

TYPICAL SECTION

SCALE 1/2" = 1'
TYPE T-35

PAVEMENT CALCULATIONS

Pavement Length
Begin Project Sta 93+54.23
End Project Sta 209+41.81
Deduct 1476.80 Center of Village
Total Length 10110.78
or 1.914 Miles

Sta. 148+00.0 TO 149+95.20 195.20 See Merger Detail
Sta. 180+11.70 TO 176+84.20 327.50 } See Superelevation Detail
Transition 266.68
Sta. 172+47.51 TO 174+50.84 203.33 }
Transition 266.68
8851.39

ITEM E-1 Roadway Excavation (Unclassified)
Average depth 17' Width = 4.0 on South Side
Computations (8851.39 x 4 x .77) ÷ 27 = 1,009.7
Merger Sta. 148+00 To 149+95.2 (195.2 x 25 x .77) ÷ 27 = 13.9
Superelevation Sta. 180+11.70 To 176+84.20 + Trans. (594.18 x 4 x .77) ÷ 27 = 67.8
Superelevation Sta. 174+50.84 To 172+47.51 + Trans. (470.01 x 4 x .77) ÷ 27 = 53.6
1,145.0 USE 1145 Cu.Yds.

ITEM E-10 Sealing (only) of Edges of Existing Pavement using Bituminous Material (Sec. M-512, AE-3)
Computations Net Length 8851.39
Merger Sta. 148+00 To 149+95.12 195.20
Super. Sta. 176+84.2 To 180+11.70 594.18
Super. Sta. 172+47.51 To 174+50.84 470.01
10710.78 USE 10,111 Lin.Ft.

ITEM I-19 1/4" Insulation Course 4' Wide on South Side
Computations (8851.39 x 4) ÷ 9 (195.2 x 5) ÷ 9 = 54.22
Merger Sta. 148+00 To 149+95.2
Transitions to extra widening Sta. 175+84.2 To 176+84.2 Sta. 180+11.7 To 181+61.7 (266.68 x 2.5) ÷ 9 = 37.04
Superelevation Sta. 176+84.2 To 180+11.70 (594.18 x 4) ÷ 9 = 264.08
Superelevation Sta. 172+47.5 To 174+50.84 (470.01 x 4) ÷ 9 = 208.89
Extra Widening
Superelevation Sta. 176+84.2 To 180+11.70 (327.5 x 2.5) ÷ 9 = 11.44
45.49
3,543.67 USE 4545 Sq.Yds.

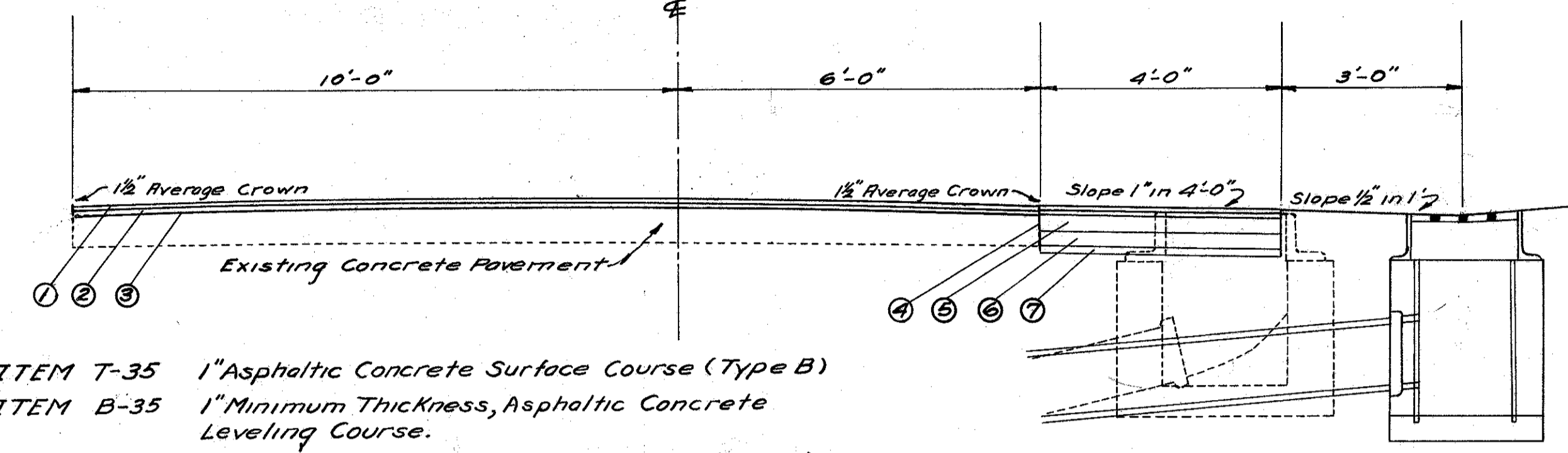
ITEM B-35 3" Asphaltic Concrete 1st. Base Course
4' Widening on South Side
Computations (8851.39 x 4 x .25) ÷ 27 = 327.83
Merger Sta. 148+00 To 149+95.2 (195.2 x 5 x .25) ÷ 27 = 4.52
Super. Sta. 180+11.70 To 176+84.20 + Trans. 22.00
Super. Sta. 174+50.84 To 172+47.51 + Trans. 17.41
371.76 USE 380 Cu.Yds.

ITEM B-35 3" Asphaltic Concrete 2nd Base Course
Same as above 371.76 USE 380 Cu.Yds.

ITEM B-35 Additional Asphaltic Concrete for Superelevations
Computations Sta. 180+11.70 To 176+84.20 (327.5 x .37 x 16) ÷ 27 = 71.81
Transitions (266.68 x .37 x 16) ÷ 27 = 29.24
Additional 2.5' Width (327.5 x 1.74 x 2.5) ÷ 27 = 22.44
Transitions (266.68 x 2.5) ÷ 27 = 9.14
Sta. 174+50.84 To 172+47.51 (203.33 x .185 x 16) ÷ 27 = 22.29
Transitions (266.68 x .185 x 16) ÷ 27 = 14.62
169.54 USE 170 Cu.Yds.

ITEM T-30 Bituminous Prime Coat (over old pave. area) using Bituminous Material (Sec. M-512, AE-3) applied at rate of .15 gal. per sq. yd. and sand cover spread at rate of 4 to 7 lbs. per sq. yd.
Computations Bituminous Material 195.20 Sta. 148 To 149+95.2
8851.39 Net Length
594.18 Sta. 176+84.20 To 180+11.70 + Trans.
470.01 Sta. 172+47.51 To 174+50.84 + Trans.
(7010.78 x 16) ÷ 9 = 17,974.72
Sta. 145+80 To 149+95.2
Bituminous Prime Coat over Concrete Gutter (417.74 x 5 coverage width) ÷ 9 = 232.07

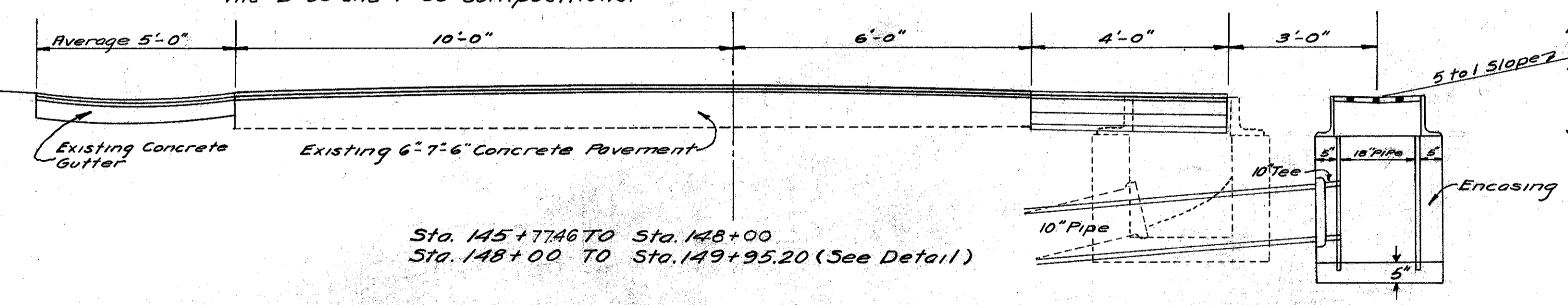
Sta. 93+54.23 TO Sta. 145+77.46
Sta. 164+72 TO Sta. 170+97.51
Sta. 181+61.70 TO Sta. 209+41.81



- ① ITEM T-35 1" Asphaltic Concrete Surface Course (Type B)
 - ② ITEM B-35 1" Minimum Thickness, Asphaltic Concrete Leveling Course.
 - ③ ITEM T-30 Bituminous Prime Coat (over old pave. area) using Bituminous Material, Sec. M-512, AE-3 applied at rate of .15 gal. per sq. yd. and cover with sand at rate of 4 to 7 lbs. per sq. yd.
 - ④ ITEM E-10 Sealing (only) of Edges of Existing Pavement using Bituminous Material, Sec. M-512, AE-3 applied at rate of .15 gal. per sq. yd.
 - ⑤ ITEM B-35 3" Asphaltic Concrete, 2nd. Base Course
 - ⑥ ITEM B-35 3" Asphaltic Concrete, 1st. Base Course
 - ⑦ ITEM I-19 1/4" Insulation Course
- NOTE: Asphalt penetration 70-80 to be used in the B-35 and T-35 Compositions.

DETAIL OF ACCEPTABLE STEEL FORMS

NOTE: The forms shall be braced in a manner to prevent Lateral or Vertical movement.



Sta. 145+77.46 TO Sta. 148+00
Sta. 148+00 TO Sta. 149+95.20 (See Detail)

STD. #7 Catch Basin
Reset Castings from existing Inlet Basins. Castings to be set to grade of ditch. Warp back slope to fit castings. Extend 10" pipe to Basin with 10" Roadway Culvert Pipe. Abandon existing Inlet Basins.

BITUMINOUS PRIME COAT, ITEM T-30, of Bituminous Material Sec. M-512, AE-3 applied by distributor or by brooms at the rate of .15 gal. per sq. yd. and sand cover uniformly spread at the rate of from 4 to 7 lbs. per sq. yd. After the bituminous material is applied all material not required to give a uniform coating to the surface, shall be swept into all cracks and open joints before the sand cover is placed. Payment for sand cover is included in the price per gallon for Bituminous Material.

TRAFFIC - Traffic shall be maintained at all times to the satisfaction of the Division Engineer. The item of maintaining shall include furnishing lights, signs, barricades and watchmen necessary to secure the unimpeded flow of traffic twenty four (24) hours daily.

EARTHWORK - All suitable material resulting from Roadway Excavation (Unclassified) shall be used to raise the Roadway. Shoulders as indicated on the Typical Section and in accordance with Item E-107 of the General Specifications.

EMBANKMENT - Watering embankment and density requirements as referred to in Sec. E-105 and Sec. E-111 of the General Specifications will not be required on this project.

PROFILE - The Profile of the Asphaltic Concrete Surface shall be approximately 2" above that of the existing pavement.

FORMS - Side Forms, set to the line and grade established by the Engineer, will be required, on widened side.

PAVEMENT - The designed depths of the Bituminous Concrete courses shown on the plans are subject to adjustment according to the ratio of volume to weight as indicated in the Specification for the item.

SUPERELEVATED CURVES - Asphaltic concrete base course material used for super-elevating curves shall be spread in courses not to exceed 3 inches compacted depth.

GENERAL SUMMARY

ITEM No.	ITEM	QUANTITY	UNIT
E-1	Roadway Excavation (Unclassified)	1145	Cu. Yds.
E-2	Excavation for Structures	22	Cu. Yds.
E-10	Sealing (only) of Edges of Existing Pavement	10,111	Lin. Ft.
E-4	Borrow (Contractor to furnish)	500	Cu. Yds.
I-19	1/4" Insulation Course	4545	Sq. Yds.
B-35	Asphaltic Concrete Base Course (laid in two courses)	760	Cu. Yds.
B-35	1" Minimum Thickness Asphaltic Concrete Leveling Course	1070	Cu. Yds.
T-30	Bituminous Prime Coat (Sec. M-512, AE-3)	2732	Gals.
T-35	1" Asphaltic Concrete Surface Course (TYPE B)	633	Cu. Yds.
I-8	Inlet Basin Top Reset	1	
I-8	Std. #7 Catch Basin Reset	23	
I-8	Std. #7 Catch Basin Built (Salvaged Top)	11	
S-122	Inlet Basin Abandoned	11	
S-27	10" Pipe for Roadway Culverts	66	Lin. Ft.
	Maintaining Traffic, including lights, signs, barricades, and watchmen 24 hr. service (as per Plan)	Lump Sum	

ITEM T-30 Bituminous Prime Coat - Continued -
18,206.79 x 0.15 = 2731.02 USE 2732 GAL.

ITEM B-35 1" Minimum Thickness, Asphaltic Concrete Leveling Course
Computations - (10,110.78 x .083 x 20) ÷ 27 = 621.63
Over Concrete Gutter (417.74 x .083 x 5) ÷ 27 = 6.42
Merger Sta. 148 To 149+95.2 (195.2 x 4 x .083) ÷ (2 x 27) = 1.20
Add for curve widening 176+84.2 to 180+11.7 (327.5 x 2.5 x .083) ÷ 27 = 2.52
Add for transition (266.68 x 2.5 x .083) ÷ (2 x 27) = 1.02
Add for road depressions, etc. 1.02
Total 632.79 USE 633 Cu. Yds.

ITEM T-35 1" Asphaltic Concrete Surface Course (TYPE B)
Computations Same as above, except for additional 267.21 cu. Yds. Total 632.79 USE 633 Cu. Yds.

ITEM E-4 Estimated volume of Borrow (Contractor to furnish) in addition to material supplied from Roadway excavation, to build up shoulders as indicated in Typical Section
USE 500 Cu. Yds.

Total 18206.79 Sq. Yds.