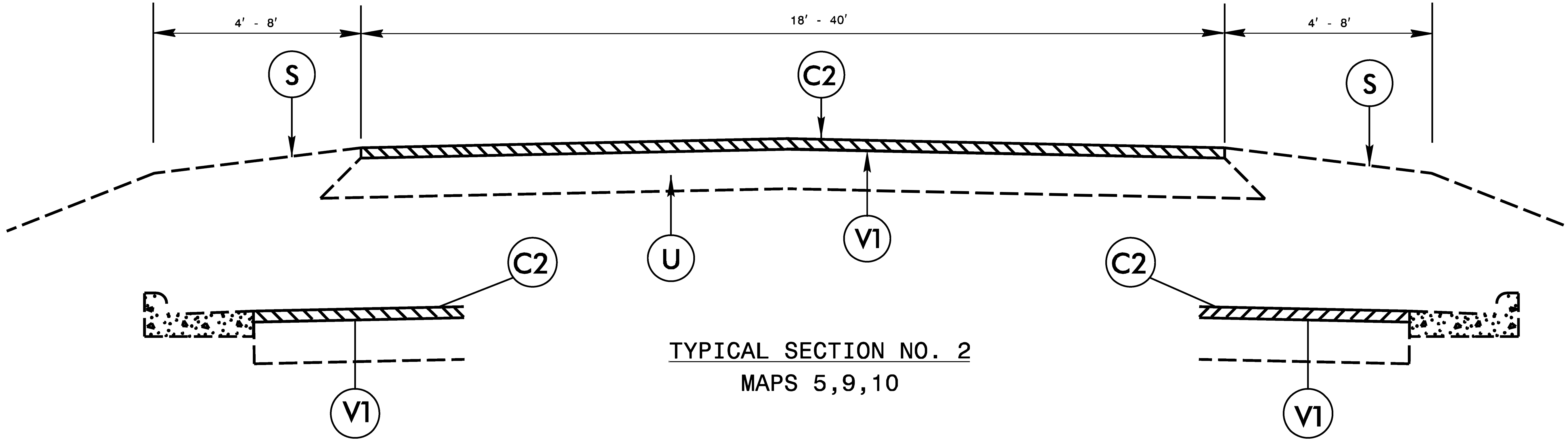
PAVEMENT SCHEDULE		S	SHOULDER GRADING ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)
C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	U	EXISTING PAVEMENT
C2	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	V1	1½" MILLING
C3	1" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.	V2	0" - 1½" MILLING NEW ASPHALT TO BE PAVED BACK FLUSH



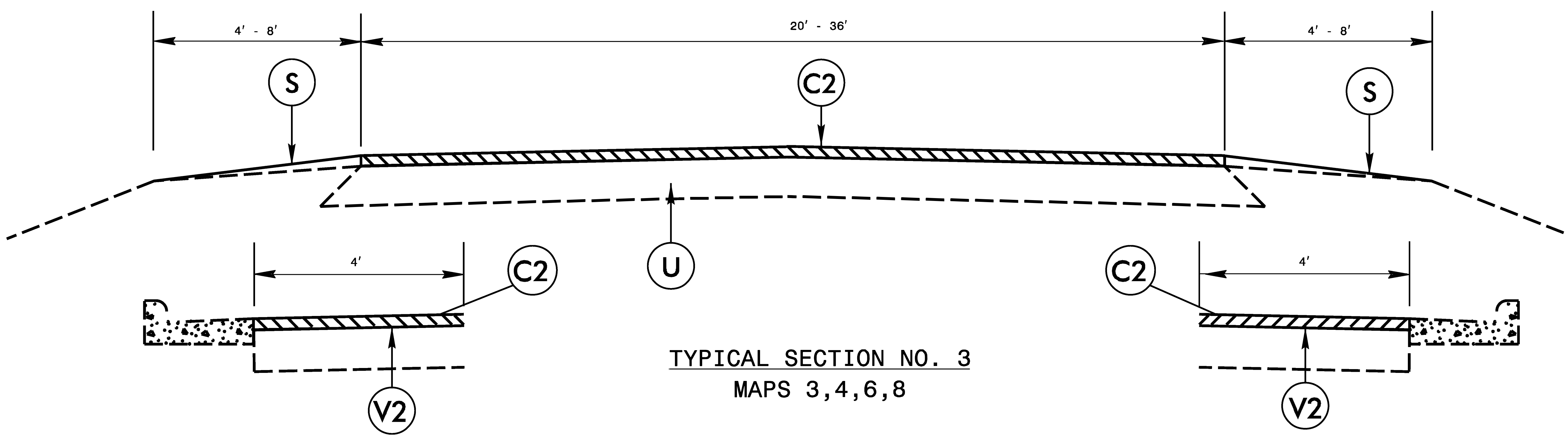
TYPICAL SECTION NO. 1

PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321J, etc.	19

PAVEMENT SCHEDULE			
C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	S	SHOULDER GRADING ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)
C2	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	U	EXISTING PAVEMENT
C3	1" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.	V1	1½" MILLING
		V2	0" - 1½" MILLING NEW ASPHALT TO BE PAVED BACK FLUSH



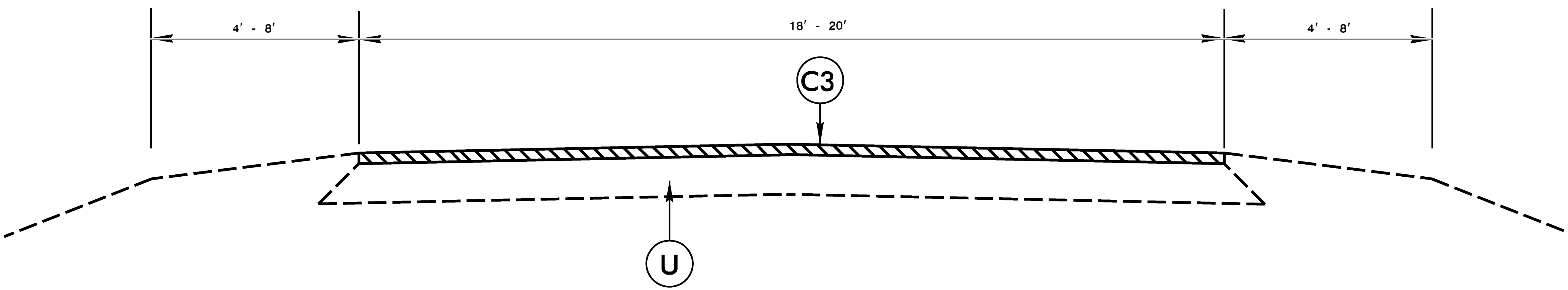
TYPICAL SECTION NO. 2
MAPS 5,9,10



TYPICAL SECTION NO. 3
MAPS 3,4,6,8

PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321.J.etc.	20

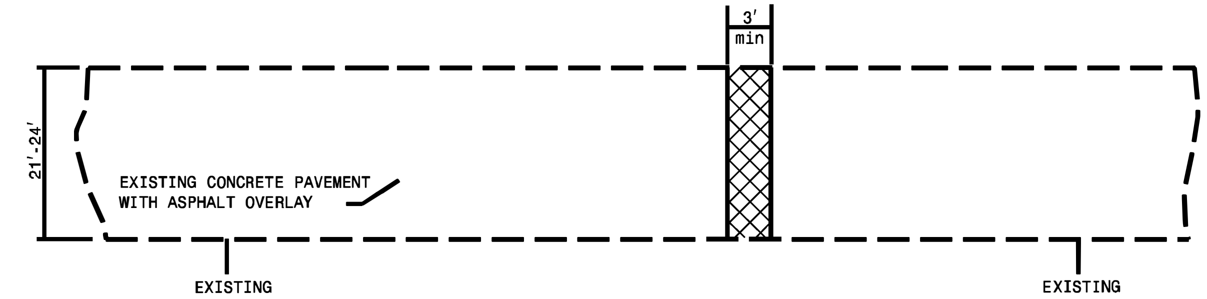
PAVEMENT SCHEDULE		S	SHOULDER GRADING ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)
C1	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	U	EXISTING PAVEMENT
C2	1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	V1	1½" MILLING
C3	1" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.	V2	0" - 1½" MILLING NEW ASPHALT TO BE PAVED BACK FLUSH



TYPICAL SECTION NO. 4

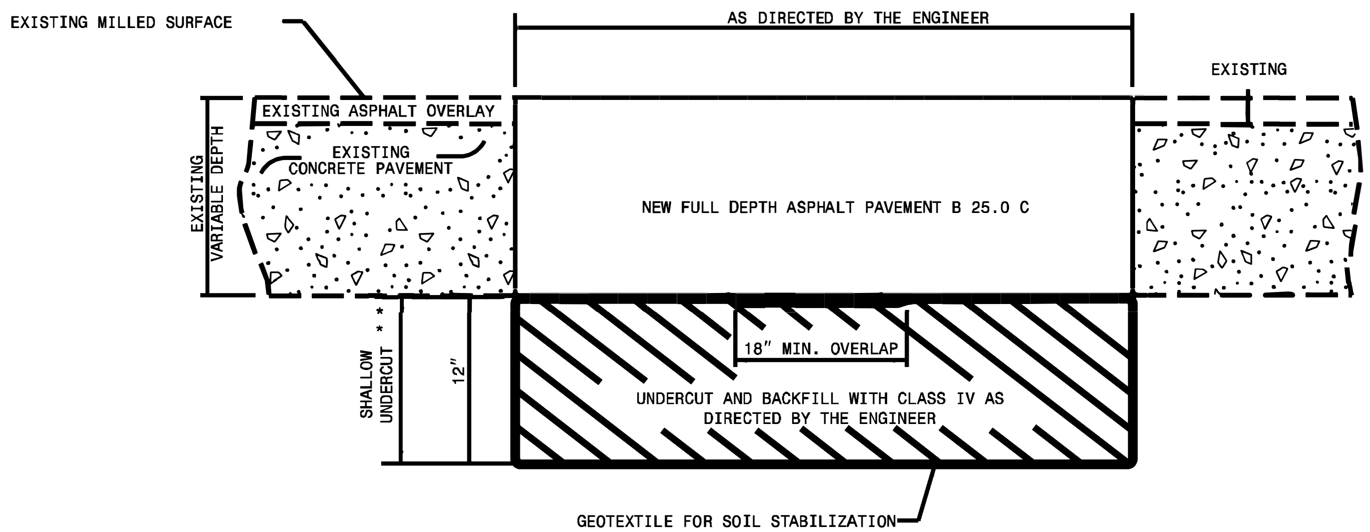
MAPS 11-34

PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01J0321J.etc.	21



TOP VIEW OF EXISTING CONCRETE SLAB REPAIR

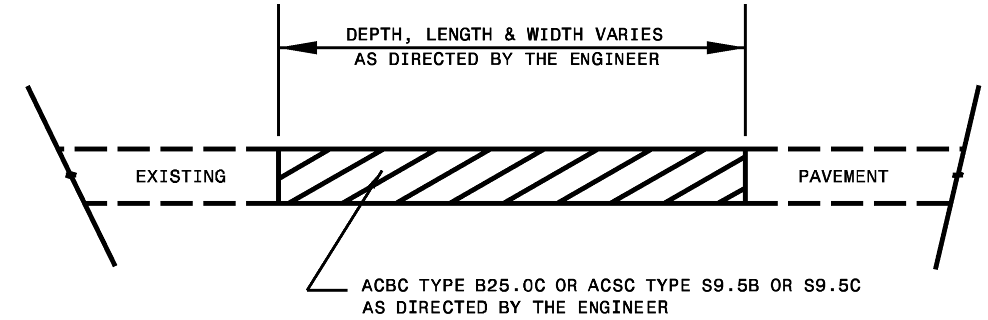
TO BE PERFORMED AFTER MILLING OPERATION, AS DIRECTED BY THE ENGINEER



CROSS SECTION OF EXISTING CONCRETE SLAB REPAIR AFTER MILLING

* DIMENSIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED

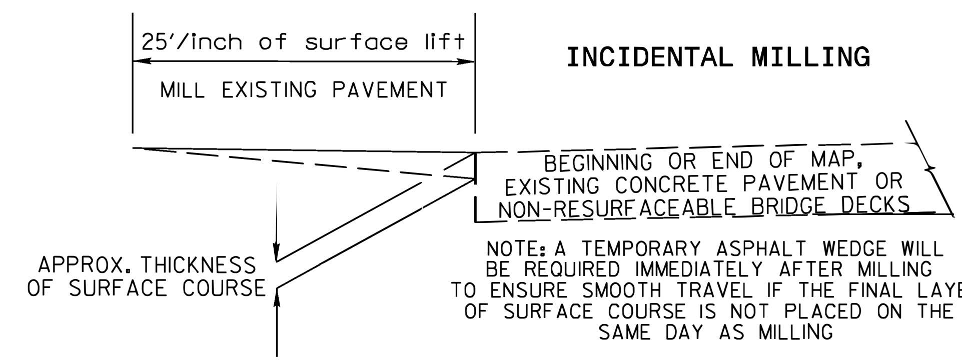
** UNDERCUT REQUIRED IN AREAS AS DIRECTED BY THE ENGINEER



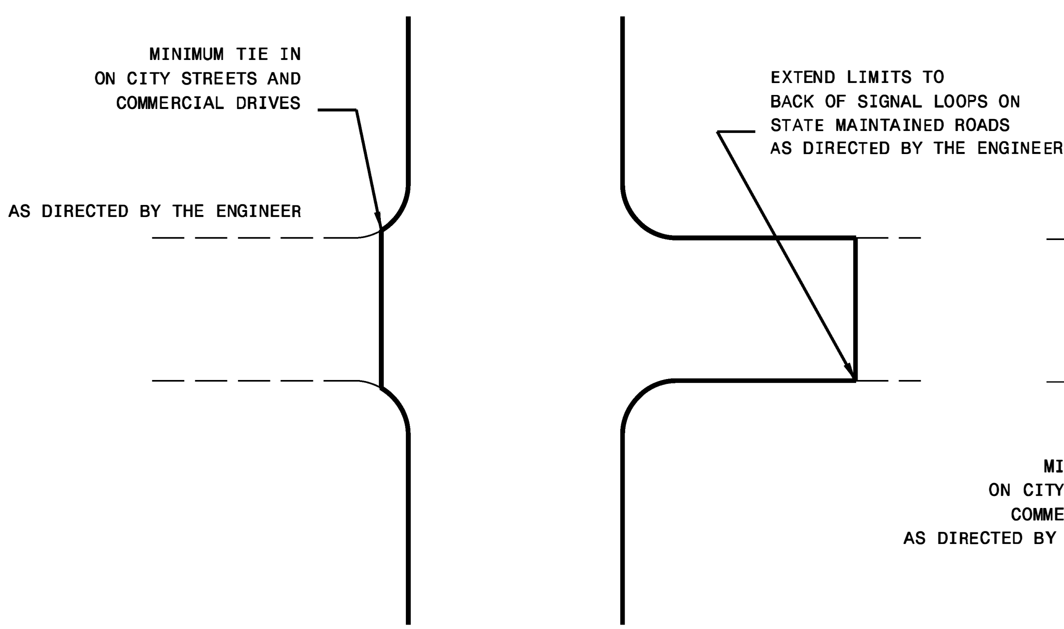
PATCHING EXISTING PAVEMENT

MILLING TO BE PERFORMED PRIOR TO PATCHING

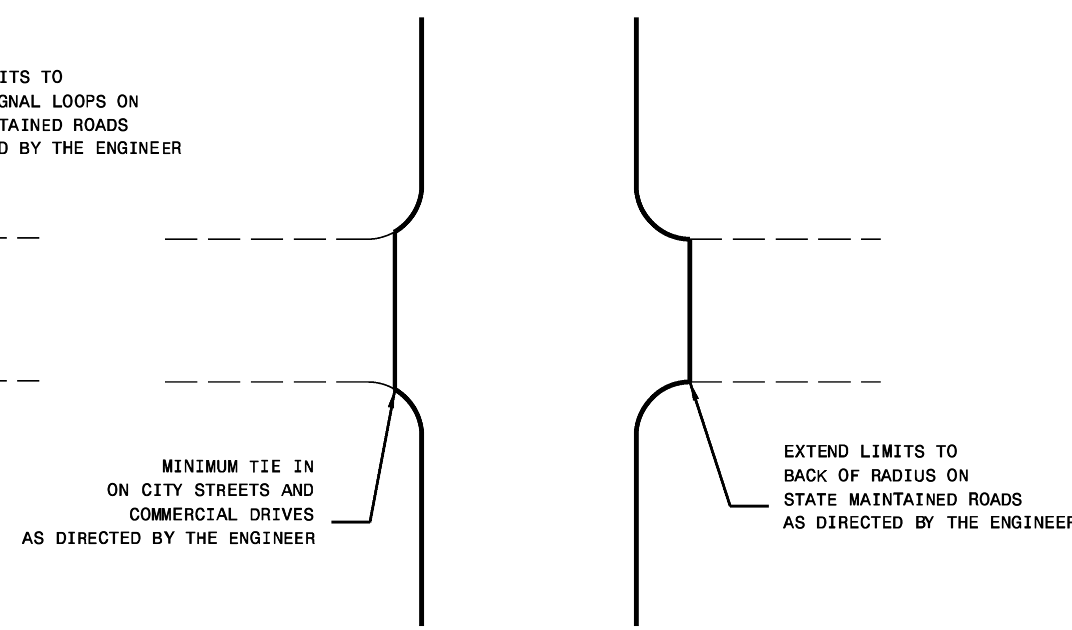
INCIDENTAL MILLING



NOTE: A TEMPORARY ASPHALT WEDGE WILL BE REQUIRED IMMEDIATELY AFTER MILLING TO ENSURE SMOOTH TRAVEL IF THE FINAL LAYER OF SURFACE COURSE IS NOT PLACED ON THE SAME DAY AS MILLING



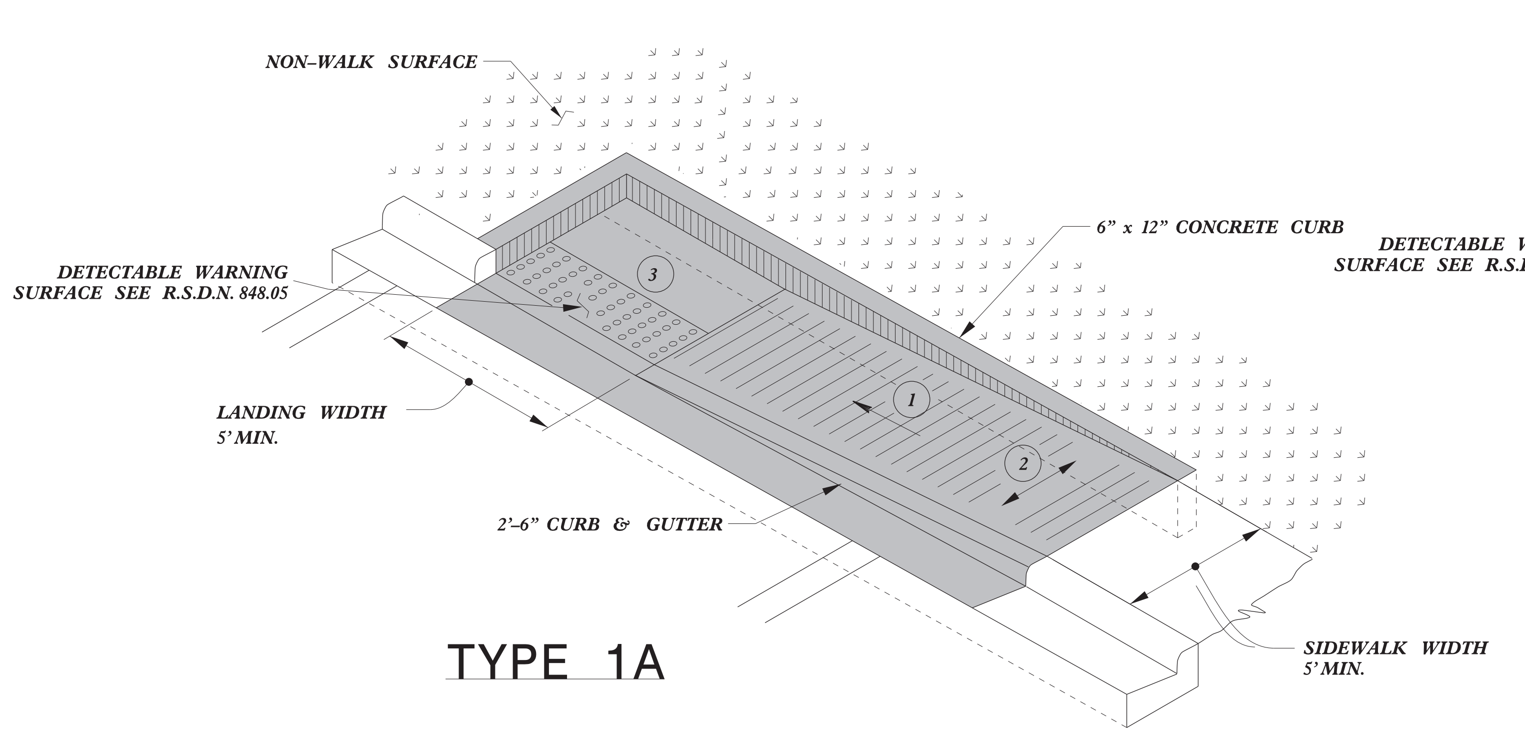
DETAIL OF PROJECT LIMITS AT
SIGNALIZED Y LINES



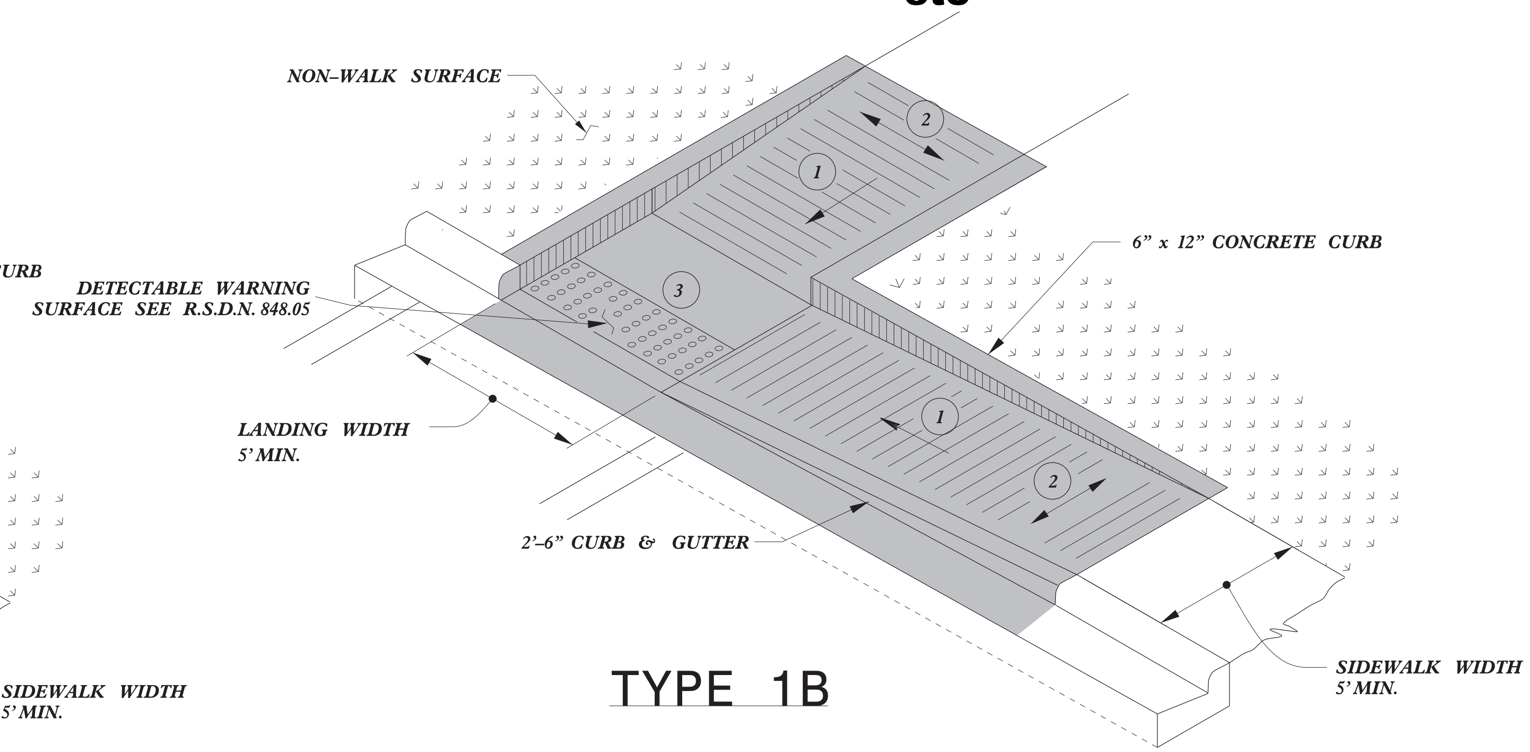
DETAIL OF PROJECT LIMITS AT
UNSIGNALIZED Y LINES

NOTES

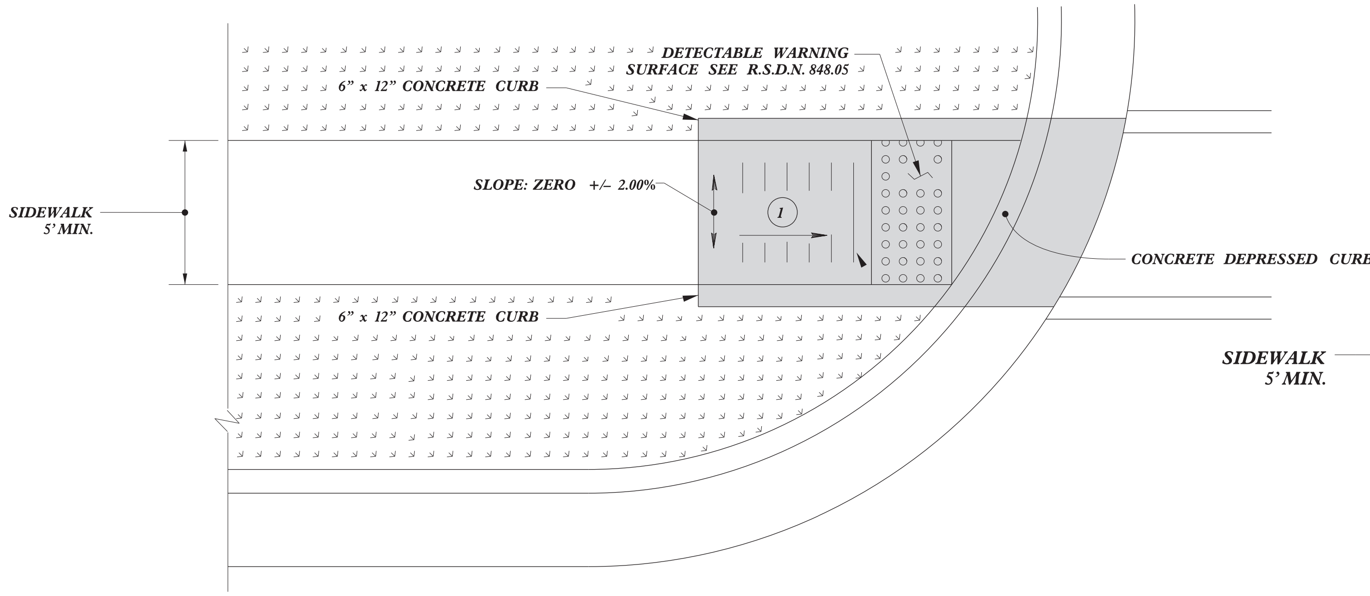
ALL UNPAVED S.R. ROADS TO BE RESURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT
ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.
EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.
BRIDGES TO BE RESURFACED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



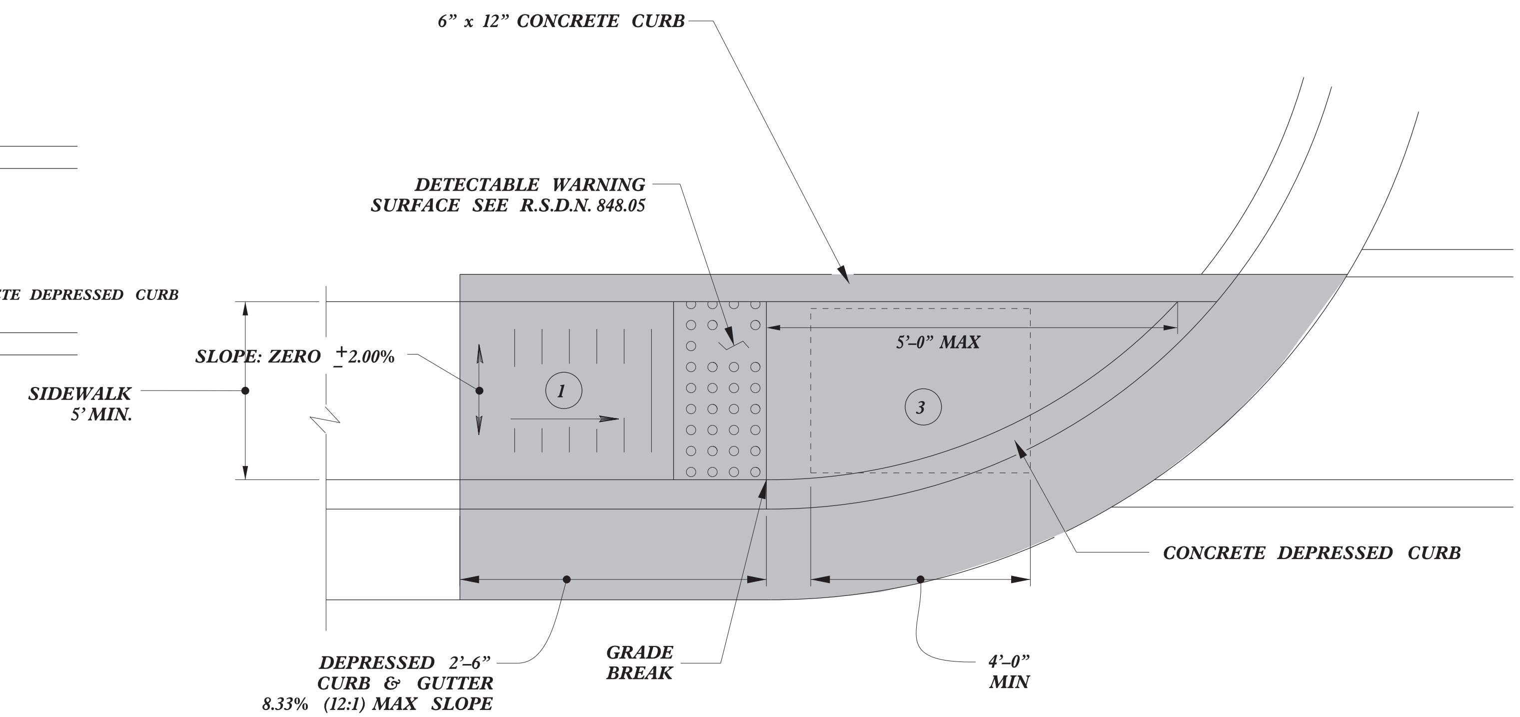
TYPE 1A



TYPE 1B



TYPE 1 Modified



TYPE 1

1/8/2020

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 RAMP NOTES

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER Joel S. Howerton

DocuSigned by:
873F3D47DCDC45F...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

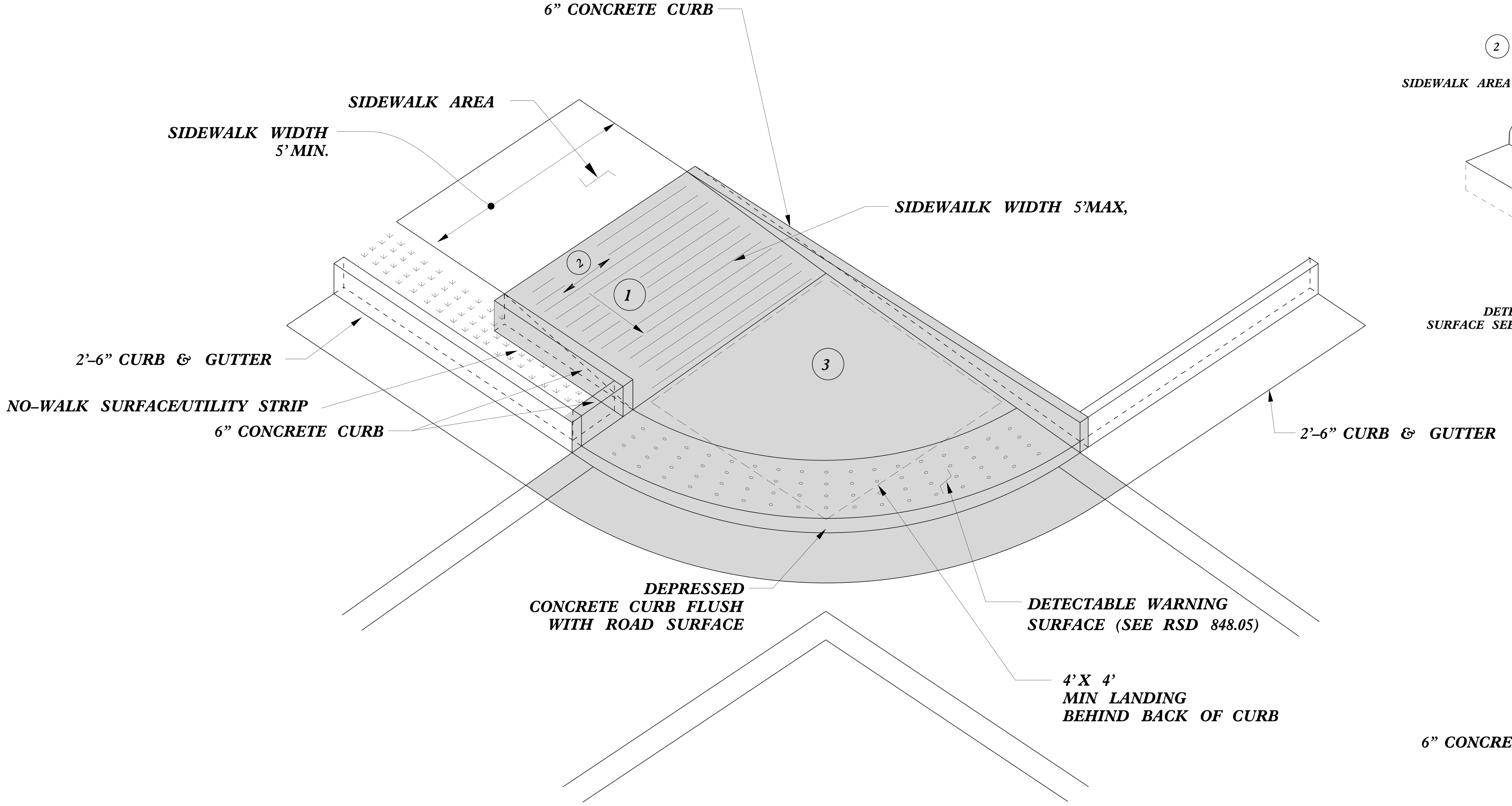
CURB RAMPS

Directional Ramps

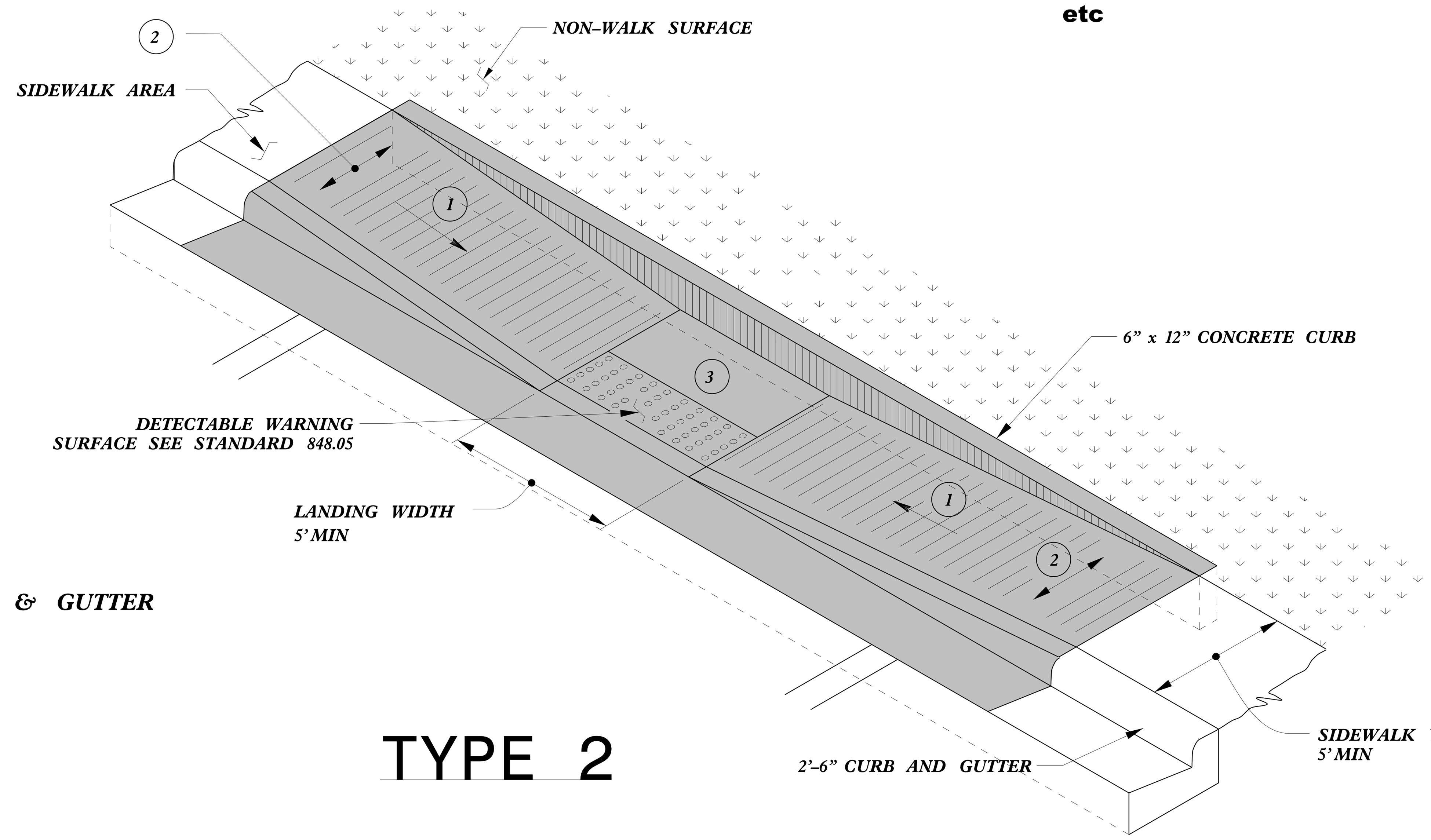
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn	

5/14/99

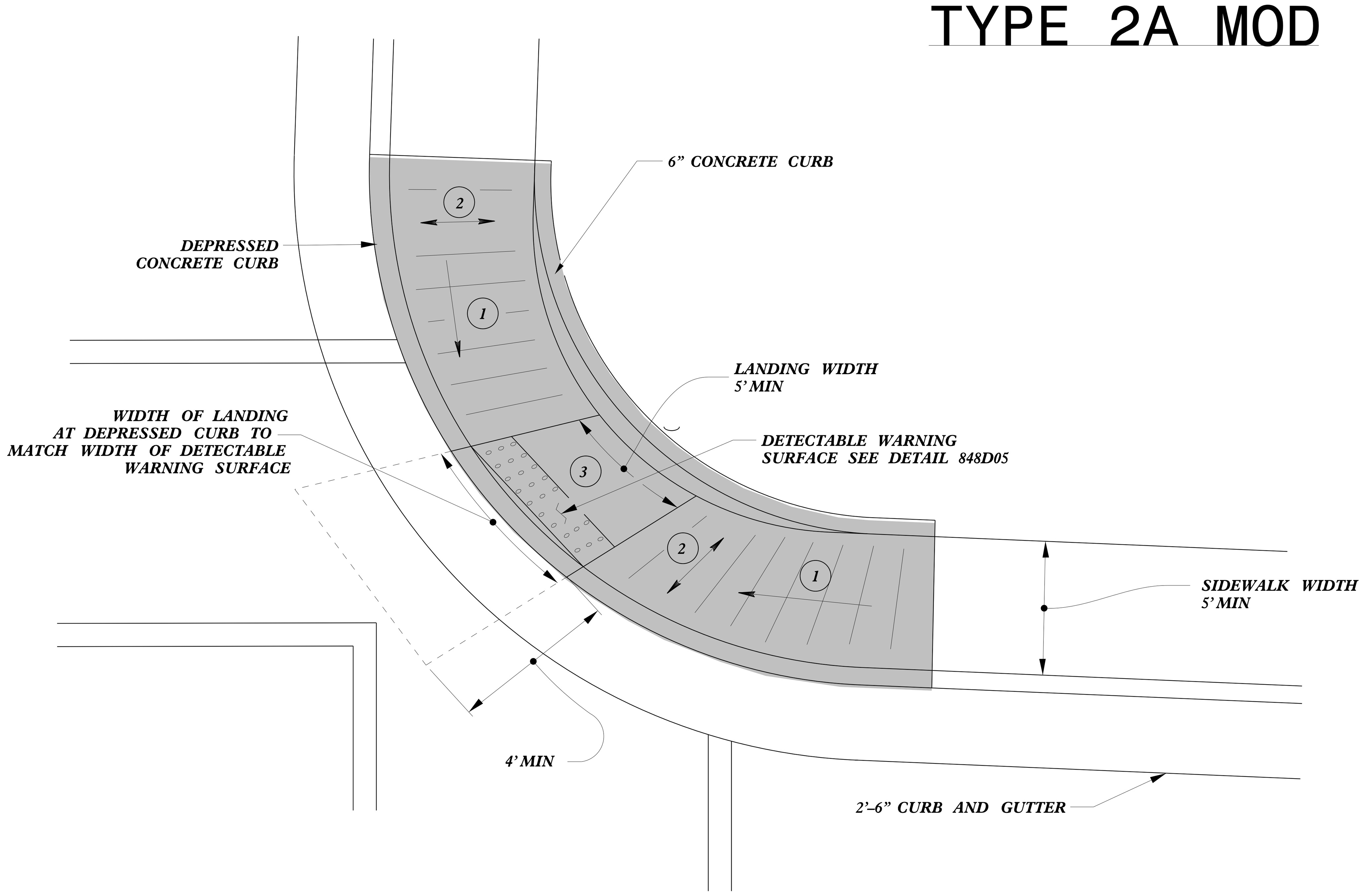
$$$$$$SYSTIME$$$$$ $$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$ $$$$USERNAME$$$$



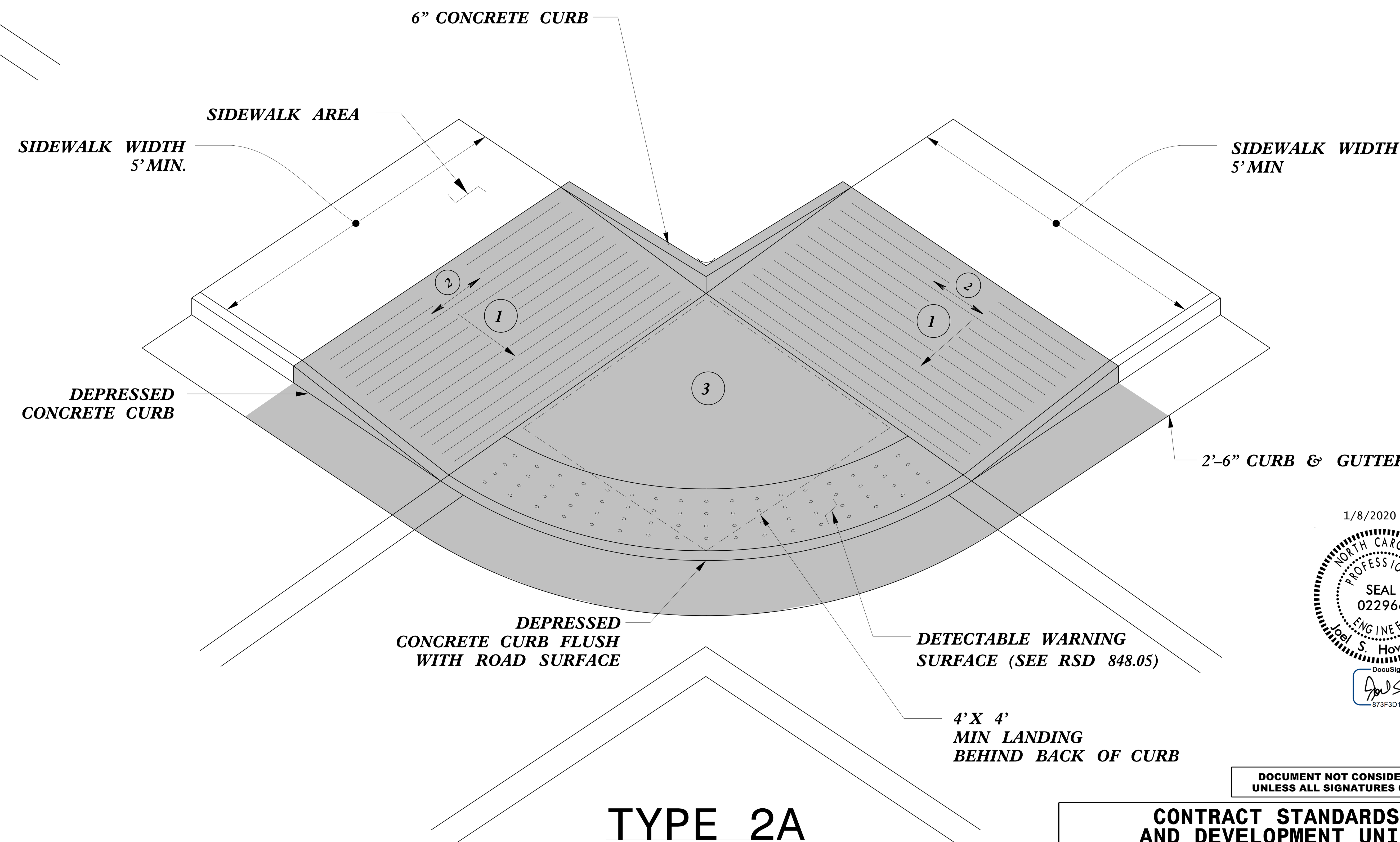
TYPE 2A MOD



TYPE 2



TYPE 2B



TYPE 2A

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

1/8/2020
NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER Joel S. Howerton
DocuSigned by:
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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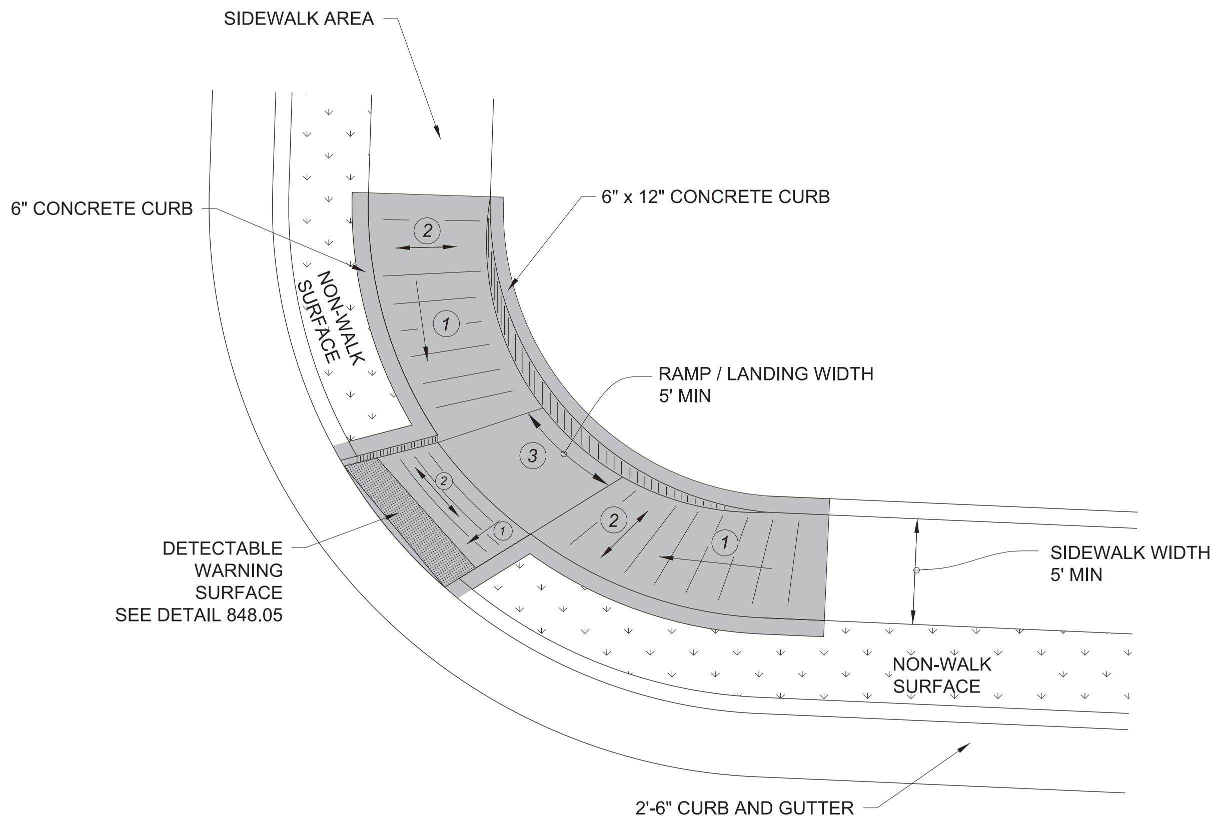
CURB RAMPS

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

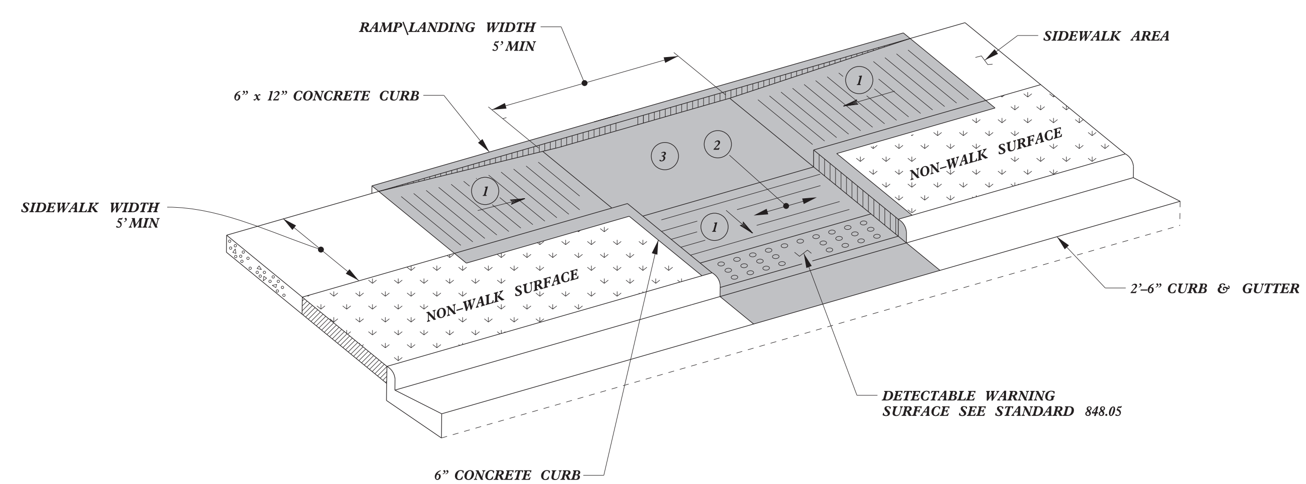
$$$$$$SYSTIME$$$$$ $$$$$$$$$$$$DGN$$$$$$$$$$$$ $$$$USERNAME$$$$

5/14/99

PAY LIMITS FOR 1 CURB RAMP



TYPE 3 MODIFIED
INSTALLATION IN A RADIUS



TYPE 3

1/8/2020

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER Joel S. Howerton

DocuSigned by:
873F3D17DCDC45F...

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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.*

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DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

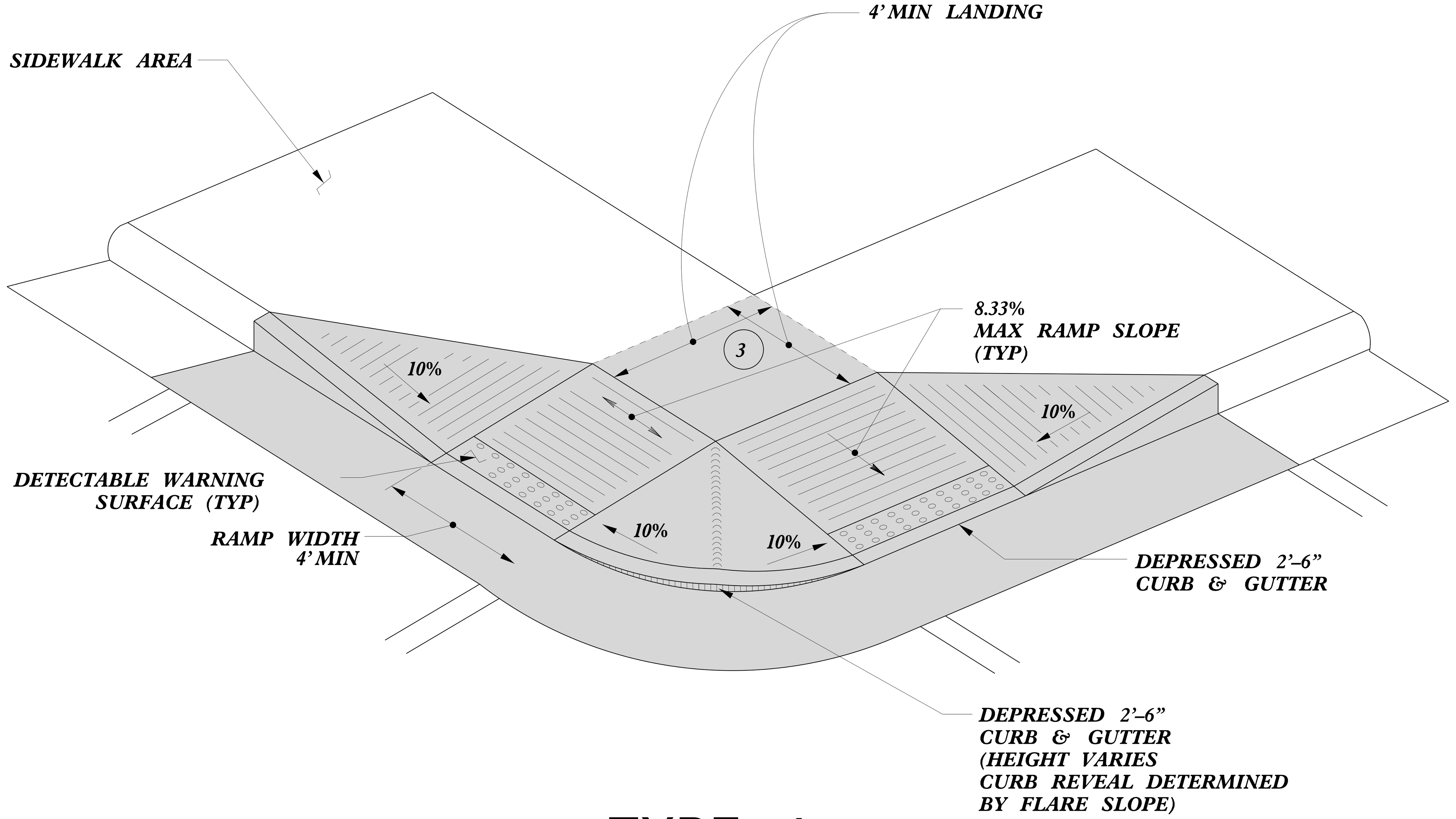
CURB RAMPS

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

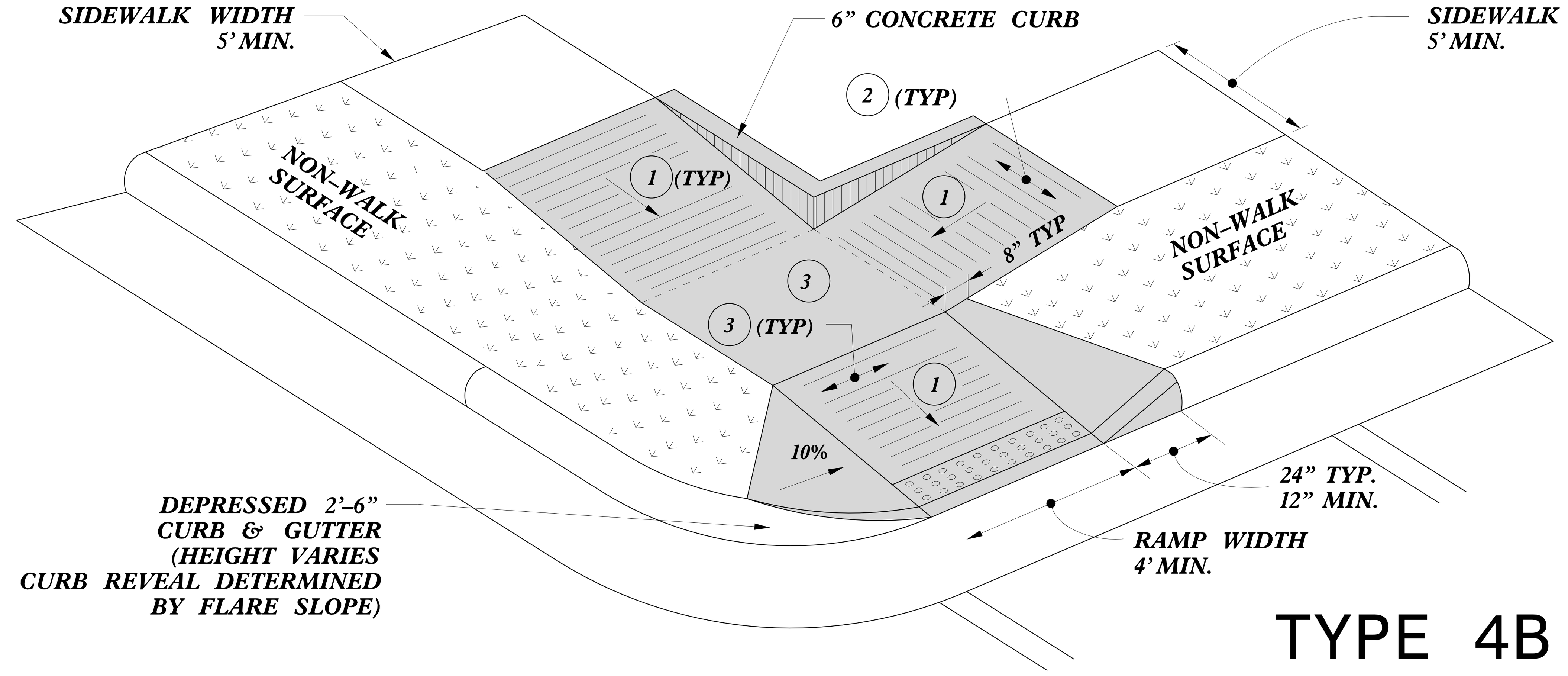
5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

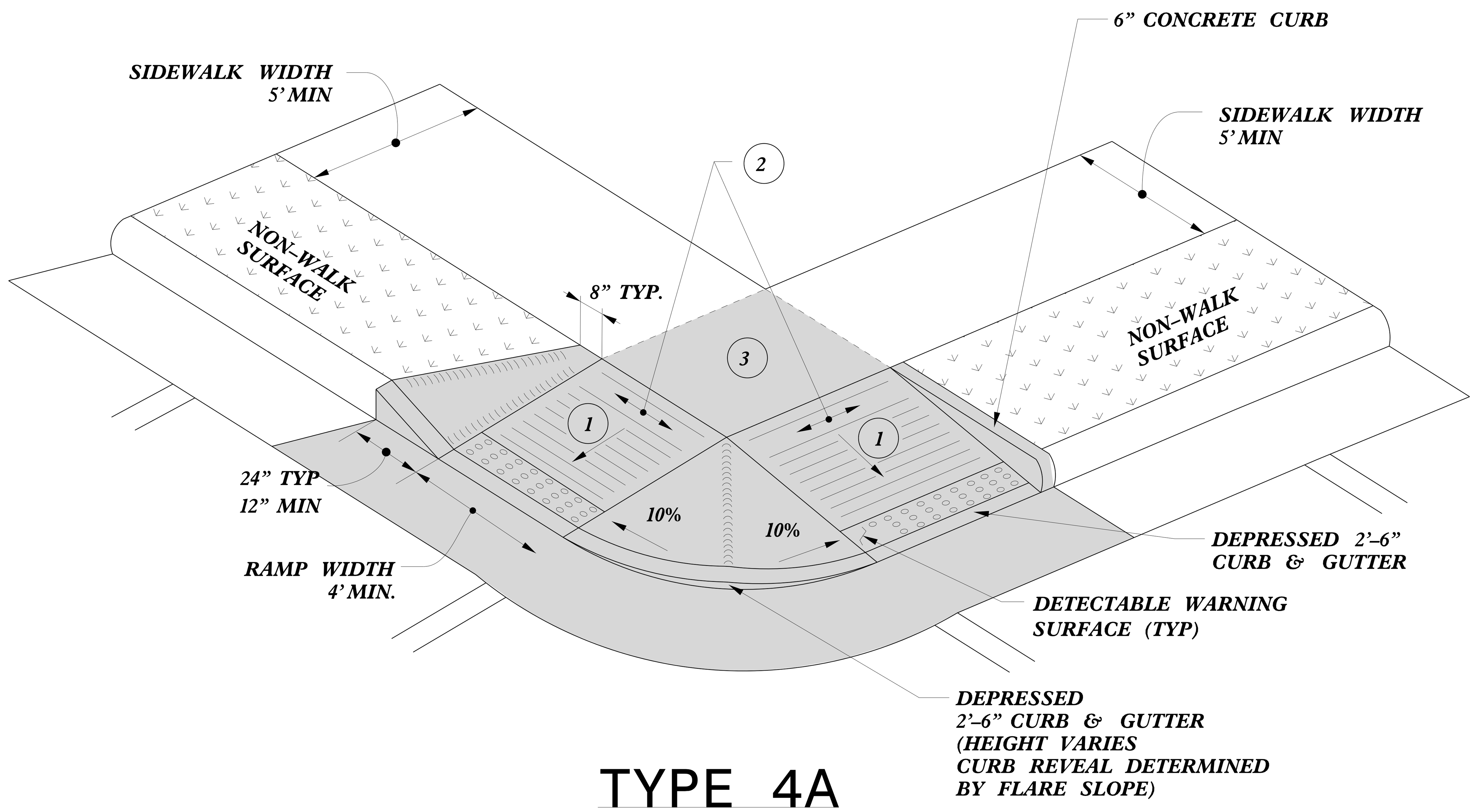
PAY LIMITS FOR 1 OR 2 CURB RAMPS (CALCULATE BASED ON NUMBER OF SETS OF TRUNCATED DOMES)



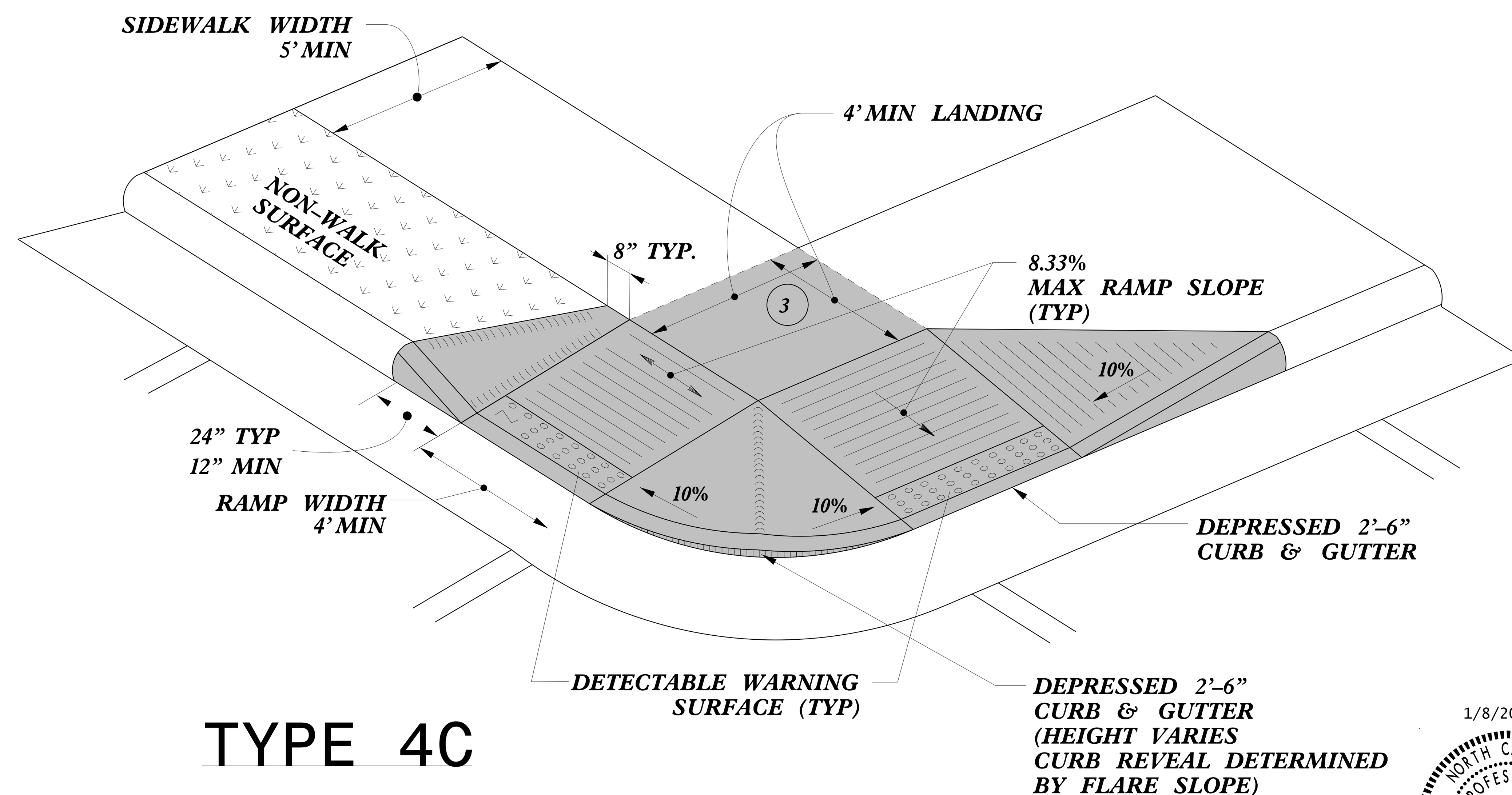
TYPE 4



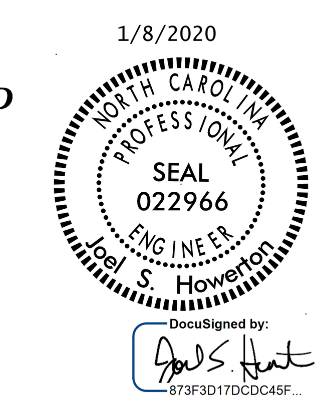
TYPE 4B



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.

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

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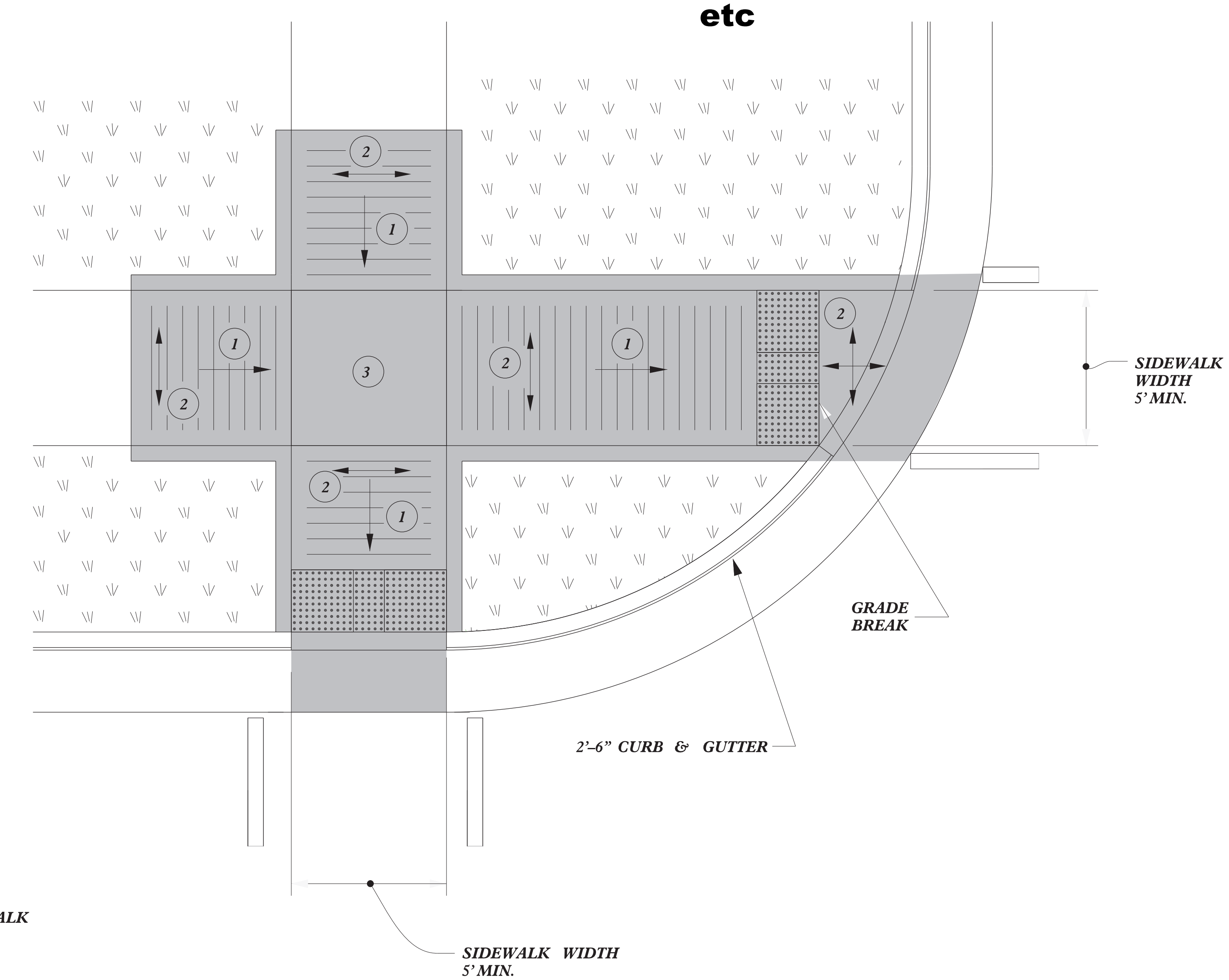
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

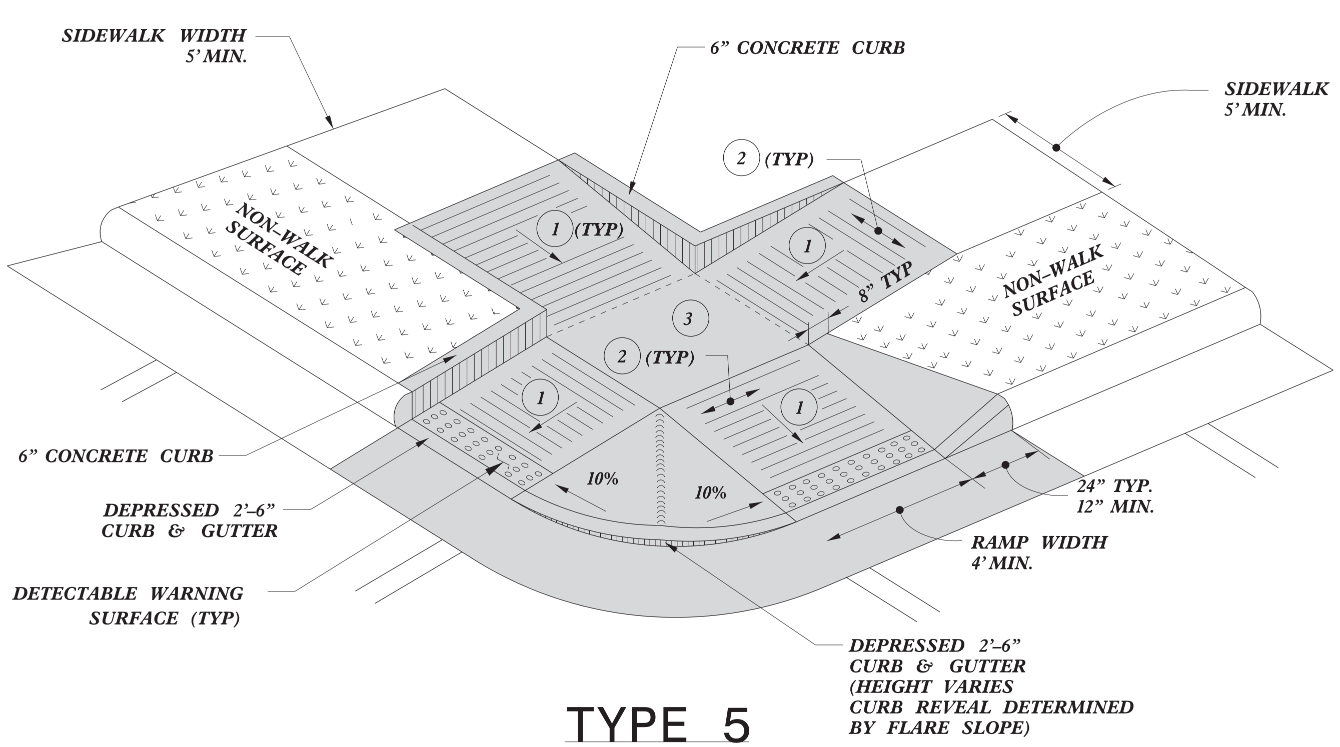
ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321.1 etc	26

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.

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

1/8/2020

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER Joel S. Howerton

DocuSigned by:
873F3D17DCDC45F...

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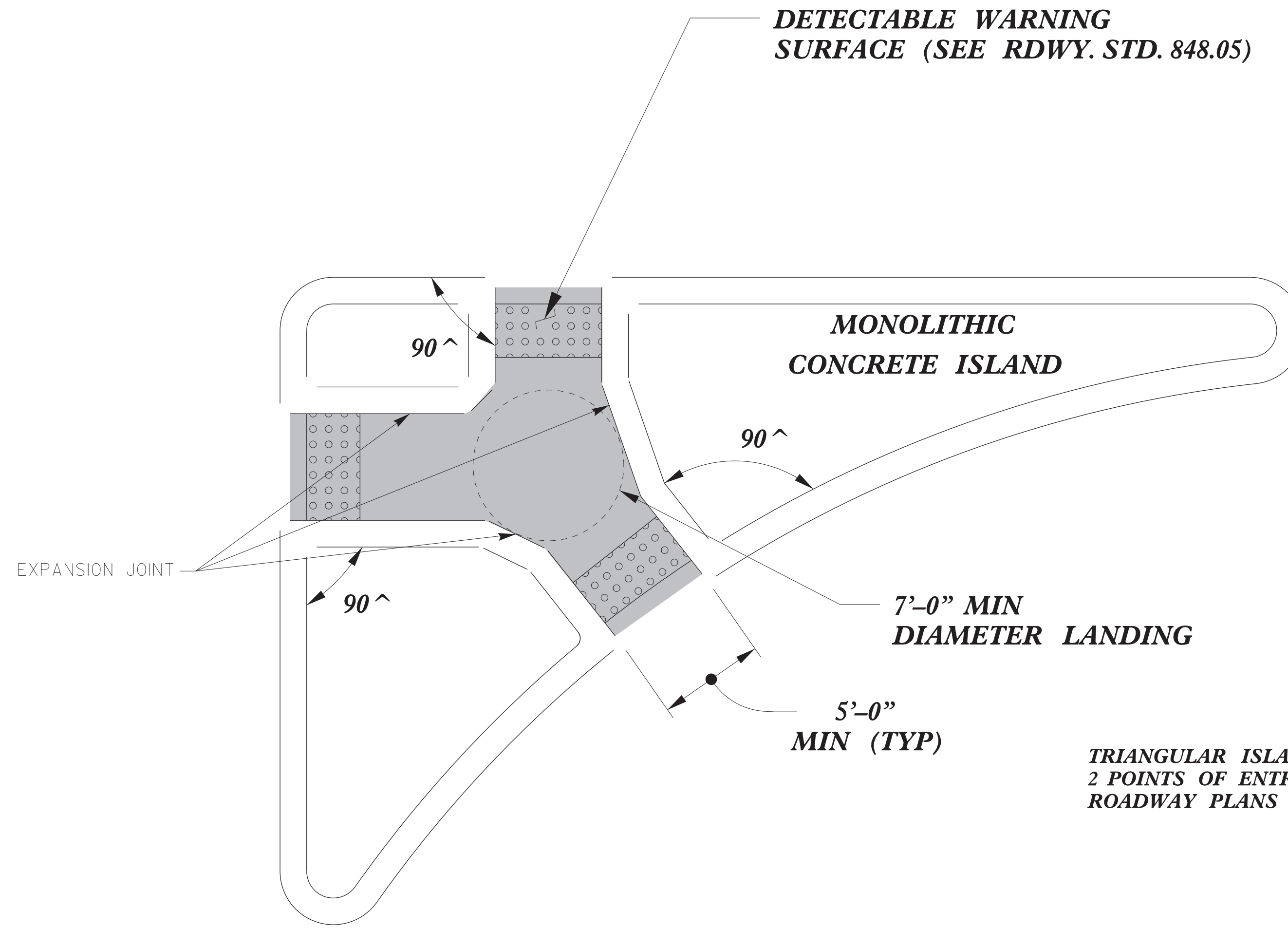
CURB RAMPS

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

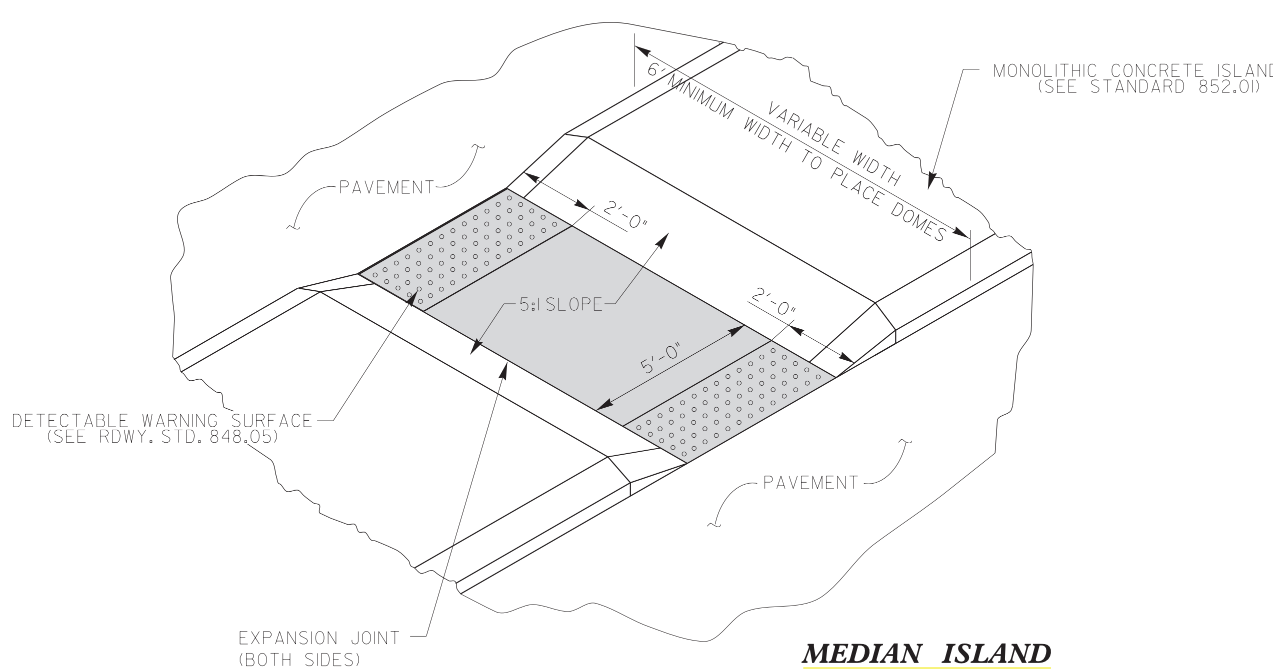
PAY LIMITS FOR 2 OR 3 CURB RAMPS etc (CALCULATE BASED ON NUMBER OF SETS OF TRUNCATED DOMES)



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.

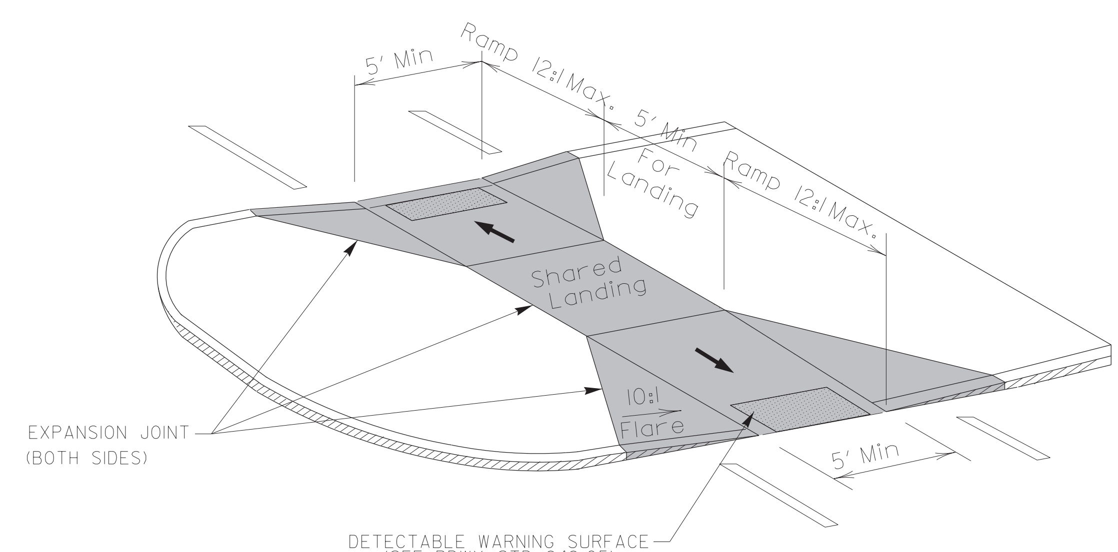
TRIANGULAR ISLAND WITH CUT THROUGH

TYPE 6



MEDIAN ISLAND WITH CUT THROUGH

TYPE 7



TYPE 8

MEDIAN ISLAND CURB RAMPS

1/8/2020

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER

DocuSigned by:

873F3D17DCDC45F...

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CURB RAMPS

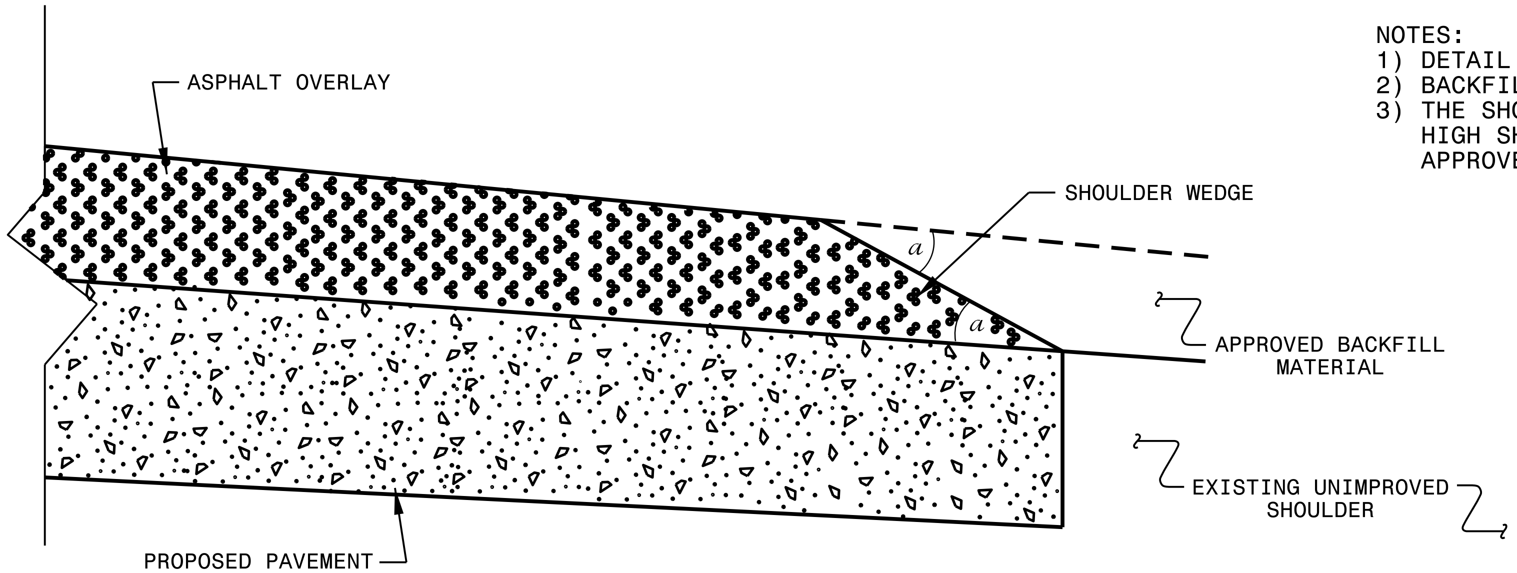
Median or Turn Lane Islands

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

5/14/99

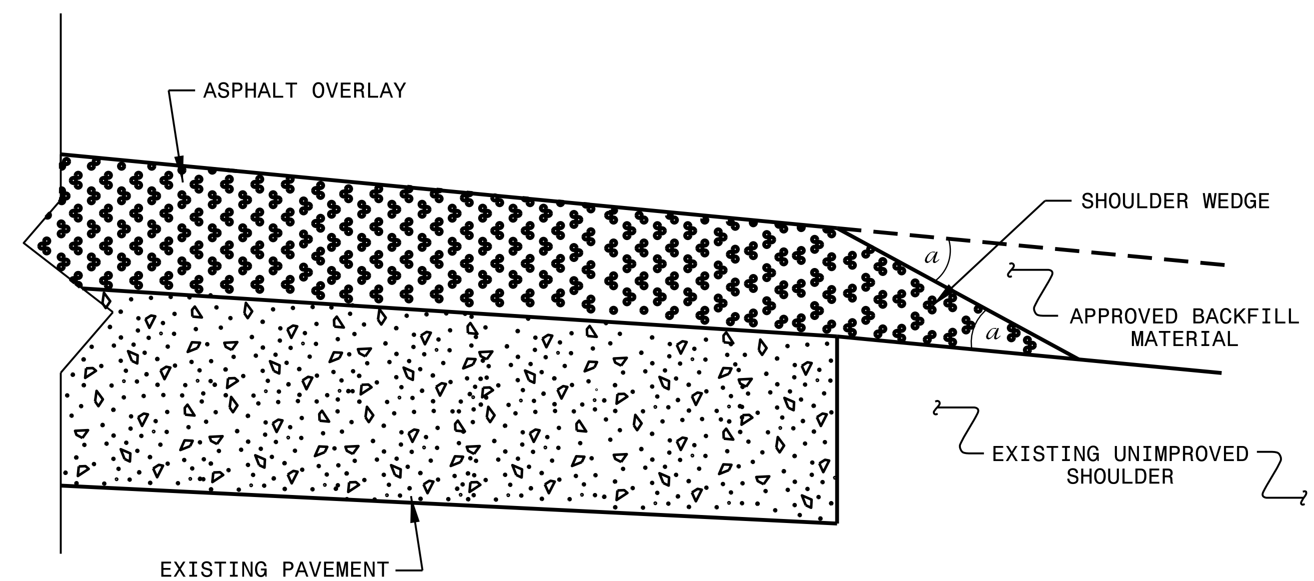
$$$$$$SYSTIME$$$$$ $$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$ $$$$USERNAME$$$$

NOTES:
1) DETAIL DOES NOT APPLY TO OGAFC 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.



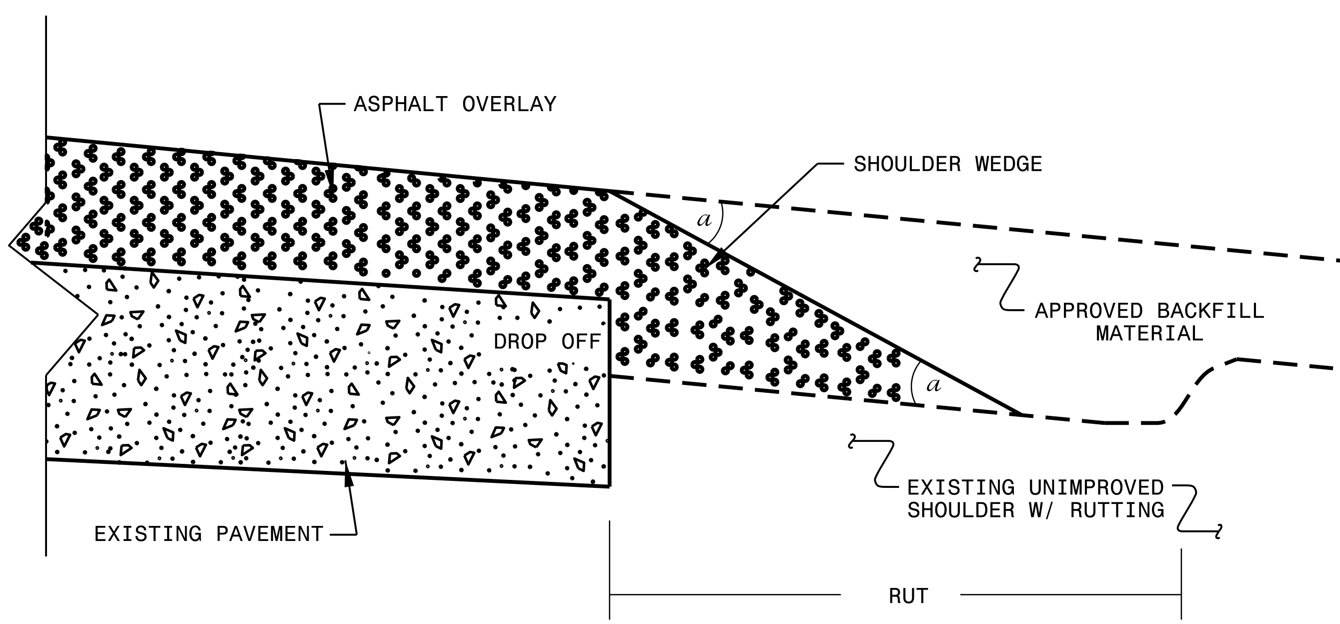
SHOULDER WEDGE DETAIL

(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°

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SHOULDER WEDGE DETAILS

ORIGINAL BY: T.SPELL DATE: 7-19-11
MODIFIED BY: DATE: 2/2/16
CHECKED BY: DATE:
FILE SPEC.: s:usr/details/stand/shoulderwedgedetail.dgn

SUMMARY OF QUANTITIES – US 501 FROM SOUTH END OF I-85 BRIDGE TO SR 1443

Municipality:	**Durham**
Project Number:	**2021 Durham**
WBS Number:	**2021CPT.05.01.10321.1**
County:	**Durham**

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E 2'-6" Concrete Curb & Gutter LF	2591000000-E 4" Concrete Sidewalk SY	2845000000-N Adjustment of Meter Boxes or Valve Boxes EA	2600000000-N Retrofit Existing Curb Ramps EA	2613000000-N Remove and Replace Curb Ramps EA	2605000000-N Concrete Curb Ramps EA	SP1 Remove Curb Ramps EA	Improvement Type
2976	1	US-501 (N Duke St)	SR-1443 (Horton Rd)				1				RetrofitWarnings
2977	1	US-501 (N Duke St)	SR-1443 (Horton Rd)				1				RetrofitWarnings
2978	1	US-501 (N Duke St)	SR-1443 (Horton Rd)				1				RetrofitWarnings
24144	1	US-501 (N Duke St)	SR-1443 (Horton Rd)				1				RetrofitWarnings
2979	2	US-501 (N Duke St)	Marathon Gas Station (3705 N Duke St) Entrance				1				RetrofitWarnings
2980	2	US-501 (N Duke St)	Marathon Gas Station (3705 N Duke St) Entrance				1				RetrofitWarnings
2981	2	US-501 (N Duke St)	Clayton's Car Care (3701 N Duke St) Entrance				1				RetrofitWarnings
2982	2	US-501 (N Duke St)	Clayton's Car Care (3701 N Duke St) Entrance				1				RetrofitWarnings
24192	2	US-501 (N Duke St)	Staples (3600 N Duke St)	15						1	Remove Ramp
24191	2	US-501 (N Duke St)	Staples (3600 N Duke St)	15						1	Remove Ramp
2983	3	US-501 (N Duke St)	Crosby Rd					1			Type1Modified
2984	3	US-501 (N Duke St)	Crosby Rd					1			Type1Modified
2985	4	US-501 (N Duke St)	Night and Day Dental (3500 N Duke St) Entrance					1			Type1
2986	5	US-501 (N Duke St)	Fairfield Rd					1			Type2B
2987	5	US-501 (N Duke St)	Fairfield Rd					1			Type2B
24143	5	US-501 (N Duke St)	Fairfield Rd					1			Standard - 848.06
24140	5	US-501 (N Duke St)	Fairfield Rd						1		Standard - 848.06
24141	5	US-501 (N Duke St)	Fairfield Rd					1			Type2B
24142	5	US-501 (N Duke St)	Fairfield Rd					1			Type2B
24176	6	US-501 (N Duke St)	Reta Rd	10						1	Remove Ramp
24175	6	US-501 (N Duke St)	Reta Rd	13						1	Remove Ramp
24174	6	US-501 (N Duke St)	Reta Rd	14						1	Remove Ramp
24179	6	US-501 (N Duke St)	Reta Rd	12						1	Remove Ramp
24178	6	US-501 (N Duke St)	Reta Rd	12						1	Remove Ramp
24177	6	US-501 (N Duke St)	Reta Rd	11						1	Remove Ramp
24173	7	US-501 (N Duke St)	Diane St	13						1	Remove Ramp
24172	7	US-501 (N Duke St)	Diane St	14						1	Remove Ramp
24171	7	US-501 (N Duke St)	Diane St	14						1	Remove Ramp
24170	7	US-501 (N Duke St)	Diane St	14						1	Remove Ramp
2988	8	US-501 (N Duke St)	Frasier St				1				RetrofitWarnings
2989	8	US-501 (N Duke St)	Frasier St				1				RetrofitWarnings
24139	8	US-501 (N Duke St)	Frasier St					1			Type2B
24136	8	US-501 (N Duke St)	Frasier St					1			Type2B
24137	8	US-501 (N Duke St)	Frasier St					1			Type2B
24138	8	US-501 (N Duke St)	Frasier St					1			Type2B
24169	9	US-501 (N Duke St)	Newsom St	14						1	Remove Ramp
24168	9	US-501 (N Duke St)	Newsom St	14						1	Remove Ramp
24167	9	US-501 (N Duke St)	Newsom St	14						1	Remove Ramp
24166	9	US-501 (N Duke St)	Newsom St	14						1	Remove Ramp
24165	9	US-501 (N Duke St)	Newsom St	14						1	Remove Ramp
24164	9	US-501 (N Duke St)	Newsom St	14						1	Remove Ramp
24163	9	US-501 (N Duke St)	Newsom St	14						1	Remove Ramp
24162	9	US-501 (N Duke St)	Newsom St	14						1	Remove Ramp
24156	10	US-501 (N Duke St)	SR-1407 (W Carver St)						1		Type2B
24161	10	US-501 (N Duke St)	SR-1407 (W Carver St)					1			Type2B
24159	10	US-501 (N Duke St)	SR-1407 (W Carver St)						1		Type2B
24158	10	US-501 (N Duke St)	SR-1407 (W Carver St)						1		Type2B
24157	10	US-501 (N Duke St)	SR-1407 (W Carver St)						1		Type2B
24160	10	US-501 (N Duke St)	SR-1407 (W Carver St)					1			Type2B
24154	10	US-501 (N Duke St)	SR-1407 (W Carver St)					1			Type2B
Sub-Total				**269**	**0**	**0**	**10**	**15**	**5**	**20**	

Municipality:	**Durham**
Project Number:	**2021 Durham**
WBS Number:	**2021CPT.05.01.10321.1**
County:	**Durham**

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E 2'-6" Concrete Curb & Gutter LF	2591000000-E 4" Concrete Sidewalk SY	2845000000-N Adjustment of Meter Boxes or Valve Boxes EA	2600000000-N Retrofit Existing Curb Ramps EA	2613000000-N Remove and Replace Curb Ramps EA	2605000000-N Concrete Curb Ramps EA	SP1 Remove Curb Ramps EA	Improvement Type
24155	10	US-501 (N Duke St)	SR-1407 (W Carver St)					1			Type2B
24133	11	US-501 (N Duke St)	Crutchfield St					1			Type1Modified
2990	11	US-501 (N Duke St)	Crutchfield St				1				RetrofitWarnings
19505	12	US-501 (N Duke St)	Medical center (2823 N Duke St) Entrance				1				RetrofitWarnings
19504	12	US-501 (N Duke St)	Medical center (2823 N Duke St) Entrance				1				RetrofitWarnings
24153	13	US-501 (N Duke St)	Wisteria Ave	12						1	Remove Ramp
2991	13	US-501 (N Duke St)	Wisteria Ave					1			Type1A
2992	14	US-501 (N Duke St)	Dentist Office (2711 N Duke St) Entrance				1				RetrofitWarnings
2993	14	US-501 (N Duke St)	Dentist Office (2711 N Duke St) Entrance				1				RetrofitWarnings
2994	15	US-501 (N Duke St)	Stadium Dr					1			Standard - 848.06
2995	15	US-501 (N Duke St)	Stadium Dr				1				RetrofitWarnings
2998	15	US-501 (N Duke St)	Stadium Dr					1			Standard - 848.06
2999	15	US-501 (N Duke St)	Stadium Dr					1			Standard - 848.06
24183	16	US-501 (N Duke St)	Division 5 Office (2612 N Duke St)	12						1	Remove Ramp
24184	16	US-501 (N Duke St)	Division 5 Office (2612 N Duke St)	12						1	Remove Ramp
24152	17	US-501 (N Duke St)	Wilbon St	14						1	Remove Ramp
24148	17	US-501 (N Duke St)	Glendale Ave	14						1	Remove Ramp
24145	17	US-501 (N Duke St)	Glendale Ave	14						1	Remove Ramp
24146	17	US-501 (N Duke St)	Glendale Ave				1				RetrofitWarnings
24151	17	US-501 (N Duke St)	Wilbon St	14						1	Remove Ramp
24150	17	US-501 (N Duke St)	Wilbon St	14						1	Remove Ramp
24147	17	US-501 (N Duke St)	Glendale Ave	14						1	Remove Ramp
24149	17	US-501 (N Duke St)	Wilbon St	14						1	Remove Ramp
19506	18	US-501 (N Duke St)	W Murray Ave	13						1	Remove Ramp
19507	18	US-501 (N Duke St)	W Murray Ave					1			Type2B
3005	18	US-501 (N Duke St)	W Murray Ave					1			Type2B
19509	18	US-501 (N Duke St)	W Murray Ave					1			Type2B
19508	18	US-501 (N Duke St)	W Murray Ave	16						1	Remove Ramp
3004	18	US-501 (N Duke St)	W Murray Ave					1			Type2B
3013	19	US-501 (N Duke St)	Lorain Ave	13						1	Remove Ramp
3006	19	US-501 (N Duke St)	Lorain Ave					1			Type1Modified
3011	19	US-501 (N Duke St)	Lorain Ave					1			Type1Modified
3010	19	US-501 (N Duke St)	Lorain Ave	13						1	Remove Ramp
3009	19	US-501 (N Duke St)	Lorain Ave	13						1	Remove Ramp
3008	19	US-501 (N Duke St)	Lorain Ave					1			Type1Modified
3012	19	US-501 (N Duke St)	Lorain Ave					1			Type1Modified
3007	19	US-501 (N Duke St)	Lorain Ave	13						1	Remove Ramp
3020	20	US-501 (N Duke St)	W Maynard Ave					1			Type1Modified
3016	20	US-501 (N Duke St)	W Maynard Ave					1			Type1Modified
3022	20	US-501 (N Duke St)	W Maynard Ave					1			Type1Modified
3017	20	US-501 (N Duke St)	W Maynard Ave	13						1	Remove Ramp
3023	20	US-501 (N Duke St)	W Maynard Ave	13						1	Remove Ramp
3021	20	US-501 (N Duke St)	W Maynard Ave	13						1	Remove Ramp
3019	20	US-501 (N Duke St)	W Maynard Ave					1			Type1Modified
3018	20	US-501 (N Duke St)	W Maynard Ave	13						1	Remove Ramp
3025	21	US-501 (N Duke St)	Leon St				1				RetrofitWarnings
3024	21	US-501 (N Duke St)	Leon St				1				RetrofitWarnings
3030	21	US-501 (N Duke St)	Leon St					1			Type2B
3033	21	US-501 (N Duke St)	Leon St					1			Type2B
3028	21	US-501 (N Duke St)	Leon St				1				RetrofitWarnings
Sub-Total				**267**	**0**	**0**	**10**	**20**	**0**	**20**	

SUMMARY OF QUANTITIES – US 501 FROM SOUTH END OF I-85 BRIDGE TO SR 1443

Municipality:	Durham
Project Number:	2021 Durham
WBS Number:	2021CPT.05.01.10321.1
County:	Durham

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E 2'-6" Concrete Curb & Gutter LF	2591000000-E 4" Concrete Sidewalk SY	2845000000-N Adjustment of Meter Boxes or Valve Boxes EA	2600000000-N Retrofit Existing Curb Ramps EA	2613000000-N Remove and Replace Curb Ramps EA	2605000000-N Concrete Curb Ramps EA	SP1 Remove Curb Ramps EA	Improvement Type
3029	21	US-501 (N Duke St)	Leon St				1				RetrofitWarnings
3027	21	US-501 (N Duke St)	Leon St					1			Type2B
3026	21	US-501 (N Duke St)	Leon St					1			Type2B
24131	22	US-501 (N Duke St)	East Hudson Ave	13						1	Remove Ramp
3034	22	US-501 (N Duke St)	East Hudson Ave	13						1	Remove Ramp
24130	22	US-501 (N Duke St)	East Hudson Ave	13						1	Remove Ramp
24129	22	US-501 (N Duke St)	East Hudson Ave	13						1	Remove Ramp
3036	22	US-501 (N Duke St)	East Hudson Ave	13						1	Remove Ramp
3040	22	US-501 (N Duke St)	East Hudson Ave					1			Type1Modified
3041	22	US-501 (N Duke St)	East Hudson Ave					1			Type1Modified
24132	22	US-501 (N Duke St)	East Hudson Ave	13						1	Remove Ramp
3035	23	US-501 (N Duke St)	Ruby St	19	8					1	Remove Ramp
3039	23	US-501 (N Duke St)	Ruby St	18	10					1	Remove Ramp
Sub-Total				**115**	**18**	**0**	**1**	**4**	**0**	**8**	
Sub-Total for US 501 from South End of I-85 Bridge to SR 1443				**651**	**18**	**0**	**21**	**39**	**5**	**48**	

SUMMARY OF QUANTITIES – US 501 BUS FROM I-85 TO US 501

Municipality:	**Durham**
Project Number:	**2021 Durham**
WBS Number:	**2021CPT.05.01.10321.1**
County:	**Durham**

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	2845000000-N	2600000000-N	2613000000-N	2605000000-N	SP1	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
19399	1	US-501-BUS (N Roxboro St)	North Duke Pointe Shopping Center (4400 N Roxboro St)				1				RetrofitWarnings
19398	1	US-501-BUS (N Roxboro St)	North Duke Pointe Shopping Center (4400 N Roxboro St)				1				RetrofitWarnings
2926	1	US-501-BUS (N Roxboro St)	Ryan St				1				RetrofitWarnings
2951	2	US-501-BUS (N Roxboro St)	Discount Tire / Professional Center (4214 N Roxboro St) Entrance				1				RetrofitWarnings
2950	3	US-501-BUS (N Roxboro St)	Professional Center / Durham Medical Center (4206 Roxboro St) Entrance				1				RetrofitWarnings
2948	4	US-501 BUS (N Roxboro St)	Pacific Ave					1			Type1Modified
2940	5	US-501-BUS (N Roxboro St)	Newsom St					1			Type3Modified
2935	6	US-501-BUS (N Roxboro St)	PNC Bank (3732 N Roxboro St) Entrance					1			Type1
2934	6	US-501-BUS (N Roxboro St)	PNC Bank (3732 N Roxboro St) Entrance				1				RetrofitWarnings
2968	7	US-501-BUS (N Roxboro St)	Crutchfield St				1				RetrofitWarnings
2933	7	US-501-BUS (N Roxboro St)	Office Building (3700 N Roxboro St) Entrance				1				RetrofitWarnings
24128	7	US-501-BUS (N Roxboro St)	Crutchfield St						1		Type1Modified
1839	8	US-501-BUS (N Roxboro St)	W Rockway St				1				RetrofitWarnings
1840	8	US-501-BUS (N Roxboro St)	W Rockway St				1				RetrofitWarnings
1842	9	US-501 BUS (N Roxboro St)	E Rockway St	14	7					1	Remove Ramp
2971	9	US-501-BUS (N Roxboro St)	Koumi Japanese Restaurant (3550 N Roxboro St) Entrance					1			Type1Modified
2970	9	US-501-BUS (N Roxboro St)	Koumi Japanese Restaurant (3550 N Roxboro St) Entrance					1			Type1Modified
2927	9	US-501 BUS (N Roxboro St)	E Rockway St					1			Standard - 848.06
1841	9	US-501 BUS (N Roxboro St)	E Rockway St	18	7					1	Remove Ramp
1843	10	US-501-BUS (N Roxboro St)	Oxford Commons (3500 N Roxboro St) Northwest Entrance					1			Type1Modified
1844	10	US-501-BUS (N Roxboro St)	Oxford Commons (3500 N Roxboro St) Northwest Entrance					1			Type1Modified
19589	10	US-501-BUS (N Roxboro St)	Regency Place Apartments (3523 N Roxboro St)				1				RetrofitWarnings
19591	10	US-501-BUS (N Roxboro St)	Regency Place Apartments (3523 N Roxboro St)				1				RetrofitWarnings
19592	10	US-501-BUS (N Roxboro St)	Regency Place Apartments (3523 N Roxboro St)				1				RetrofitWarnings
19590	10	US-501-BUS (N Roxboro St)	Regency Place Apartments (3523 N Roxboro St)				1				RetrofitWarnings
19588	11	US-501-BUS (N Roxboro St)	SR-1004 (Old Oxford Rd)		18			1			Standard - 848.06
1853	12	US-501-BUS (N Roxboro St)	Acker Ave						1		Type1
19587	12	US-501-BUS (N Roxboro St)	SR-1004 (Old Oxford Rd)				1				RetrofitWarnings
1854	13	US-501-BUS (N Roxboro St)	Berwyn Ave				1				RetrofitWarnings
1855	13	US-501-BUS (N Roxboro St)	Berwyn Ave					1			Type1Modified
1856	14	US-501-BUS (N Roxboro St)	La Superior Grocery Store (3325 N Roxboro St) Entrance				1				RetrofitWarnings
1857	14	US-501-BUS (N Roxboro St)	La Superior Grocery Store (3325 N Roxboro St) Entrance				1				RetrofitWarnings
1950	15	US-501-BUS (N Roxboro St)	E Delafield Ave					1			Type1Modified
1948	15	US-501-BUS (N Roxboro St)	E Delafield Ave					1			Type2AModified
1940	15	US-501-BUS (N Roxboro St)	E Delafield Ave			2	1				RetrofitWarnings
1939	15	US-501-BUS (N Roxboro St)	E Delafield Ave				1				RetrofitWarnings
1955	16	US-501-BUS (N Roxboro St)	Bon Air Ave					1			Type2A
1931	16	US-501-BUS (N Roxboro St)	Bon Air Ave					1			Type3
1929	17	US-501-BUS (N Roxboro St)	E Edgewood Dr				1				RetrofitWarnings
1930	17	US-501-BUS (N Roxboro St)	E Edgewood Dr				1				RetrofitWarnings
24194	17	US-501-BUS (N Roxboro St)	E Edgewood Dr	14		1			1		Type3
Sub-Total				**46**	**32**	**3**	**22**	**14**	**3**	**2**	

SUMMARY OF QUANTITIES – US 501 BUS FROM I-85 TO US 501

Municipality:	**Durham**
Project Number:	**2021 Durham**
WBS Number:	**2021CPT.05.01.10321.1**
County:	**Durham**

Ramp ID	**Inset Map Number**	**Route 1**	**Route 2**	**2549000000-E**	**2591000000-E**	**2845000000-N**	**2600000000-N**	**2613000000-N**	**2605000000-N**	**SP1**	**Improvement Type**
				2'-6" Concrete Curb & Gutter	**4" Concrete Sidewalk**	**Adjustment of Meter Boxes or Valve Boxes**	**Retrofit Existing Curb Ramps**	**Remove and Replace Curb Ramps**	**Concrete Curb Ramps**	**Remove Curb Ramps**	
				LF	**SY**	**EA**	**EA**	**EA**	**EA**	**EA**	
1944	18	US-501-BUS (N Roxboro St)	E Maynard Ave					1			Type1Modified
1943	18	US-501-BUS (N Roxboro St)	E Maynard Ave					1			Type1Modified
1927	19	US-501-BUS (N Roxboro St)	E Maynard Ave				1				RetrofitWarnings
1928	19	US-501-BUS (N Roxboro St)	E Maynard Ave				1				RetrofitWarnings
1922	20	US-501-BUS (N Roxboro St)	Hammond St					1			Type2B
1925	20	US-501-BUS (N Roxboro St)	Hammond St					1			Type1
1933	20	US-501-BUS (N Roxboro St)	Hammond St					1			Type1Modified
1932	20	US-501-BUS (N Roxboro St)	Hammond St					1			Type1Modified
1938	21	US-501-BUS (N Roxboro St)	E Lavender Ave		3			1			Type2AModified
1936	21	US-501-BUS (N Roxboro St)	E Lavender Ave					1			Type2AModified
1913	22	US-501-BUS (N Roxboro St)	E Ellerbee St					1			Type1Modified
1914	22	US-501-BUS (N Roxboro St)	E Ellerbee St			1		1			Type1Modified
1981	22	US-501-BUS (N Roxboro St)	E Ellerbee St					1			Type1Modified
1980	22	US-501-BUS (N Roxboro St)	E Ellerbee St					1			Type1Modified
24189	22	US-501-BUS (N Roxboro St)	E Ellerbee St	16						1	Remove Ramp
3935	23	US-501-BUS (N Roxboro St)	Davidson Ave				1				RetrofitWarnings
3936	23	US-501-BUS (N Roxboro St)	Davidson Ave					1			Standard - 848.06
3931	23	US-501-BUS (N Roxboro St)	Davidson Ave					1			Standard - 848.06
3932	23	US-501-BUS (N Roxboro St)	Davidson Ave					1			Standard - 848.06
3934	23	US-501-BUS (N Roxboro St)	Davidson Ave				1				RetrofitWarnings
3938	23	US-501-BUS (N Roxboro St)	Davidson Ave				1				RetrofitWarnings
3954	24	US-501-BUS (N Roxboro St)	St Paul St	13	8					1	Remove Ramp
Sub-Total				**29**	**11**	**1**	**5**	**15**	**0**	**2**	
Sub-Total for US 501 Bus from I-85 to US 501				**75**	**43**	**4**	**27**	**29**	**3**	**4**	

SUMMARY OF QUANTITIES – HORTON RD FROM US 501 TO US 501 BUS

Municipality:	**Durham**
Project Number:	**2021 Durham**
WBS Number:	**2021CPT.05.01.20321.1**
County:	**Durham**

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E 2'-6" Concrete Curb & Gutter LF	2591000000-E 4" Concrete Sidewalk SY	2845000000-N Adjustment of Meter Boxes or Valve Boxes EA	2600000000-N Retrofit Existing Curb Ramps EA	2613000000-N Remove and Replace Curb Ramps EA	2605000000-N Concrete Curb Ramps EA	SP1 Remove Curb Ramps EA	Improvement Type
24182	1	SR-1443 (Horton Rd)	BP Gas Station (3804 N Duke St)				1				RetrofitWarnings
24181	1	SR-1443 (Horton Rd)	BP Gas Station (3804 N Duke St)				1				RetrofitWarnings
24180	2	SR-1443 (Horton Rd)	McDonalds (4301 N Roxboro St)		12				1		Type1Modified
Sub-Total for Horton Rd from US 501 to US 501 BUS				**0**	**12**	**0**	**2**	**0**	**1**	**0**	

SUMMARY OF QUANTITIES – MT SINAI RD FROM ORANGE CO TO SR 1306

Municipality:	**Outside Municipality**
Project Number:	**2021 Durham**
WBS Number:	**2021CPT.05.01.20321.1**
County:	**Durham**

Ramp ID	**Inset Map Number**	**Route 1**	**Route 2**	**2549000000-E** **2'-6" Concrete Curb & Gutter** **LF**	**2591000000-E** **4" Concrete Sidewalk** **SY**	**2845000000-N** **Adjustment of Meter Boxes or Valve Boxes** **EA**	**2600000000-N** **Retrofit Existing Curb Ramps** **EA**	**2613000000-N** **Remove and Replace Curb Ramps** **EA**	**2605000000-N** **Concrete Curb Ramps** **EA**	**SP1** **Remove Curb Ramps** **EA**	**Improvement Type**
19925	1	SR-1304 (Kerley Rd)	SR-1305 (Mt Sinai Rd)				1				RetrofitWarnings
Sub-Total for Mt Sinai Rd from Orange Co to SR 1306				**0**	**0**	**0**	**1**	**0**	**0**	**0**	

SUMMARY OF QUANTITIES – ERWIN RD FROM ORANGE CO TO SR 1308

Municipality:	**Outside Municipality, Durham**
Project Number:	**2021 Durham**
WBS Number:	**2021CPT.05.01.20321.1**
County:	**Durham**

Ramp ID	**Inset Map Number**	**Route 1**	**Route 2**	**2549000000-E** 2'-6" Concrete Curb & Gutter LF	**2591000000-E** 4" Concrete Sidewalk SY	**2845000000-N** Adjustment of Meter Boxes or Valve Boxes EA	**2600000000-N** Retrofit Existing Curb Ramps EA	**2613000000-N** Remove and Replace Curb Ramps EA	**2605000000-N** Concrete Curb Ramps EA	**SP1** Remove Curb Ramps EA	**Improvement Type**
19942	1	SR-1302 (Randolph Rd)	SR-1306 (Erwin Rd)	16						1	Remove Ramp
19932	2	SR-1306 (Erwin Rd)	SR-1304 (Kerley Rd)				1				RetrofitWarnings
19933	3	SR-1306 (Erwin Rd)	Hollow Rock Racquet and Swim Club (5100 Erwin Rd) Entrance		3		1				RetrofitWarnings
19934	3	SR-1306 (Erwin Rd)	Hollow Rock Racquet and Swim Club (5100 Erwin Rd) Entrance				1				RetrofitWarnings
Sub-Total for Erwin Rd from Orange Co to SR 1308				**16**	**3**	**0**	**3**	**0**	**0**	**1**	

SUMMARY OF QUANTITIES – S ROXBORO ST FROM MLK TO SR 1158

Municipality:	**Durham**
Project Number:	**2021 Durham**
WBS Number:	**2021CPT.05.01.20321.1**
County:	**Durham**

Ramp ID	**Inset Map Number**	**Route 1**	**Route 2**	**2549000000-E**	**2591000000-E**	**2845000000-N**	**2600000000-N**	**2613000000-N**	**2605000000-N**	**SP1**	**Improvement Type**
				2'-6" Concrete Curb & Gutter	**4" Concrete Sidewalk**	**Adjustment of Meter Boxes or Valve Boxes**	**Retrofit Existing Curb Ramps**	**Remove and Replace Curb Ramps**	**Concrete Curb Ramps**	**Remove Curb Ramps**	
				LF	**SY**	**EA**	**EA**	**EA**	**EA**	**EA**	
22803	1	SR-1158 (E Cornwallis Rd)	SR-2295 (S Roxboro St)						1		Type2B
23304	1	SR-1158 (E Cornwallis Rd)	SR-2295 (S Roxboro St)						1		Type2B
22646	2	SR-2295 (Archdale Dr)	Third Fork Rd				1				RetrofitWarnings
22647	3	SR-2295 (Archdale Dr)	Alpine Rd				1				RetrofitWarnings
22640	4	SR-2295 (Archdale Dr)	High Ridge Dr					1			Type1
22641	4	SR-2295 (Archdale Dr)	High Ridge Dr					1			Type1
22636	5	SR-2295 (Archdale Dr)	Martin Luther King Jr Pkwy				1				RetrofitWarnings
Sub-Total for S Roxboro St from MLK to SR 1158				**0**	**0**	**0**	**3**	**2**	**2**	**0**	

SUMMARY OF QUANTITIES – HILLANDALE RD FROM SR 1404 TO PVMT. JOINT

Municipality:	**Durham**
Project Number:	**2021 Durham**
WBS Number:	**2021CPT.05.01.20321.1**
County:	**Durham**

Ramp ID	**Inset Map Number**	**Route 1**	**Route 2**	**2549000000-E**	**2591000000-E**	**2845000000-N**	**2600000000-N**	**2613000000-N**	**2605000000-N**	**SP1**	**Improvement Type**
				2'-6" Concrete Curb & Gutter	**4" Concrete Sidewalk**	**Adjustment of Meter Boxes or Valve Boxes**	**Retrofit Existing Curb Ramps**	**Remove and Replace Curb Ramps**	**Concrete Curb Ramps**	**Remove Curb Ramps**	
				LF	**SY**	**EA**	**EA**	**EA**	**EA**	**EA**	
3220	1	SR-1404 (Rose Of Sharon Rd)	Ridgestone Pkwy				1				RetrofitWarnings
3221	1	SR-1404 (Rose Of Sharon Rd)	Ridgestone Pkwy	18						1	RemoveRamp
3287	1	SR-1404 (Rose Of Sharon Rd)	Ridgestone Pkwy	18	9					1	RemoveRamp
3288	1	SR-1404 (Rose Of Sharon Rd)	Ridgestone Pkwy	18	9			1			Type3
Sub-Total for Hillandale Rd from SR 1404 to Pvmt. Joint				**54**	**18**	**0**	**1**	**1**	**0**	**2**	

SUMMARY OF QUANTITIES – INFINITY RD FROM U-5516 (1800' EAST OF US 501) TO SR 1631

Municipality:	**Durham**
Project Number:	**2021 Durham**
WBS Number:	**2021CPT.05.01.20321.1**
County:	**Durham**

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E 2'-6" Concrete Curb & Gutter LF	2591000000-E 4" Concrete Sidewalk SY	2845000000-N Adjustment of Meter Boxes or Valve Boxes EA	2600000000-N Retrofit Existing Curb Ramps EA	2613000000-N Remove and Replace Curb Ramps EA	2605000000-N Concrete Curb Ramps EA	SP1 Remove Curb Ramps EA	Improvement Type
2884	1	SR-1639 (Infinity Rd)	Windermere Dr	18	8			1			Standard - 848.06
2885	1	SR-1639 (Infinity Rd)	Windermere Dr	18	10			1			Standard - 848.06
Sub-Total for Infinity Rd from U-5516 (1800' East of US 501) to SR 1631				**36**	**18**	**0**	**0**	**2**	**0**	**0**	

PROJECT NO.	SHEET NO.	TOTAL NO.
2021CPT.05.01.10321.1, etc.	40	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPH. REQUIRED	LENGTH	WIDTH	BORROW	REM. OF EXI. CONC. PAVEMENT	GEO-TEXTILE FOR SOIL STABILIZATION	SHOULDER GRADING	SHALLOW UNDER-CUT	CLASS IV SUB-GRADE STABILIZA-TION	INC. STONE BASE	ASB	1½" MILLING	0" TO 1.5" MILLING	INC. MILLING	BASE COURSE, B25.0C	SURFACE COURSE, S9.5B	SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXI. PAVEMENT	4" CONC SIDE-WALK	RETRO-FIT EXI. CURB RAMP	CONC CURB RAMP	REM. & REPL. CURB RAMPS	REM. & REPL. DRIVE-WAY APRON	2' 6" CONC CURB & GUTTER	REM. CURB RAMPS	ADJ. OF MAN HOLES	ADJ. OF METER OR VALVE BOXES	PORT-ABLE LIGHT-ING	TEMP. SILT FENCE	WATTLE	SEED & MULCHING	RESP. FOR EC	INDUC-TIVE LOOP SAWCUT	PED. CHANNELIZING DEVICES	PED. TRANS-PORT. SERV.	AUD. WARNING DE-VICE
									MI	FT	CY	SY	SY	SMI	CY	TON	TONS	TON	SY	SY	SY	TONS	TONS	TONS	TON	TONS	SY	EA	EA	EA	SY	LF		EA	EA	LS	LF	LF	AC	EA	LF	LF	EA	EA
2021CPT.05.01.10321.1	Durham	1	US 501 (N. DUKE ST)	S. END OF I-85 BRG. TO SR 1443 (HORTON RD)	1	5	NO	NO	1.99	62-84									78,140		4,492			7,301	438	160	18	21	5	39		651	48	28	5	0.45					10,227	60	15	4
		2	BUS 501 (N. ROXBORO ST)	I-85 TO US 501	1	3	NO	NO	3.07	29-64		207	207.1		69	131			99,778		6,624	125		9,404	570	620	43	27	3	29	42	75	4	18	7	0.45					11,232			
TOTAL FOR PROJ NO. 2021CPT.05.01.10321.1									5.06			207	207.1		69	131			177,918		11,116	125		16,705	1,008	780	61	48	8	68	42	726	52	46	12	0.90					21,459	60	15	4
2021CPT.05.01.20321.1	Durham	3	SR 1305 (MT SINAI RD)	ORANGE CO TO SR 1306 (ERWIN ROAD)	3	2	NO	NO	0.34	20-36	17			0.68			17	31			453		549		37	150		1									25	70	0.25					
		4	SR 1306 (ERWIN RD)	ORANGE CO TO SR 1308 (W CORNWALLIS ROAD)	3	2	NO	NO	1.48	24-36	62			2.49			62	115		1,133	1,135		2,133		143	150	3	3				16	1	1	1		91	230	0.91					
		5	SR 1332 (SANDY CREEK DR)	SR 1303 (PICKETT RD) TO DEAD END	2	2	NO	NO	0.63	20-26	47			1.26			32	29	7,507		330		683		46	20											69	180	0.69					
		6	SR 1413 (HILLANDALE RD)	SR 1404 (ROSE OF SHARON RD) TO PVMT JOINT	3	2	NO	NO	0.22	20-22	11			0.44			11	20			383		264		18	35	18	1		1		54	2				16	40	0.16					
		7	SR 1443 (HORTON RD)	US 501 TO US 501 BUS	1	4	NO	NO	0.1	48									2,816		554			298	18	100	12	2	1							0.10								
		8	SR 1639 (INFINITY RD)	1800" EAST OF US 501 TO SR 1631 (SNOW HILL RD)	3	2	NO	NO	2.45	22-33	112			4.49			112	208		290	1,123		3,259		218	300	18			2		36		2	5		163	410	1.63	1				
		9	SR 1884 (PERVIS RD)	SR 1800 (CHEEK RD) TO SR 1675 (JUNCTION ROAD)	2	2	NO	NO	0.46	18	46			0.92			23		4,858		434		461		31	205											67	170	0.67					
		10	SR 2295 (ARCHDALE DR/ S. ROXBORO ST)	SR 1146 (MLK) TO SR 1158 (CORNWALLIS RD)	2	2	NO	NO	1.04	20-40	42			1.70			42	79	14,909		1,044		1,389		93	140		3	2	2							62	160	0.62		1,035			
		11	SR 2324 (WESCOTT PL)	SR 2323 (HEATHER GLEN RD) TO CUL-DE-SAC	4	2	NO	NO	0.1	20							5						82		5	5																		
		12	SR 2328 (FALKIRK DR)	END OF MAINTENANCE TO END OF MAINTENANCE	4	2	NO	NO	0.55	20							28						374		25	60																50	15	3
		13	SR 2329 (ST CLAIR PL)	SR 2328 (FALKIRK DR) TO CUL-DE-SAC	4	2	NO	NO	0.05	20							3						49		3	5																		
		14	SR 2351 (TROON LN)	SR 2352 (INVERNESS DRIVE) TO SR 1449 (UMSTEAD ROAD)	4	2	NO	NO	0.26	20							13				1,465		186		12	100																		
		15	SR 2382 (TAVISTOCK DR)	SR 2352 (INVERNESS DRIVE) TO SR 2393 (SONNETT PLACE)	4	2	NO	NO	0.65	20							33						442		30	75																		
		16	SR 2392 (CANTER PL)	SR 2350 (SADDLE DR) TO CUL-DE-SAC	4	2	NO	NO	0.1	20							5						84		6	5																		
		17	SR 1520 (LILLIE DR)	SR 1453 (BIVINS RD) TO END OF MAINTENANCE	4	2	NO	NO	0.28	18							14				726		176		12	202																		
		18	SR 2323 (HEATHER GLEN RD)	SR 1451 (RUSSELL RD) TO SR 2328 MAINTENANCE	4	2	NO	NO	0.24	20							12				1,379		172		12	40																		
		19	SR 2350 (SADDLE DR)	SR 1450 (CRAIG RD) TO SR 2352 (FALKIRK DR)	4	2	NO	NO	0.28	20							14				1,174		198		13	30																		
		20	SR 2352 (INVERNESS DR)	SR 1449 (UMSTEAD RD) TO CUL-DE-SAC	4	2	NO	NO	1.02	20							51				1,586		720		48	560														1				
TOTAL FOR PROJ NO. 2021CPT.05.01.20321.1									10.25		337			11.98			477	482	30,090	1,423	11,786		11,221	298	770	2,182	51	10	3	5		106	3	3	6	0.10	493	1,260	4.93	2	1,035	50	15	3
2021CPT.05.01.20322.1	Durham	21	SR 2359 (QUINCEMOOR RD)	SR 2328 (FALKIRK DR) TO SR 2393 (SONNETT PL)	4	2	NO	NO	0.34	20							17						231		16	65																		
		22	SR 2365 (SPLIT RAIL PL)	SR 1450 (CRAIG RD) TO SR 2382 (TAVISTOCK DR)	4	2	NO	NO	0.29	20							15				1,890		209		14	20																		
		23	SR 2372 (CARDRIFF PL)	SR 2359 (QUINCEMOOR RD) TO CUL-DE-SAC	4	2	NO	NO	0.1	20							5						86		6	130																		
		24	SR 2373 (KILTSHIRE RD)	SR 2359 (QUINCEMOOR RD) TO END OF MAINTENANCE	4	2	NO	NO	0.41	20							21						279		19	155																		
		25	SR 2378 (SHANTERCLIFF PL)	SR 2359 (QUINCEMOOR RD) TO CUL-DE-SAC	4	2	NO	NO	0.07	20							4						62		4	30																		
		26	SR 2383 (MUIRFIELD CT)	SR 2382 (TAVISTOCK DR) TO CUL-DE-SAC	4	2	NO	NO	0.15	20							8						121		8	145																		
		27	SR 2391 (GLENEAGLES PL)	SR 1451 (RUSSELL RD) TO SR 2352 (INVERNESS DR)	4	2	NO	NO	0.12	20							6				1,448		91		6	175																		
		28	SR 2393 (SONNETT PL)	SR 2359 (QUINCEMOOR RD) TO CUL-DE-SAC	4	2	NO	NO	0.05	20							3						42		3	35																50	15	3
		29	SR 2415 (PERTH PL)	SR 2328 (FALKIRK DR) TO CUL-DE-SAC	4	2	NO	NO	0.06	20							3						57		4	36																		
		30	SR 2431 (FAIRNTOSH PL)	SR 2328 (FALKIRK DR) TO CUL-DE-SAC	4	2	NO	NO	0.11	20							6						92		6	110																		
		31	SR 2447 (PRESCOTT DR)	SR 2373 (KILTSHIRE RD) TO END OF MAINTENANCE	4	2	NO	NO	0.25	20							13				1,410		179		12	190																		
		32	SR 2448 (TRAWICK PL)	SR 2373 (KILTSHIRE RD) TO END OF MAINTENANCE	4	2	NO	NO	0.12	20							6						102		7	58																		
		33	SR 2464 (ROTHBURY DR)	SR 1451 (RUSSELL RD) TO END OF MAINTENANCE	4	2	NO	NO	0.1	20							5				1,267		76		5	15																		
		34	SR 2468 (HEATHER RIDGE CT)	SR 2382 (TAVISTOCK DR) TO CUL-DE-SAC	4	2	NO	NO	0.2	20							10						155		10	110																		
TOTAL FOR PROJ NO. 2021CPT.05.01.20322.1									2.37								122				6,015		1,782		120	1,274																50	15	3
GRAND TOTAL									17.68		337	207	207.1	11.98	69	131	599	482	208,008	1,423	28,917	125	13,003	17,003	1,898	4,236	112	58	11	73	42	832	55	49	18	1	493	1,260	4.93	2	22,494	160	45	10

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THERMOPLASTIC AND PAINT QUANTITIES

									4413000	445700	451000	4685000000-E		4695000000-E		470000	4720000000-E			4725000000-E						4770000000-E		4780000000-E	
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LENGTH	WIDTH	WZ ADV./ GEN. WARN. SIGNING	TEMP. TRAFFIC CONTROL	LAW ENFORCEMENT	4" X 90 M YELLOW THERMO	4" X 90 M WHITE THERMO	8" X 90 M WHITE THERMO	8" X 90 M YELLOW THERMO	12" X 90 M YELLOW THERMO	THERMO MSG ONLY 90 M	THERMO MSG SCHOOL 90 M	THERMO MSG RXR 90 M	THERMO LT ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO RT ARROW 90 M	THERMO MERGE ARROW 90 M	THERMO STR & LT ARROW 90 M	4" YELLOW COLD APPL, TYPE II	4" WHITE COLD APPL, TYPE II	8" WHITE COLD APPL, TYPE II	8" YELLOW COLD APPL, TYPE II
							MI	FT	SF	LS	HR	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	LF	LF	LF	LF
2021CPT.05.01 .10321.1	Durham	1	US 501 (N. DUKE ST)	S. END OF I-85 BRG. TO SR 1443 (HORTON RD)	1	5	1.99	62-84	349	0.25	320	21,737	7,402	1,995	62					78	39	26	6	3		732	1,124	255	150
		2	BUS 501 (N. ROXBORO ST)	I-85 TO US 501	1	3	3.07	29-64	469	0.30	560	34,852	11,869	2,798	369		12			39	54	26	14		10				
TOTAL FOR PROJ NO. 2021CPT.05.01.10321.1							5.06		818	0.55	880	56,589	19,271	4,793	431		12			117	93	52	20	3	10	732	1,124	255	150
												75,860		5,224			12			295						1,856		405	
2021CPT.05.01.20321.1	Durham	3	SR 1305 (MT SINAI RD)	ORANGE CO TO SR 1306 (ERWIN ROAD)	3	2	0.34	20-36	164	0.03		3,928	3,695			149		12		5		2							
		4	SR 1306 (ERWIN RD)	ORANGE CO TO SR 1308 (W CORNWALLIS ROAD)	3	2	1.48	24-36	292	0.04		18,966	13,848	83		360		12		8		8	1						
		5	SR 1332 (SANDY CREEK DR)	SR 1303 (PICKETT RD) TO DEAD END	2	2	0.63	20-26	71	0.02		6,400	6,290																
		6	SR 1413 (HILLANDALE RD)	SR 1404 (ROSE OF SHARON RD) TO PVMT JOINT	3	2	0.22	20-22	25	0.01		2,258	2,270																
		7	SR 1443 (HORTON RD)	US 501 TO US 501 BUS	1	4	0.1	48	137	0.01		850	339	166						6		6							
		8	SR 1639 (INFINITY RD)	1800" EAST OF US 501 TO SR 1631 (SNOW HILL RD)	3	2	2.45	22-33	274	0.05		34,433	25,427			758				13									
		9	SR 1884 (PERVIS RD)	SR 1800 (CHEEK RD) TO SR 1675 (JUNCTION ROAD)	2	2	0.46	18	51	0.01				100					8										
		10	SR 2295 (ARCHDALE DR/S. ROXBORO ST)	SR 1146 (MLK) TO SR 1158 (CORNWALLIS RD)	2	2	1.04	20-40	242	0.03		10,520	9,034	215	65					8	1	1	6		1				
		11	SR 2324 (WESCOTT PL)	SR 2323 (HEATHER GLEN RD) TO CUL-DE-SAC	4	2	0.1	20	11	0.01																			
		12	SR 2328 (FALKIRK DR)	END OF MAINTENANCE TO END OF MAINTENANCE	4	2	0.55	20	62	0.01																			
		13	SR 2329 (ST CLAIR PL)	SR 2328 (FALKIRK DR) TO CUL-DE-SAC	4	2	0.05	20	6	0.01																			
		14	SR 2351 (TROON LN)	SR 2352 (INVERNESS DRIVE) TO SR 1449 (UMSTEAD RD)	4	2	0.26	20	29	0.01																			
		15	SR 2382 (TAVISTOCK DR)	SR 2352 (INVERNESS DRIVE) TO SR 2393 (SONNETT PL)	4	2	0.65	20	73	0.01																			
		16	SR 2392 (CANTER PL)	SR 2350 (SADDLE DR) TO CUL-DE-SAC	4	2	0.1	20	11	0.01																			
		17	SR 1520 (LILLIE DR)	SR 1453 (BIVINS RD) TO END OF MAINTENANCE	4	2	0.28	18	31	0.01																			
		18	SR 2323 (HEATHER GLEN RD)	SR 1451 (RUSSELL RD) TO SR 2328 (FALKIRK DR)	4	2	0.24	20	27	0.01																			
		19	SR 2350 (SADDLE DR)	SR 1450 (CRAIG RD) TO SR 2352 (INVERNESS DR)	4	2	0.28	20	31	0.01																			
		20	SR 2352 (INVERNESS DR)	SR 1449 (UMSTEAD RD) TO CUL-DE-SAC	4	2	1.02	20	114	0.02																			
TOTAL FOR PROJ NO. 2021CPT.05.01.20321.1							10.25		1,651	0.31		77,355	60,903	564	65	1,267		24	8	40	1	17	7		1				
												138,258		629			32			66									
2021CPT.05.01.20322.1	Durham	21	SR 2359 (QUINCEMOOR RD)	SR 2328 (FALKIRK DR) TO SR 2393 (SONNETT PL)	4	2	0.34	20	38	0.01																			
		22	SR 2365 (SPLIT RAIL PL)	SR 1450 (CRAIG RD) TO SR 2382 (TAVISTOCK DR)	4	2	0.29	20	32	0.01																			
		23	SR 2372 (CARDRIFF PL)	SR 2359 (QUINCEMOOR RD) TO CUL-DE-SAC	4	2	0.1	20	11	0.01																			
		24	SR 2373 (KILTSHIRE RD)	SR 2359 (QUINCEMOOR RD) TO END OF MAINTENANCE	4	2	0.41	20	46	0.01																			
		25	SR 2378 (SHANTERCLIFF PL)	SR 2359 (QUINCEMOOR RD) TO CUL-DE-SAC	4	2	0.07	20	8	0.01																			
		26	SR 2383 (MUIRFIELD CT)	SR 2382 (TAVISTOCK DR) TO CUL-DE-SAC	4	2	0.15	20	17	0.01																			
		27	SR 2391 (GLENEAGLES PL)	SR 1451 (RUSSELL RD) TO SR 2352 (INVERNESS DR)	4	2	0.12	20	13	0.01																			
		28	SR 2393 (SONNETT PL)	SR 2359 (QUINCEMOOR RD) TO CUL-DE-SAC	4	2	0.05	20	6	0.01																			
		29	SR 2415 (PERTH PL)	SR 2328 (FALKIRK DR) TO CUL-DE-SAC	4	2	0.06	20	7	0.01																			
		30	SR 2431 (FAIRNTOSH PL)	SR 2328 (FALKIRK DR) TO CUL-DE-SAC	4	2	0.11	20	12	0.01																			
		31	SR 2447 (PRESCOTT DR)	SR 2373 (KILTSHIRE RD) TO END OF MAINTENANCE	4	2	0.25	20	28	0.01																			
		32	SR 2448 (TRAWICK PL)	SR 2373 (KILTSHIRE RD) TO END OF MAINTENANCE	4	2	0.12	20	13	0.01																			
		33	SR 2464 (ROTHBURY DR)	SR 1451 (RUSSELL RD) TO END OF MAINTENANCE	4	2	0.1	20	11	0.01																			
		34	SR 2468 (HEATHER RIDGE CT)	SR 2382 (TAVISTOCK DR) TO CUL-DE-SAC	4	2	0.2	20	22	0.01																			
TOTAL FOR PROJ NO. 2021CPT.05.01.20322.1							2.37		264	0.14																			
GRAND TOTAL							17.68		2,733	1.00	880	133,944	80,174	5,357	496	1,267	12	24	8	157	94	69	27	3	11	732	1,124	255	150
												214,118		5,853			44			361						1,856		405	

PROJECT NO.	SHEET NO.	TOTAL NO.
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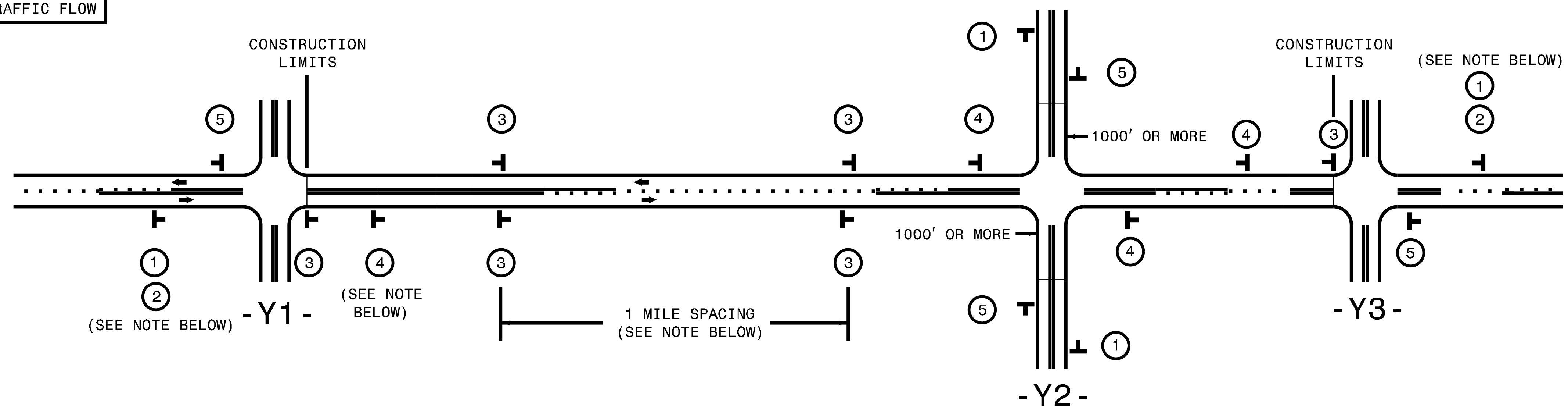
THERMOPLASTIC AND PAINT QUANTITIES

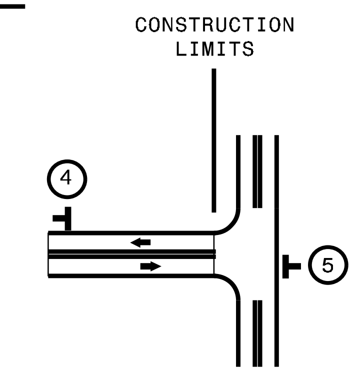
									4800000	4805000000-N		4810000000-E		4820000000-E		4830000	4835000	4840000000-N		4845000000-N						4850000	4860000	4891000	4891000	4895 -N
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LENGTH	WIDTH	COLD APPL MSG ONLY, TYPE II	COLD APPL STR ARROW, TYPE II	COLD APPL RT ARROW, TYPE II	4" YELLOW PAINT	4" WHITE PAINT	8" WHITE PAINT	8" YELLOW PAINT	16" WHITE PAINT	24" WHITE PAINT	PAINT MSG ONLY	PAINT MSG RXR	PAINT LT ARROW	PAINT STR ARROW	PAINT STR & RT ARROW	PAINT RT ARROW	PAINT MERGE ARROW	PAINT STR & LT ARROW	4" LINE REMOVAL	8" LINE REMOVAL	24" X 90 M WHITE THERMO	16" X 90 M WHITE THERMO	NON-CAST IRON SNOW PLOWABLE MRKR
							MI	FT	EA	EA	EA	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	EA
2021CPT.05.01 .10321.1	Durham	1	US 501 (N. DUKE ST)	S. END OF I-85 BRG. TO SR 1443 (HORTON RD)	1	5	1.99	62-84	4	3	4	22,469	8,526	2,250	212		1,097	4		78	42	26	10	3		1,856	405	1,097		1,032
		2	BUS 501 (N. ROXBORO ST)	I-85 TO US 501	1	3	3.07	29-64				34,852	11,869	2,798	369		1,020	12		39	54	26	14		10			870		1,477
TOTAL FOR PROJ NO. 2021CPT.05.01.10321.1							**5.06**		**4**	**3**	**4**	**57,321**	**20,395**	**5,048**	**581**		**2,117**	**16**		**117**	**96**	**52**	**24**	**3**	**10**	**1,856**	**405**	**1,967**		**2,509**
										7		**77,716**		**5,629**				**16**		**302**										
2021CPT.05.01.20321.1	Durham	3	SR 1305 (MT SINAI RD)	ORANGE CO TO SR 1306 (ERWIN ROAD)	3	2	0.34	20-36																				16		
		4	SR 1306 (ERWIN RD)	ORANGE CO TO SR 1308 (W CORNWALLIS ROAD)	3	2	1.48	24-36																				317		
		5	SR 1332 (SANDY CREEK DR)	SR 1303 (PICKETT RD) TO DEAD END	2	2	0.63	20-26																				35		
		6	SR 1413 (HILLANDALE RD)	SR 1404 (ROSE OF SHARON RD) TO PVMT JOINT	3	2	0.22	20-22																				36		
		7	SR 1443 (HORTON RD)	US 501 TO US 501 BUS	1	4	0.1	48				850	339	166			64			6		6						64		
		8	SR 1639 (INFINITY RD)	1800" EAST OF US 501 TO SR 1631 (SNOW HILL RD)	3	2	2.45	22-33																						
		9	SR 1884 (PERVIS RD)	SR 1800 (CHEEK RD) TO SR 1675 (JUNCTION ROAD)	2	2	0.46	18								100	70		4									70	100	
		10	SR 2295 (ARCHDALE DR/S. ROXBORO ST)	SR 1146 (MLK) TO SR 1158 (CORNWALLIS RD)	2	2	1.04	20-40				10,520	9,034	215	65		119			8	1	1	6		1			119		
		11	SR 2324 (WESCOTT PL)	SR 2323 (HEATHER GLEN RD) TO CUL-DE-SAC	4	2	0.1	20																						
		12	SR 2328 (FALKIRK DR)	END OF MAINTENANCE TO END OF MAINTENANCE	4	2	0.55	20																						
		13	SR 2329 (ST CLAIR PL)	SR 2328 (FALKIRK DR) TO CUL-DE-SAC	4	2	0.05	20																						
		14	SR 2351 (TROON LN)	SR 2352 (INVERNESS DRIVE) TO SR 1449 (UMSTEAD RD)	4	2	0.26	20																						
		15	SR 2382 (TAVISTOCK DR)	SR 2352 (INVERNESS DRIVE) TO SR 2393 (SONNETT PL)	4	2	0.65	20																						
		16	SR 2392 (CANTER PL)	SR 2350 (SADDLE DR) TO CUL-DE-SAC	4	2	0.1	20																						
		17	SR 1520 (LILLIE DR)	SR 1453 (BIVINS RD) TO END OF MAINTENANCE	4	2	0.28	18																						
		18	SR 2323 (HEATHER GLEN RD)	SR 1451 (RUSSELL RD) TO SR 2328 (FALKIRK DR)	4	2	0.24	20																						
		19	SR 2350 (SADDLE DR)	SR 1450 (CRAIG RD) TO SR 2352 (INVERNESS DR)	4	2	0.28	20																						
		20	SR 2352 (INVERNESS DR)	SR 1449 (UMSTEAD RD) TO CUL-DE-SAC	4	2	1.02	20																						
TOTAL FOR PROJ NO. 2021CPT.05.01.20321.1							**10.25**					**11,370**	**9,373**	**381**	**65**	**100**	**253**		**4**	**14**	**1**	**7**	**6**		**1**			**657**	**100**	
												20,743		**446**				**4**		**29**										
2021CPT.05.01.20322.1	Durham	21	SR 2359 (QUINCEMOOR RD)	SR 2328 (FALKIRK DR) TO SR 2393 (SONNETT PL)	4	2	0.34	20																						
		22	SR 2365 (SPLIT RAIL PL)	SR 1450 (CRAIG RD) TO SR 2382 (TAVISTOCK DR)	4	2	0.29	20																						
		23	SR 2372 (CARDRIFF PL)	SR 2359 (QUINCEMOOR RD) TO CUL-DE-SAC	4	2	0.1	20																						
		24	SR 2373 (KILTSHIRE RD)	SR 2359 (QUINCEMOOR RD) TO END OF MAINTENANCE	4	2	0.41	20																						
		25	SR 2378 (SHANTERCLIFF PL)	SR 2359 (QUINCEMOOR RD) TO CUL-DE-SAC	4	2	0.07	20																						
		26	SR 2383 (MUIRFIELD CT)	SR 2382 (TAVISTOCK DR) TO CUL-DE-SAC	4	2	0.15	20																						
		27	SR 2391 (GLENEAGLES PL)	SR 1451 (RUSSELL RD) TO SR 2352 (INVERNESS DR)	4	2	0.12	20																						
		28	SR 2393 (SONNETT PL)	SR 2359 (QUINCEMOOR RD) TO CUL-DE-SAC	4	2	0.05	20																						
		29	SR 2415 (PERTH PL)	SR 2328 (FALKIRK DR) TO CUL-DE-SAC	4	2	0.06	20																						
		30	SR 2431 (FAIRNTOSH PL)	SR 2328 (FALKIRK DR) TO CUL-DE-SAC	4	2	0.11	20																						
		31	SR 2447 (PRESCOTT DR)	SR 2373 (KILTSHIRE RD) TO END OF MAINTENANCE	4	2	0.25	20																						
		32	SR 2448 (TRAWICK PL)	SR 2373 (KILTSHIRE RD) TO END OF MAINTENANCE	4	2	0.12	20																						
		33	SR 2464 (ROTHBURY DR)	SR 1451 (RUSSELL RD) TO END OF MAINTENANCE	4	2	0.1	20																						
		34	SR 2468 (HEATHER RIDGE CT)	SR 2382 (TAVISTOCK DR) TO CUL-DE-SAC	4	2	0.2	20																						
TOTAL FOR PROJ NO. 2021CPT.05.01.20322.1							**2.37**																							
GRAND TOTAL							**17.68**		**4**	**3**	**4**	**68,691**	**29,768**	**5,429**	**646**	**100**	**2,370**	**16**	**4**	**131**	**97**	**59**	**30**	**3**	**11**	**1,856**	**405**	**2,624**	**100**	**2,509**
										7		**98,459**		**6,075**				**20**		**331**										

PROJ. REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321.1,etc	TMP-1

SIGNING FOR RESURFACING PROJECTS

LEGEND
- ⊢ STATIONARY SIGN
- ← DIRECTION OF TRAFFIC FLOW





TEE INTERSECTION

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1	ROAD WORK AHEAD 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.
2	NEXT XX MILES W7-3aP 24" X 18"	#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	LOWSOFT SHOULDER SP 13107 48" X 48"	- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY ½ MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.
4	ROAD UNDER CONST 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. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.
5	END ROAD WORK G20-2 A 48" X 24"	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.

-Y- LINE SIGNING

NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:

1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE
2) SUBDIVISION ROADS
3) DEAD END ROADS

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.

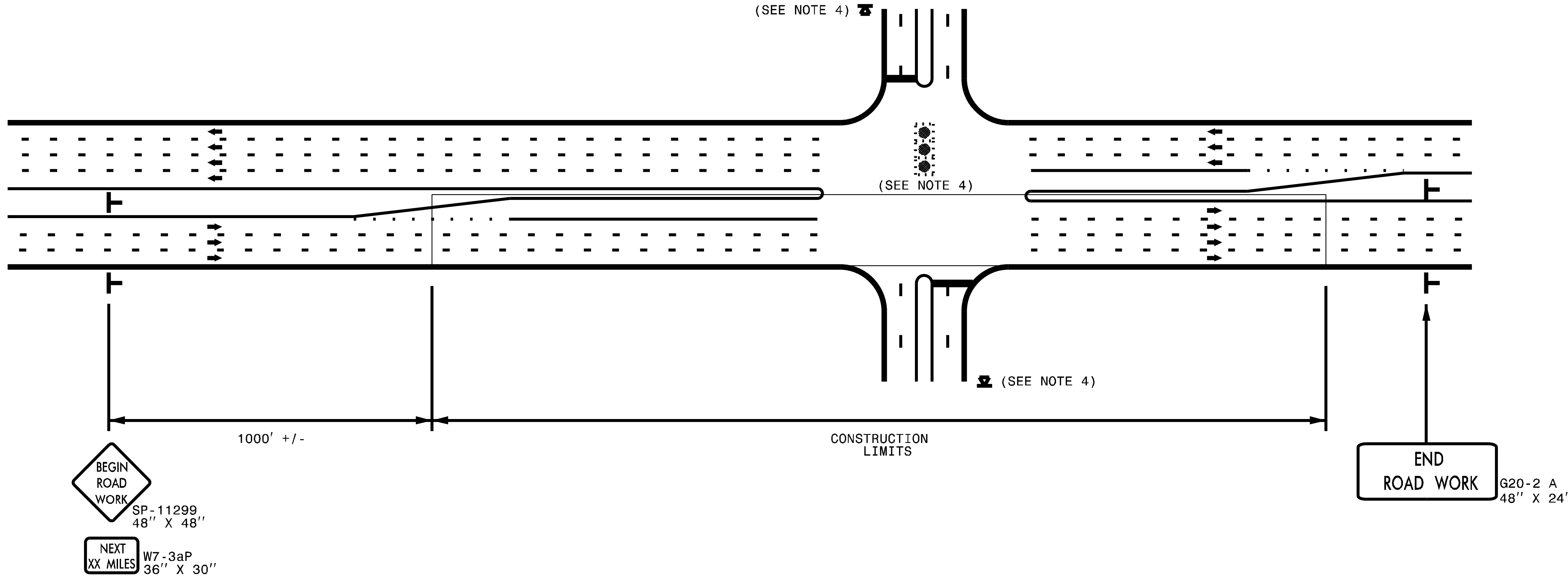
ROAD WORK AHEAD W20-1 48" X 48"	W20-7 A 48" X 48"
PLACED 500' IN ADVANCE OF FLAGGER.	PLACED 250' IN ADVANCE OF FLAGGER.

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

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

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

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

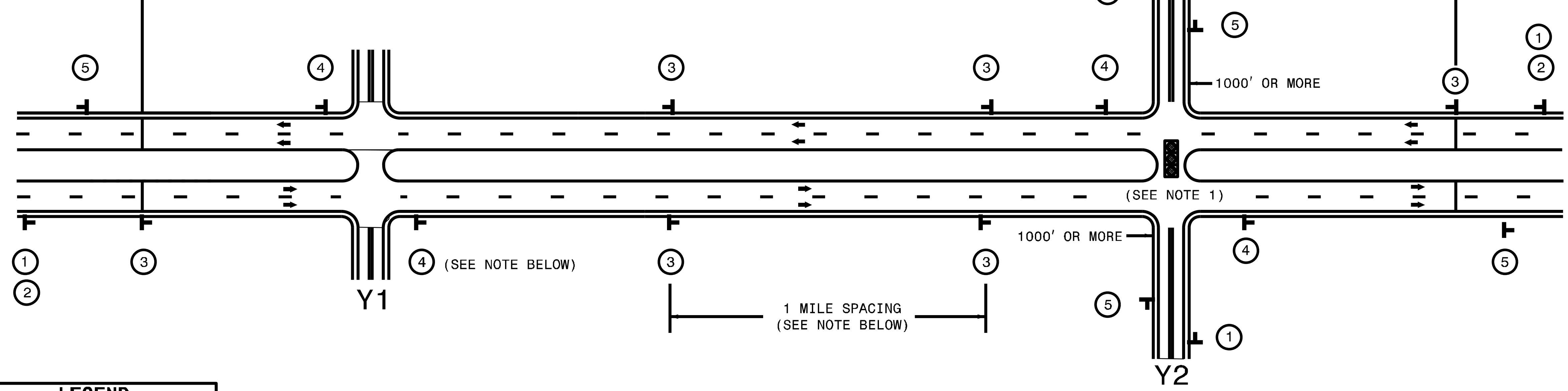
$$$$$$SYSTIME$$$$$ $$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$ $$$$USERNAME$$$$

DIVISION OF HIGHWAYS — STATE OF NORTH CAROLINA — DEPARTMENT OF TRANSPORTATION — WORK ZONE TRAFFIC CONTROL

RESURFACING ADVANCE WARNING SIGNS FOR URBAN / SUBURBAN FACILITIES

PROJ. REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321.1,etc	TMP-3

SIGNING FOR RESURFACING PROJECTS



LEGEND
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1 2	ROAD WORK AHEAD — W20-1 48″ X 48″ NEXT XX MILES — W7-3aP 24″ X 18″	PLACE 1000′ PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000′ ALONG -Y- LINE. #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	LOW/SOFT SHOULDER — 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 ½ MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.
4	ROAD UNDER CONST — 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	END ROAD WORK — G20-2 A 48″ X 24″	PLACE 500′ FOLLOWING THE END OF CONSTRUCTION LIMITS.

-Y- LINE SIGNING

NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:

1) LESS THAN 1000′ OF RESURFACING ALONG -Y- LINE
2) SUBDIVISION ROADS
3) DEAD END ROADS

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.

ROAD WORK AHEAD — W20-1 48″ X 48″

PLACED 500′ IN ADVANCE OF FLAGGER.

W20-7 A 48″ X 48″

PLACED 250′ IN ADVANCE OF FLAGGER.

NOTES:

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.

DIVISION OF HIGHWAYS — STATE OF NORTH CAROLINA — DEPARTMENT OF TRANSPORTATION — WORK ZONE TRAFFIC CONTROL

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

$$$$$$SYSTIME$$$$ $$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$ $$$$USERNAME$$$$

TIP NO.	SHEET NO.
2021CPT.05.01.10321.1, etc.	PMP-1

APPROVED: [signature]

DATE: 3/6/12

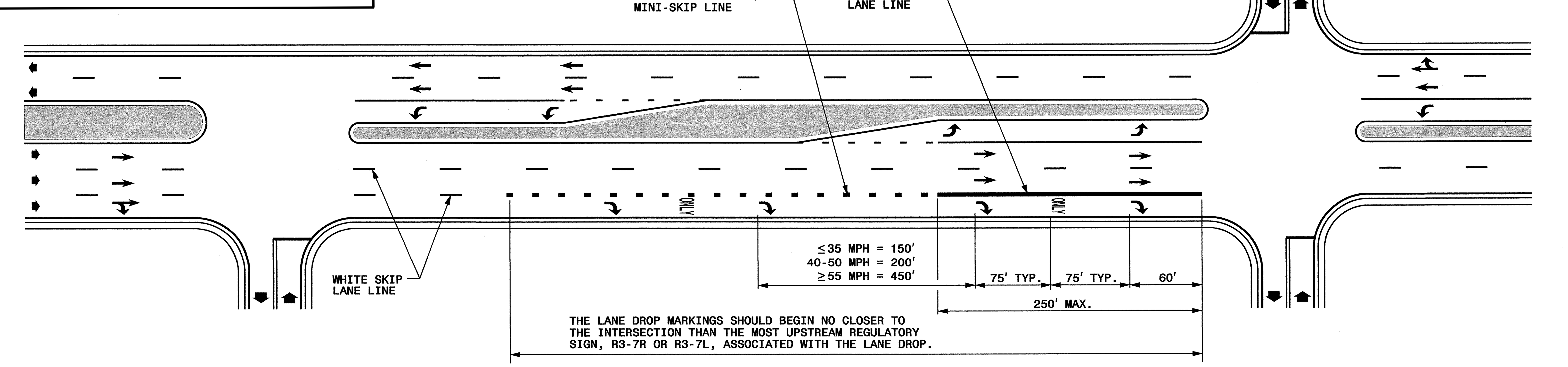
SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022959 RONALD W. KING

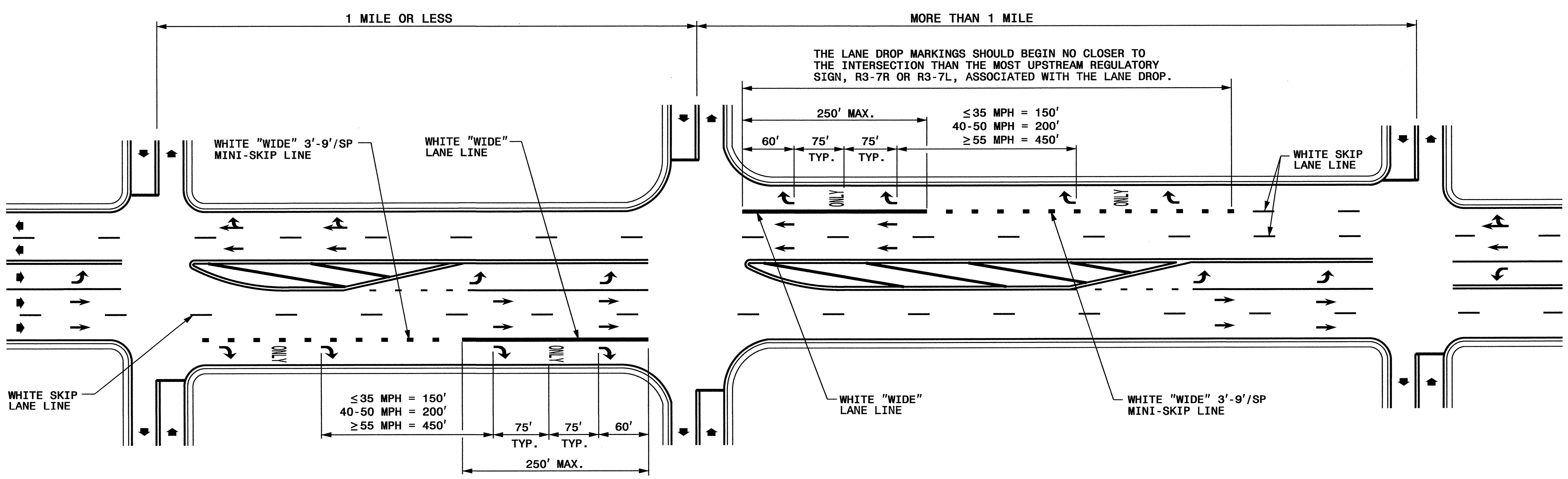
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12

LANE DROP AT AN INTERSECTION



LANE DROP AT AN INTERSECTION WITH AN AUXILIARY LANE



GENERAL NOTES:

1- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.

2- LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

LEGEND	
W = WIDTH OF TRAVEL LANE	ONLY PAVEMENT MARKING SYMBOLS & CHARACTERS
DIRECTION OF TRAFFIC FLOW	

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

SHEET 1 OF 3

1205D06

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

1-12

ENGLISH DETAIL DRAWING FOR
PAVEMENT MARKINGS
LANE DROPS

SHEET 1 OF 3

1205D06

REVISED PAVEMENT MARKING
ROADWAY STANDARD DRAWING

PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321.1,etc	EC-1

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

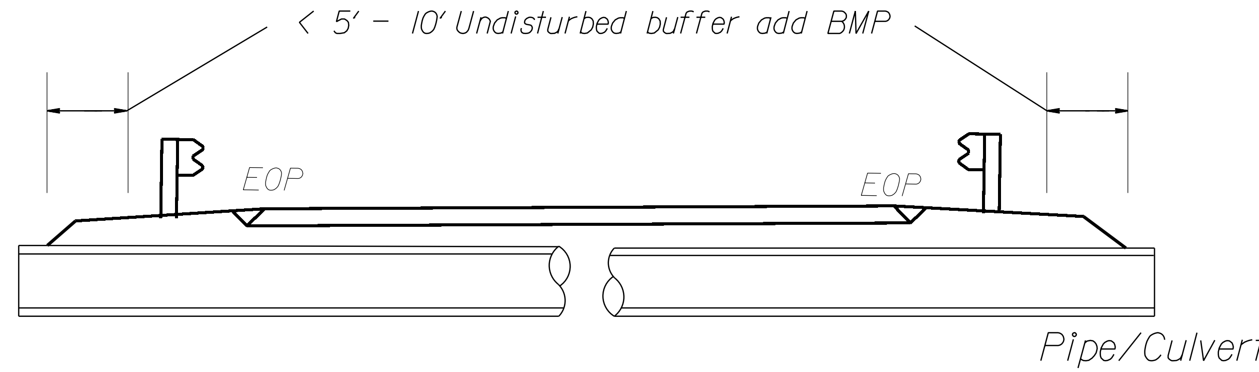
SOIL STABILIZATION TIMEFRAMES

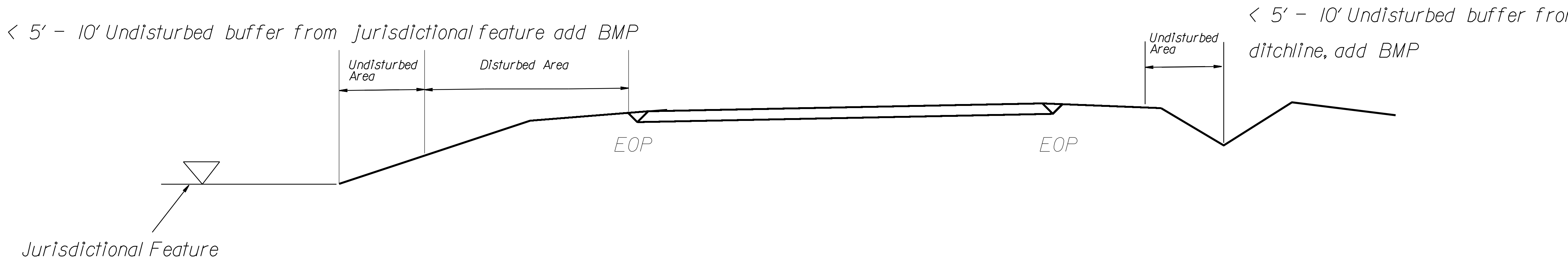
SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	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 HQW ZONES.

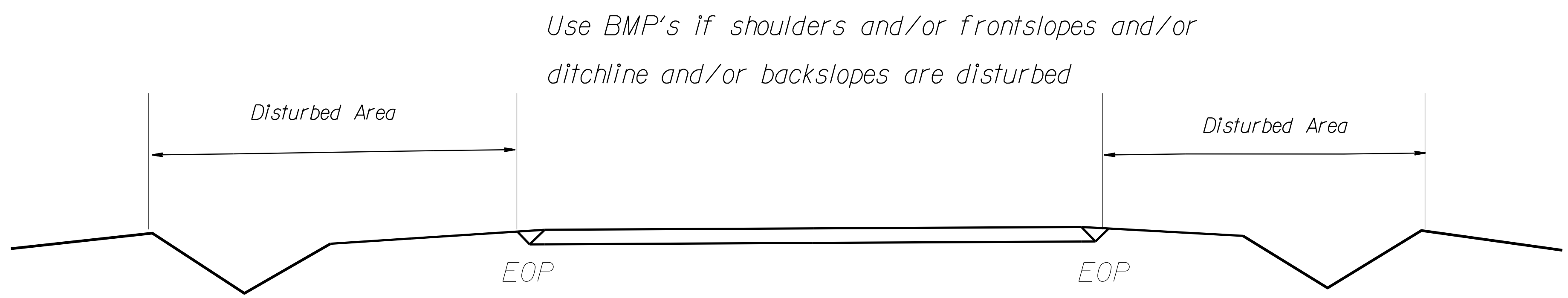
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

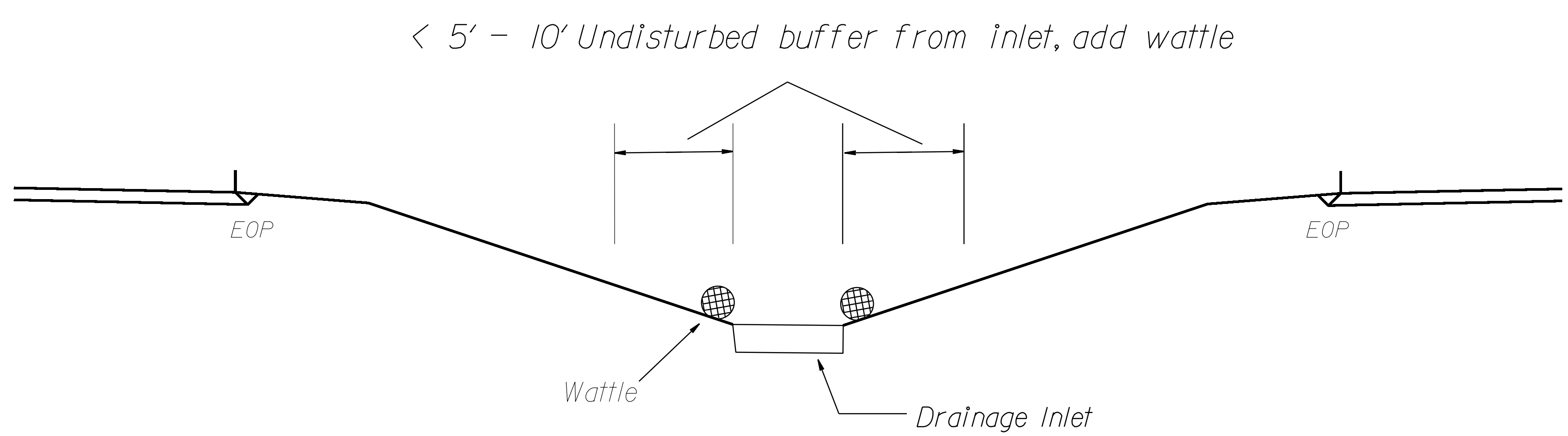
BMP Options: Wattle, Silt Fence or Hardened Aggregate.

EROSION CONTROL DETAIL



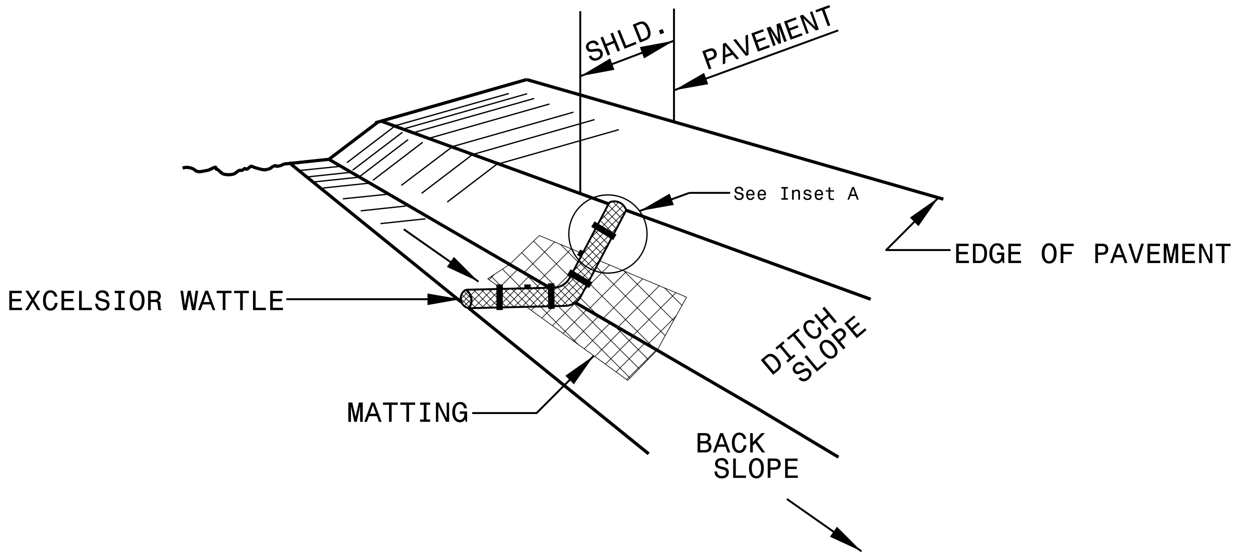






NOT TO SCALE

WATTLE DETAIL



ISOMETRIC VIEW

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

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

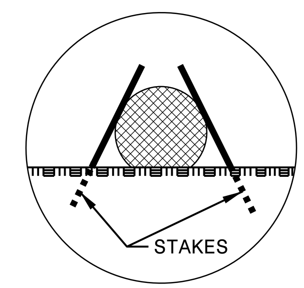
<u>ONLY</u> INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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

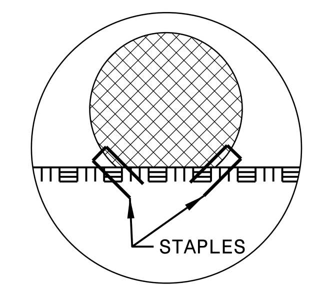
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

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

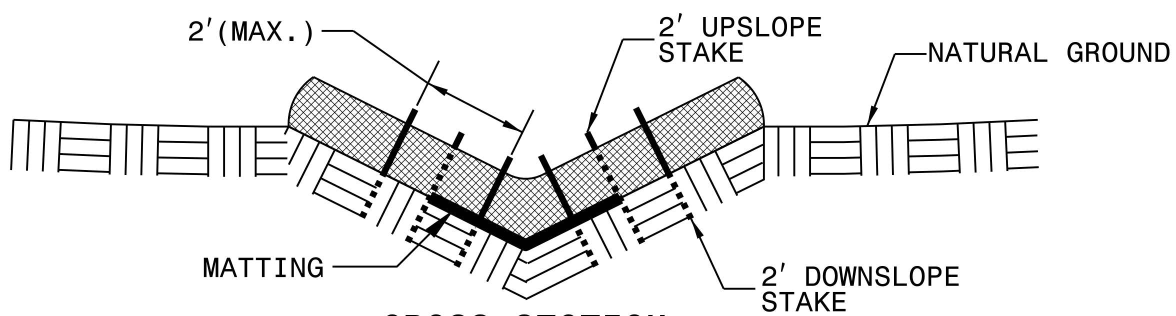
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



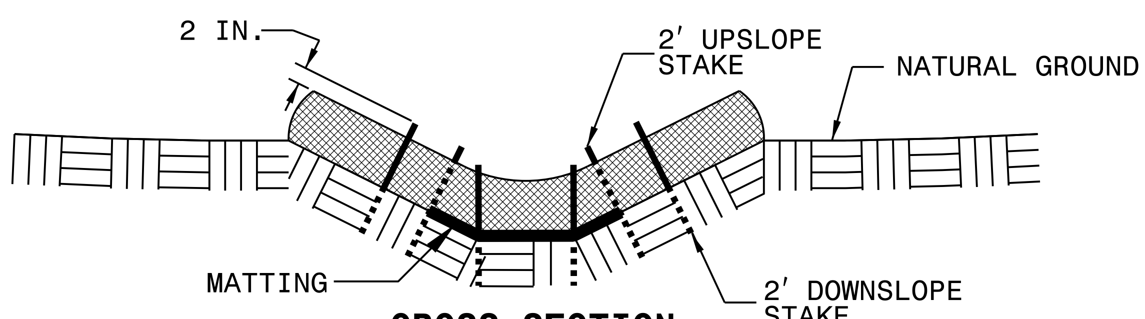
INSET A



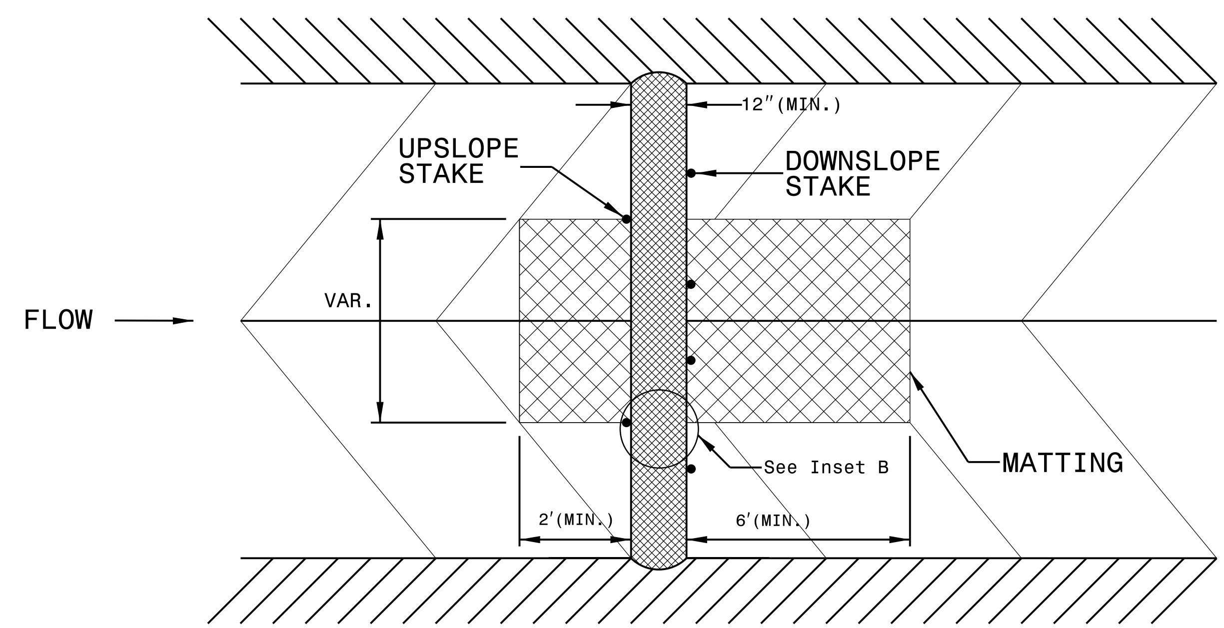
INSET B



CROSS SECTION VEE DITCH



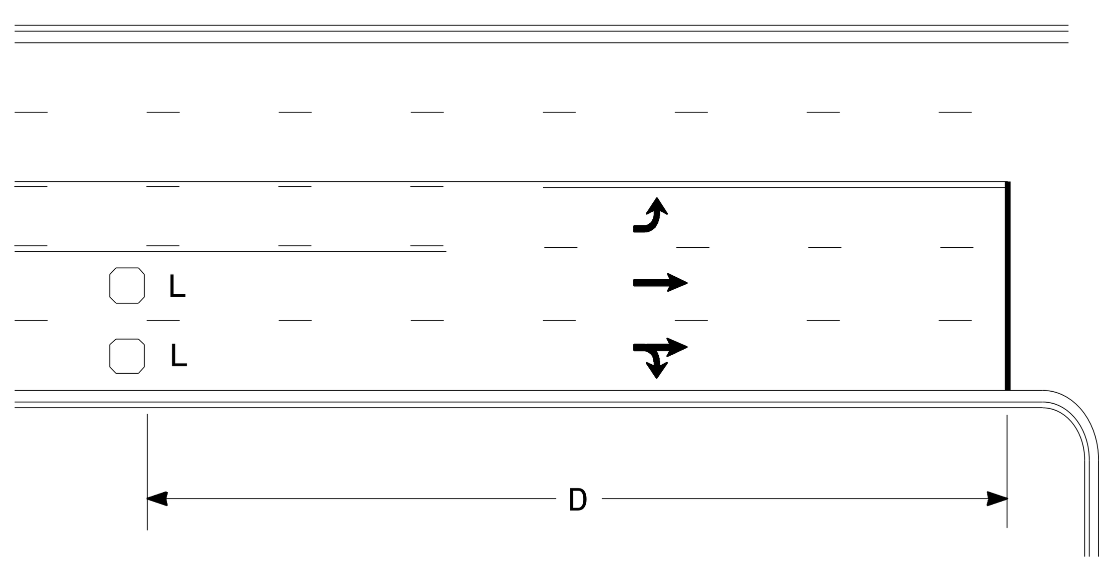
CROSS SECTION TRAPEZOIDAL DITCH



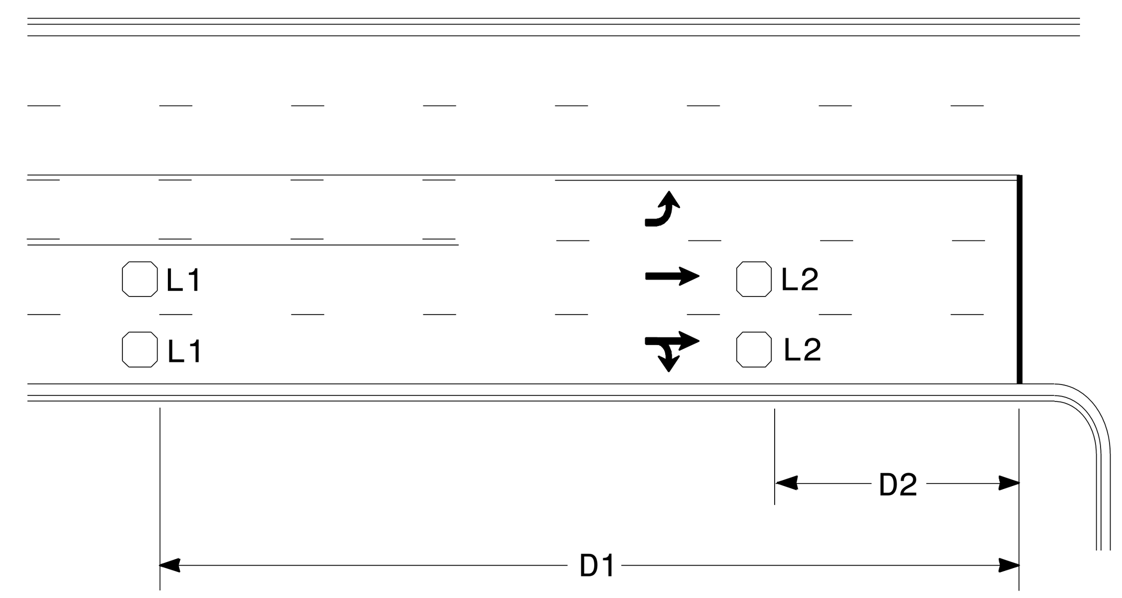
TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.01.10321.1 etc	SIG-1

High Speed Detection
(≥40 mph)



OR



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

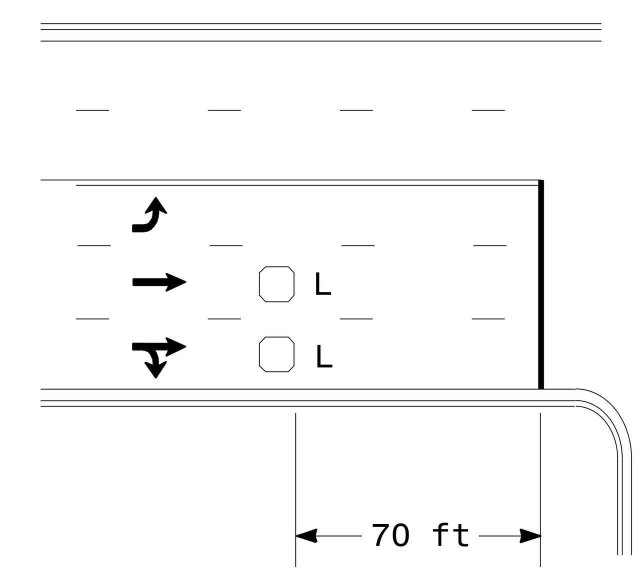
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

"Stretch" Operation

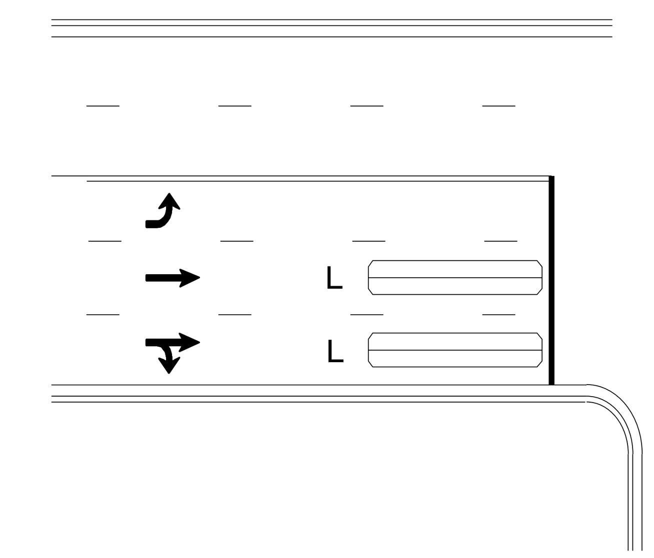
L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

Low Speed Detection
(≤35 mph)



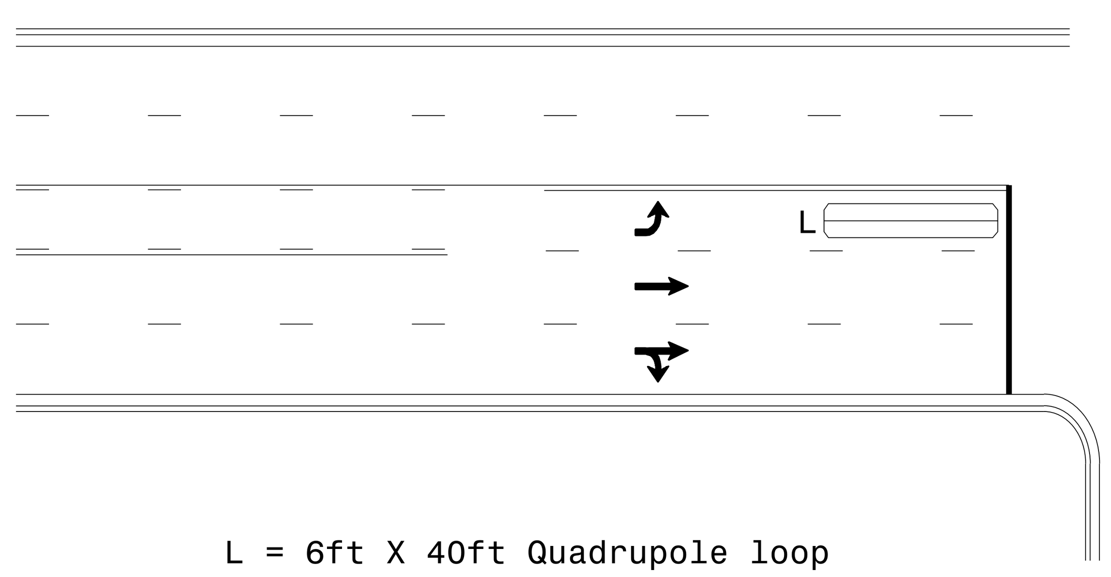
OR



L = 6ft X 6ft
Wired in series

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

Left Turn Lane Detection



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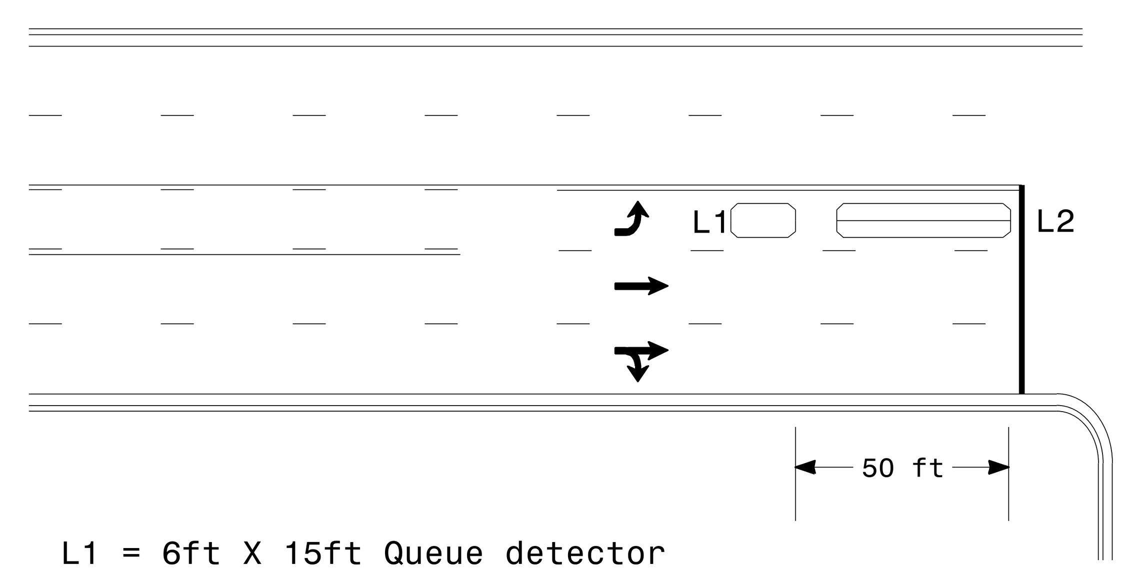


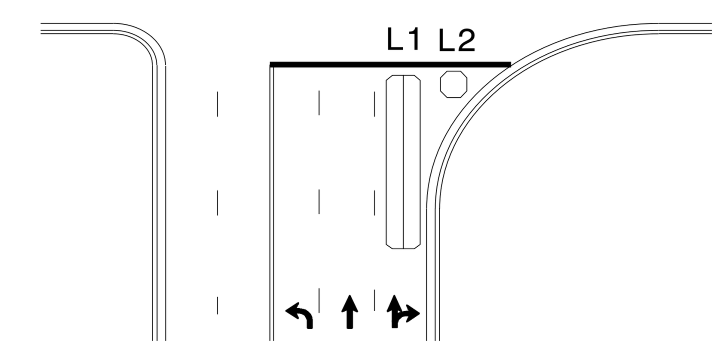
L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

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

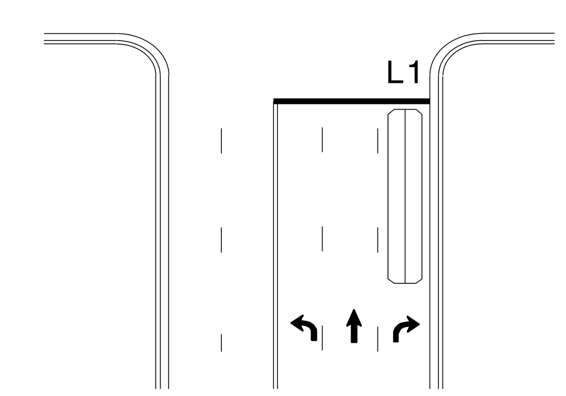
Queue Loop Detection

Right Turn Lane Detection

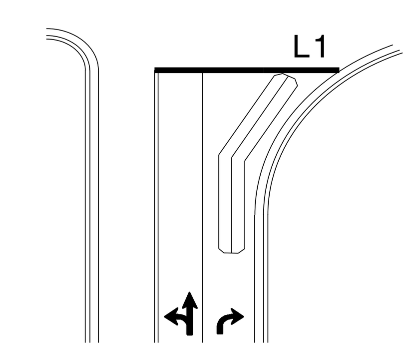


Shared Lane/
Wide Radius Turn

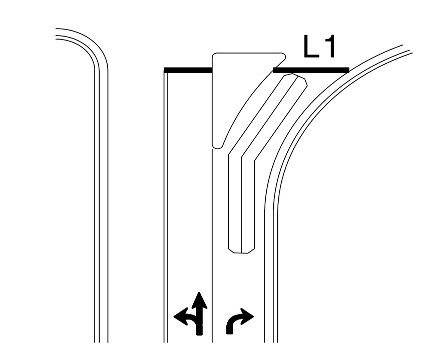
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

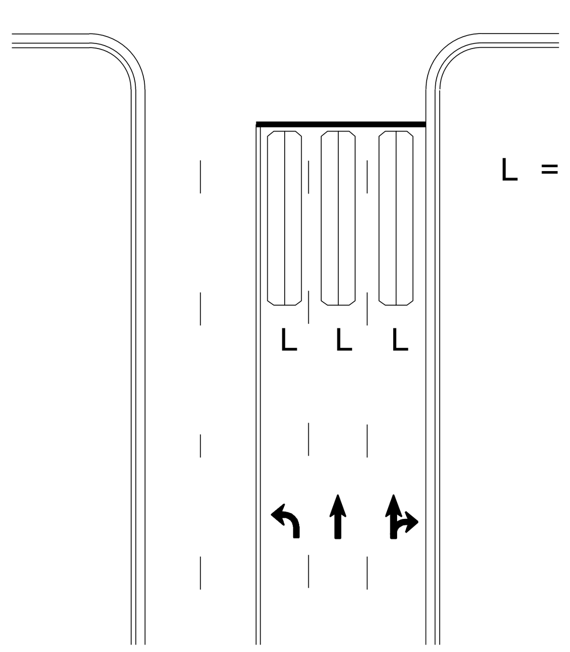


Wide Radius Turn



Channelized Turn

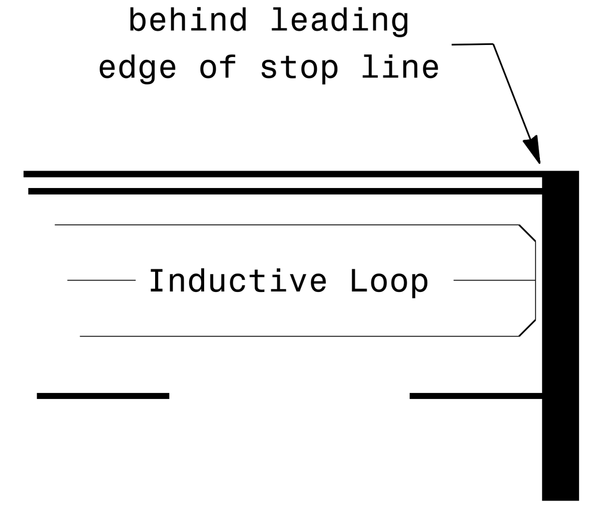
Side Street Detection



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

Presence Loop Placement at Stop Lines

Locate loop slightly behind leading edge of stop line



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

Prepared in the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

Typical Signal Loop Locations

PLAN DATE:	January 2015	REVIEWED BY:	JPG
PREPARED BY:	PLA	REVIEWED BY:	

SCALE
N/A

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 23489 ENGINEER PAMELA L. ALEXANDER

DocuSigned by:
P L Alexander
1/30/2015
DATE

SIG. INVENTORY NO.

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