



**CONE AVENUE/DOVER STREET ROAD INTERSECTION
REALIGNMENT**

CONE MILL MEMORIAL

ESTIMATED COSTS

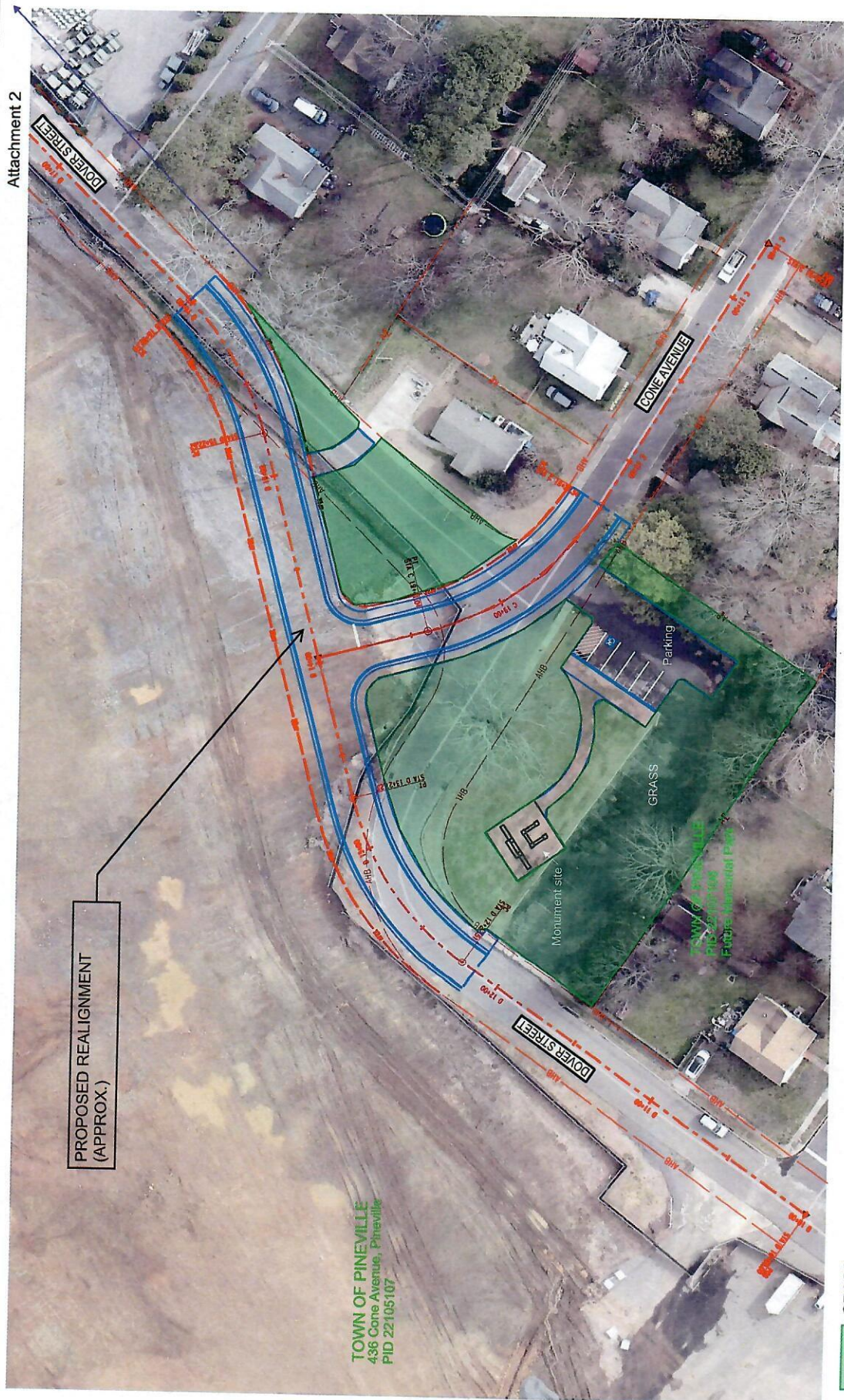
**CONE AVENUE/DOVER STREET ROAD INTERSECTION
REALIGNMENT**

(Specifications)

Attachment 2

3

PROPOSED REALIGNMENT
(APPROX.)



TOWN OF PINEVILLE
436 Cone Avenue, Pineville
PID 22105107

GRASS

INTERSECTION CENTERLINE
REALIGNMENT



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PROJECT NUMBER
2211901.40

DATE
April 26, 2022

PROJECT MANAGER
DAVID BARBER

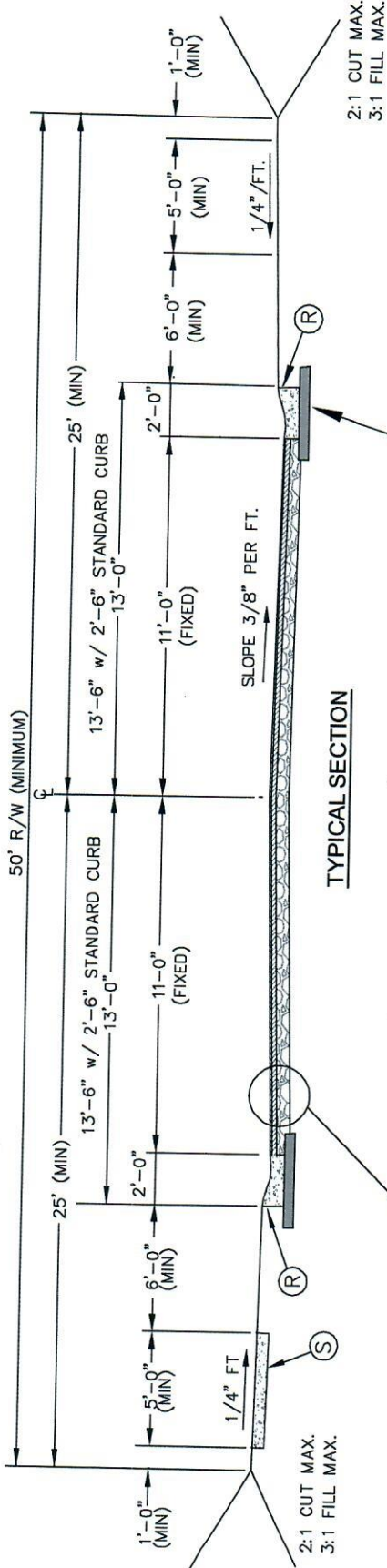
CONTRACT TITLE
CONE AVENUE & DOVER STREET
INTERSECTION DESIGN

TOWN OF PINEVILLE
DEPARTMENT OF PUBLIC WORKS

PROPOSAL FOR ENGINEERING SERVICES
INTERSECTION REALIGNMENT
AND MEMORIAL PARK

FIG-1





TACK COAT TO BE APPLIED BETWEEN ASPHALT LIFTS IN ACCORDANCE W/ CURRENT NCDOT SPECIFICATIONS

SURFACE COURSE
 1 1/2" S9.5B - FINAL LIFT
 1 1/2" S9.5B - INITIAL LIFT

BASE COURSE
 8" ABC OR 4" ACBC TYPE B25.0B

SUBGRADE
 SEE PLDS SPECIFICATIONS AND SPECIAL PROVISION NOTE I.A.19 FOR SUBGRADE COMPACTION REQUIREMENTS.

4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B OR 6" CABC COMPACTED TO 100% COMPACT TOP 6" SUBGRADE TO 100% ASPHALT BASE TO EXTEND 12" IN FRONT AND BACK OF CURB & GUTTER SECTION

NOTES:

1. SIDEWALK WILL ONLY BE REQUIRED ON ONE SIDE OF STREET AND NOT ALONG CUL-DE-SAC "BULB".
2. IRRIGATION SYSTEMS ARE NOT ALLOWED IN THE STREET RIGHTS-OF-WAY UNLESS AN ENCROACHMENT AGREEMENT HAS BEEN ISSUED BY THE TOWN OF PINEVILLE.
3. TREES PROPOSED IN THE PLANTING STRIPS OR RIGHTS-OF-WAY SHALL APPROVED BY THE TOWN OF PINEVILLE PRIOR TO INSTALLATION.
4. ANY RESIDENTIAL STREET THAT RECEIVES TRAFFIC FROM 150 OR MORE LOTS SHALL BE CONSIDERED A RESIDENTIAL COLLECTOR STREET.
5. REFER TO PLDS SPECIFICATIONS AND SPECIAL PROVISION NOTES FOR COMPACTION TESTING REQUIREMENTS.

TYPICAL PAVEMENT SECTION

KEY

- (R) 2'-0" VALLEY GUTTER OR 2'-6" STD. CURB AND GUTTER
 - (S) 4" CONCRETE SIDEWALK, 6" AT ALL DRIVEWAYS.
- INSTALL DRIVEWAY APRONS W/GEOGRID 1100 TENSILE (MIN) & COMPACT SUBGRADE TO 100% STANDARD PROCTOR. SEE PLDS SPECIFICATIONS AND SPECIAL PROVISIONS NOTE I.F.1 FOR BASE REQUIREMENTS.

NOT TO SCALE

REV. DATE	4/2/21
STD. NO.	10.06
REV.	5

TOWN OF PINEVILLE
 LAND DEVELOPMENT
 STANDARDS



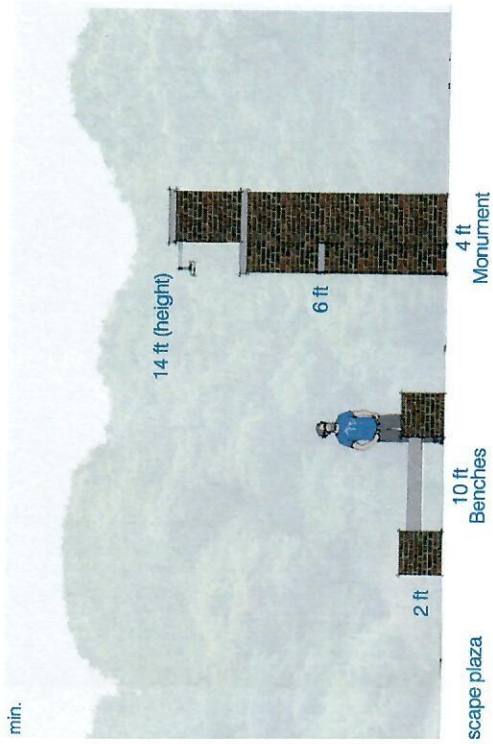
LOCAL RESIDENTIAL STREET

CONE MILL MEMORIAL

(Specifications)

CONE MILL MEMORIAL

PINEVILLE, NORTH CAROLINA



BRICK ESTIMATES:

Monument (as shown)
 ~808 sf surface area x 7 bricks per sf
 = 5,656 bricks x 1.3 (waste/culls)
 = 7,353 brick needed for veneer use*
 *If using Mill Brick for double wythe w
 14,705 bricks required

Bench Supports (3 benches w/ 2 sup)
 ~120 sf surface area x 7 bricks per sf
 = 840 bricks x 1.3 (waste/culls)
 = 1,092 bricks needed for veneer use

Total Brick Required:
 8,445 16 cubes

If using salvaged brick for stru
 of masonry walls:
 16,890 32 cubes

Rear Elevation



Overall View
 Monument to include primary monument, wing walls, benches, flag and plaza
 landscaping, illumination.



Wall for Plaques

Main Monument

Optional Wing Wall for Plaques

Estimated Costs

Engineer's Opinion of Probable Cost

Dover Street and Cone Avenue Intersection Realignment	\$1,075,280
Memorial Park-site Grading and Parking Lot (Memorial Monument Costs not included)	\$ 228,900
Total Intersection Realignment/Memorial Monument Costs	<u>\$1,304,180</u>



Road Length (ft) 750
 Lane Road Width (ft) 11
 Shoulder Width (ft) 12
 Curb & Gutter Length (lf) 1500
 Storm Drain Install on Dover Curb & Gutter Length (lf) 250
 Planting Area (sf) 18
 Driveways (ea) 1
 Shoulder Length (ft) 1500

Item No.	Item Description	Unit	Unit Price	Dover Cone Realignment	
				Quantity	Amount
1	Mobilization, Demolition, & Grading (20% of total costs)	LS		1	\$147,000
Storm Drainage					
2	15"-18" R.C. Pipe, Class III	LF	\$100	50	\$5,000
3	24"-30" R.C. Pipe, Class III	LF	\$120	100	\$12,000
4	36"-42" R.C. Pipe, Class III	LF	\$220	400	\$88,000
5	48" - 60" R.C. Pipe, Class III	LF	\$350	100	\$35,000
6	Brick Masonry Endwalls	CY	\$900	5	\$4,500
7	Masonry Drainage Structures	EA	\$5,000	12	\$60,000
8	Frame, Grate and Hood or Rim and Grates for Masonry Drainage Structures	EA	\$500	12	\$6,000
8	Channel Excavation (includes Matting for Erosion Control)	LF	\$100	300	\$30,000
9	Select Material	LF	\$100	70	\$7,031
10	Foundation Conditioning Material (assume 15%)	TN	\$75	15	\$1,143
Roadway Asphalt - New Stone Base and Pavement					
11	Undercut for unsuitable subbase (assume 15%)	TN	\$75	50	\$3,750
12	Incidental Stone Base (5% of total area for construction activities)	TN	\$75	50	\$3,750
13	Asphalt Concrete Surface Course, Type S9.5B (2 layers 1.5" each)	TN	\$125	150	\$18,750
14	Asphalt Concrete Surface Course, Type S9.5B (1.5") overlay lanes to Dover st	TN	\$125	67	\$8,400
15	Aggregate Base Stone (8")	TN	\$75	400	\$30,000
16	Asphalt Binder Patch of storm install to sag, (.5.5" full depth)	SY	\$75	153	\$11,458
17	Asphalt Binder for Plant Mix	TN	\$650	10	\$6,500
18	Borrow - Average 0.3' depth, for sidewalk shoulder section and 2' depth for rea	CY	\$55	1000	\$55,000
20	Compacted Aggregate Base Course (6") - Under curb	TN	\$60	190	\$11,400
Curb & Gutter, Sidewalk, Driveways, & Retaining Walls					
17	2'-0" Concrete Curb	LF	\$50	1750	\$87,500
18	4" Concrete Sidewalk, 5' wide	SY	\$80	972	\$77,778
19	6" Concrete Driveway aprons (assume 20 SY per 20' wide apron)	SY	\$150	20	\$3,000
20	6" Concrete Driveway for tie to ex. driveways (assume 20 SY per driveway)	SY	\$100	40	\$4,000
21	Concrete Wheelchair Ramps (assume 10 SY per ramp)	SY	\$120	30	\$3,600
Landscaping, Lighting, and Pavement Markings					
22	Pavement Markings	LF	\$25	100	\$2,500
23	Seeding & Mulching	SY	\$10	2000	\$20,000
Other Items					
24	Traffic Control (10% of costs)	LS		1	\$60,000
25	Erosion Control (8% of costs)	LS		1	\$48,000
26	Misc. Utility Relocation (5% of costs)	LS		1	\$30,000
27	Other	LS	\$0	0	\$0
				2022 Construction Cost Sub-Total	\$881,100
				15% Contingency	\$132,200
				Construction Cost and Contingency Total	\$1,013,300
				Survey, Plat, Preliminary Design Drawings **	\$61,980
				Right of way acquisition services	\$0
				Const. Admin & observation (assume 6 month construction period)	\$0
					\$61,980
				Right of Way/ Construction Easements	\$0
				Legal Costs (per parcel) (abandon exist. r/w to adjacent parcel)	\$0
					\$0
				Grand Total Engineer's Estimate	\$1,075,280

Assumptions:

Alignment Based on Mecklenburg County Polaris GIS data (not to scale)

Assumed seeding and mulching will extend 15 feet from back of curb

Storm drainage based on preliminary analysis; new drainage structures will tie to existing storm system under current curb

Grading & Mobilization includes:

- Removal of existing gravel, asphalt, and curb and gutter
- Tree removal and protection
- All channel/ditch grading
- Adjustments for manholes, etc.
- Pipe removal and pipe collars
- Select Material
- Rip rap and filter fabric
- Trench Rock removal
- Foundation Conditioning Material
- Selective vegetation removal

Improvements will remain inside existing right of way, shoulder grading will require additional r/w
 No Traffic Impact Analysis

FIRST PHASE WILL BE SURVEY AND DESIGN ONLY; NO R/W ACQUISITION AND NO CONSTRUCTION SERVICES
 See Labell Fee Proposal dated 5/3/22

ENGINEER'S OPINION OF PROBABLE COSTS - Estimator BAF
Memorial Park - Site Grading and Parking lot Date: 5/26/2022
(Memorial Monument Costs not included)



Parking Lot Length (ft) 45
 Parking Lot Width (ft) 72
 Shoulder Width (ft) 10
 Curb & Gutter Length (lf) 250
 Storm Drain Install on Dover Curb & Gutter Length (lf) 0
 Planting Area (sf) 0
 Driveways (ea) 1
 Shoulder Length (ft) 250

Item No.	Item Description	Unit	Unit Price	Dover Cone Realignment	
				Quantity	Amount
1	Mobilization, Demolition, & Grading (20% of total costs)	LS		1	\$23,000
Storm Drainage					
2	15"-18" R.C. Pipe, Class III	LF	\$100	100	\$10,000
3	24"-30" R.C. Pipe, Class III	LF	\$120		\$0
4	36"-42" R.C. Pipe, Class III	LF	\$220		\$0
5	48" - 60" R.C. Pipe, Class III	LF	\$350		\$0
6	Brick Masonry Endwalls	CY	\$900		\$0
7	Masonry Drainage Structures	EA	\$5,000	3	\$15,000
8	Frame, Grate and Hood or Rim and Grates for Masonry Drainage Structures	EA	\$500	3	\$1,500
8	Channel Excavation (includes Matting for Erosion Control)	LF	\$100	0	\$0
9	Select Material	LF	\$100	14	\$1,406
10	Foundation Conditioning Material (assume 15%)	TN	\$75	2	\$176
Parking Lot Asphalt - New Stone Base and Pavement					
11	Undercut for unsuitable subbase (assume 15%)	TN	\$75	50	\$3,750
12	Incidental Stone Base (5% of total area for construction activities)	TN	\$75	0	\$0
13	Asphalt Concrete Surface Course, Type S9.5B (2")	TN	\$125	50	\$6,250
14		TN	\$125	0	\$0
15	Aggregate Base Stone (8")	TN	\$75	160	\$12,000
16	Asphalt Binder Patch of storm install to sag, (5.5" full depth)	SY	\$75	0	\$0
17	Asphalt Binder for Plant Mix	TN	\$650	0	\$0
18	Borrow - Average 0.3' depth, for sidewalk shoulder section	CY	\$55	50	\$2,750
20	Compacted Aggregate Base Course (6") - Under curb	TN	\$60	30	\$1,800
Curb & Gutter, Sidewalk, Driveways, & Retaining Walls					
17	2'-0" Concrete Curb	LF	\$50	250	\$12,500
18	4" Concrete Sidewalk, 5' wide	SY	\$80	133	\$10,667
19	6" Concrete Driveway aprons (assume 20 SY per 20' wide apron)	SY	\$150	20	\$3,000
20	6" Concrete Driveway for tie to ex. driveways (assume 20 SY per driveway)	SY	\$100	0	\$0
21	Concrete Wheelchair Ramps (assume 10 SY per ramp)	SY	\$120	10	\$1,200
Landscaping, Lighting, and Pavement Markings					
22	Pavement Markings	LF	\$25	100	\$2,500
23	Seeding & Mulching	SY	\$4	3444	\$13,778
Other Items					
24	Traffic Control (5% of costs)	LS		1	\$5,000
25	Erosion Control (7% of costs)	LS		1	\$7,000
26	Misc. Utility Relocation (5% of costs)	LS		1	\$5,000
27	Other	LS	\$0	0	\$0
2022 Construction Cost Sub-Total					\$138,300
15% Contingency					\$20,700
Construction Cost and Contingency Total					\$159,000
Survey, Plat, Preliminary Design Drawings **					\$28,740
Memorial Monument Plan					\$14,600
Const. Admin & observation (assume 8 week construction period; includes oversight for Monument construction)					\$26,560
					\$69,900
Right of Way/ Construction Easements				SF	\$2.00
Legal Costs (per parcel) (abandon exist. r/w to adjacent parcel)				EA	\$2,500.00
				0	\$0
				0	\$0
					\$0
Grand Total Engineer's Estimate					\$228,900

Assumptions:

Alignment Based on Mecklenburg County Polaris GIS data (not to scale)

Assumed seeding and mulching will extend for expanded site area

Storm drainage based on preliminary analysis; new drainage structures will tie to existing storm system under current curb

Grading & Mobilization includes:

- Removal of existing gravel, asphalt, and curb and gutter
- Tree removal and protection
- All channel/ditch grading
- Adjustments for manholes, etc.
- Pipe removal and pipe collars

- Select Material
- Rip rap and filter fabric
- Trench Rock removal
- Foundation Conditioning Material
- Selective vegetation removal

No Traffic Impact Analysis

See LaBella Fee Proposal dated 5/3/22