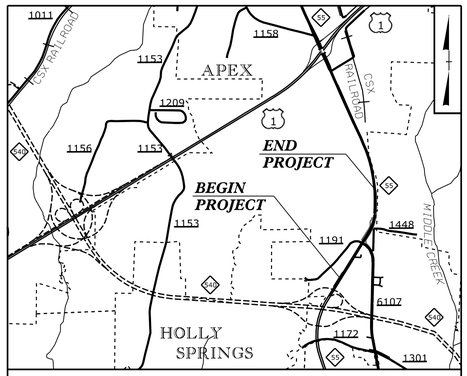
09/08/99

TIP PROJECT: HL–0007

CONTRACT:

See Sheet 1A For Index of Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HL–0007	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
49366.1.1	N/A	PE
49366.2.1	4936601	ROW
49366.2.2	4936601	UTILITIES
49366.3.1	4936601	CONST

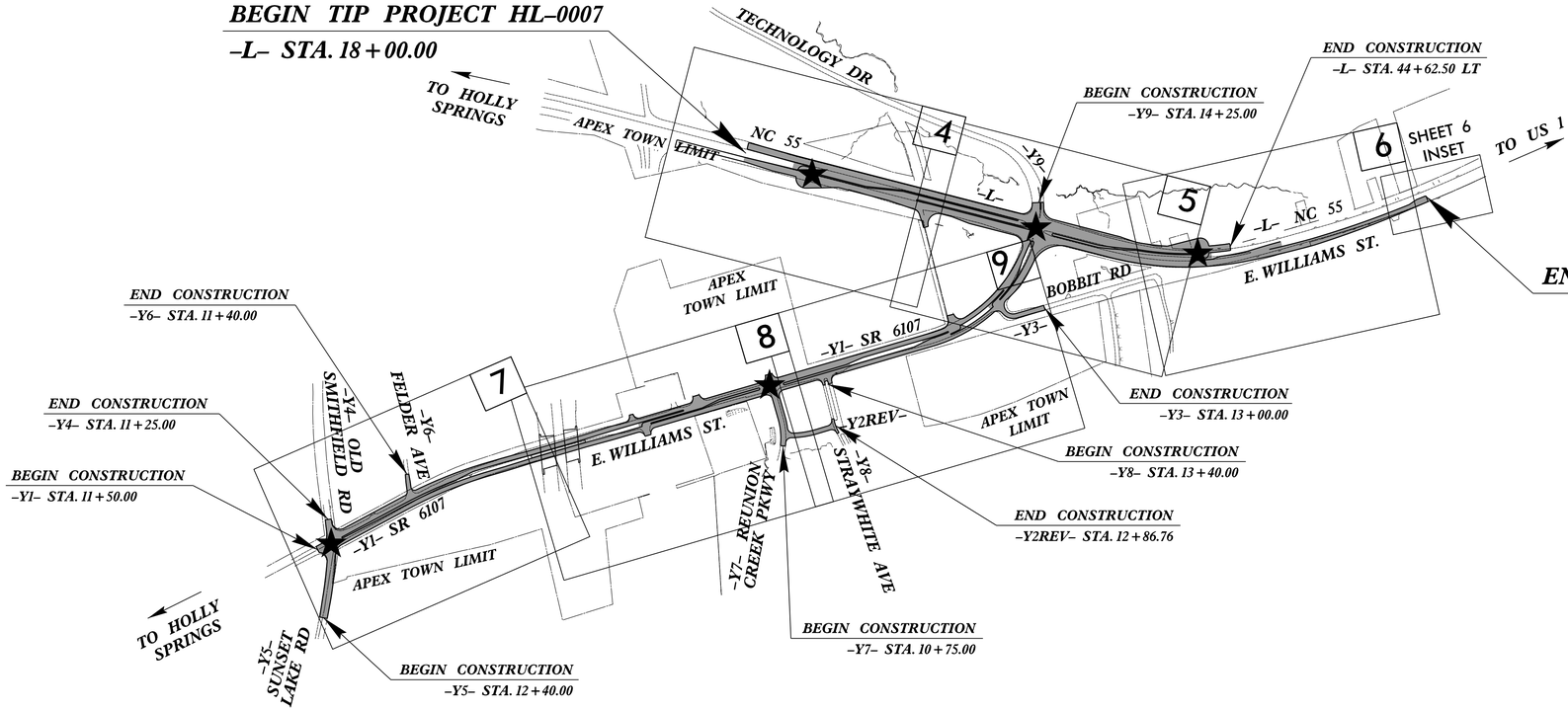
ROADWAY FINAL PLAN SET

LOCATION: NC 55 AT SR 1191 (TECHNOLOGY DRIVE) / SR 6107 (E. WILLIAMS STREET) IN APEX. CONVERT INTERSECTION TO ALTERNATIVE INTERSECTION.

TYPE OF WORK: DRAINAGE, GRADING, PAVING, AND SIGNALS

NAD 83/2011

BEGIN TIP PROJECT HL–0007
–L– STA. 18 + 00.00



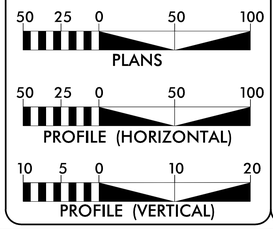
END TIP PROJECT HL–0007
–L– STA. 55 + 50.00

★ PROPOSED SIGNAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF APEX.
THIS IS A LIMITED CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES AND AT–GRADE INTERSECTIONS ON NC 55 SOUTH OF SR 1191 /SR 6107.

GRAPHIC SCALES



DESIGN DATA

ADT 2025 = 47,900
ADT 2045 = 56,200
K = 10 %
D = 60 %
T = 5 % *
V = 50 MPH
* TTST = 1% DUAL = 4%
FUNC CLASS =
PRINCIPAL ARTERIAL
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT HL–0007 = 0.710 MILES

TOTAL LENGTH TIP PROJECT HL–0007 = 0.710 MILES

–L– USED TO DETERMINE PROJECT LENGTH

Prepared for NCDOT in the Office of:
Mead&Hunt
111 E. Hargett Street, Suite 300
Raleigh, North Carolina 27601
919-714-8670 | meadhunt.com
NC License No. F-1235

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 14, 2023

LETTING DATE:
APRIL 21, 2026

RICK DECOLA, PE
ROADWAY DESIGN ENGINEER

BRAD SMITH, PE
HYDRAULICS ENGINEER

JOHN BRAXTON
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

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1784rjd

9/10/2021

PROJECT REFERENCE NO.	SHEET NO.
HL-0007	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin (EIP) — EIP
- Computed Property Corner
- Existing Concrete Monument (ECM) — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Existing Historic Property Boundary — HPB
- Known Contamination Area: Soil — S
- Potential Contamination Area: Soil — S
- Known Contamination Area: Water — W
- Potential Contamination Area: Water — W
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Secondary Horiz and Vert Control Point
- Vertical Benchmark
- Existing Right of Way Monument
- Proposed Right of Way Monument (Rebar and Cap)
- Proposed Right of Way Monument (Concrete)
- Existing Permanent Easement Monument
- Proposed Permanent Easement Monument (Rebar and Cap)
- Existing C/A Monument
- Proposed C/A Monument (Rebar and Cap)
- Proposed C/A Monument (Concrete)
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Existing Control of Access Line — CA
- Proposed Control of Access Line — CA
- Proposed ROW and CA Line — RW CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage/Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge

- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

** SUE – Subsurface Utility Engineering*
LOS – Level of Service – A,B,C or D (Accuracy)

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- H–Frame Pole
- U/G Power Line Test Hole (SUE – LOS A)*
- U/G Power Line (SUE – LOS B)* — P
- U/G Power Line (SUE – LOS C)* — P
- U/G Power Line (SUE – LOS D)* — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- U/G Telephone Test Hole (SUE – LOS A)*
- U/G Telephone Cable (SUE – LOS B)* — T
- U/G Telephone Cable (SUE – LOS C)* — T
- U/G Telephone Cable (SUE – LOS D)* — T
- U/G Telephone Conduit (SUE – LOS B)* — TC
- U/G Telephone Conduit (SUE – LOS C)* — TC
- U/G Telephone Conduit (SUE – LOS D)* — TC
- U/G Fiber Optics Cable (SUE – LOS B)* — T FO
- U/G Fiber Optics Cable (SUE – LOS C)* — T FO
- U/G Fiber Optics Cable (SUE – LOS D)* — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line Test Hole (SUE – LOS A)*
- U/G Water Line (SUE – LOS B)* — W
- U/G Water Line (SUE – LOS C)* — W
- U/G Water Line (SUE – LOS D)* — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Test Hole (SUE – LOS A)*
- U/G TV Cable (SUE – LOS B)* — TV
- U/G TV Cable (SUE – LOS C)* — TV
- U/G TV Cable (SUE – LOS D)* — TV
- U/G Fiber Optic Cable (SUE – LOS B)* — TV FO
- U/G Fiber Optic Cable (SUE – LOS C)* — TV FO
- U/G Fiber Optic Cable (SUE – LOS D)* — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line Test Hole (SUE – LOS A)*
- U/G Gas Line (SUE – LOS B)* — G
- U/G Gas Line (SUE – LOS C)* — G
- U/G Gas Line (SUE – LOS D)* — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- SS Force Main Line Test Hole (SUE – LOS A)*
- SS Force Main Line (SUE – LOS B)* — FSS
- SS Force Main Line (SUE – LOS C)* — FSS
- SS Force Main Line (SUE – LOS D)* — FSS

MISCELLANEOUS:

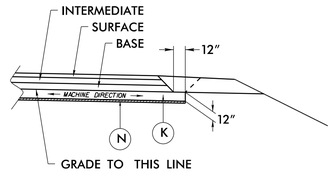
- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line (SUE – LOS B)* — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

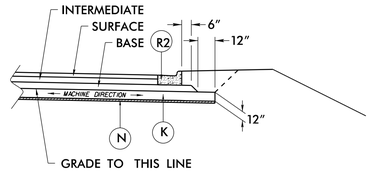
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PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	N	GEOTEXTILE FOR PAVEMENT STABILIZATION.
C2	PROP. APPROX. 2″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.	R1	1′-6″ CONCRETE CURB AND GUTTER.
C3	PROP. APPROX. 3″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	R2	2′-6″ CONCRETE CURB AND GUTTER.
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1″ DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2″ IN DEPTH.	R3	SHOULDER BERM GUTTER.
D1	PROP. APPROX. 4″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R4	5″ MONOLITHIC CONCRETE ISLAND (KEYED IN).
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½″ IN DEPTH OR GREATER THAN 4″ IN DEPTH.	R5	42″ VERTICAL CONCRETE BARRIER.
E1	PROP. APPROX. 3″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	S	4″ CONCRETE SIDEWALK.
E2	PROP. APPROX. 4″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	T	EARTH MATERIAL.
E3	PROP. APPROX. 5½″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
E4	PROP. APPROX. 7″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	V1	MILLING ASPHALT PAVEMENT, 1½″ DEPTH.
E5	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3″ IN DEPTH OR GREATER THAN 5½″ IN DEPTH.	V2	INCIDENTAL MILLING.
J1	PROP. 8″ AGGREGATE BASE COURSE.	W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).
K	PROP. 12″ CLASS IV SUBGRADE STABILIZATION.	W2	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).
L	BASE TO BE STABILIZED WITH 200 TO 400 LBS. PER SQ. YD. OF STABILIZER AGGREGATE MIXED WITH THE TOP 3″ OF SUBGRADE SOIL AT LOCATIONS DIRECTED BY THE ENGINEER.	W3	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).

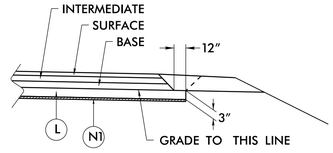
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.





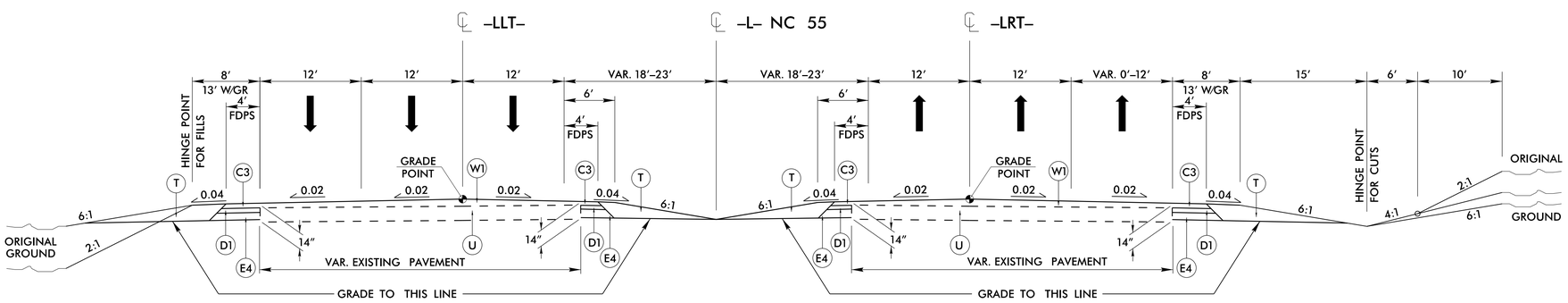
CLASS IV SUBGRADE STABILIZATION WITH GEOTEXTILE FOR PAVEMENT STABILIZATION

USE DETAIL FOR AGGREGATE SUBGRADE (TYPE 1)
–L– STA. 18+00 TO –L– STA. 55+50
–Y1– STA. 11+50 TO –Y1– STA. 54+00



STABILIZER AGGREGATE

USE DETAIL FOR CONTINGENCY ONLY



TYPICAL SECTION NO. 1

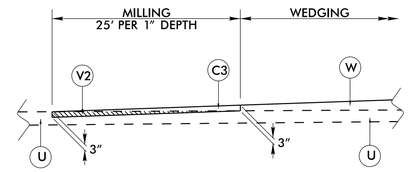
USE TYPICAL SECTION NO. 1
–L– STA. 18+00.00 TO STA. 20+60.00

PROJECT REFERENCE NO.	SHEET NO.
HL-0007	2A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

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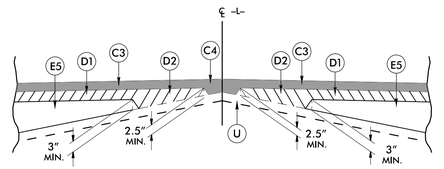
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INCIDENTAL MILLING DETAIL



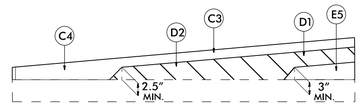
USE INCIDENTAL MILLING DETAIL AT ALL PROPOSED PROFILE TIE-INS TO EXISTING PAVEMENT

DETAIL W1



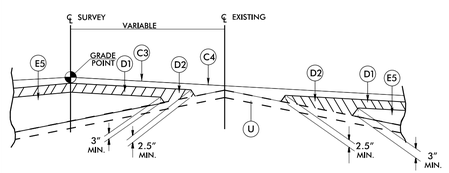
DETAIL SHOWING METHOD OF WEDGING

DETAIL W2



DETAIL SHOWING METHOD OF WEDGING

DETAIL W3



DETAIL SHOWING METHOD OF WEDGING

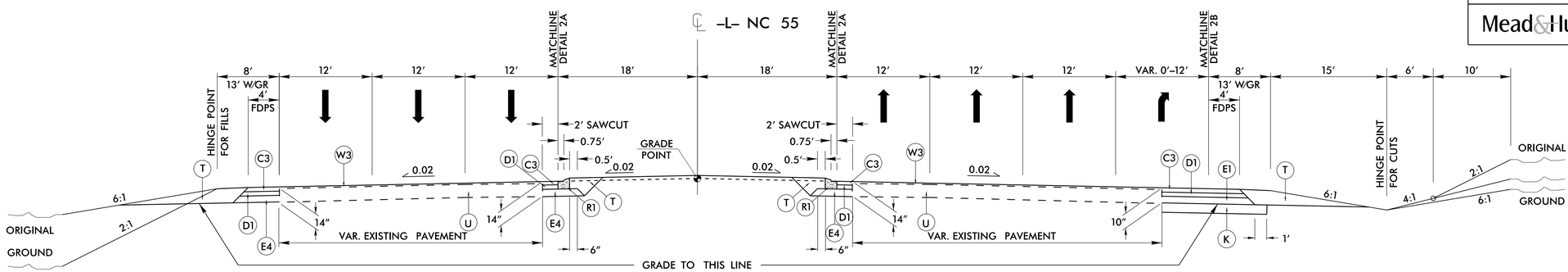
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6/2/99

PROJECT REFERENCE NO.	SHEET NO.
HL-0007	2A-2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

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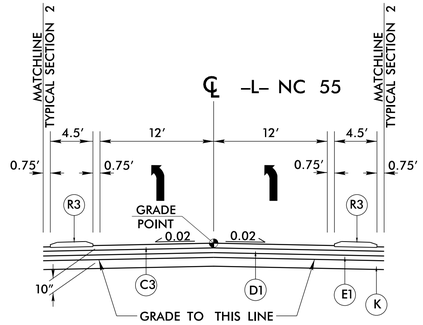
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TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2

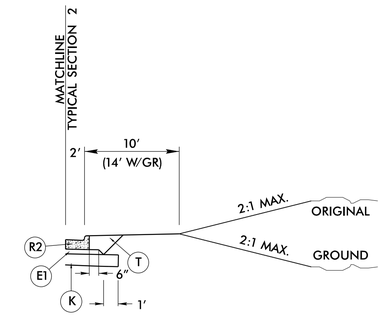
–L– STA. 20+60.00 TO STA. 33+00.00



TYPICAL SECTION NO. 2A

USE IN CONJUCTION WITH TYPICAL SECTION NO. 2
SEE PLANS FOR LOCATIONS

–L– STA. 26+15.00 TO 33+00.00

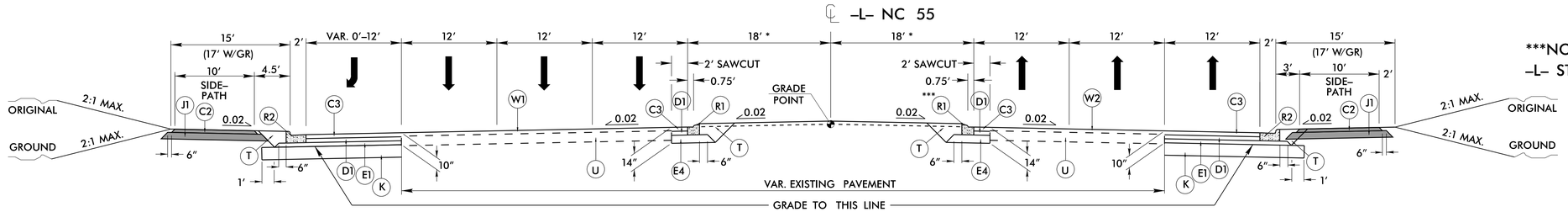


TYPICAL SECTION NO. 2B

USE IN CONJUCTION WITH TYPICAL SECTION NO. 2
SEE PLANS FOR LOCATIONS

–L– STA. 28+89.34 TO 33+00.00

PAVEMENT SCHEDULE	
C1	1.5″ S9.5C
C2	2″ S9.5C
C3	3″ S9.5C
C4	VAR. DEPTH S9.5C
D1	4″ I19.0C
D2	VAR. DEPTH I19.0C
E1	3″ B25.0C
E2	4″ B25.0C
E3	5.5″ B25.0C
E4	7″ B25.0C
E5	VAR. DEPTH B25.0C
J1	8″ ABC
K	SUBGRADE STAB.
R1	1′-6″ C & G
R2	2′-6″ C & G
R3	5″ MCI
S	4″ SIDEWALK
T	EARTH MATERIAL
U	EXIST. PVMT.
V2	INCIDENTAL MILLING
W1	WEDGING
W2	WEDGING
W3	WEDGING



***NOTE: USE 2′–9″ CURB & GUTTER
–L– STA. 43+55.00 TO 55+00.00 MED. RT.

TYPICAL SECTION NO. 3

*SEE DETAIL SHEETS 2B–2 THRU 2B–3 FOR MEDIAN ISLAND LOCATIONS.

USE TYPICAL SECTION NO. 3

–L– STA. 33+00.00 TO STA. 44+62.50

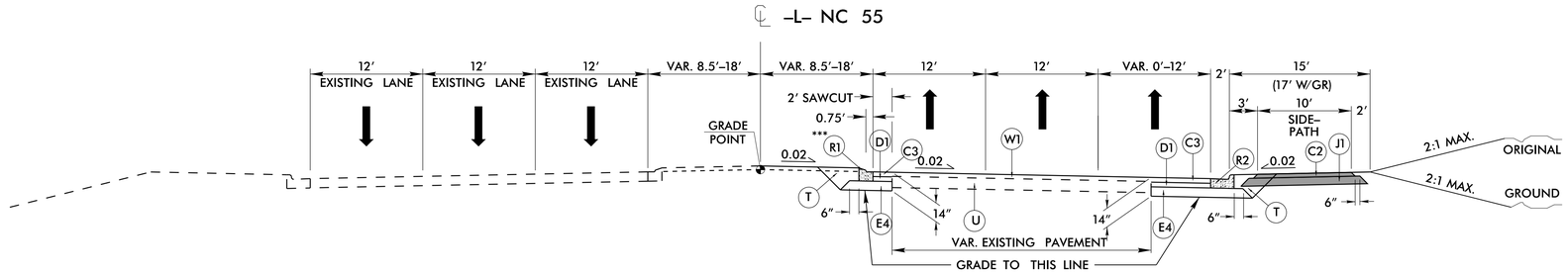
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PROJECT REFERENCE NO.	SHEET NO.
HL-0007	2A-3
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

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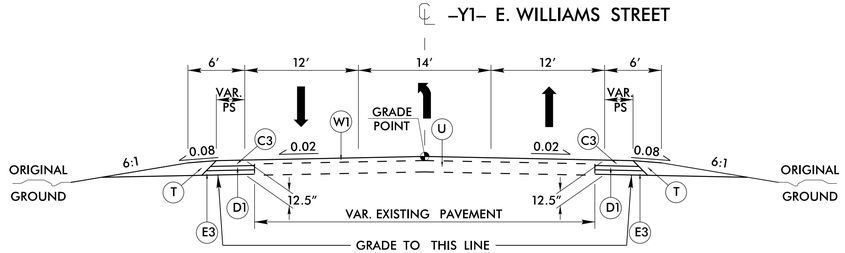
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PAVEMENT SCHEDULE	
C1	1.5" S9.5C
C2	2" S9.5C
C3	3" S9.5C
C4	VAR. DEPTH S9.5C
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.5" B25.0C
E4	7" B25.0C
E5	VAR. DEPTH B25.0C
J1	8" ABC
K	SUBGRADE STAB.
R1	1'-6" C & G
R2	2'-6" C & G
R3	5" MCI
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PVMT.
V2	INCIDENTAL MILLING
W1	WEDGING
W2	WEDGING
W3	WEDGING



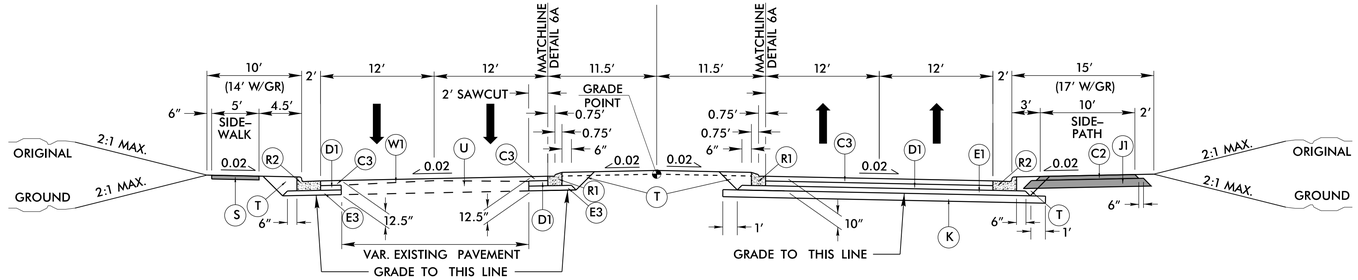
TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4
–L– STA. 44+62.50 TO STA. 55+50.00



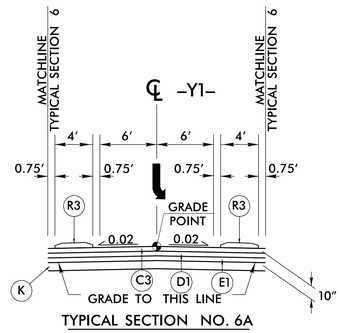
TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5
–Y1– STA. 11+50.00 TO STA. 12+50.00



TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6
–Y1– STA. 12+50.00 TO STA. 22+60.00
–Y1– STA. 28+55.00 TO STA. 54+26.33



TYPICAL SECTION NO. 6A

USE IN CONJUCTION WITH TYPICAL SECTION NO. 5
SEE PLANS FOR LOCATIONS
–Y1– STA. 30+30.00 TO 33+50.00
–Y1– STA. 46+25.00 TO 47+85.00 (REVERSE)
–Y1– STA. 50+18.50 TO 52+00.00

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1344.ud

6/2/99

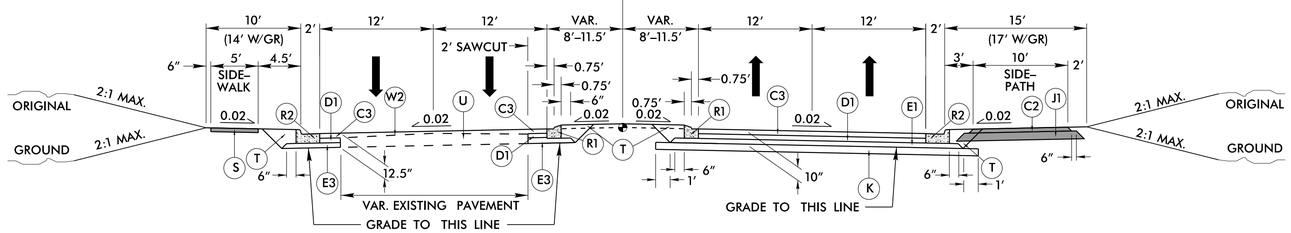
PROJECT REFERENCE NO.	SHEET NO.
HL-0007	2A-4
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

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NC License No. F-1235

PAVEMENT SCHEDULE	
C1	1.5" S9.5C
C2	2" S9.5C
C3	3" S9.5C
C4	VAR. DEPTH S9.5C
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	3" B25.0C
E2	4" B25.0C
E3	5.5" B25.0C
E4	7" B25.0C
E5	VAR. DEPTH B25.0C
J1	8" ABC
K	SUBGRADE STAB.
R1	1'-6" C & G
R2	2'-6" C & G
R3	5" MCI
S	4" SIDEWALK
T	EARTH MATERIAL
U	EXIST. PVMT.
V	INCIDENTAL MILLING
W1	WEDGING
W2	WEDGING
W3	WEDGING

–Y1– E. WILLIAMS STREET

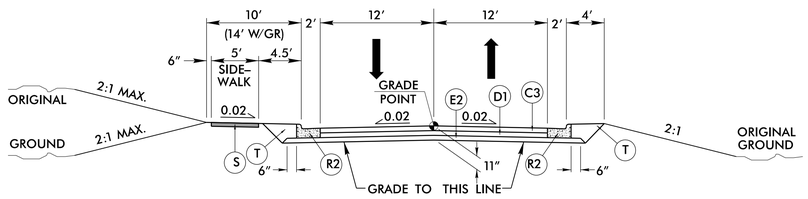


TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7

–Y1– STA. 22+60.00 TO STA. 28+55.00

–Y2REV– NEW SERVICE ROAD

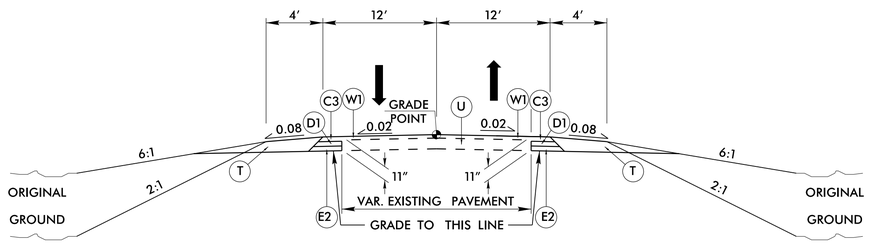


TYPICAL SECTION NO. 8

USE TYPICAL SECTION NO. 8

–Y2REV– STA. 10+25.50 TO STA. 12+74.64

–Y3– BOBBITT ROAD

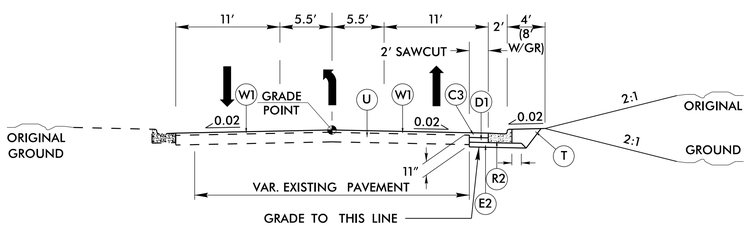


TYPICAL SECTION NO. 9

USE TYPICAL SECTION NO. 9

–Y3– STA. 10+35.50 TO STA. 13+00.00

–Y4– OLD SMITHFIELD ROAD

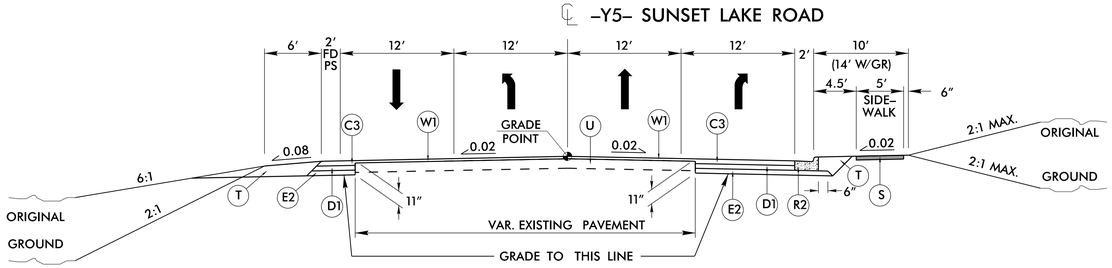


TYPICAL SECTION NO. 10

USE TYPICAL SECTION NO. 10

–Y4– STA. 10+37.99 TO STA. 11+25.00

–Y5– SUNSET LAKE ROAD



TYPICAL SECTION NO. 11

USE TYPICAL SECTION NO. 11

–Y5– STA. 12+40.00 TO STA. 16+06.72

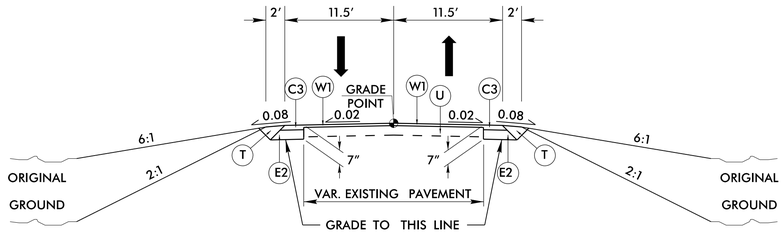
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17-JAN-2006 15:38

PROJECT REFERENCE NO.	SHEET NO.
HL-0007	2A-5
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

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–Y6– FELDER AVENUE

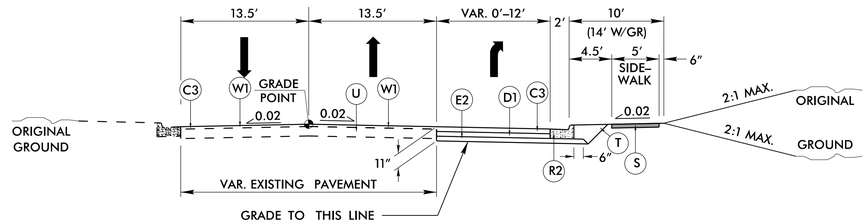


TYPICAL SECTION NO. 12

USE TYPICAL SECTION NO. 12

–Y6– STA. 10+37.80 TO STA. 11+40.00

–Y7– REUNION CREEK PARKWAY

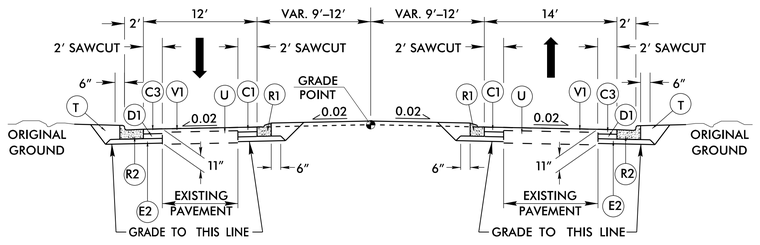


TYPICAL SECTION NO. 13

USE TYPICAL SECTION NO. 13

–Y7– STA. 10+75.00 TO STA. 13+36.70

–Y8– STRAYWHITE AVENUE



TYPICAL SECTION NO. 14

USE TYPICAL SECTION NO. 14

–Y8– STA. 13+40.00 TO STA. 13+77.13

PAVEMENT SCHEDULE	
C1	1.5″ S9.5C
C2	2″ S9.5C
C3	3″ S9.5C
C4	VAR. DEPTH S9.5C
D1	4″ I19.0C
D2	VAR. DEPTH I19.0C
E1	3″ B25.0C
E2	4″ B25.0C
E3	5.5″ B25.0C
E4	7″ B25.0C
E5	VAR. DEPTH B25.0C
J1	8″ ABC
K	SUBGRADE STAB.
R1	1′-6″ C & G
R2	2′-6″ C & G
R3	5″ MCI
S	4″ SIDEWALK
T	EARTH MATERIAL
U	EXIST. PVMT.
V1	1½″ DEPTH MILLING
V2	INCIDENTAL MILLING
W1	WEDGING
W2	WEDGING
W3	WEDGING

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PROJECT REFERENCE NO.	SHEET NO.
HL-0007	4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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REVISIONS

8/17/99

R/W REVISION: PROPERTY OWNER INFORMATION UPDATED ON PARCEL 2.(RJD 2/26/2024) R/W REVISION: C/A ADDED TO PARCEL 4.(RJD 3/05/2024)
R/W REVISION: PARCEL 3 DIVIDED INTO PARCELS 3 AND 3A.(RJD 3/13/2024) R/W REVISION: PARCEL 2 DIVIDED INTO PARCELS 2 AND 2A.(RJD 5/3/2024)
R/W REVISION: ADDED POE ON PARCELS 3 & 4.(RJD 12/13/2024)

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17841_hl

NAD 83/2001

-LLT- POT Sta. 14+00.00 =
-L- POT Sta. 14+00.00 (35.00' LT)

BEGIN CONSTRUCTION
-LRT- STA. 14+25.00

-LLT- PI Sta. 18+10.00 =
-L- POT Sta. 18+10.00 (35.00' LT)

-LLT- POT Sta. 20+60.05 =
-L- POT Sta. 20+60.00 (30.00' LT)

-LRT- POT Sta. 14+00.00 =
-L- POT Sta. 14+00.00 (34.50' RT)

BEGIN TIP PROJECT HL-0007
-L- POT STA. 18+00.00

-LRT- PI Sta. 18+10.00 =
-L- POT Sta. 18+10.00 (34.50' RT)

-LRT- POT Sta. 20+60.04 =
-L- POT Sta. 20+60.00 (30.00' RT)

MATCHLINE -L- STA. 28+00 SEE SHEET 5

EMC CORPORATION
DB 8681 PG 1014
BM 1997 PG 843

LEE, CHU YANG
DB 19413 PG 367
BM 1989 PG 1393

APEX-WILLIAMS STREET HOLDINGS, LLC
DB 16421 PG 1964

WILLIAMS STREET PROPERTIES LLC
LUND, MARCIA M
DB 17290 PG 300
BM 2003 PG 398

NCDOT DB 8399 PG 2161

PIPE OUTLET STABILIZATION
w/CL II RIP RAP
EST. 44 TONS CL II RIP RAP
EST. 47 SY GEOTEXTILE
EST. DDE=17 CY
S=1.05%
SEE DETAIL 4-4

CHANNEL STABILIZATION
EST. 45 TONS CL II RIP RAP
EST. 48 SY GEOTEXTILE
SEE DETAIL 4-12

STANDARD 4' BASE DITCH
EST. 245 TONS CL II RIP RAP
EST. 499 SY GEOTEXTILE
EST. DDE=1,142 CY
S=7.59%
SEE DETAIL 4-8

LATERAL 'V' DITCH
w/CL B RIP RAP
EST. 3 TONS CL B RIP RAP
EST. 6 SY GEOTEXTILE
SEE DETAIL 4-3

SPECIAL LATERAL 'V' DITCH
w/CL B RIP RAP
EST. 21 TONS CL B RIP RAP
EST. 51 SY GEOTEXTILE
SEE DETAIL 4-2

CL B RIP RAP
EST. 2 TONS
EST. 7 SY GF

CL II RIP RAP
EST. 15 TONS
EST. 30 SY GF

SPECIAL CUT DITCH w/HINGE
SEE DETAIL 4-1

SPECIAL CUT DITCH w/HINGE & w/PSRM
EST. 125 SY PSRM
SEE DETAIL 4-5

STANDARD 3' BASE DITCH
w/CL II RIP RAP
EST. 182 TONS CL II RIP RAP
EST. 192 SY GEOTEXTILE
EST. DDE=363 CY
S=12.88%
SEE DETAIL 4-9

STANDARD 3' BASE DITCH
EST. DDE=400 CY
S=1.10%
SEE DETAIL 4-7

FALSE SUMP
SEE DETAIL 4-10

FALSE SUMP
SEE DETAIL 4-11

42" CONC. BARRIER RAIL WITH MOMENT SLAB

TRENCHLESS INSTALLATION 36" WELDED STEEL

FLOWABLE FILL
REMOVE DI

REMOVE DI & 14 LF 24" RCP

DO NOT DISTURB EXISTING O/H SIGN

DO NOT DISTURB EXISTING DMS SIGN

TIE TO EXISTING DITCH

TIE TO EXISTING CHANNEL

RETAIN

GREU TL-3

TYPE B-77

CAT-1

2GI-D

BYI-235

BYI-236

BY3-1

NC 55 BY EB 30 BST

NC 55 BY WB 41' BST

TECHNOLOGY DR 32' BST

TECHNOLOGY DR 23' BST

CHARTER COMM. FO

AT&T CORP. FO

MCI COMM. FO

WOODS

ABAND.

CONC HW

JB

MTL POLE

OVERHEAD AWNING

EXISTING R/W

PDE

TDE

RW CA

2A

3A

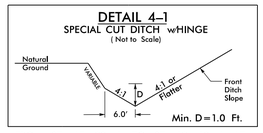
2

3

4

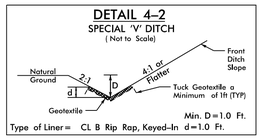
5

DETAIL 4-1
SPECIAL CUT DITCH w/HINGE
(Not to Scale)



FROM STA. 17+82 -L- TO STA. 19+50 -L- LT
FROM STA. 18+00 -L- TO STA. 20+50 -L- RT
FROM STA. 21+00 -L- TO STA. 23+50 -L- RT
FROM STA. 24+50 -L- TO STA. 25+00 -L- RT

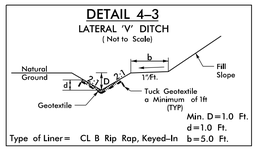
DETAIL 4-2
SPECIAL 'V' DITCH
(Not to Scale)



Type of Liner= CL B Rip Rap, Keyed-In d=1.0 Ft.

FROM STA. 22+50 -L- TO STA. 23+00 -L- LT

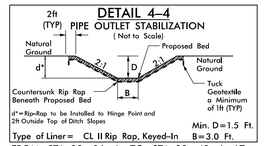
DETAIL 4-3
LATERAL 'V' DITCH
(Not to Scale)



Type of Liner= CL B Rip Rap, Keyed-In

FROM STA. 23+00 -L- TO STA. 23+10 -L- LT

DETAIL 4-4
PIPE OUTLET STABILIZATION
(Not to Scale)

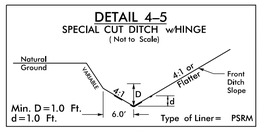


d*=Rip-Rap to be Installed to Hinge Point and 2ft Outside Top of Ditch Slopes

Type of Liner= CL II Rip Rap, Keyed-In

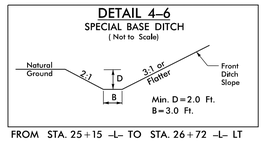
FROM STA. 23+36 -L- TO STA. 23+43 -L- LT

DETAIL 4-5
SPECIAL CUT DITCH w/HINGE
(Not to Scale)



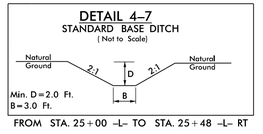
FROM STA. 25+00 -L- TO STA. 26+00 -L- RT

DETAIL 4-6
SPECIAL BASE DITCH
(Not to Scale)



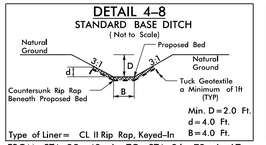
FROM STA. 25+15 -L- TO STA. 26+72 -L- LT

DETAIL 4-7
STANDARD BASE DITCH
(Not to Scale)



FROM STA. 25+00 -L- TO STA. 25+48 -L- RT

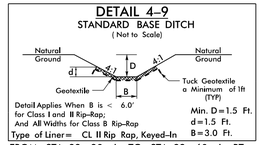
DETAIL 4-8
STANDARD BASE DITCH
(Not to Scale)



Type of Liner= CL II Rip Rap, Keyed-In

FROM STA. 25+48 -L- TO STA. 26+72 -L- LT

DETAIL 4-9
STANDARD BASE DITCH
(Not to Scale)

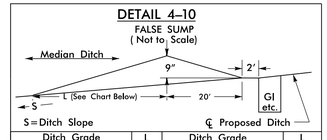


Detail Applies When B is < 6.0' for Class I and II Rip-Rap; And All Widths for Class B Rip-Rap

Type of Liner= CL II Rip Rap, Keyed-In

FROM STA. 22+20 -L- TO STA. 22+60 -L- RT

DETAIL 4-10
FALSE SUMP
(Not to Scale)

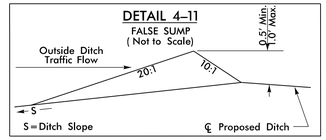


S=Ditch Slope

Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

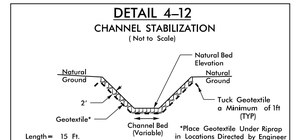
STA. 18+38 -L- MED

DETAIL 4-11
FALSE SUMP
(Not to Scale)



STA. 20+91 -L- RT

DETAIL 4-12
CHANNEL STABILIZATION
(Not to Scale)



STA. 25+43 -L- TO STA. 25+48 -L- LT

★ PROPOSED TRAFFIC SIGNAL
FOR DETAIL, SEE SHEET 2B-1

FOR -LLT-, -LRT-, -L- PROFILES, SEE SHEETS 10 & 11

PROJECT REFERENCE NO.	SHEET NO.
HL-0007	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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REVISIONS

R/W REVISION: PARCEL 6 COMBINED WITH PARCEL 12, NOW PARCEL 12. PARCEL 8 DIVIDED INTO TWO PARCELS: PARCELS 8 AND 6. PARCEL 6 INCLUDES NAME CHANGE. (DJC 11/11/2024)
DESIGN REVISION: PLANS HAVE BEEN REVISED TO INCORPORATE VERIDEA NC 55 ROADWAY IMPROVEMENTS. (RJD 12/13/2024)
R/W REVISION: TCE ADDED TO PARCEL 6. R/W MODIFIED ON PARCEL 8. (RJD 1/21/2025)

8/17/99

TRAFFIC VOLUME DATA

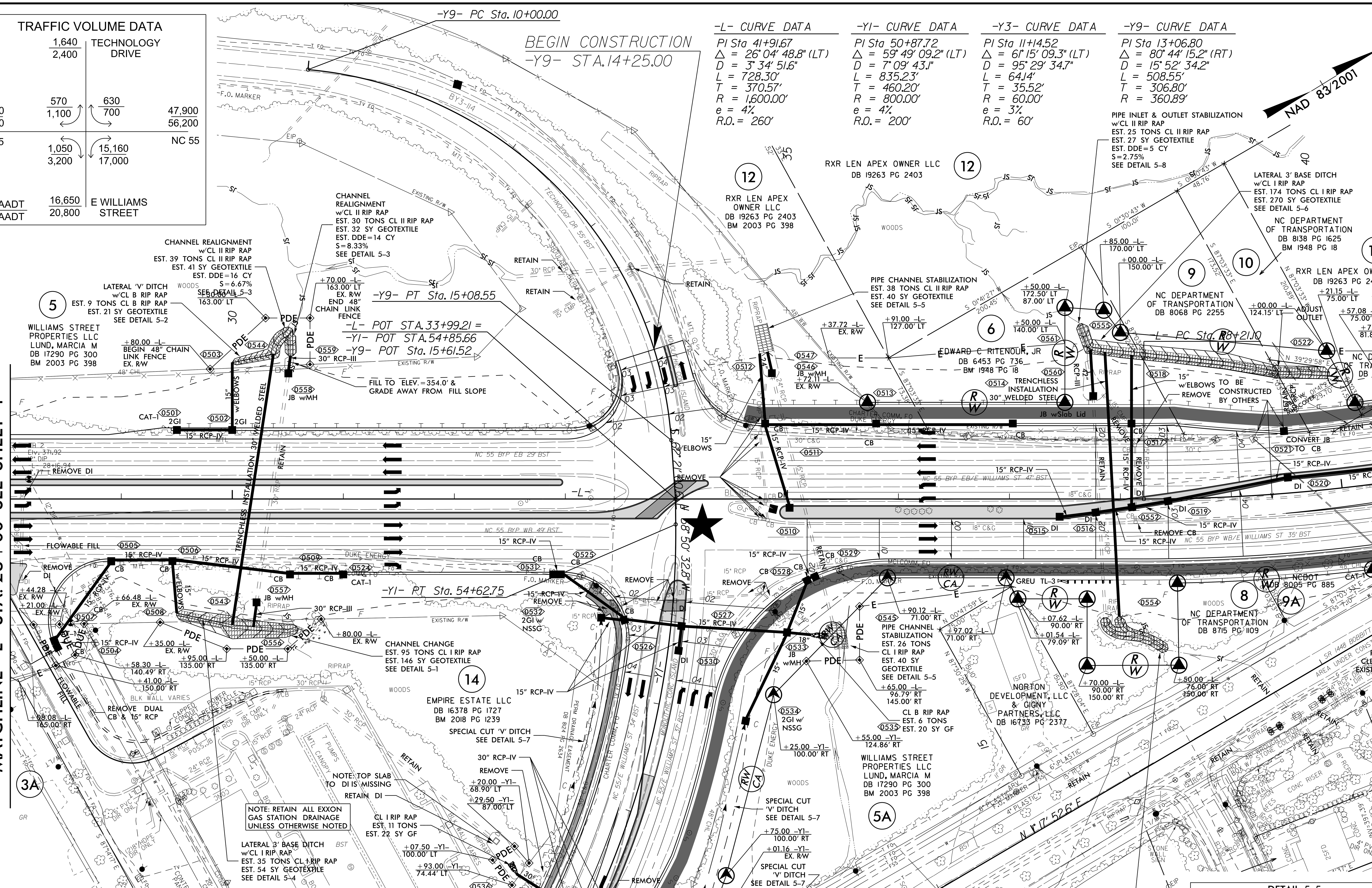
	2025 AADT / 2045 AADT
TECHNOLOGY DRIVE	1,640 / 2,400
NC 55 (west)	33,730 / 42,800
NC 55 (east)	47,900 / 56,200
E WILLIAMS STREET	16,650 / 20,800
Turning movement	570 / 1,100
Turning movement	630 / 700
Turning movement	1,050 / 3,200
Turning movement	15,160 / 17,000

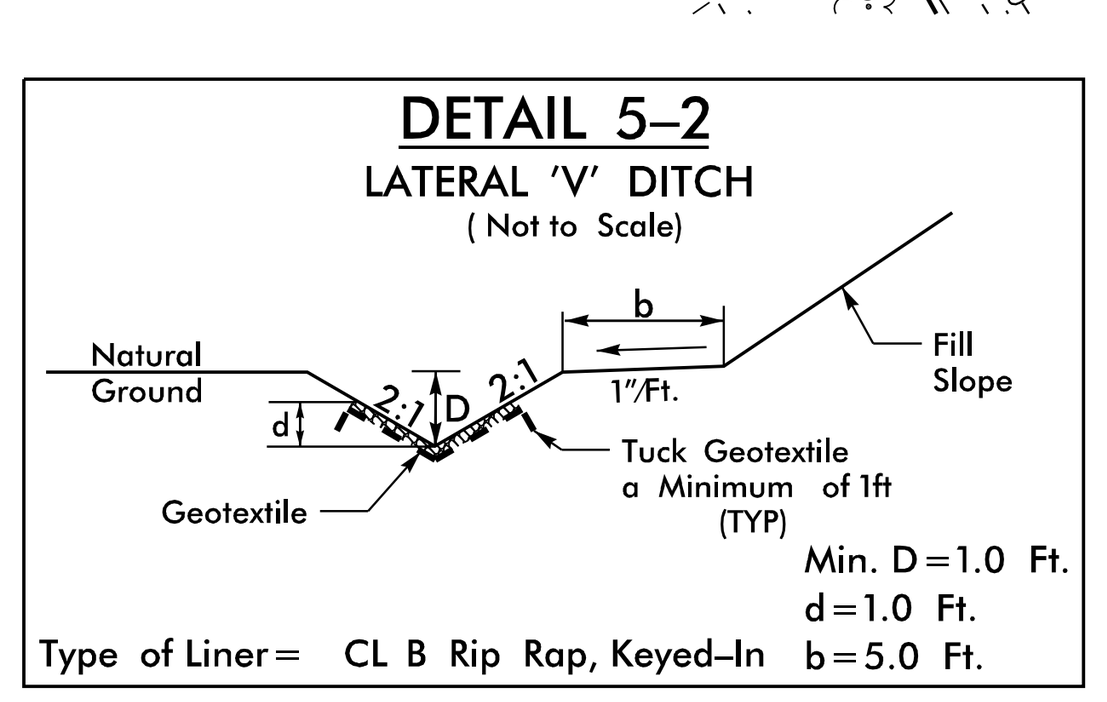
-L- CURVE DATA
PI Sta 41+91.67
Δ = 26° 04' 48.8" (LT)
D = 3° 34' 51.6"
L = 728.30'
T = 370.57'
R = 1,600.00'
e = 4%
R.O. = 260'

-Y1- CURVE DATA
PI Sta 50+87.72
Δ = 59° 49' 09.2" (LT)
D = 7° 09' 43.1"
L = 835.23'
T = 460.20'
R = 800.00'
e = 4%
R.O. = 200'

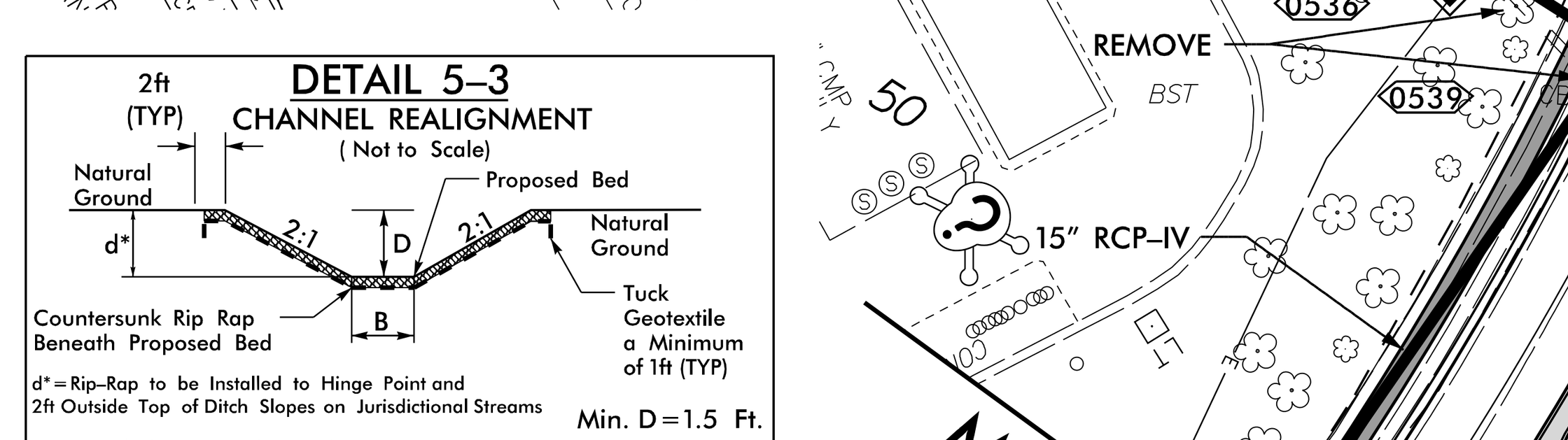
-Y3- CURVE DATA
PI Sta 11+14.52
Δ = 61° 15' 09.3" (LT)
D = 95° 29' 34.7"
L = 64.14'
T = 35.52'
R = 60.00'
e = 3%
R.O. = 60'

-Y9- CURVE DATA
PI Sta 13+06.80
Δ = 80° 44' 15.2" (RT)
D = 15° 52' 34.2"
L = 508.55'
T = 306.80'
R = 360.89'

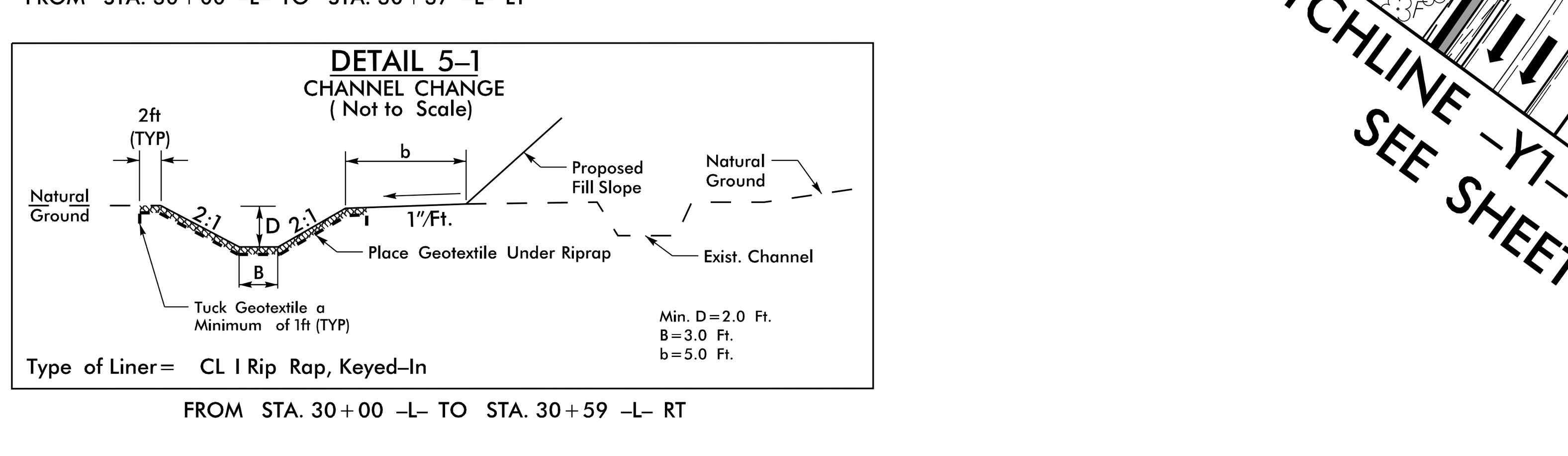




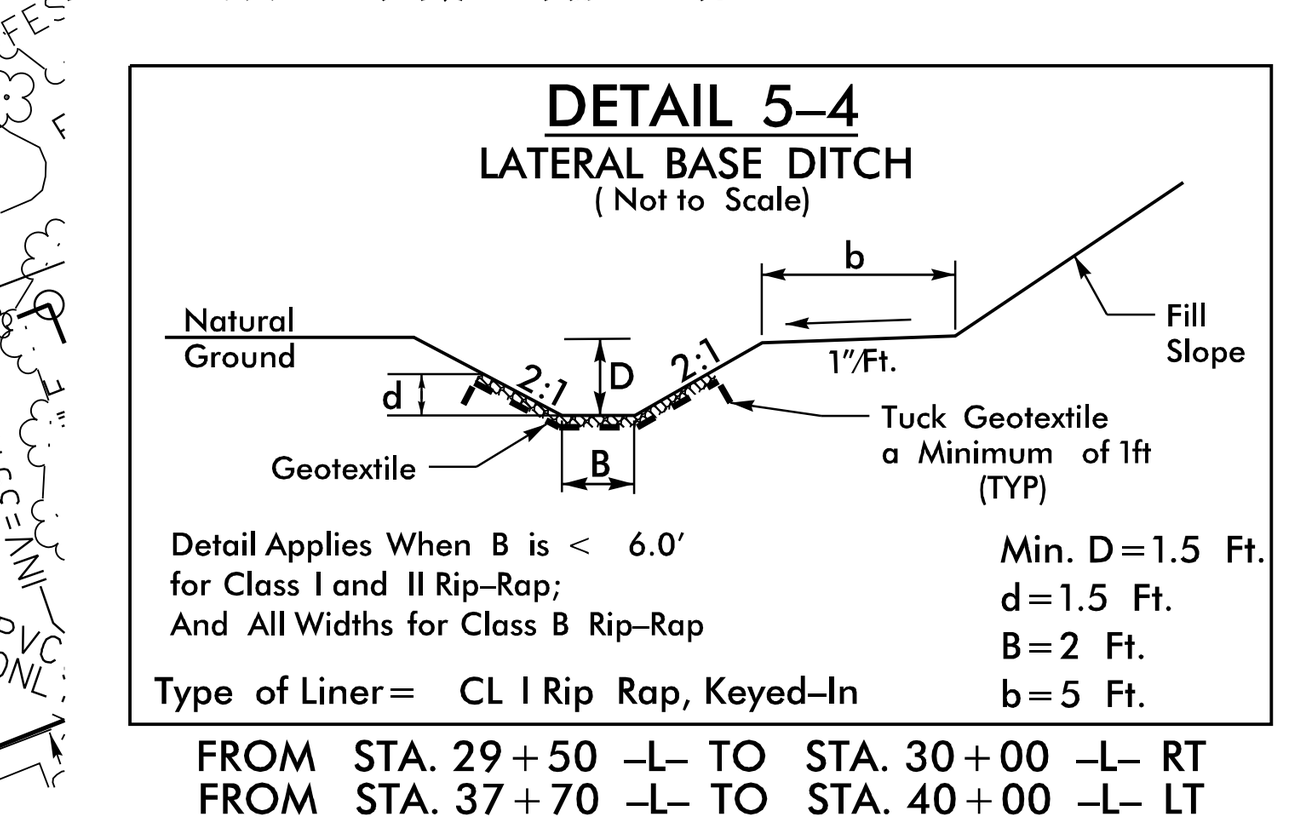
FROM STA. 30+00 -L- TO STA. 30+37 -L- LT



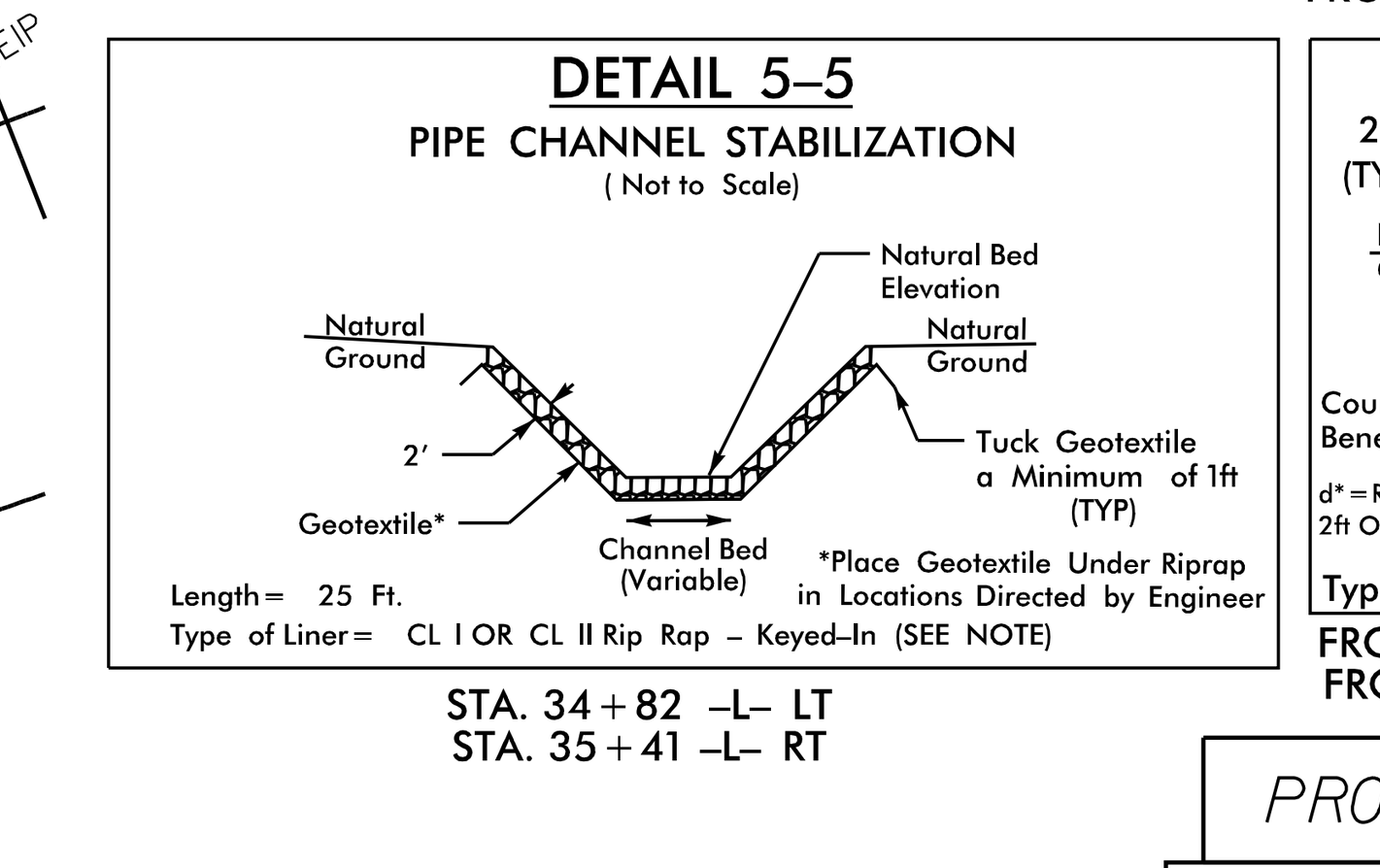
FROM STA. 30+37 -L- TO STA. 30+63 -L- LT



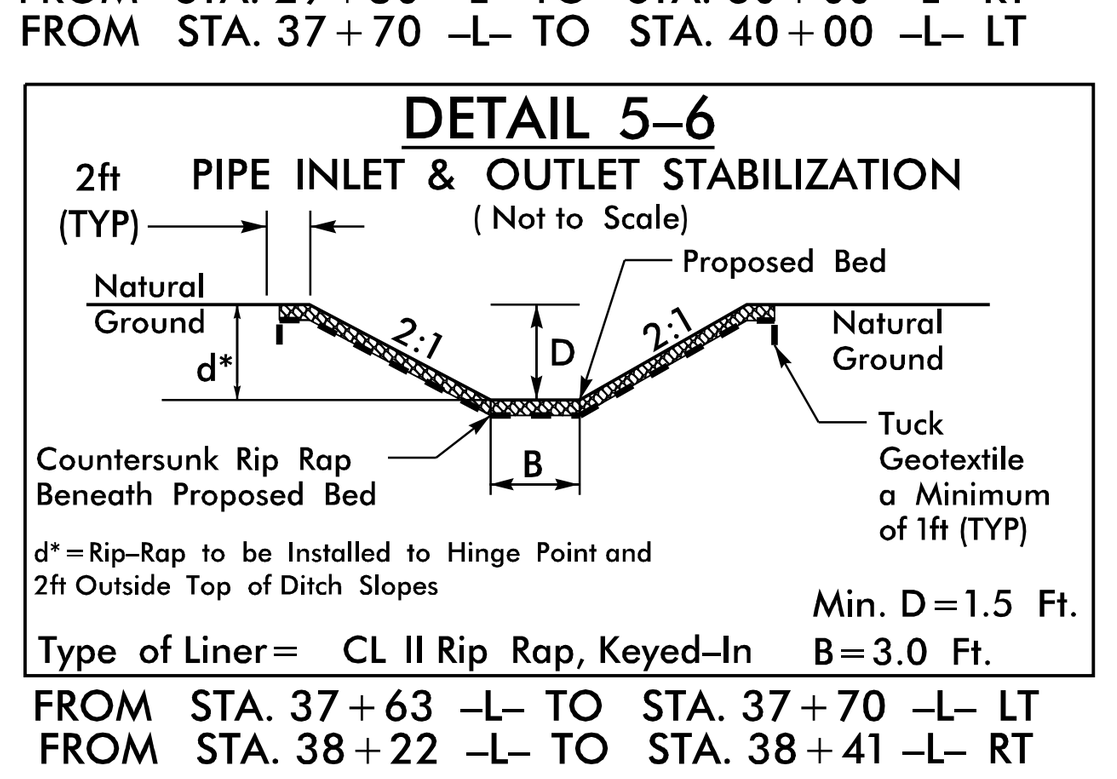
FROM STA. 30+00 -L- TO STA. 30+59 -L- RT



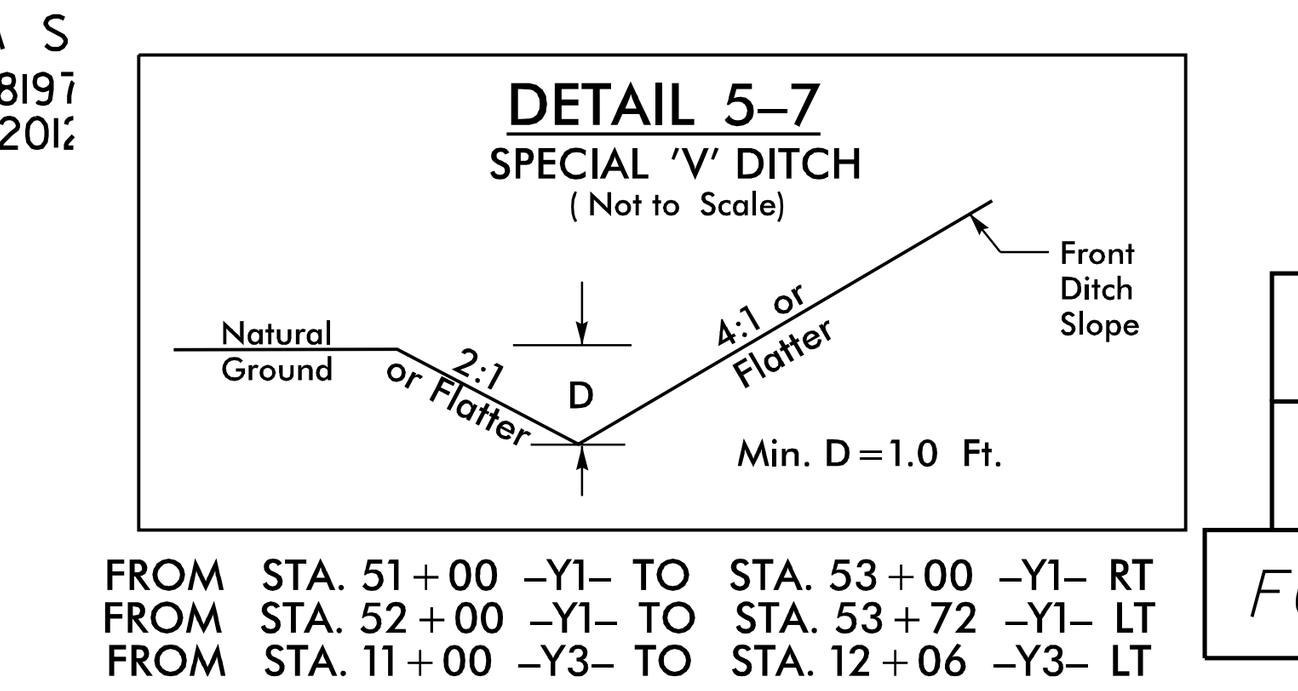
FROM STA. 29+50 -L- TO STA. 30+00 -L- RT
FROM STA. 37+70 -L- TO STA. 40+00 -L- LT



STA. 34+82 -L- LT
STA. 35+41 -L- RT



FROM STA. 37+63 -L- TO STA. 37+70 -L- LT
FROM STA. 38+22 -L- TO STA. 38+41 -L- RT



FROM STA. 51+00 -Y1- TO STA. 53+00 -Y1- RT
FROM STA. 52+00 -Y1- TO STA. 53+72 -Y1- LT
FROM STA. 11+00 -Y3- TO STA. 12+06 -Y3- LT

PROPOSED TRAFFIC SIGNAL ★

FOR -L- PROFILE, SEE SHEET 11
FOR -Y1- PROFILE, SEE SHEET 14
FOR -Y3- PROFILE, SEE SHEET 14
FOR -Y9- PROFILE, SEE SHEET 15
FOR DETAIL, SEE SHEET 2B-1 & 2B-2

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PROJECT REFERENCE NO.	SHEET NO.
HL-0007	6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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8/17/99

REVISIONS

R/W REVISION: ELIMINATED PARCEL 13. MODIFIED PUE AND R/W ON PARCELS 16 AND 65. (TAC 12/07/2023)
R/W REVISION: PARCELS 6, 12, 23, AND 65 OWNERS NAMES CHANGED. (TAC 1/29/2024)
R/W AND DESIGN REVISION: REMOVED DUE FROM PARCEL 12. PLANS HAVE BEEN REVISED TO INCORPORATE VERIDEA. NC 55 ROADWAY IMPROVEMENTS. (RJD 12/13/2024)

-L- CURVE DATA

PI Sta 41+91.67
△ = 26° 04' 48.8" (LT)
D = 3° 34' 51.6"
L = 728.30'
T = 370.57'
R = 1,600.00'
e = 4%
R.O. = 260'

PI Sta 60+07.85
△ = 29° 45' 17.0" (LT)
D = 1° 02' 37.1"
L = 2,851.06'
T = 1,458.45'
R = 5,490.00'
e = 2%
R.O. = 130'

NAD 83/2001

MATCHLINE -L- STA. 41+00 SEE SHEET 5

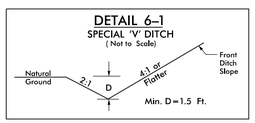
MATCHLINE -L- STA. 54+00 SEE THIS SHEET

END CONSTRUCTION
-L- STA. 44+62.50 LT

-L- PCC Sta. 45+49.40

★ PROPOSED TRAFFIC SIGNAL
FOR -L- PROFILE, SEE SHEET 12
FOR DETAIL, SEE SHEET 2B-2 & 2B-3

DETAIL 6-1
SPECIAL 'V' DITCH
(Not to Scale)



FROM STA. 42+00 -L- TO STA. 47+00 -L- RT

END TIP PROJECT HL-0007
-L- POT STA. 55+50.00

MATCHLINE -L- STA. 54+00 SEE THIS SHEET

RXR LEN APEX OWNER LLC DB 19263 PG 2403

CROWN BUILDERS AND DEVELOPERS OF NC LLC DB 18907 PG 2189

DEXTER RAY & QUEEN L MONK DB 12823 PG 522

BATOUL NYBE DB 18856 PG 2419

MARILYN S JONES DB 13305 PG 766

PATRICIA A JONES DB 3116 PG 572

TRINITY APEX NORTH 100 LLC DB 14735 PG 685 BM 2006 PG 414

TRINITY APEX NORTH 100 LLC DB 14735 PG 685 BM 2006 PG 414

LORINE LUNSFORD HEIRS DB 14-E PG 4016 DB 2618 PG 692

CALVIN STEELE HEIRS C/O BRENDA J HAWKINS DB 8682 PG 2360

CALVIN STEELE HEIRS C/O BRENDA J HAWKINS DB 532 PG 00-E

ANCELA HICKS HIGDON VICKY KAREN HICKS DB 19035 PG 740

GERTRUDE JUDD DB 11-E PG 3193 DB 1754 PG 306

GERTRUDE STEELE DB 8682 PG 2366

KAM GROUP INC DB 17240 PG 2481 BM 2017 PG 2402

PAGE TWO HOLDINGS LLC RODESSA LLC DB 17240 PG 2610

ALA COMMERCIAL LLC DB 12233 PG 2621

DAVID F & SHARON L RAYMER DB 8712 PG 265

ALAN MEZA SR DB 17229 PG 740

THOMPSONGAS - SMOKIES LLC DB 15976 PG 1140 TO BE CONSTRUCTED BY OTHERS

TO BE ACQUIRED BY OTHERS

TO BE CONSTRUCTED BY OTHERS

NC DEPARTMENT OF TRANSPORTATION DB 8235 PG 1162

TOWN OF APEX 16" DIP

DOMINION ENERGY, 4" FSS

AT&T CORP., COPPER

MCI COMM. CORP., COPPER

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8/17/99

HYDRAULICS LEGEND
1. DRAINAGE STRUCTURE REMOVAL
2. PIPE REMOVAL
3. PLUG AND FLOW FILL

-Y1- CURVE DATA
PI Sta 19+17.20
△ = 11° 53' 20.9" (RT)
D = 2° 29' 28.0"
L = 477.26'
T = 239.49'
R = 2,300.00'
e = 3%
R.O. = 150'

-Y5- CURVE DATA
PI Sta 14+45.29
△ = 7° 49' 53.3" (LT)
D = 2° 29' 28.0"
L = 314.38'
T = 157.43'
R = 2,300.00'
e = 3%
R.O. = SEE PLANS

NAD 83/2001

PROJECT REFERENCE NO.	SHEET NO.
HL-0007	7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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REVISIONS
R/W REVISION: REDUCED TCE ON PARCEL 44, DRIVES AND PDE ADDED TO PARCEL 47. - TAC 1/25/2024
R/W REVISION: DUE CHANGED TO R/W ON PARCEL 50, PROPERTY OWNER INFORMATION UPDATED ON PARCELS 29,32 AND 33, ELIMINATED PARCELS 34,37 AND 38. (RJD 2/26/2024)

-Y4- POT Sta. 12+12.02
END CONSTRUCTION
-Y4- STA. 11+25.00
-Y1- STA. 12+31.32 =
-Y4- STA. 10+00.00
BEGIN CONSTRUCTION
-Y1- STA. 11+50.00
END CONSTRUCTION
-Y6- STA. 11+40.00
-Y6- PT Sta. 12+20.29
-Y1- STA. 12+38.04 =
-Y5- Sta. 16+48.18
-Y5- PT Sta. 16+02.24
-Y1- PC Sta. 16+77.71
-Y1- STA. 11+11.5 =
-Y6- STA. 10+00.00
-Y1- PT Sta. 21+54.97
-Y5- PC Sta. 12+87.86
BEGIN CONSTRUCTION
-Y5- STA. 12+40.00
MATCHLINE -Y1- STA. 24+50 SEE SHEET 8

DEBRA A. JONES DB 13753 PG 2474 BM 1950 PG 85
VARAPRASAD N SOMPALLI & MADHURI PAPANI DB 13282 PG 607 BM 2008 PG 1997
PINNACLE REALTY GROUP INC DB 16783 PG 2580 BM 1950 PG 85
MILTON K & TERESA M FUSSELL DB 15270 PG 741 BM 1960 PG 273
ERNESTINE STONE & ALEXANDER BAKER DB 6754 PG 392 BM 1960 PG 273
LUCILLE H WIGGINS & ROSA B JONES DB 13-E PG 598 BD 172 PG 55 BM 1960 PG 273
CALVARY DELIVERANCE CHURCH OF THE APOSTOLIC FAITH INC DB 10438 PG 2006 BM 1960 PG 273
JENNIFER H ROBINSON DB 17484 PG 1977 BM 1960 PG 273
BLANCHE MCCOY DB 2464 PG 548
MITKO & DIMKA DIMITROV DB 18129 PG 757
BOBBY L & PEGGY S CANNADY DB 5417 PG 665
LORENE DOBBS DB 16509 PG 394
ATCHAMAMBA YARRAM DB 17983 PG 2547 BM 1960 PG 273
ANGLEWOOD MOTEL DB 18975 PG 68 BM 1995 PG 801
CHRISTINE M WILLIAMS DB 14039 PG 1426
NAYMA CHOWDHURY & NUR SULTANA CHOWDHURY DB 19339 PG 382
DARRIN F. MCCLAIN BRENDA F. MCCLAIN DB 19019 PG 195 DB 18425 PG 2211
ESTHER MAE PEARSON DB 1892 PG 89
MCI ENTERPRISES LLC DB 17729 PG 586 BM 1995 PG 613
STEVEN ANTHONY HUGHES LUCEY & KATHLEEN ANN LUCEY DB 17463 PG 984 BM 1999 PG 1842
ROBERTO REYNOSO & MELANIA REINOSO VASQUEZ DB 18069 PG 250 BM 1999 PG 1842
SEAN DOLE & CARLOTA PAMILAR DB 17122 PG 877 BM 1999 PG 1842
TISHA JONES DB 11589 PG 232 BM 1999 PG 1842
SAAD & AISHA HASAN DB 15853 PG 1133 BM 1999 PG 1842

DETAIL 7-1
SPECIAL 'V' DITCH
(Not to Scale)
Natural Ground, 2:1, D, 4:1 or Flatter, Front Ditch Slope
Min. D=1.0 Ft.
FROM STA. 13+50 -Y1- TO STA. 14+50 -Y1- LT
FROM STA. 20+50 -Y1- TO STA. 22+10 -Y1- LT
FROM STA. 12+50 -Y1- TO STA. 17+00 -Y1- RT
FROM STA. 10+75 -Y6- TO STA. 11+25 -Y6- LT
FROM STA. 15+00 -Y5- TO STA. 15+95 -Y5- RT

DETAIL 7-2
SPECIAL 'V' DITCH
(Not to Scale)
Natural Ground, 2:1, d, D, 4:1 or Flatter, Front Ditch Slope
Min. D=1.0 Ft.
d=1.0 Ft.
Type of Liner= PSRM
FROM STA. 14+42 -Y5- TO STA. 15+00 -Y5- RT

DETAIL 7-3
LATERAL BASE DITCH
(Not to Scale)
Natural Ground, 2:1, d, D, 2:1, b, 1':Ft., Fill Slope, B
Min. D=1.5 Ft.
d=1.5 Ft.
B=2.0 Ft.
b=5.0 Ft.
Type of Liner= PSRM
FROM STA. 22+65 -Y1- TO STA. 23+12 -Y1- LT

DETAIL 7-4
LATERAL 'V' DITCH
(Not to Scale)
Natural Ground, 2:1, D, 2:1, b, 1':Ft., Fill Slope
Min. D=1.5 Ft.
b=5.0 Ft.
FROM STA. 23+12 -Y1- TO STA. 24+00 -Y1- LT

DETAIL 7-5
SPECIAL BASE DITCH
(Not to Scale)
Natural Ground, 2:1, D, 4:1 or Flatter, Front Ditch Slope, B
Min. D=1.0 Ft.
B=3.0 Ft.
FROM STA. 13+90 -Y5- TO STA. 15+70 -Y5- LT

DETAIL 7-6
STANDARD BASE DITCH
(Not to Scale)
Natural Ground, 2:1, D, 2:1, Natural Ground, B
Min. D=1.5 Ft.
B=3.0 Ft.
FROM STA. 14+42 -Y5- TO STA. 14+62 -Y5- RT

DETAIL 7-7
PIPE OUTLET CHANNEL STABILIZATION
(Not to Scale)
Natural Ground, Natural Bed Elevation, 3', Geotextile*, Channel Bed (Variable), Tuck Geotextile a Minimum of 1ft (TYP)
*Place Geotextile Under Riprap in Locations Directed by Engineer
Length= 25 Ft.
Type of Liner= CL I Rip Rap - Keyed-In
STA. 23+12 -Y1- RT

★ PROPOSED TRAFFIC SIGNAL
FOR DETAIL, SEE SHEET 2B-4
FOR -Y1- PROFILE, SEE SHEET 13
FOR -Y4- PROFILE, SEE SHEET 15
FOR -Y5- PROFILE, SEE SHEET 15
FOR -Y6- PROFILE, SEE SHEET 15

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PROJECT REFERENCE NO.	SHEET NO.
HL-0007	8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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8/17/99

REVISIONS

R/W REVISION: DUE CHANGED TO R/W ON PARCEL 50. ELIMINATED PARCEL 39. (RJD 2/26/2024)

MATCHLINE -Y1- STA. 24+50 SEE SHEET 7

MATCHLINE -Y1- STA. 38+50 SEE SHEET 9

NAD 83/2001

-Y2REV- CURVE DATA
PI Sta 11+18.08
Δ = 15° 03' 54.0" (LT)
D = 11° 27' 33.0"
L = 131.47'
T = 66.11'
R = 500.00'
e = 4%
R.O. = SEE PLANS

-Y7- CURVE DATA
PI Sta 11+38.73
Δ = 25° 50' 34.2" (LT)
D = 14° 53' 07.8"
L = 173.61'
T = 88.31'
R = 384.91'
e = 4%
R.O. = SEE PLANS

50 — KATHERINE J. BLOUNT, JEANETTE S. BLOUNT & WILLIAM H JR BLOUNT, DB 2403 PG 365

NC TURNPIKE AUTHORITY, DB 14144 PG 831

52 — NEELKAMAL CORP, DB 13774 PG 1884, BM 2000 PG 509

53 — HOPE COMMUNITY CHURCH OF NC INC, DB 16429 PG 301, BM 2016 PG 1690

56 — APEX FIRST BAPTIST CHURCH, DB 6697 PG 443, BM 1994 PG 1797

57 — SUMMIT MANAGEMENT COMPANY, DB 8285 PG 1652, BM 1999 PG 538

59 — CSP COMMUNITY OWNER LLC, DB 13253 PG 1405, BM 1999 PG 1518

55 — MCIENTERPRISES LLC, DB 13240 PG 1979, BM 2017 PG 2357

APEX FIRST BAPTIST CHURCH, DB 6233 PG 748, BM 1990 PG 99

RICKY E MANGUM & PAMELA C MANGUM, DB 5981PG 578

PIPE INLET BANK STABILIZATION, EST. 24 TONS CL B RIP RAP, EST. 35 SY GEOTEXTILE, SEE DETAIL 8-4

PIPE OUTLET CHANNEL STABILIZATION, EST. 11 TONS CL I RIPRAP, EST. 16 SY GEOTEXTILE, SEE DETAIL 8-2

STANDARD 3' BASE DITCH w/CL I RIP RAP, EST. 24 TONS CL I RIP RAP, EST. 30 SY GEOTEXTILE, EST. DDE=18 CY, S=0.4%, SEE DETAIL 8-3

SPECIAL CUT 'V' DITCH, SEE DETAIL 8-1

TIE 2GI TO EXISTING 38" & RETAIN EXISTING 18"

TIE PROP DITCH TO DITCH CONST. BY R-2721 & CONVERT 2GI TO JB w/ MH

TIE CB TO EXISTING 18" RCP, RETAIN 18" RCP

RETAIN 18" RCP

DO NOT DISTURB EXIST. LIGHT POLE

-Y7- PT Sta. 12+24.04

-Y2_REV- STA.10+00.00 = -Y7- STA.11+15.30

-Y7- PC Sta. 10+50.43

-Y7- POT Sta. 10+00.00

-Y2_REV- PC Sta. 10+51.96

BEGIN CONSTRUCTION -Y7- STA.10+75.00

CSP COMMUNITY OWNER LLC, DB 13253 PG 1405, BM 1999 PG 1518

★ PROPOSED TRAFFIC SIGNAL

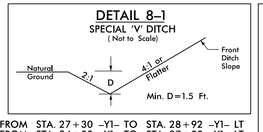
FOR -Y7- PROFILE, SEE SHEET 15

FOR -Y2REV- PROFILE, SEE SHEET 14

FOR DETAIL, SEE SHEET 2B-5 & 2B-6

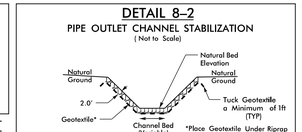
FOR -Y1- PROFILE, SEE SHEETS 13 & 14

DETAIL 8-1
SPECIAL 'V' DITCH
(Not to Scale)



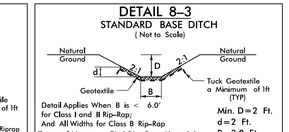
FROM STA. 27+30 -Y1- TO STA. 28+92 -Y1- LT
FROM STA. 34+00 -Y1- TO STA. 37+00 -Y1- LT
FROM STA. 38+40 -Y1- TO STA. 38+50 -Y1- LT
FROM STA. 11+67 -Y7- TO STA. 11+95 -Y7- RT
FROM STA. 10+50 -Y2- TO STA. 11+00 -Y2- LT

DETAIL 8-2
PIPE OUTLET CHANNEL STABILIZATION
(Not to Scale)



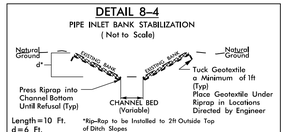
STA. 35+53 -Y1- RT

DETAIL 8-3
STANDARD BASE DITCH
(Not to Scale)



STA. 36+25 -Y1- RT

DETAIL 8-4
PIPE INLET BANK STABILIZATION
(Not to Scale)



STA. 32+80 -Y1- LT

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Hal Jones

PROJECT REFERENCE NO.	SHEET NO.
HL-0007	9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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NAD 83/2001

REVISIONS

R/W REVISION: PROPERTY OWNER INFORMATION UPDATED ON PARCELS 2 AND 63.(RJD 2/26/2024)
R/W REVISION: PARCEL 3 DIVIDED INTO PARCELS 3 AND 3A.(RJD 3/13/2024)

8/17/99

-Y1- CURVE DATA
PI Sta 50+87.72
△ = 59° 49' 09.2" (LT)
D = 7° 09' 43.1"
L = 835.23'
T = 460.20'
R = 800.00'
e = 4%
R.O. = 200'

-Y2_REV- CURVE DATA
PI Sta 11+18.08
△ = 15° 03' 54.0" (LT)
D = 11° 27' 33.0"
L = 131.47'
T = 66.11'
R = 500.00'
e = 4%
R.O. = SEE PLANS

-Y8- CURVE DATA
PI Sta 10+93.56
△ = 13° 29' 48.3" (RT)
D = 19° 59' 09.5"
L = 67.53'
T = 33.92'
R = 286.68'
e = 4%
R.O. = SEE PLANS

MATCHLINE -Y1- STA. 38+50 SEE SHEET 8

MATCHLINE -Y1- STA. 49+50 SEE SHEET 5

HOPE COMMUNITY CHURCH OF NC INC. DB 16429 PG 301 BM 2016 PG 1690 — (53)

JAMES C & MARY JANE BARONE DB 12408 PG 146 BM 1991 PG 260 — (61)

RONALD E LEASURE & MARY L HANNER DB 4872 PG 899 BM 1991 PG 260 — (62)

LEE CHU YANG DB 19413 PG 367 BM 1989 PG 1393 — (2)

APEX-WILLIAMS STREET HOLDINGS, LLC DB 16421 PG 1964 — (3A)

EMPIRE ESTATE LLC DB 16378 PG 1727 BM 2018 PG 1239 — (14)

SUMMIT MANAGEMENT COMPANY DB 8285 PG 1652 BM 1999 PG 538 — (57)

MIRAMONTE HOMEOWNERS ASSN INC DB 12259 PG 454 BM 2004 PG 2319 — (60)

LEE CHU YANG DB 19413 PG 367 BM 1989 PG 1393 — (63)

MIRAMONTE HOMEOWNERS ASSN INC DB 12259 PG 454 BM 2004 PG 2319 — (58)

JERRY V EDWARDS & JUDITH B EDWARDS DB 1924 PG 14 BM 2002 PG 1368 — (64)

-Y1- PC Sta. 46+27.52

-Y1- STA. 40+30.57 = -Y8- STA. 14+12.65

BEGIN CONSTRUCTION -Y8- STA. 13+40.00

-Y8- PT Sta. 11+27.17

-Y2_REV- STA. 12+99.64 = -Y8- STA. 11+14.27

-Y8- PC Sta. 10+59.64

-Y8- POT Sta. 10+00.00

END CONSTRUCTION -Y2REV- STA. 12+86.76

END GRADE -Y2REV- STA. 12+74.64

-Y2_REV- PT Sta. 11+83.43

SPECIAL CUT 'V' DITCH SEE DETAIL 9-1

2GI-D w/NSSG

WOODS

ISFD

ISBKD

ISMTL/BUS

CONTROL PANEL

SEPTIC TANKS

WD RAMP

GR VARIES

AT&T Corp., FO

DOMINION ENERGY, 4"

TOWN OF APEX, 12" DIP

TOWN OF APEX, 16" DIP

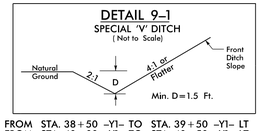
CHARTER COMM., FO

DUKE ENERGY

ABAND

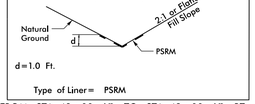
TOE PROTECTION EST. 101 SY PSRM SEE DETAIL9-2

DETAIL 9-1
SPECIAL 'V' DITCH
(Not to Scale)



FROM STA. 38+50 -Y1- TO STA. 39+50 -Y1- LT
FROM STA. 40+00 -Y1- TO STA. 40+50 -Y1- LT
FROM STA. 41+00 -Y1- TO STA. 41+50 -Y1- LT
FROM STA. 42+00 -Y1- TO STA. 44+00 -Y1- LT

DETAIL 9-2
TOE PROTECTION
(Not to Scale)



d=1.0 Ft.

Type of Liner= PSRM

FROM STA. 48+00 -Y1- TO STA. 49+00 -Y1- RT

FOR DETAIL, SEE SHEET 2B-6
FOR -Y1- PROFILE, SEE SHEET 14
FOR -Y8- PROFILE, SEE SHEET 15
FOR -Y2REV- PROFILE, SEE SHEET 14

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