STATE OF NEW HAMPSHIRE

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

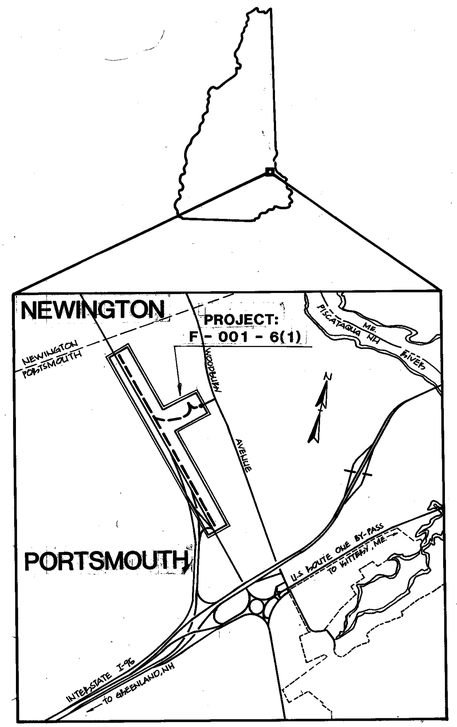
PLANS OF PROPOSED

SPAULDING TURNPIKE IMPROVEMENT
F - 001 - 6(1)

N.H. PROJECT NO. P-4104-A

SPAULDING TURNPIKE (N.H. ROUTE 4 AND 16)

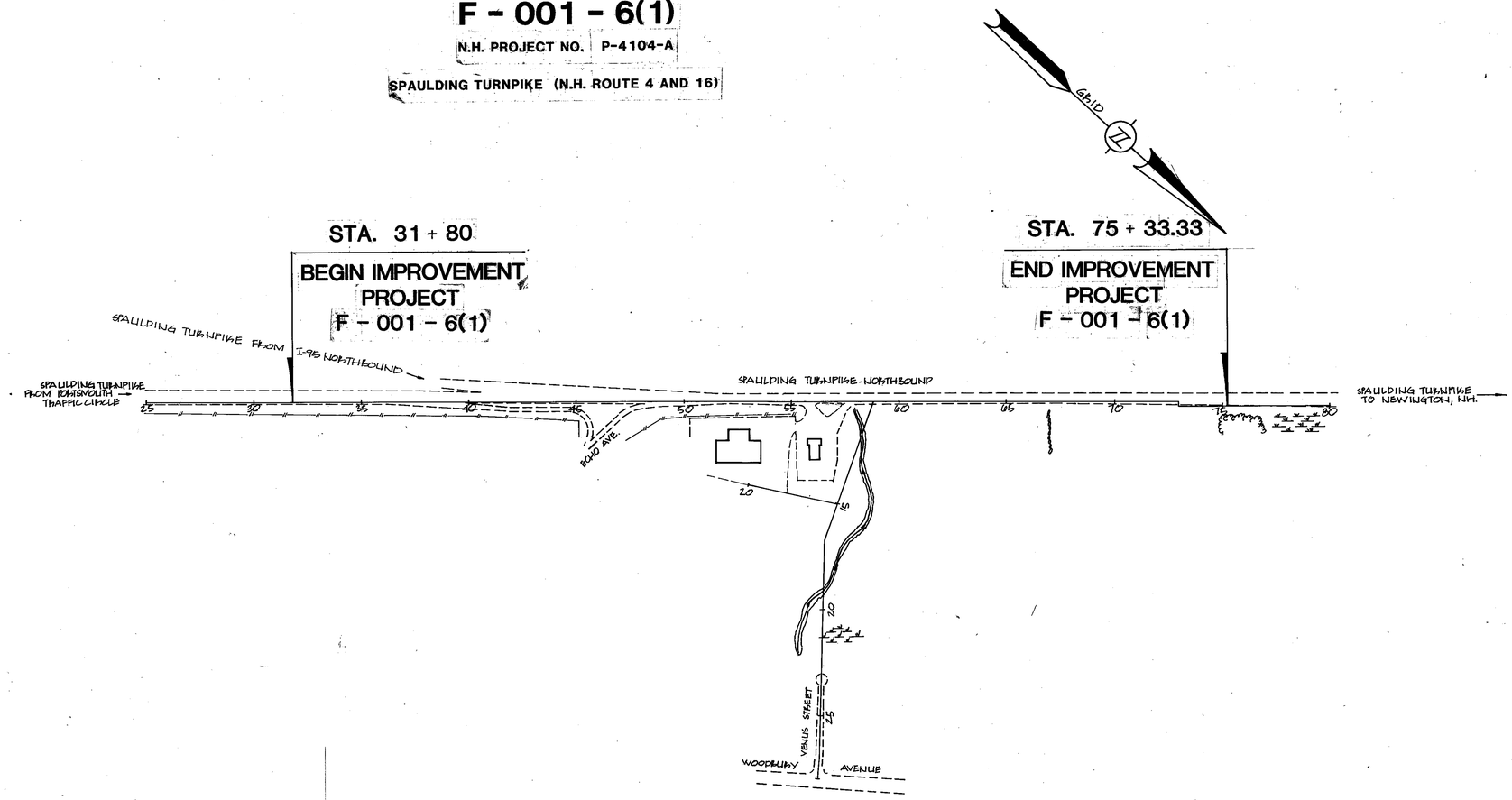
DESIGN DATA		
AVERAGE DAILY TRAFFIC 1984	32,000	
AVERAGE DAILY TRAFFIC 2004	65,000	
PERCENT OF TRUCKS	7	%
DESIGN SPEED	65	M.P.H.
LENGTH OF PROJECT	.824	MILES



LOCATION MAP

2000 4000 6000

GRAPHIC SCALE: 1" = 2000'



LAYOUT

SCALE 1" = 300'

AS BUILT PLANS

CITY OF PORTSMOUTH

COUNTY OF ROCKINGHAM

PLANS PREPARED BY
WRIGHT-PIERCE
ARCHITECTS AND ENGINEERS
BY: Preston Lund

THE STATE OF NEW HAMPSHIRE — PRESTON L. LUND — PROFESSIONAL ENGINEER

N.H. DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

RECOMMENDED FOR APPROVAL: 8-9-84
DEPUTY COMMISSIONER AND CHIEF ENGINEER — DATE

APPROVED: COMMISSIONER

MUNICIPAL HIGHWAYS ENGINEER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: DIVISION ADMINISTRATOR — DATE

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
F-001-(011)	P-4104-A	1	118

DRAWN BY Roy B. DATE 14 JUN 84
CHECKED BY DM/Hence DATE 21 JULY 84

BRUNING 44-141 56157

INDEX OF SHEETS

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1	TITLE PAGE
2	INDEX OF SHEETS & GENERAL NOTES
3	INDEX OF STANDARD SHEETS & CONSTRUCTION SIGN
	STANDARD SHEETS
4	STANDARD SYMBOLS
5-7	TYPICAL SECTIONS OF IMPROVEMENT
8-14	SUMMARY OF QUANTITIES
15	TEMP. EROSION CONTROL MEASURES & SPECIAL DRAINAGE STRUCTURES
16-21	PLANS & PROFILES
22,23	PAVEMENT, CURBING, SIGNING, & PAVEMENT MARKING LAYOUT
24,25	OVERHEAD SIGN STRUCTURES
26-29	ALUMINUM POST, PLANKS, AND ROUTE MARKER DETAILS
30-36	TRAFFIC CONTROL PLANS
37-	SECTIONS

THE FOLLOWING GENERAL NOTES WILL BE USED ON THIS PROJECT:

1	2	5	7	8	9	12	13	24	25	29	30
31	4	27	3	23	21						

GENERAL NOTES

1. THIS PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS DATED 1983 AND SUPPLEMENTAL SPECIFICATIONS, CURRENT STANDARD SHEETS AND SPECIAL PROVISIONS ATTACHED TO THE PROPOSAL.

2. ADJUSTING, ALTERING OR RELOCATING THE PROPERTY OF ANY PUBLIC UTILITY SHALL BE DONE BY THE OWNER, NOT A PART OF THIS CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH THE OWNER IN THE PERFORMANCE OF THIS WORK. (EXCEPTION: ALTERATIONS TO CITY OWNED WATER AND SEWER PLANT WILL BE DONE AS A PART OF THIS CONTRACT.)

3. HIGH TENSION OVERHEAD TRANSMISSION LINES ARE LOCATED THROUGHOUT THE PROJECT WITH CROSSINGS AT VARIOUS LOCATIONS AND RUNNING ALONG THE ROAD THROUGHOUT THE PROJECT EVEN ON REGULAR POLES. THE CONTRACTOR IS ADVISED THAT EXTREME CAUTION WILL BE REQUIRED IN THE OPERATION OF EQUIPMENT, ESPECIALLY CRANES AND PILE DRIVING EQUIPMENT.

4. ALL EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS

5. THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. THE EXACT LOCATION SHOULD BE ESTABLISHED IN THE FIELD BY THE UTILITY COMPANY PRIOR TO ANY EXCAVATION OR POST DRIVING.

6. DRIVES SHALL BE REPLACED IN KIND EXCEPT AT THOSE LOCATIONS WHERE DRIVES HAVE BEEN STEEPENED TO THE EXTENT THAT A MORE STABLE SURFACE IS WARRANTED. ALL GRAVEL DRIVES TO RESIDENCES, AND OTHER GRAVEL DRIVES WHEN ORDERED, SHALL BE CONSTRUCTED WITH A PAVED APRON ADJACENT TO THE SHOULDER.

7. TOPSOIL SHALL BE REMOVED FOR ITS TOTAL DEPTH WITHIN THE LIMITS OF THE SLOPE LINES. UNLESS OTHERWISE DIRECTED, THE TOPSOIL SHALL BE STOCKPILED AND USED IN ITS ENTIRETY UNDER SECTION 647– HUMUS.

8. UNSUITABLE MATERIAL, ROOTS AND STUMPS WITHIN THE LIMITS OF THE ROAD BED, SHALL BE REMOVED AS ORDERED.

9. MUCK SHALL BE REMOVED BY EXCAVATION UNDER ITEM (203.1), ~~(203.4)~~, OR BY DISPLACEMENT, AS ORDERED.

10. THE SUBGRADE SHALL BE SCARIFIED TO ASSURE THAT ALL BOULDERS AND COBBLES OVER 6 INCHES ARE REMOVED WITHIN 36 INCHES OF FINISHED GRADE. THIS WORK AND RECOMPACTION OF THE SUBGRADE WILL BE PAID UNDER ITEM 212.1– SCARIFYING.

11. EXISTING LEDGE AND BOULDER OUTCROPS ARE TO BE REMOVED AND/OR BERMED AS SHOWN OR AS ORDERED.

12. HUMUS SHALL BE APPLIED TO ALL EARTH SLOPES NOT LOAMED TO A NOMINAL DEPTH OF 3-1/2 INCHES (471 C.Y./ACRE), UNLESS OTHERWISE ORDERED.

13. ALL NEW EARTH SLOPES SHALL BE MULCHED.

14. THE SLOPES AROUND EXTENDED PIPES SHALL BE FLATTENED AND GRADED AS SHOWN OR ORDERED.

15. ASPHALT SURFACE TREATMENT INCLUDING SAND COVER SHALL BE APPLIED TO THE TRAVELED WAY AS A PRIME COAT AT THE RATE OF 0.50 GALLONS PER SQUARE YARD IN ONE APPLICATION, OR AS ORDERED.

16. ASPHALT SURFACE TREATMENT INCLUDING SAND COVER SHALL BE APPLIED TO THE SHOULDER AS A PRIME COAT AT THE RATE OF 0.50 GALLONS PER SQUARE YARD IN ONE APPLICATION, OR AS ORDERED.

17. THE PAVEMENT OVERLAY SHALL BE WARPED TO MATCH EXISTING CATCH BASINS, DROP INLETS, AND/OR SIMILAR STRUCTURES.

18. EXISTING CONCRETE PAVEMENT REMOVAL WILL BE PAID UNDER ITEM 203.2– ROCK EXCAVATION (____ C.Y./100 L.F.). THE BITUMINOUS PAVEMENT ABOVE THE CONCRETE WILL NOT BE PAID UNDER ITEM 203.2.

19. RESTORE SUPERELEVATION ON EXISTING CURVES BY THE USE OF A PAVEMENT LEVELING COURSE AS INDICATED ON PLANS OR AS ORDERED.

20. ALL CRACKS IN THE PAVEMENT MEASURING 1/4 INCH OR MORE IN WIDTH, OR AS ORDERED, SHALL BE TREATED WITH CRACK FILLER WITHIN THE LIMITS DESIGNATED ON THE PLANS.

21. ADJUSTMENT OF CATCH BASINS AND DROP INLETS OR SIMILAR STRUCTURES TO THE NEW PAVEMENT GRADE SHALL BE DONE AS ORDERED. PAYMENT WILL BE UNDER ITEM 604.45– ADJUSTING CATCH BASIN AND DROP INLET GRATES AND FRAMES SET BY OTHERS.

22. EXISTING ANCHORS FOR CABLE GUARD RAIL SHALL BE DUG UP AND SALVAGED INTACT TO THE STATE.

23. ALL GUARD RAIL SHALL BE SET AT A 30 INCH RAIL HEIGHT BASED ON THE PAVEMENT OVERLAY, UNLESS OTHERWISE SHOWN OR ORDERED.

24. EXISTING DELINEATORS AND WITNESS MARKERS THAT ARE DISTURBED SHALL BE RESET. THIS WORK WILL BE SUBSIDIARY. ADDITIONAL DELINEATORS ORDERED WILL BE PAID UNDER APPROPRIATE ITEMS OF THE CONTRACT.

25. NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.

26. UNPROTECTED PROJECT MARKERS SHALL BE REMOVED OR SET BACK TO 30 FEET FROM THE TRAVELED WAY AS ORDERED. THIS WORK WILL BE SUBSIDIARY.

27. CLEARING AND GRUBBING ON THIS PROJECT WILL BE SUBSIDIARY.

28. ALL WORK ON THIS PROJECT, UNLESS OTHERWISE SHOWN ON THE PLANS OR ORDERED, SHALL BE CONSTRUCTED WITHIN THE EXISTING RIGHT–OF–WAY.

29. COORDINATES FOR THIS PROJECT ARE (ASSUMED) AND THE BEARING SHOWN ARE (GRID).

30. TRAFFIC DIVISION WILL ASSIST IN THE LAYOUT OF ALL PAVEMENT MARKINGS. NOTIFY TRAFFIC DIVISION (271-2291) TWO WEEKS PRIOR TO REQUIRING LAYOUT.

31. REMOVAL OF EXISTING CATCH BASINS AND REMOVAL OR PLUGGING OF CONNECTING PIPES SHALL BE PRECEDED BY A FIELD DETERMINATION AS TO THE CORRECT LAYOUT AND PRESENT FUNCTION OF THESE FACILITIES. THIS MAY REQUIRE CLEANING OF EXISTING CATCH BASINS OF DEBRIS TO REVEAL INLET AND OUTLET PIPES. (THE CLEANING SHALL BE PAID FOR AS ALTERATIONS AND ADDITIONS AS NEEDED) (ITEM 1008)

32. IT IS ANTICIPATED THAT ALL CURB REMOVED ON THIS PROJECT WILL BE RESET.

STATE OF NEW HAMPSHIRE

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS • HIGHWAY DESIGN DIVISION

INDEX OF SHEETS AND GENERAL NOTES

FEDERAL PROJECT NO.	STATE PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	P-4104-A	2	118

(USE BOTTOM LINES FIRST)

REVISIONS AFTER PROPOSAL

NO.	DATE	STATION	STATION	DESCRIPTION

NOTEBOOKS

BOOK NO.	PAGE NO.	BOOK NO.	PAGE NO.

	DATE
PLAN TRACED	
PLAN CHECKED	
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PROFILE CHECKED	
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CHECKED	

STANDARD SHEETS

STANDARD	NO. 1	CONCRETE AND M.R.M. HEADWALLS	REVISED	MARCH 24, 1977
STANDARD	NO. 1-A	CONCRETE AND M.R.M. HEADWALLS	REVISED	MAY 8, 1970
STANDARD	NO. 2	STEEL ARCH PIPES, SLOPE PAVING, UNDERDRAIN HEADWALL	REVISED	MARCH 1, 1983
STANDARD	NO. 2-A	CORRUGATED ALUMINUM PIPE, PIPE ARCH, UNDERDRAIN FLUSHING BASIN	REVISED	DECEMBER 20, 1982
STANDARD	NO. 3	CATCH BASINS, DROP INLETS	REVISED	OCT. 17, 1983
STANDARD	NO. 3-A	GRATES FOR C.B.'S & D.I.'S, PRECAST C.B., D.I., M.H.	REVISED	OCT. 17, 1983
STANDARD	NO. 3-B	CATCH BASINS, DROP INLETS. TRAP	REVISED	OCT. 17, 1983
STANDARD	NO. 4	CURBING	REVISED	APRIL 21, 1982
STANDARD	NO. 5	CONCRETE BOUND, STEPS	REVISED	DECEMBER 20, 1982
STANDARD	NO. 5-A	GUTTERS, SLUICE, SLOPES, MUCK EXCAVATION	REVISED	FEBRUARY 26, 1975
STANDARD	NO. 6	BEAM GUARD RAIL	REVISED	JUNE 11, 1981
STANDARD	NO. 6-A	BEAM GUARD RAIL	REVISED	DECEMBER 10, 1981
STANDARD	NO. 6-B	BEAM GUARD RAIL	REVISED	JUNE 11, 1981
STANDARD	NO. 7	BEAM GUARD RAIL WITH PEDESTRIAN HAND RAIL	REVISED	APRIL 26, 1979
STANDARD	NO. 8	3 CABLE GUARD RAIL	REVISED	MARCH 24, 1977
STANDARD	NO. 8-A	3 CABLE GUARD RAIL	REVISED	DECEMBER 10, 1981
STANDARD	NO. 9	WOVEN WIRE & CHAIN LINK FENCE	REVISED	AUGUST 2, 1977
STANDARD	NO. 9-A	STEEL WITNESS MARKER	REVISED	OCT. 17, 1983
STANDARD	NO. 10	SIGNAL BASE, PULL BOX, CONDUIT DETAILS, HAND HOLE	REVISED	MAY 8, 1981
STANDARD	NO. 10-A	LENS FOR TURNING MOVEMENTS, LIGHT POLE BASE, DETECTORS, PULL BOX	REVISED	DECEMBER 20, 1982
STANDARD	NO. 11	END SECTIONS FOR PIPES	REVISED	MAY 21, 1975
STANDARD	NO. 12	DELINEATORS	REVISED	OCT. 17, 1983
STANDARD	NO. 12-A	DELINEATOR SPACING FOR RAMPS AND LOOPS	REVISED	OCT. 17, 1983
STANDARD	NO. 13	URBAN MARKING AND SIGN POSTING	REVISED	MARCH 1, 1983
STANDARD	NO. 14	RUBBISH CONTAINER, FIREPLACE, TABLE, SHELTER	REVISED	AUGUST 1, 1969
STANDARD	NO. 15	FIREPLACE, DRINKING FOUNTAIN, WATER PIPE DRAINS, PICNIC SITES	REVISED	MARCH 24, 1977
STANDARD	NO. 16	SIDEWALK RAMPS	REVISED	JUNE 11, 1981

CONSTRUCTION SIGN STANDARD SHEETS

CS	NO. 1	GENERAL NOTES	REVISED	MARCH 1, 1983
CS	NO. 2	BARRICADES, REMOVAL OF PAVEMENT MARKING, CONES	REVISED	MARCH 1, 1983
CS	NO. 3	PANELS & DELINEATORS, LIGHTING DEVICES, SIGN PADDLE	REVISED	OCTOBER 17, 1983
CS	NO. 4	TRAFFIC CONTROL PROCEDURES, HAUL ROADS, BLASTING ZONES	REVISED	MARCH 1, 1983
CS	NO. 5	TYPICAL LAYOUT- PERMANENT CONST. SIGNING	REVISED	MARCH 1, 1983
CS	NO. 6	SIGNS	REVISED	MARCH 1, 1983
CS	NO. 7	SIGNS	REVISED	MARCH 1, 1983
CS	NO. 8	SIGNS	REVISED	MARCH 1, 1983
CS	NO. 9	TWO-WAY TRAFFIC LANE CLOSURE AND SHOULDER WORK	REVISED	MARCH 1, 1983
CS	NO. 10	2 LANE DIVIDED, 2 LANE CLOSURE - BREAKDOWN LANE	REVISED	MARCH 1, 1983
CS	NO. 11	DETOUR FOR 2 LANE CLOSURE, 2 LANE DIVIDED - BRIDGEWORK	REVISED	MARCH 1, 1983
CS	NO. 12	4-LANE DIVIDED - 2 LANE CLOSURE UTILIZING CROSSOVER	REVISED	MARCH 1, 1983
CS	NO. 13	MULTI-LANE CLOSURE	REVISED	MARCH 1, 1983

THE FOLLOWING STANDARD SHEETS WILL BE USED ON THIS PROJECT:										THE FOLLOWING CONSTRUCTION SIGN STANDARD SHEETS WILL BE USED ON THIS PROJECT:				
1	2	3	3A	3B	4	5	5A	9	9A	CS-1	CS-2	CS-3	CS-4	CS-5
10A	12	12A	6	10A	10B	11				CS-6	CS-7	CS-8	CS-9	CS-10

STATE OF NEW HAMPSHIRE

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS • HIGHWAY DESIGN DIVISION

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REVISIONS AFTER PROPOSAL

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NOTEBOOKS

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PROFILE CHECKED	
INKED	
CHECKED	

ENGINEERING

SURVEY OR TRAVERSE LINE 30 31 32 33
CONSTRUCTION LINE 30 31 32 33
PROFILE GROUND LINE .....
PROFILE GRADE LINE .....
CROSS SECTION GROUND LINE .....
CROSS SECTION TEMPLATE LINE .....
SLOPE LINE (FILL) .....
SLOPE LINE (CUT) .....
GROUND ELEVATION (LEFT) 22.1
GRADE ELEVATION (RIGHT) 24.12
PROPERTY PARCEL NUMBER ..... (2)
CLEARING & GRUBBING AREA ..... (E)
INTERSTATE NUMBERED HIGHWAY ..... (93)
UNITED STATES NUMBERED HIGHWAY ..... (3)
STATE NUMBERED HIGHWAY ..... (10)

DRAINAGE

MANHOLE (EXISTING) ..... M.H.
MANHOLE (PROPOSED) ..... M.H.
CATCH BASIN (EXISTING) ..... C.B.
CATCH BASIN (PROPOSED) .....
DROP INLET (EXISTING) ..... D.I.
DROP INLET (PROPOSED) .....
DRAINAGE PIPE (EXISTING) .....
DRAINAGE PIPE (PROPOSED) .....
UNDERDRAIN (EXISTING) .....
UNDERDRAIN (PROPOSED) .....
HEADER (EXISTING) .....
HEADER (PROPOSED) .....
OPEN DITCH (PROPOSED) .....
STONE SLOPE PROTECTION .....

BOUNDARIES

RIGHT OF WAY LINE .....
PROPERTY LINE ..... PL SMITH STANDISH PL
TOWN LINE ..... TOWN LINE BOW CONCORD
COUNTY LINE ..... COUNTY LINE COOS GRAFTON
STATE LINE ..... STATE LINE MAINE NEW HAMPSHIRE
STONE BOUND ..... S.B.
IRON PIPE OR PIN ..... I.P.
NATIONAL FOREST .....

UTILITIES

TELEPHONE OR TELEGRAPH POLE .....
POWER POLE .....
JOINT OCCUPANCY .....
POLE .....
GUY POLE OR STUB .....
NOTE: Remove Or New As Applicable i.e. ..... R N +22 15'
LIGHT POLE .....
LIGHT ON POWER POLE .....
LIGHT ON JOINT POLE .....
HYDRANT .....
MANHOLE ..... (Label Type)
UNDERGROUND WATER (EXISTING) ..... W W
UNDERGROUND WATER (PROPOSED) ..... PW PW
UNDERGROUND SEWER (EXISTING) ..... S S
UNDERGROUND SEWER (PROPOSED) ..... PS PS
UNDERGROUND TELEPHONE (EXISTING) ..... T T
UNDERGROUND TELEPHONE (PROPOSED) ..... PT PT
UNDERGROUND ELECTRIC (EXISTING) ..... E E
UNDERGROUND ELECTRIC (PROPOSED) ..... PE PE
GATES & SHUTOFFS ..... W.S.O. (Label W.G., W.S.O., G.S.O., Etc.)
RAILROAD ..... (Label Ownership)
RAILROAD SIGN .....
RAILROAD SIGNAL .....
SIGNAL CONDUIT (EXISTING) .....
SIGNAL CONDUIT (PROPOSED) .....
MAGNETIC DETECTOR SLEEVE ..... MD
LOOP DETECTOR ..... 8'x10' EXISTING / 8'x10' PROPOSED
PULLBOX ..... P.B. / P.B.
HANDHOLE ..... H.H. / H.H.
CONTROLLER CABINET ..... C.C.
SPREAD FOOTING ..... 15' 8'
CYLINDRICAL FOUNDATION .....
MAST ARM POLE .....
STEEL SPAN WIRE POLES .....
PEDESTRIAN SIGNAL POLE .....
SIGNAL HEAD .....
TRAFFIC FLOW .....
STOP BAR .....
STREET LIGHT CONDUIT .....
LUMINAIRE .....

GENERAL CULTURE

TRAVELED WAY ..... S.T.G.
DRIVEWAYS ..... Gravel
BUILDINGS ..... Porch
FOUNDATION .....
GUARD RAIL (Label Type) ..... (PROPOSED) (EXISTING) B.G.R. C.G.R.
CURB (EXISTING) ..... (Label Type)
CURB (PROPOSED) .....
STEPS AND WALK .....
INTERMITTENT WATER COURSE .....
SHORE LINE ..... River (Stream) Pond
SWAMP, MARSH OR WETLANDS .....
BRUSH (WOODS) LINE .....
TREES (DECIDUOUS) .....
TREES (CONIFEROUS) .....
STUMPS .....
ORCHARD .....
HEDGE .....
WELL ..... W
SEPTIC TANK ..... S
LEACHFIELD ..... Leach Field
GAS PUMPS .....
STORAGE TANKS .....
CEMETERY ..... Cem. Or +
BRIDGE CROSSING STREAM .....
HIGHWAY OVERPASS .....
ROCK OUTCROP .....
OLD GROUND (Typicals & Standards Only) .....
ROCK LINE .....
STONE WALL ..... Or
RETAINING WALL ..... (Points Toward High Ground)
FENCE (BARBED WIRE) .....
FENCE (OTHER) .....
SIGNS .....

NOTEBOOKS				REVISIONS AFTER PROPOSAL (USE BOTTOM LINES FIRST)				
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BOOK NO.	PAGE NO.							

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STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS • HIGHWAY DESIGN DIVISION

STANDARD SYMBOLS

FEDERAL PROJECT NO.	STATE PROJ. NO.	SHEET NO.	TOTAL SHEETS
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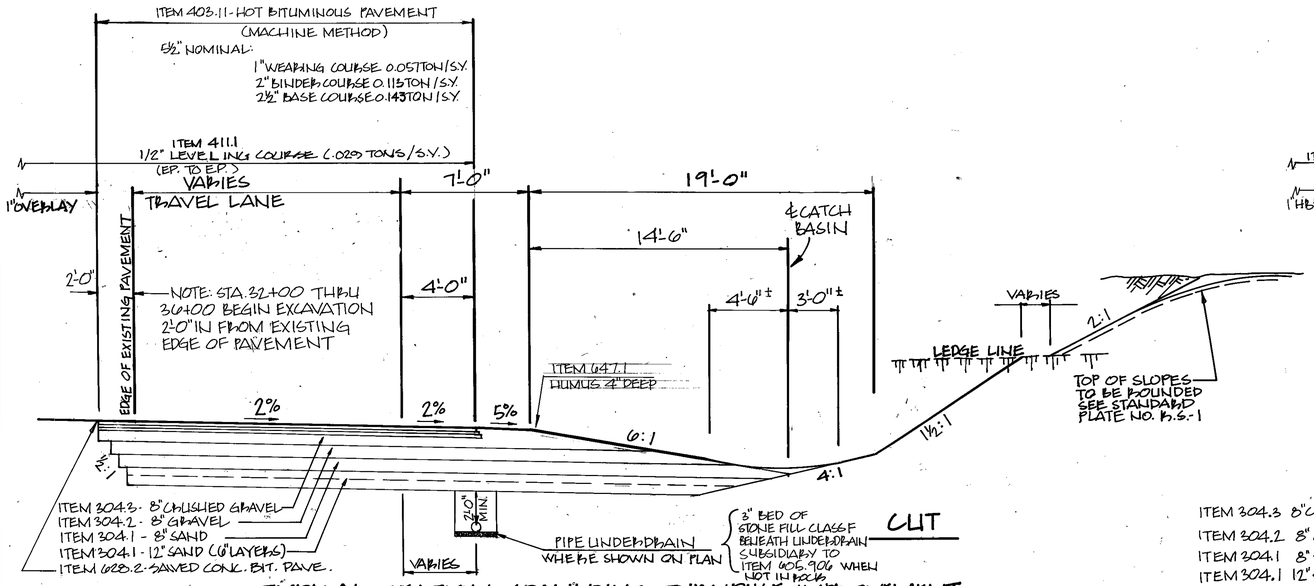
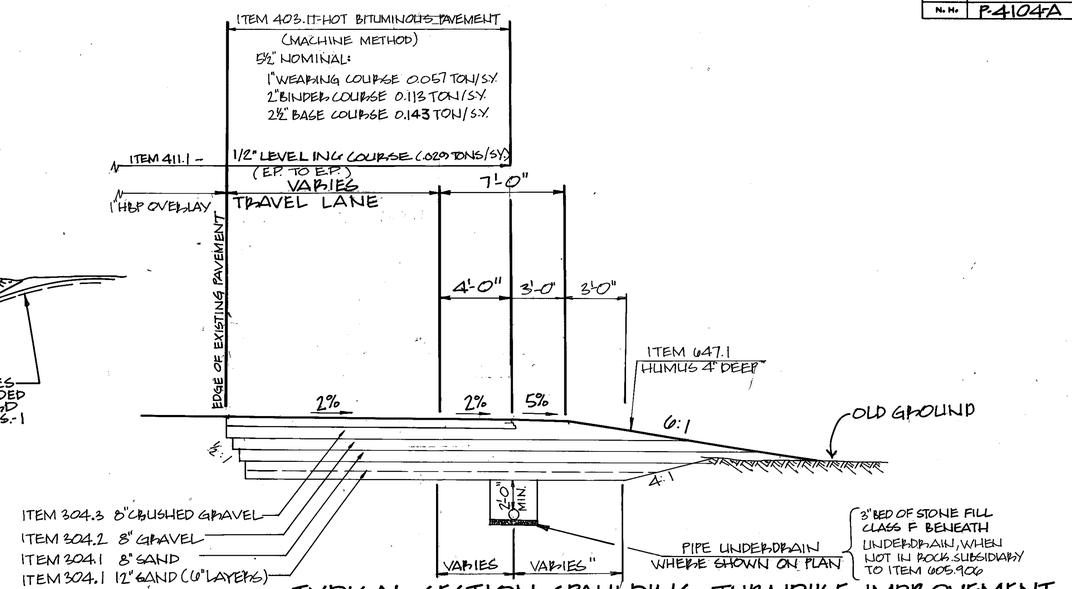


TYPICAL SECTION SPAULDING TURNPIKE IMPROVEMENT

STATION 34+50 THRU 35+50

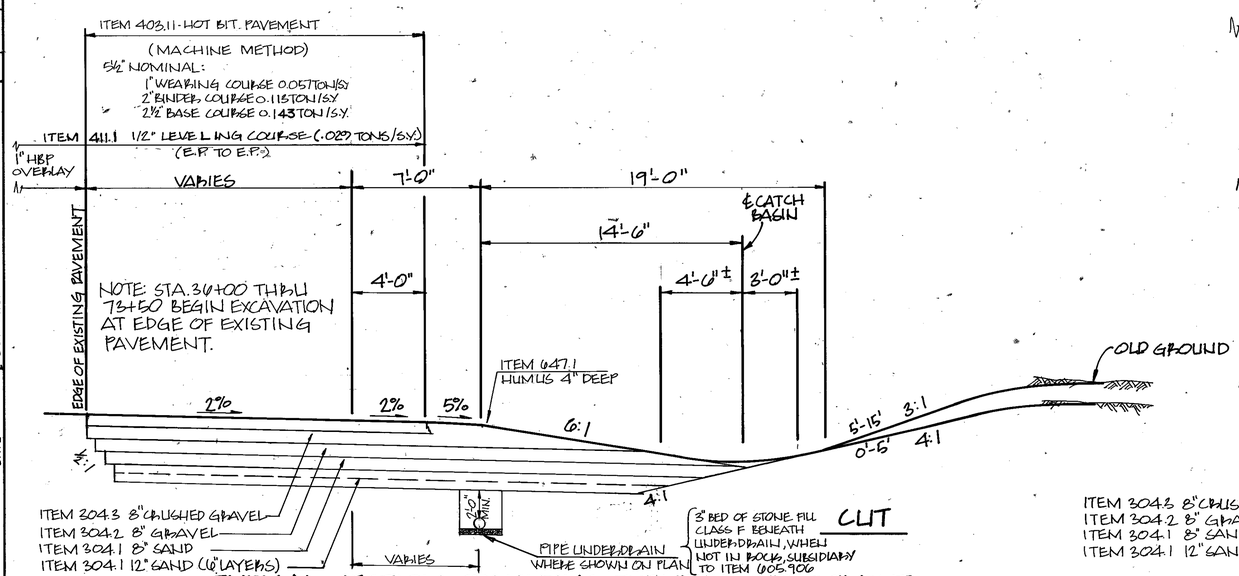
SCALE: 1/4" = 1'-0"



TYPICAL SECTION SPAULDING TURNPIKE IMPROVEMENT

STATION 37+00 THRU 39+50

SCALE: 1/4" = 1'-0"



TYPICAL SECTION SPAULDING TURNPIKE IMPROVEMENT

STATION 36+00 THRU 36+50

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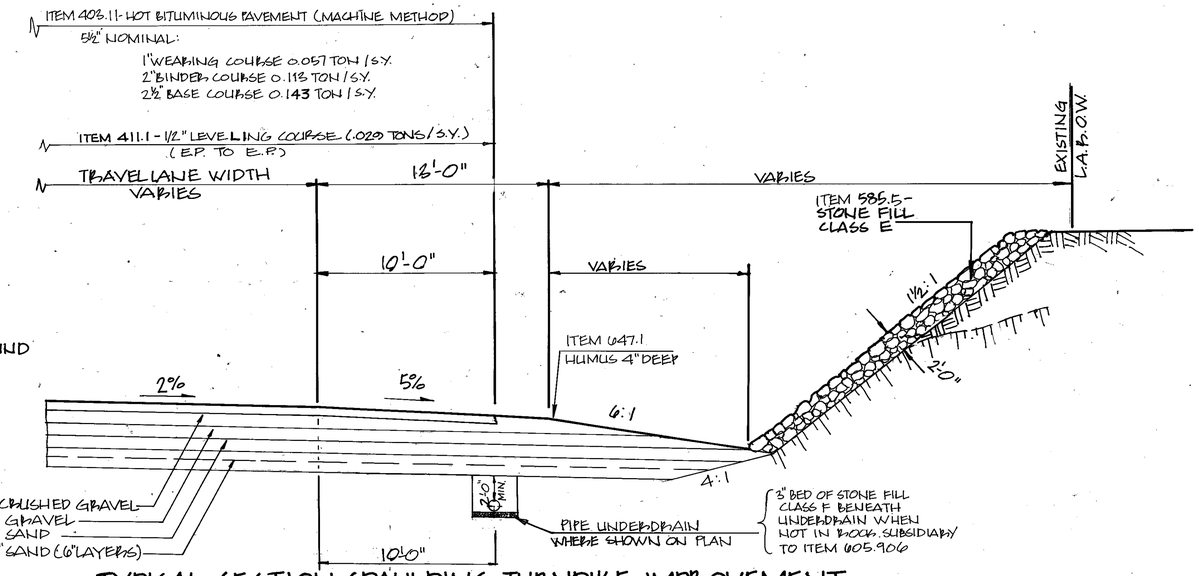

TYPICAL SECTION SPAULDING TURNPIKE IMPROVEMENT

STATION 67+00 THRU 70+50

SCALE: 1/4" = 1'-0"

DESCRIPTION	STATION	STATION
REVISIONS AFTER PROPOSAL		
NOTEBOOKS		
DATE 14 JUN 84		
PLAN TRACED Ray B.		
PLAN CHECKED		
PROFILE TRACED		
PROFILE CHECKED		
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(USE BOTTOM LINES FIRST)

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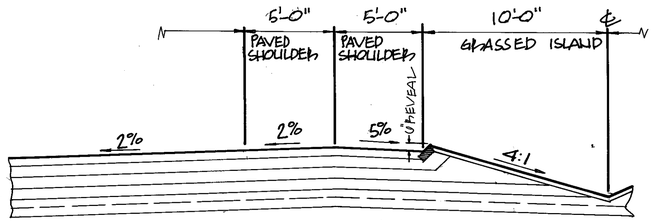
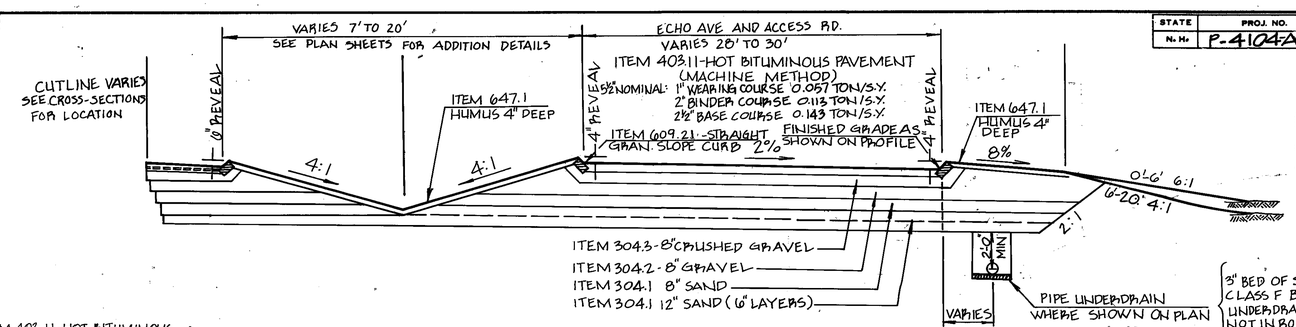
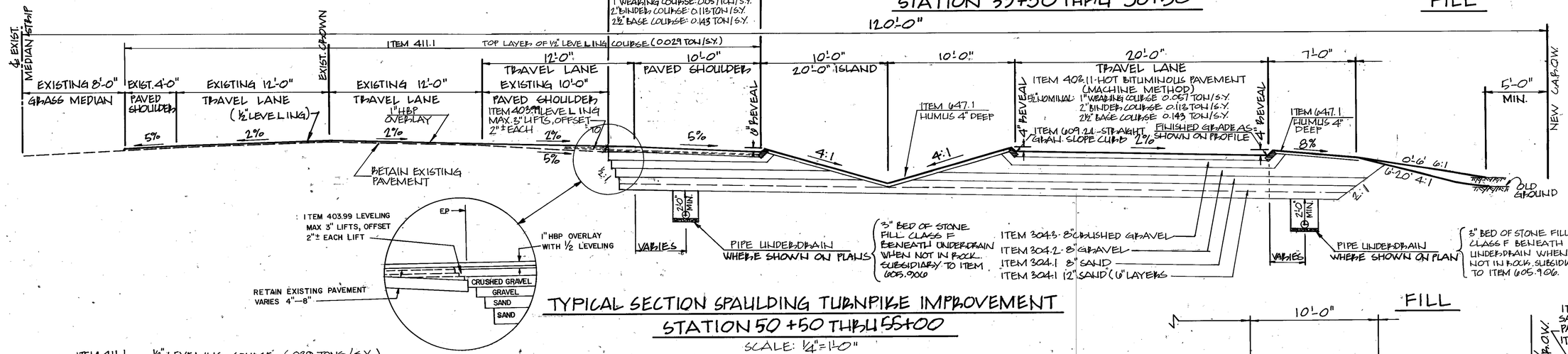


TYPICAL SECTION AT FULL SUPERELEVATION



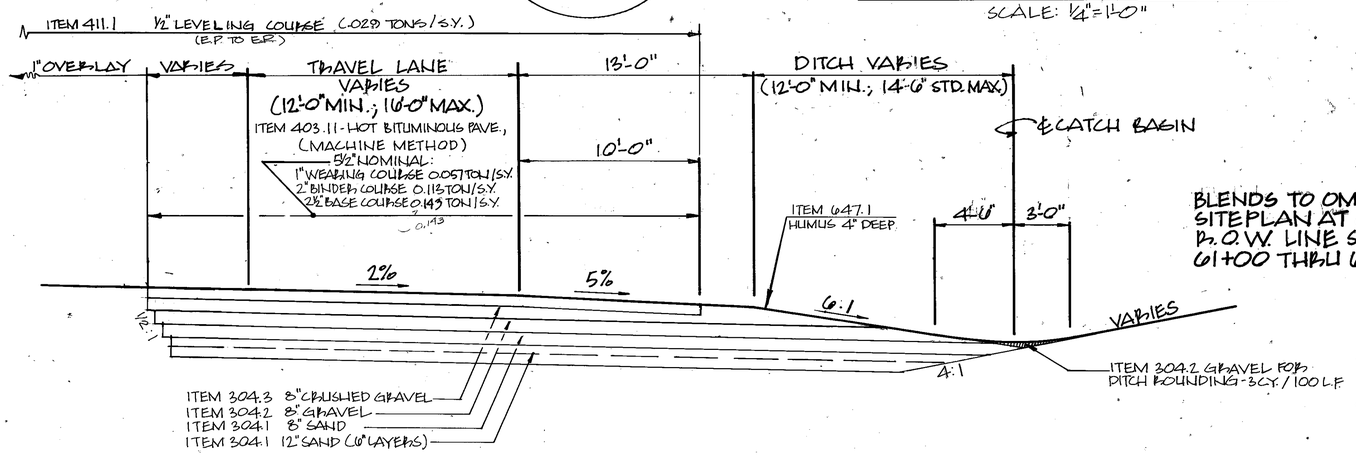
TYPICAL SECTION SPAULDING TURNPIKE IMPROVEMENT
STATION 39+50 THRU 50+50

FILL



TYPICAL SECTION SPAULDING TURNPIKE IMPROVEMENT
STATION 50+50 THRU 55+00

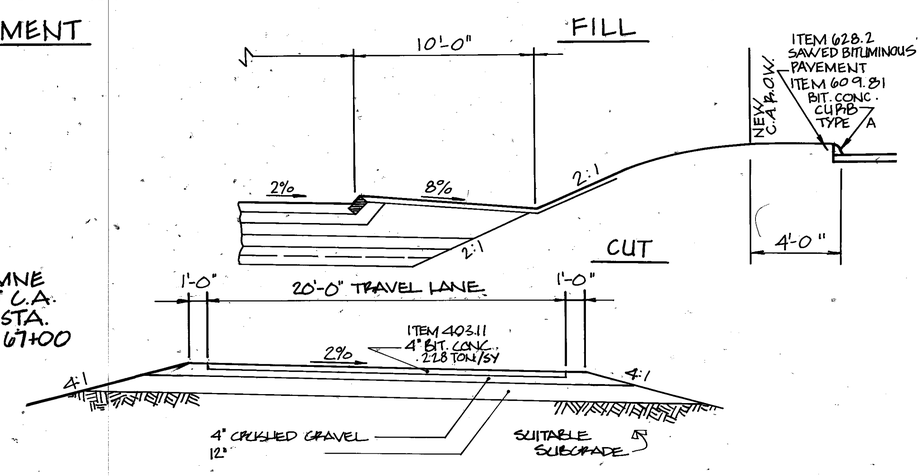
SCALE: ¼" = 1'-0"



BLENDS TO OMNE SITEPLAN AT C.A. R.O.W. LINE STA. 61+00 THRU 67+00

TYPICAL SECTION SPAULDING TURNPIKE IMPROVEMENT
STATION 61+00 THRU 65+00

SCALE: ¼" = 1'-0"



TYPICAL SECTION - TEMPORARY ACCESS ROADWAY
STATION 56+50± THRU 59+75±

SCALE ¼" = 1'-0"

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REVISIONS AFTER PROPOSAL (USE BOTTOM LINES FIRST)

NO.	DATE	STATION	STATION	DESCRIPTION

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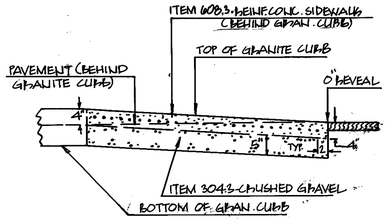
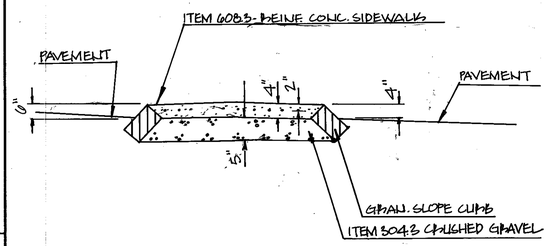
DRAWING 34582-3

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-4104A	7	



OFF RAMP NOSE

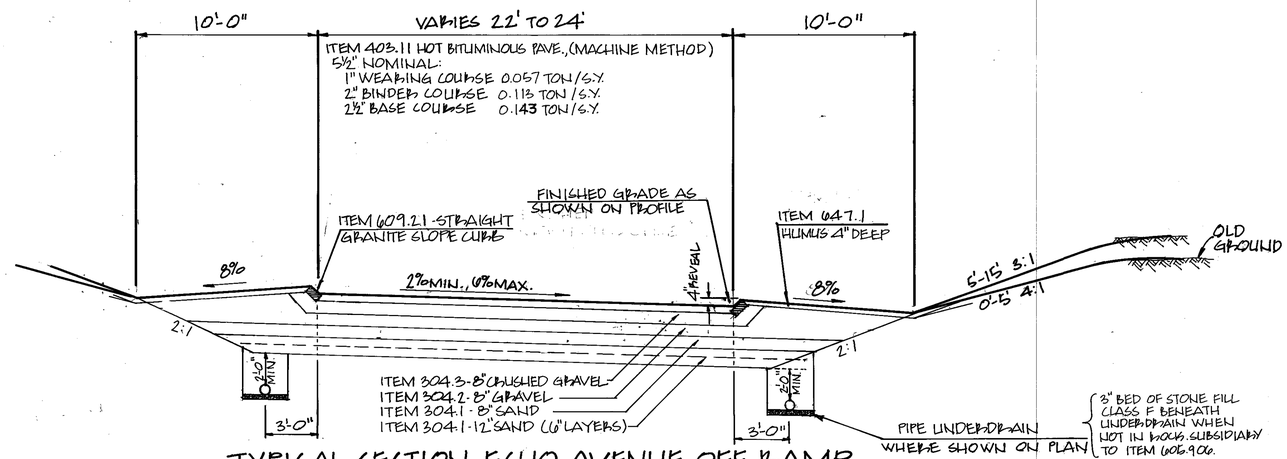
NOT TO SCALE



STA. 119+40—120+42.7

ON RAMP NOSE

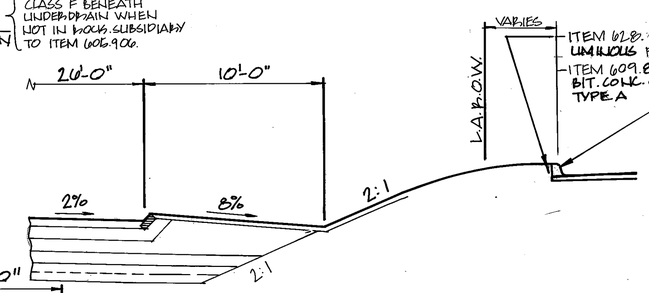
NOT TO SCALE



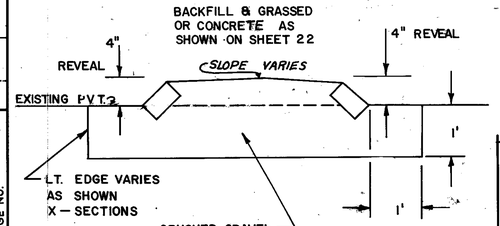
TYPICAL SECTION ECHO AVENUE OFF RAMP

STATION 306+00 THRU 308+25

SCALE: 1/4" = 1'-0"

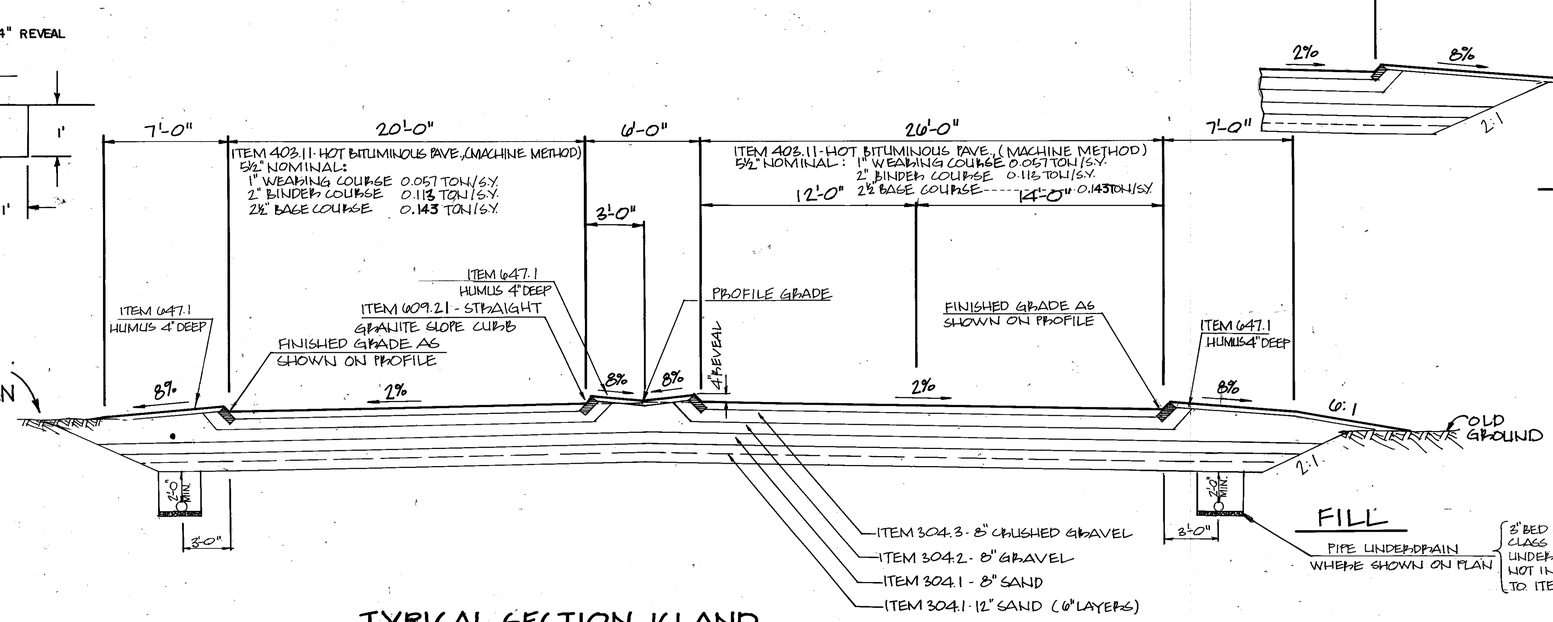


CUT



MERGE NOSE

NOT TO SCALE

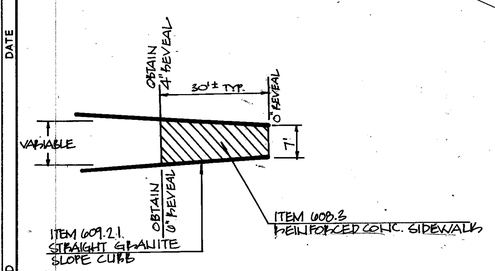


FILL

TYPICAL SECTION ISLAND

STATION 353+50 TO 355+00

SCALE: 1/4" = 1'-0"



DETAIL OF REINFORCED CONCRETE SIDEWALK AT DECELERATION LANE NOSE

NOT TO SCALE

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	7	118

(USE BOTTOM LINES FIRST)

NOTEBOOKS

BOOK NO.	PAGE NO.	DESCRIPTION

REVISIONS AFTER PROPOSAL

NO.	DATE	STATION

	DATE	BOOK NO.	PAGE NO.
PLAN TRACED			
PLAN CHECKED			
PROFILE TRACED			
PROFILE CHECKED			
INKED			
CHECKED			

DATE 14 JUN 84

Roy B.

PLANNING 34382-3

SUMMARY OF QUANTITIES (ESTIMATED)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

* NOT AN ITEM TOTAL

EARTHWORK SUMMARY

UNIT	CU. YD.
COMMON EXCAVATION IN SECTIONS	24,470
TOPSOIL REMOVED BENEATH FILL SECTIONS	3852
DRIVE AND APPROACH EXCAVATION (COMMON)	142
DRAINAGE STRUCTURE EXCAVATION (COMMON)	200
TOTAL COMMON EXCAVATION	28664
COMMON EXCAVATION FOR ESTIMATE ITEM 203.1	30000
COMMON STRUCTURE EXCAVATION	50
SUB-TOTAL	28714
TOPSOIL REMOVED FOR USE AS LOAM OR HUMUS (EST.)	3852
COMMON EXCAVATION FOR FILL	24862
ROCK EXCAVATION IN SECTIONS (SOLID)	4857
ROCK OVERBREAKAGE (EST.)	50
TOTAL ROCK EXCAVATION	4907
ROCK EXCAVATION FOR ESTIMATE ITEM 203.2	5000
ROCK EXPANDED 20%	5828
ROCK OVERBREAKAGE (EST.)	50
ROCK STRUCTURE EXCAVATION	1340
ROCK FOR FILL	7218
SECTIONS FILL	6738
TOPSOIL REPLACEMENT (EST.)	3852
DRIVE AND APPROACH FILL	47
TOTAL FILL	10637
ROCK FOR FILL	7218
FILL BEFORE EXPANSION	3419
SHRINKAGE FACTOR 20%	
EXPANDED FILL	4274
COMMON EXCAVATION FOR FILL	24862
SURPLUS	20588

ISLANDS

ITEM NO.	608.34	209
ITEM	4" REINFORCED CONCRETE SIDEWALK	GRANULAR BACKFILL
UNIT	S.Y.	C.Y.
LOCATION		
I-95 - SPAULDING ISLAND (SW-3) (STA. 100+00 - 101+80.98)	120	13
FRONTAGE ROAD NOSE (SW-4) (STA. 207+40 - 207+70)	9	1
ECHO AVE. NOSE (SW-5) (STA. 104+71.89 - 105+12.)	54	6
OMNE ROAD ISLAND (SW-2) (STA. 353+15 - 353+00)	135	15
ON-RAMP NOSE (SW-1) (STA. 119+40 - 120+42.70)	50	6
SUB-TOTALS	368	41
ESTIMATED	9	9
FROM DRAINAGE SUMMARY		200
PROJECT TOTALS	375	250

LOCATION OF BOUNDS

ITEM NO.	622.2
ITEM	CONCRETE BOUNDS
UNIT	E.A.
LOCATION	
46+50 MS ℄ 120' RT.	1
52+50 MS ℄ 120' RT.	1
416+97.27 OMNE RD OFF-RAMP 22' RT.	1
417+92.97 OMNE RD OFF-RAMP 22' RT	1
418+88.67 OMNE RD OFF-RAMP 22' RT.	1
419+84.36 OMNE RD. ON-RAMP 20' RT.	1
355+00 OMNE RD. 49' RT.	1
355+00 OMNE RD. 42' LT.	1
252+10.10 OMNE RD. ON-RAMP 20' RT.	1
253+02.08 OMNE RD. ON-RAMP 20' RT.	1
253+95.20 OMNE RD. ON-RAMP 20' RT	1
254+32.22 OMNE RD ON-RAMP 20' RT	1
64+00 RT. 100' ADDED	1
61+50 MS ℄ 105.00' RT.	1
SUBTOTALS	13
ESTIMATED	0
~~PROJECT~~ TOTALS - AS BUILT	~~13~~ 14

INCIDENTAL ITEMS

ITEM NO.	ITEM	UNIT	QUANTITY
214.	FINE GRADING	U	1
618.29	UNIFORMED OFFICERS AND FLAGMEN	HR.	2200
619.1	MAINTENANCE OF TRAFFIC	U	1
619.51	TEMPORARY PAVEMENT MARKING TAPE - WHITE	L.F.	2500
619.52	TEMPORARY PAVEMENT MARKING TAPE - YELLOW	L.F.	2500
621.31	SINGLE DELINEATOR - WHITE	EA.	20
621.41	REF. BEAM G.P. DELINEATOR (WHITE)	EA.	12
621.32	SINGLE DELINEATOR - YELLOW	EA.	25
621.42	REF. BEAM G.P. DELINEATOR (YELLOW)	EA.	3
621.321	DOUBLE DELINEATOR - WHITE	EA.	30
621.342	DOUBLE DELINEATOR DOUBLE FACE	EA.	6
622.1	STEEL WITNESS MARKERS	EA.	20
628.2	SAWED BITUMINUS CONCRETE PAVEMENT	L.F.	4500
692.	MOBILIZATION	U	1
698.1	FIELD OFFICE	EA.	1
698.2	PHYSICAL TESTING LAB	U	1
699.	TEMPORARY PROJECT WATER POLLUTION CONTROL	$	1
1008	ALT. AND ADDITIONS AS NEEDED	$	1
604.55	ADJ. M.H. COVERS AND FRAMES BY OTHERS	EA.	1
611.811	RELOCATE HYDRANT	$	1
611.90001	ADJUST WATER GATES	EA.	2
611.99	REMOVE & RECONST. WATER VALVE BOX TOP	$	1

CONSTRUCTION SIGNS AND WARNING DEVICES

(MINIMUM REQUIREMENTS)

ITEM 619.2 TOTAL = 1 UNIT

SIGN NO.	DESCRIPTION	SIZE	SQ. FT.	NO. REQ'D	TOTAL AREA	POSTS	EASELS	REMARKS
G20-2	END CONSTRUCTION	3×6	18	6	108	12		
R11-2	ROAD CLOSED	2½×4	10	2	20			
R200-5	UNAUTHORIZED TRAVEL PROHIBITED	2×4	8	2	16			
W4-2L	LANE NARROWS ⅓	4×4	16	4	64		4	
W4-2R	LANE NARROWS ⅓	4×4	16	4	64		4	
W20-5E	RIGHT (LEFT) LANE CLOSED (1/2 MILE)	4×4	16	4	64		4	
W20-7A	FLAGMAN (AHEAD)	4×4	16	4	64		4	
W20-9	BE PREPARED TO STOP	4×4	16	4	64		4	
W9-1L	LEFT LANE ENDS	4×4	16	4	64		4	
W9-1R	RIGHT LANE ENDS	4×4	16	4	64		4	
W9-2L	LANE ENDS MERGE LEFT	4×4	16	4	64		4	
W9-2R	LANE ENDS MERGE RIGHT	4×4	16	4	64		4	
W20-1A	ROAD (BRIDGE) CONSTRUCTION (AHEAD)	4×4	16	3	48	6		
W20-1E	ROAD (BRIDGE) CONSTRUCTION (1/2 MILE)	4×4	16	6	96	12		
W20-1F	ROAD (BRIDGE) CONSTRUCTION (1 MILE)	4×4	16	6	96	12		
	BARRICADES							
	TYPE II			50				
	TYPE III			10				
	WARNING LIGHTS							
	TYPE A OR C			30				
	DELINEATORS							
	VP-1 (8" × 24")			30				
	TRAFFIC CONES							
	28" ORANGE			50				
	ARROW BOARDS							
	DIETZ OR EQUAL			3				
	PLASTIC BARRELS			150				

SURFACING MATERIALS

ITEM NO.	304.1	304.2	304.3		304.32		403.11	403.12	403.99	411.1
ITEM	SAND	GRAVEL	CRUSHED GRAVEL		C.G. FOR SHOULDER LEVELING		HOT BITUM. PAVEMENT MACHINE	HOT BITUM. PAVEMENT HAND	H.B. CONC. LEVELING COURSE	H.B. CONC. LEVELING COURSE
UNIT	C.Y.	C.Y.	C.Y.		C.Y.		TON	TON	TON	TON
LOCATION										
SPAULDING TPK. & DECEL. LANE 24+00 - 39+20 M.S.℄	281	135	73		23		523			213
FRONTAGE ROAD 39+20 - 56+16 M.S.℄	5194	2083	988				1450			
OMNE ROAD OFF-RAMP 416+97 - 420+02.72 ℄30	520	208	149				246			
OMNE ROAD 353+00 - 355+00 ℄20	965	387	228				377			
OMNE ROAD ON-RAMP 251+00 ℄25 - 61+00 M.S.℄	745	299	213				352			
SPAULDING TPK. & ACCEL LANE 61+00 - 75+33.33 M.S.℄	1903	761	639				1081			296
ECHO AVE OFF-RAMP 306+00 - 308+50 ℄23	473	320	105				209			
SPAULDING TPK. & I-95 39+20 - 61+00 M.S.℄	622	250	214				1065	35	663	390
EDWARDS TOYOTA PARK. LOT							61			
TEMP. ACCESS ROAD (DEALERSHIPS)	267		81				120			
SUBTOTALS	10970	4443	2690		23		5484	35	663	899
ESTIMATED	1030	157	110		77		116	15	137	101
PROJECT TOTALS	12000	4600	2800		100		5600	50	800	1000

PROJ. NO.	SHEET NO.	TOTAL SHEETS
P-2104-A F-001-(1)	8	118

NOTE BOOKS

BOOK NO.	PAGE NO.

AFTER PROPOSAL

REVISIONS DATE	REVISION	DESCRIPTION

COMPILED BY DATE
CHECKED BY DATE
INKED BY B.T.D. DATE 6-15-84
CHECKED BY DATE

1M 1 68 BRUNING 40-21 50800

SUMMARY OF QUANTITIES (ESTIMATED)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

* NOT AN ITEM TOTAL - SEE SHEET 8 OF FOR TOTAL

SUBSIDIARY ITEMS

CONNECTING PIPES TO EXISTING CATCH BASINS SHALL BE SUBSIDIARY TO PIPE

CONNECTING PIPES TO EXISTING PIPES SHALL BE SUBSIDIARY TO PIPE

CONNECTING CATCH BASINS TO EXISTING PIPES SHALL BE SUBSIDIARY TO CATCH BASINS

REMOVAL OF CONCRETE ISLAND SECTIONS SHALL BE SUBSIDIARY TO COMMON EXCAVATION ITEM NO. 203.1

REMOVAL OF EXISTING GRATE & FRAME AT 35+00 SHALL BE SUBSIDIARY TO ITEM 604.6 - MH. COVER & FRAME.

6" FRENCH DRAIN INCL. EXCAVATION & BACKFILL @ STA. 57+95 DURING CONST. SUBSIDIARY TO C.B.-B ITEM NO. 604.19100, SEE SHEET 27 FOR DETAILS.

REMOVAL AND STOCKPILING OF R.O.W. FENCE FOR SALVAGE TO STATE SUBSIDIARY TO FENCE

TRAFFIC SIGNS

ITEM NO.	615.02	615.10001	615.10301	615.03	615.04	615.044	615.10002	615.10801
		✓	✓		✓	✓	✓	✓
ITEM	TRAFFIC SIGNS TYPE B	FULL TRAFFIC SIGN STRUCTURE	REMOVE FULL TRAFFIC SIGN STRUCTURE	TRAFFIC SIGNS TYPE C	TRAFFIC SIGNS TYPE AA	RELOCATING TRAFFIC SIGNS TYPE AA	FULL TRAFFIC SIGN STRUCTURE	FULL TRAFFIC SIGN STRUCTURE SUPPLIED BY OTHERS
UNIT	S.F.	U	U	S.F.	S.F.	U	U	U
SEE SHEETS FOR SIGNING DETAILS						4		
SUB-TOTALS	44	1	1	94.66	341		1	1
ESTIMATED	0	0	0	5.35	0	0	0	0
PROJECT TOTALS	44	1	1	100	341	4	1	1

LIGHTING SUMMARY

ITEM NO.	614.721	614.51	625.22
ITEM	2" P.V.C. PLASTIC CONDUIT INCLUDING SPECIFIED EXCAVATION	CONCRETE PULL BOX	CONCRETE LIGHT POLE BASES TYPE "B" FOR HIGHWAY LIGHTING
UNIT	L.F.	EA.	EA.
LOCATION			
30+70 RT.		1	1
30+70 RT. - 38+90 RT.	225		
38+90 RT		1	1
38+90 RT. - 41+80 RT.	288		
41+80 RT.		1	
41+80 RT. - 44+80 RT.	302		
44+80 RT.		1	1
44+80 RT - 300+95 RT.	100		
300+95 RT (ECHO AVE.)		1	1
300+95 RT. - 308+68 RT.	160		
53+60 RT.		1	1
53+60 RT - 55+95 RT	235		
55+95 RT.		1	1
55+95 RT. - 418+45 RT.	152		
418+45 RT.		1	1
418+45 RT. - 419+85 RT.	125		
419+85 RT.		1	
419+85 RT. - 354+75 RT.	195		
SUB-TOTALS	1782	9	7
ESTIMATE	18	1	0
PROJECT TOTALS	1800	10	7

PAVEMENT MARKINGS

ITEM NO.	632		635.101	635.22	635.21
ITEM	REFLECTORIZED PAINT PAVEMENT MARKINGS (TEMPORARY)		REFLECTORIZED PLASTIC PVM'T. MARKING, 60 MIL. TYPE I	REFLECTORIZED PLASTIC PVM'T. ARROWS DOUBLE	REFLECTORIZED PLASTIC PVM'T. ARROWS, SNGL. WITH WORDS
	4" YELLOW	4" WHITE			
UNIT	L.F.	L.F.	L.F.	EA.	EA.
LOCATION					
I-95	1000	2240			
SPAULDING TURNPIKE (EST.)	3750	7100			
FRONTAGE ROAD (EST.)		310			
OMNE ROAD INTERSECTION			160	2	2
SUB-TOTALS	4750	9650			
ESTIMATED	250	350	15	—	—
PROJECT TOTAL	5000	10,000	175	2	2
ITEM TOTAL	15,000		175	2	2

ESTIMATED QUANTITIES FOR O.H. TRAFFIC SIGN STRUCTURE FOUNDATIONS

ITEM NO.	520.21	544.	206.1
ITEM	CLASS A CONCRETE	REINFORCING STEEL	COMMON STRUCTURE EXCAVATION
UNIT	C.Y.	LB.	C.Y.
LOCATION			
STA. 59+00	35	1500	120
STA. 20+00	25	1200	60
STA. 34+50	25	1300	75
ESTIMATED PROJECT TOTALS	85*	4000	* 255

WORK TO BE DONE BY OTHERS

NEW WATER MAIN BY OMNE: STA. 52+50 - STA. 58+93 MS &

RELOCATION OF OVERHEAD COMM. LINES BY NEW ENGLAND TELEPHONE

RELOCATION OF UNDERGROUND POWER LINE BY PUBLIC SERVICE N.H.

EXPANSION OF BRADY FORD PARKING LOT & DRAINAGE SYSTEM (TO BE TIED TO STATE DRAINAGE) BY OMNE.

FENCING SUMMARY

S.A. 607.6559 SUBSTITUTE TOP RAIL W/STANDARD TENSION CABLE

ITEM NO.	607.655	607.659
ITEM	VINYL-COATED CHAIN LINK FENCE 5' HIGH	POST ASSEMBLY FOR FENCE 5' HIGH
UNIT	L.F.	EA.
LOCATION	AS-BUILT	TOTAL
46+50 RT. 268' - 46+50 RT. 120	~~145~~ 141	~~1~~ 2
46+50 RT. 120 - 55+20 RT. 120	~~870~~ 863	~~3~~ 2
55+80 RT. 120 - 36+16.31 RT. 120	~~36~~ 43	1 ✓
36+16.31 RT. 120 - 417+92.97 RT. 22	80 ✓	1 ✓
417+92.97 RT. 22 - 418+88.67 RT. 22	80 ✓	1 ✓
418+88.67 RT. 22 - 419+84.36 RT. 20	80 ✓	1 ✓
419+84.36 RT. 20 - 422+02.72 RT. 20	~~215~~ 218	2 ✓
249+00 RT. 20 - 252+10.10 RT. 20	~~610~~ 0	2 ✓
252+10.10 RT. 20 - 253+02.68 RT. 20	~~85~~ 0	1 ✓
253+02.68 RT. 20 - 253+95.26 RT. 20	~~85~~ 0	1 ✓
253+95.26 RT. 20 - 254+32.55 RT. 20	~~38~~ 0	1 ✓
254+32.55 RT. 20 - 64+00 RT. 100'	~~400~~ 0	2 ✓
64+00 RT. 100' - 75+33.33 RT. 100'	~~150~~ 848	~~4~~ 4
SUB-TOTALS	3874	19
ESTIMATED	126	6
PROJECT TOTALS	~~4000~~	~~25~~
AS-BUILT TOTAL	3555	21

GUARDRAIL @ O.H. SIGN STRUCTURE LOCATIONS

STRUCTURE STA. 20+00 (OFFSET G.R. 10'-0" FROM T.W.)

ITEM NO.	ITEM	STATION	AS BUILT QUANTITY
606.146	TERM. UNIT TYPE F	17+50 - 18+50	1 U ✓
606.140	STD. SECTION	18+50 - 19+75	125 L.F. ✓
606.147	TERM. UNIT TYPE G	19+75 - 20+25	1 U ✓

STRUCTURE STA. 34+50 (~~OFFSET G.R. 8'-0" FROM T.W. RIGHT~~ ~~OFFSET G.R. 7'-0" FROM T.W. LEFT~~)

ITEM NO.	ITEM	STATION	QUANTITY
606.146	TERM. UNIT TYPE F	31+75 - 32+75 RT.	~~1~~ U 0
606.140	STD. SECTION	32+75 - 34+25 RT.	~~150~~ L.F. 0
606.147	TERM. UNIT TYPE G	34+25 - 34+75 RT.	~~1~~ U 0
606.146	TERM. UNIT TYPE F	32+00 - 32+00 LT.	1 U ✓
606.140	STD. SECTION	32+00 - 34+25 LT.	125 L.F. ✓
606.147	TERM. UNIT TYPE G	34+25 - 34+75 LT.	1 U ✓

STRUCTURE STA. 59+00 (~~OFFSET G.R. 10'-0" FROM T.W. RIGHT~~ ~~OFFSET G.R. 10'-0" FROM T.W. LEFT~~)

ITEM NO.	ITEM	STATION	QUANTITY
606.146	TERM. UNIT TYPE F	56+75 - 57+75 RT.	~~1~~ U 0
606.140	STD. SECTION	56+75 - 58+75 RT.	~~200~~ L.F.
606.147	TERM. UNIT TYPE G	58+75 - 59+25 RT.	~~1~~ U 0
606.146	TERM. UNIT TYPE F	58+75 - 59+25 LT.	1 U ✓
606.140	STD. SECTION	59+25 - 61+00 LT.	~~175~~ L.F. 0
606.147	TERM. UNIT TYPE G	61+00 - 62+00 LT.	1 U ✓
606.146	~~PROJECT~~ TOTAL - AS BUILT		3 U ~~5 U~~
606.140	~~PROJECT~~ TOTAL - AS BUILT		300.0 ~~675~~ L.F.
606.147	~~PROJECT~~ TOTAL - AS BUILT		3 U ~~5 U~~

LANDSCAPING AND SLOPE PROTECTION

ITEM NO.	585.5	642.0	643.12	643.22	644.44	645.11	645.51	647.1
ITEM	STONE FILL CLASS E	LIMESTONE	FERTILIZER FOR INITIAL APPLICATION	FERTILIZER FOR RE-FERTIL.	SLOPE SEED TYPE 44	MULCH	HAY BALES FOR TEMP. EROSION CONTROL	HUMUS
UNIT	C.Y.	TON	TON	TON	POUND	ACRE	EA.	C.Y.
LOCATION								
SPAULDING TPK. & FRONTAGE ROAD LEFT OF PAVEMENT	550	3.44	0.75	0.75	103	1.72		810
ISLAND BETWEEN TPK. & FRONTAGE ROAD 39+20 TO 56+50		1.28	0.28	0.28	38	0.64		310
ECHO AVE. LEFT & RIGHT		0.35	0.08	0.08	11	0.17		80
OMNE ROAD OFF-RAMP RT.		0.64	0.14	0.14	19	0.32		146
OMNE ROAD ON-RAMP RT.		0.41	0.01	0.01	12	0.21		99
OMNE ROAD ON & OFF RAMPS TO L.A.R.O.W.		0.30	0.07	0.07	9	0.15		71
ISLAND AREA BETWEEN MAINLINE AND ON & OFF RAMPS		1.41	0.31	0.31	42	0.70		330
SUB-TOTALS	550	7.83	1.64	1.64	234	3.91	143 (EST.)	1846
ESTIMATED	50	0.17	0.36	0.36	6	.09	57	154
PROJECT TOTALS	600	8.00	2.00	2.00	240	4.00	200	2000

PROJ. No.	SHEET No.	TOTAL SH'TS.
P-4104A F-001-6(1)	9	118

NOTE BOOKS BOOK NO. PAGE NO.

DESCRIPTION

AFTER PROPOSAL STATION DATE

REVISIONS STATION DATE

DATE DATE DATE 6-15-84 DATE

COMPILED BY CHECKED BY INDEXED BY STD CHECKED BY

FM 1 (8) BRUNING 46.31 - 30000

SUMMARY OF QUANTITIES (ESTIMATED)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

* NOT AN ITEM TOTAL

CURB SUMMARY	ITEM NO.	609.81		609.01	609.5	609.21	609.22	609.23
	DESCRIPT.	BIT. CONCRETE CURB TYPE A UNPAINTED		STRAIGHT GRANITE CURB	RESET GRANITE CURB	STRAIGHT GRANITE SLOPE CURB		CURVED GRANITE SLOPE CURB
	MARK NO.	L.F.	RADIUS	L.F.	L.F.	SQ. JTS. L.F.	RAD. JTS. L.F.	L.F.
✓ 100+00 RT 10.00' TO 101+80.98 RT 10.00' ℄21	MK 1-1				181.0			
✓ 101+80.98 RT. 10.00 TO 101+81.05 RT. 12.00' ℄21	MK 1-2		1.0					3.1
✓ 207+95.00 LT 4.00' TO 210+58.54 LT. 4.00' LT. ℄21	MK 1-3		22,922.31		263.6			
✓ 206+95.00 LT. 4.00' TO 207+95.00 LT 4.00' ℄22	MK 1-4				100.0			
✓ 207+40.00 RT. 26.00' TO 210+89.53 RT 24.11' ℄22	MK 2-1				349.2			
✓ 210+89.53 RT. 24.11' TO 214+18.12 RT. 22.00' ℄22	MK 2-2		12,074.13		328.5			
✓ 105+41.06 RT 28.00' TO 109+56.01 RT 22.00' ℄21	MK 2-3				415.5			
✓ 109+56.01 RT. 22.00 TO 112+67.56 RT. 22.00' ℄21	MK 2-4		11,481.16		312.2			
✓ 112+67.56 RT. 22.00' TO 120+41.76 RT. 22.00' ℄21	MK 2-5				550	224.2		
✓ 120+41.76 RT. 22.00' TO 120+41.76 RT. 24.00' ℄21	MK 2-6		1.0					3.1
119+72.04 RT 25.40' TO 120+41.76 RT. 24.00' ℄21	MK 2-7					69.7		
253+95.85 LT. 20.00' TO 254+69.44 LT. 16.79' ℄25	MK 2-8		199.32			73.5		
252+10.10 LT 20.00' TO 253+95.85 LT. 20.00 ℄25	MK 2-9		250.0			185.8		
✓ 351+89.89 LT 3.00' TO 354+97.00 LT. 3.00' ℄26	MK 2-10					307.1		
✓ 354+97.00 LT 3.00' TO 354+97.00 RT 3.00' ℄26	MK 2-11		3.0				9.4	
✓ 353+41.33 RT 3.00' TO 354+97.00 RT. 3.00' ℄26	MK 2-12					155.7		
353+41.48 RT 6.00 TO 353+41.33 RT 3.00' ℄26	MK 2-13		150.0			30.0		
352+81.63 RT. 9.00' TO 353+11.48 RT. 6.00' ℄26	MK 2-14		150.0			30.0		
✓ 416+97.27 LT 20.00' TO 419+84.36 LT 20.00' ℄30	MK 2-15		170.0			325.4		
112+67.56 RT. 42.00' TO 115+59.02 RT. 42.00' ℄21	MK 2-16					291.5		
109+65.96 RT. 42.00' TO 112+67.56 RT. 42.00' ℄21	MK 2-17		11,501.70			302.7		
✓ 207+40.00 RT 33.00' TO 218+43.56 RT. 42.00' ℄22	MK 2-18					1102.6		
✓ 209+20.79 RT. 65.42 TO 210+20.75 RT. 73.62 ℄22	MK 3-1					100.0		
✓ 210+20.75 RT. 73.62 TO 212+82.74 RT. 73.03' ℄22	MK 3-2					261.2		
✓ 305+42.21 TO 307+71.48 ℄23	MK 3-3		100.0				229.3	
✓ 307+71.48 TO 308+25.00 ℄23	MK 3-4					53.5		
306+00 LT. 24.00' TO 307+71.48 LT. 22.00' ℄23	MK 4-1		123.0			211.4		
✓ 307+71.48 LT 22.00' TO 308+25.00 LT. 22.00' ℄23	MK 4-2					53.5		
104+77.89 RT. 69.69 TO 109+65.96 RT. 62.00' ℄21	MK 5-1					489.4		
✓ 109+65.96 RT 62.00' TO 112+67.56 RT. 62.00' ℄21	MK 5-2		11,521.16			303.2		
✓ 112+67.56 RT. 62.00' TO 114+48.25 RT. 62.00' ℄21	MK 5-3					180.7		
✓ 114+50.13 RT. 99.00' TO 114+48.25 RT. 62.00' ℄21	MK 5-4		25.0				51.8	
114+48.25 RT. 98.52' TO 114+50.13 RT. 99.00' ℄21	MK 5-5		1.0					2.6
✓ 114+48.25, 88.52' TO 107.52' RT. ℄21	MK 5-6	19.0						
109+75.04 RT. 91.76' TO 114+48.25 RT. 87.52 ℄21	MK 5-7	473.2						
SUB-TOTAL		492.2			2,500	4751.1	290.5	8.8

CURB SUMMARY	ITEM NO.	609.81		609.01	609.5	609.21	609.22	609.23
	DESCRIPT.	BIT. CONCRETE CURB TYPE A UNPAINTED		STRAIGHT GRANITE CURB	RESET GRANITE CURB	STRAIGHT GRANITE SLOPE CURB		CURVED GRANITE SLOPE CURB
	MARK NO.	L.F.	RADIUS	L.F.	L.F.	SQ. JTS. L.F.	RAD. JTS. L.F.	L.F.
✓ 351+89.89 LT. 23.00' TO 355+00.00 LT. 23.00' ℄26	MK 6-1					312.6		
✓ 252+10.10 TO 254+87.85 ℄25	MK 6-2		230.0			277.8		
✓ 119+92.09 RT. 41.00' TO 120+46.13 RT. 49.92 ℄21	MK 6-3		150.0			55.1		
✓ 352+81.63 RT 54.00' TO 354+47.27 RT. 54.00' ℄26	MK 12-1	165.6						
✓ 418+88.67 RT 27.00' TO 419+84.36 RT. 26.00' ℄30	MK 12-2	77.8						
✓ 417+92.97 RT. 27.00' TO 418+88.67 RT. 27.00' ℄30	MK 12-3	77.2						
✓ 416+97.27 RT. 27.00' TO 417+92.97 RT 27.00' ℄30	MK 12-4	77.2						
✓ 115+13.49 RT. 89.00' TO 115+59.02 RT. 89.00' ℄21	MK 12-5	45.5						
✓ 115+12.62 RT. 88.50' TO 115+13.49 RT. 89.00' ℄21	MK 12-6		1.0					1.0
115+00.00 RT. 66.50' TO 115+12.62 RT. 88.50 ℄21	MK 12-7					25.4		
115+02.52 RT 66.50' TO 115+02.52 RT 62.00' ℄21	MK 12-8		3.0				6.3	
✓ 115+02.52 RT 62.00' TO 115+59.02 RT. 62.00' ℄21	MK 12-9					56.5		
✓ 416+97.27 TO 419+84.36 ℄30	MK 12-10		150.0			287.1		
✓ 352+81.63 RT. 29.00 TO 354+98.72 RT. 29.00 ℄26	MK 12-11					217.3		
		492.2						
SUB-TOTAL		443.3			0	1,231.8	6.3	1.0
TOTAL		935.5			2,500	5982.9	296.8	9.8
EST.		14.5			50	117.1	53.2	0.2
PROJECT TOTAL		950			2,550	6100	350	10

FED. PROJ. NO.	PROJ No	SHEET No	TOTAL SHTS
F-001-6(1)	P-4104-A	10	118

NOTE BOOKS — BOOK NO. / PAGE NO.

PROPOSAL — DESCRIPTION

AFTER — STATION

REVISIONS — DATE / STATION

COMPILED BY — DATE

CHECKED BY — DATE

INKED BY — DATE

CHECKED BY — DATE

1M 1 68 BRUNING 40 21 50500

SUMMARY OF QUANTITIES (ESTIMATED)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

* NOT AN ITEM TOTAL

DRAINAGE SUMMARY

LOCATION	202.41 REMOVAL OF PIPE UNDER 24" Ø L.F.	202.5 REMOVAL OF C.B.'S D.I.'S & M.H.'S EACH	206.1 STRUCTURE EXCAVATION COMMON C.Y.	206.2 STRUCTURE EXCAVATION ROCK C.Y.	209* GRANULAR BACKFILL C.Y.	520.1 CLASS 'A' CONCRETE C.Y.	604.39 SPECIAL MH ACT. U.	604.39 SPECIAL MH EST. U.	603.00212 REINFORCED CONCRETE PIPE INCLUDING SPECIFIED EXCAVATION 12" DIA. L.F.	603.00215 15" DIA. L.F.	603.00218 18" DIA. L.F.	603.00224 24" DIA. L.F.	603.00236 36" DIA. L.F.	603.30112 R.C. END SECTION INCL. SPEC. EXCAV. 12" EACH	603.30136 36" EACH	604.12 C.B. "B" ACT. U.	604.12 C.B. "B" EST. U.	604.15 C.B. "E" ACT. U.	604.15 C.B. "E" EST. U.	604.19XX SPECIAL C.B. 5' DIA. ACT. U.	604.19XX SPECIAL C.B. 5' DIA. U.	604.22 D.I. "B" ACT. U.	604.22 D.I. "B" EST. U.	604.242 D.I. "D-B" ACT. U.	604.242 D.I. "D-B" EST. U.	604.25 D.I. "E" ACT. U.	604.25 D.I. "E" EST. U.	603.60036 RELAYING DRAINAGE PIPE L.F.	604.4 RECONST. CB. & D.I. L.F.	604.6 MANHOLE COVER & FRAME EACH	605.90206 6" U.D. INCL. SPEC. EXCAV. & BACKFILL L.F.	REMARKS
SPAULDING MAINLINE & FRONTAGE RD.																																	
35+00				19					8																	1	1				1		REMOVE EXIST. GRATE & FRAME
35+00 - 37+00				15																												205	1 45° BEND, Connect To CB @ 35+00
37+00 - 39+50																																240	1 45° BEND (ADVERSE TO GRADE)
39+20 - 40+69 GRADE ISLAND TO DRAIN																																	COVERED UNDER FINE GRADING
39+30			1.6			.30																											UL-2 HEADWALL STRUCTURE
39+45			10																	1	1												ITEM NO. 604.19101, REPAIR EX. STRUC. INLET
39+45 - 44+25																																485	1 45° BEND
39+50			1.6			.30																											UL-2 HEADWALL STRUCTURE
39+50 - 42+00 (RT. EDGE ECHO AVE. RAMP)																																255	1 45° BEND
40+69																													4				ECCENTRIC TOP CENTER GRATE IN ISLAND
40+71 - 42+48	185											180																					
41+61		1																															
42+10									18					1								1	1										
42+10 - 24+50																																325	1 45° BENDS
42+50																													4				ECCENTRIC TOP CENTER GRATE IN ISLAND
44+35									5							1	1												4				ECCENTRIC TOP CENTER GRATE IN ISLAND
44+35 - 46+14	180																																
44+35 - 48+50																																425	1 45° BEND
44+37 - 45+43										125																							
45+45																1	1																
46+14 - 46+50	85																																
45+45 - 48+50																																325	1 45° BEND
46+00 - 308+50																																	COVERED UNDER FINE GRADING
46+14	48																																
46+14		2																															
46+25			14		3		1	1																									
46+50		1																															
46+25 - 48+50													190																				
48+50				5									15							4	4												(ITEM NO. 604.19103, 604.19104 & 604.19107
46+25													23																				" " 604.19109 - REMOVE EXIST. STRUCTURE)
46+28															1																		
48+50 - 54+28				70																												1180	4 - 45° BENDS
54+28										7																							
54+28				35						15	25					2	2	2	2			1	1										RETAIN EXISTING 24" RCP
54+28 - 58+10				90																												395	1 45° BEND
54+28 - 418+92				52																												400	1 45° BEND
54+28 - 55+65				30						135																							
55+25				15																		1	1										FLAT SLAB TOP
55+25 - 55+62				8						35																							
55+62				15												1	1																FLAT SLAB TOP
55+62 - 55+65				2						10																							
55+65				15												1	1																
55+65 - 55+85				4						20																							
55+85				10																						1	1						
57+95																				1	1												ITEM NO. 604.19100 ** (SEE NOTE NEXT SHEET)
57+95 - 58+00										30																							
57+95 - 61+50										350																							
57+95 - 64+00				20																												600	1 45° BEND
58+00																						1	1										
61+50																										1	1						
64+45		1		25					37																	1	1						DI. @ 90.5' RT.
64+45 - 67+47																																325	1 45° BEND
67+47		1		30					33																	1	1						DI. @ 90.5' RT.
67+47 - 73+45				90																												600	1 45° BENDS
73+45										14																1	1				1		REMOVE EXISTING CB GRATE & FRAME
75+33.33 - 76+50																																	COVERED UNDER FINE GRADING
SHEET TOTAL	498	6	27.2	550	3	.60	1	1	101	741	25	180	228	1	1	6	6	2	2	3	3	1	1	6	6	0	12	2				5700	

SEE SHEET 12 FOR AS-BUILT TOTALS

PROJ. NO.	SHEET NO.	TOTAL SH'TS
P-4104-A F-001-6(1)	11	118

NOTE BOOKS

BOOK NO.	PAGE NO.

REVISIONS — DATE — STATION — DESCRIPTION

AFTER PROPOSAL

COMPILED BY — DATE
CHECKED BY — DATE 6/14/84
INKED BY JVM — DATE
CHECKED BY — DATE

1M 1 68 BRUNING 40-21 50800

SUMMARY OF QUANTITIES (ESTIMATED)

THIS INFORMATION IS FOR BIDDING PURPOSES ONLY

* NOT AN ITEM TOTAL

DRAINAGE SUMMARY

LOCATION	202.41 REMOVAL OF PIPE UNDER 24" ø L.F.	202.5 REMOVAL OF C.B.'S D.I.'S & M.H.'S EACH	206.1 STRUCTURE EXCAVATION COMMON C.Y.	206.2 STRUCTURE EXCAVATION ROCK C.Y.	209 * GRANULAR BACKFILL C.Y.	520.1 CLASS "A" CONCRETE C.Y.	604.59 SPECIAL MH ACT. U	604.59 SPECIAL MH EST. U	603.00212 REINFORCED CONCRETE PIPE INCLUDING SPECIFIED EXCAVATION 12" DIA. L.F.	603.00215 15" DIA. L.F.	603.00218 18" DIA. L.F.	603.00224 24" DIA. L.F.	603.00236 36" DIA. L.F.	603.30112 R.C. END SECTION INCL. SPEC. EXCAV. 12" EACH	603.30136 36" EACH	604.12 C.B. "B" ACT. U	604.12 C.B. "B" EST. U	604.15 C.B. "E" ACT. U	604.15 C.B. "E" EST. U	604.191.104 SPECIAL C.B. 5' DIA. ACT. U	604.191.104 SPECIAL C.B. 5' DIA. EST. U	604.22 D.I. "B" ACT. U	604.22 D.I. "B" EST. U	604.242 D.I. "D-B" ACT. U	604.242 D.I. "D-B" EST. U	604.25 D.I. "E" ACT. U	604.25 D.I. "E" EST. U	603.60036 RELAYING DRAINAGE PIPE L.F.	604.4 RECONST. CB. & D.I. L.F.	604.6 MANHOLE COVER & FRAME EACH	605.0106 6" U.D. INCL. SPEC. EXCAV. & BACKFILL L.F.	REMARKS
ECHO AVE.																																	
24+50 ECHO			3																														
24+50 ECHO - 45+35 SPAULDING M.S.&										34												1	1										
24+50 ECHO - 27+25 ECHO																																280	1 45° BEND 280 ABS
45+45 M.S.& - 27+25 ECHO																																300	1 45° BEND 300 ABS
OMNE RD. OFF-RAMP																																	
418+92 &30 - 354+95 &26				72																												325	1 45° BEND 325 ABS
~~352+95 &26~~																																	
352+95 &26 - 57+95 MS &				333																													
419+00 &30 - 419+95 &30									90													1	1					225					EXISTING 36" RCP **
352+95 &26			2	31															1	1													
354+95 &26 - 419+95 &30				296																								200					ITEM NO. 604.19105 ** EXISTING 36" RCP **
354+95 &26				35						24								1	1	1	1												ITEM NO. 604.19108 **
OMNE RD. ON-RAMP																																	
354+95 &26			3							14																							
354+95 &26			20							18						1	1									1	1						
354+95 &26 - 252+75 &25																																380	1 45° BEND
252+70 &25									6							1	1									1	1						
57+96 M.S.& - 252+70 &25										105																							
252+70 & 26 - 64+45 MS &																																600	1 45° BEND
FROM OHD. TRAFFIC SIGNS			255			85																											
SHEET TOTALS	—	—	260	790	—	85	—	—	90	201	—	—	—	0	—	—		2	2	1	1	2	2	—	—	2	2	425	—	—		1885	
OTHER SUMMARY TOTALS	498	6	27.2	550	3	60	1	1	101	741	25	180		228	1	1		6	6	1	2	3	3	1	1	6	6	0	12	2		5760	
TOTALS	498	6	287.2	1340	3	85.60		1	191	942	25	180		228	1	1			8	2	3		5	1	1	8	8	425	12	2		7645	
ESTIMATED	32	2	17.8	160	197	44			59	68	5	20		22	—	—			—		1		1		—		2	25	3	2		355	
PROJECT TOTALS	~~530~~	~~8~~	305	1500	200*	90		1	~~250~~	~~1000~~	~~30~~	~~200~~		~~250~~	1	1			8		~~4~~		~~6~~		+		~~10~~	~~450~~	~~15~~	~~4~~		~~8000~~	
AS BUILT TOTALS →	296	6						✓	347	869	25	178		226	✓	✓			✓		3.1		5.3		2		8	0	13.8	3		7103	
FROM OHD. TRAF SIGNS																																	
PROJECT TOTAL																																	

** NOTE: DO NOT ORDER MATERIAL FOR ITEMS 604.19106, 604.19105, 604.19108 OR BEGIN ANY WORK ASSOCIATED WITH ITEM 603.60036 WITHOUT PRIOR APPROVAL OF THE ENGINEER

NOTE BOOKS — BOOK NO. / PAGE NO.

DESCRIPTION — AFTER PROPOSAL — STATION

REVISIONS — DATE — STATION

COMPILED BY — DATE
CHECKED BY — DATE
INKED BY JVM — DATE 6/14/66
CHECKED BY — DATE

PROJ. No.	SHEET No.	TOTAL SHTS
P-4104-A F-001-6(1)	12	118

1M 1 66 BRUNING 40-21 50800

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N.H.	P-4104-A	13	

ITEM NO.	IDENT. NO.	SIGN SIZE HEIGHT	SIGN SIZE WIDTH	TEXT	TEXT DIMENSIONS LETTER HEIGHT U.C.	L.C.	CAPS	RTE. MKR. OR SHIELD	ARROW	NUMERAL	NO. SIGNS REQ'D.	SIGN AREA (SQ. FT.) NOM. AREA	TOTAL AREA	REMARKS
615.03	R3-8	30"	30"	ONLY — BLACK ON WHITE			4"				2	6.25	12.50	1 ALUM. POST 3" PER SIGN
615.03	R4-7	30"	24"	BLACK ON WHITE							1	5.00	5.00	1 ALUM POST 3"
615.03	OM TYPE 1	18"	18"	3" YELLOW HIFI DOTS W/ BLACK BACKGROUND							1	2.25	2.25	MOUNTED ON POST ABOVE.
615.03	R2-1	24"	30"	SPEED LIMIT 45 — BLACK ON WHITE	SEE F.H.W.A. HIGHWAY SIGNS BOOKLET.						1	5.00	5.00	1 ALUM. POST 3"
615.03	R5-1	30"	30"	DO NOT ENTER — WHITE ON RED			4"				2	6.25	12.50	1 ALUM. POST 3" PER SIGN
615.03	R5-1A	24"	30"	WRONG WAY — WHITE ON RED	SEE F.H.W.A. HIGHWAY SIGNS BOOKLET						2	6.0	12.00	1 ALUM POST 3" PER SIGN

ITEM NO.	IDENT. NO.	SIGN SIZE HEIGHT	SIGN SIZE WIDTH	TEXT	TEXT DIMENSIONS LETTER HEIGHT U.C.	L.C.	CAPS	RTE. MKR. OR SHIELD	ARROW	NUMERAL	NO. SIGNS REQ'D.	SIGN AREA (SQ. FT.) NOM. AREA	TOTAL AREA	REMARKS
615.03	W13-3	60"	48"	RAMP 30 M.P.H. — BLACK ON YELLOW	SEE F.H.W.A. HIGHWAY SIGNS BOOKLET						1	20.0	20.0	1 ALUM. POST 3"
615.04	GO-2	11'-0"	15'-0"	NORTH 16 / WEST 4			10E	36"			1	165.0	165.0	LOCATED ON MAST ARM STA. 34+50
615.04	GO-2A	8'-0"	10'-0"	ECHO AVE OMNE RD.		13" 13"	10" 10"				1	80.0	80.0	LOCATED ON MAST ARM STA. 34+50
615.02	GA-1	4'-0"	6'-0"	ECHO AVE. OMNE RD.			8C 8C		8"		1	24.0	24.0	2 ALUM. POST 3"
615.02	GA-2	4'-0"	5'-0"	OMNE RD. / ECHO AVE.			6C 6C		6"		1	20.0	20.0	2 ALUM. POST 3"

NOTE: ALL TRAFFIC SIGNS TYPE C TO BE SUPPLIED WITH CIRCULAR ALUMINUM POSTS

TRAFFIC SIGN SUMMARY

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	13	118

REVISIONS AFTER PROPOSAL (USE BOTTOM LINES FIRST)

NO.	DATE	DESCRIPTION	STATION	STATION

NOTEBOOKS

	DATE	BOOK NO.	PAGE NO.	BOOK NO.	PAGE NO.
PLAN TRACED					
PLAN CHECKED					
PROFILE TRACED					
PROFILE CHECKED					
INKED					
CHECKED					

SEE SHEET 9 FOR SUMMARY OF QUANTITIES

ITEM NO.	IDENT. NO.	SIGN SIZE HEIGHT	SIGN SIZE WIDTH	TEXT	TEXT DIMENSIONS LETTER HEIGHT * U.C.	L.C.	CAPS.	RTE. MKR. OR SHIELD	ARROW	NUMERAL	NO. SIGNS REQ'D.	SIGN AREA (SQ. FT.) NOM. AREA	TOTAL AREA	REMARKS
615.04	GO-1	2'-0" 8'-0"	8'-0" 10'-0"	EXIT 1 Pease A.F.B. Gosling Rd. 1 MILE	13" 13"	10" 10"	10E 10"			15E 10E	1	16.0 80.0	96.0	LOCATED ON MAST ARM. STA. 20+00
615.044	GE-1	11'-0"	12'-0"	EXISTING SIGN SOUTHBOUND (RIGHT LANE)							1 UNIT			LOCATED ON MAST ARM STA. 59+00
615.044	GE-2	11'-0"	15'-0"	EXISTING SIGN SOUTHBOUND (LEFT LANE)							1 UNIT			LOCATED ON MAST ARM STA. 59+00
615.044	GE-3	3'-0"	10'-0"	Pease A.F.B. NEXT LEFT							1 UNIT			LOCATED ON MAST ARM STA. 59+00
615.044	GE-4	2'-0" 3'-0"	8'-0" 10'-0"	EXIT 1 Gosling Rd. NEXT RIGHT							1 UNIT			LOCATED ON MAST ARM STA. 59+00

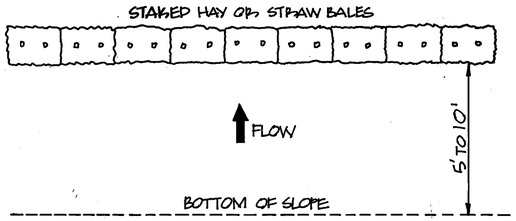
NOTE: ALL TRAFFIC SIGNS TYPE C TO BE SUPPLIED WITH CIRCULAR ALUMINUM POSTS.

ITEM NO.	IDENT. NO.	SIGN SIZE HEIGHT	SIGN SIZE WIDTH	TEXT	TEXT DIMENSIONS LETTER HEIGHT * U.C.	L.C.	CAPS.	RTE. MKR. OR SHIELD	ARROW	NUMERAL	NO. SIGNS REQ'D.	SIGN AREA (SQ. FT.) NOM. AREA	TOTAL AREA	REMARKS
615.03	R1-1	30"	30"	STOP WHITE ON RED			10"				1	6.25	6.25	1 ALUM. POST 3"
615.03	R1-2	36"x36"x36"		YIELD RED ON WHITE			3"				1	3.90	3.90	1 ALUM. POST 3"
615.03	R3-1L	24"	24"	RED AND BLACK ON WHITE							1	4.0	4.0	1 ALUM. POST 3"
615.03	R3-2L	24"	30"	NO LEFT TURN BLACK ON WHITE			5" 5" 5"				1	5.0	5.0	1 ALUM. POST 3"
615.03	R3-7L	30"	30"	LEFT LANE MUST TURN LEFT BLACK ON WHITE			4" 5" 4"				1	6.25	6.25	1 ALUM. POST 3"

TRAFFIC SIGN SUMMARY

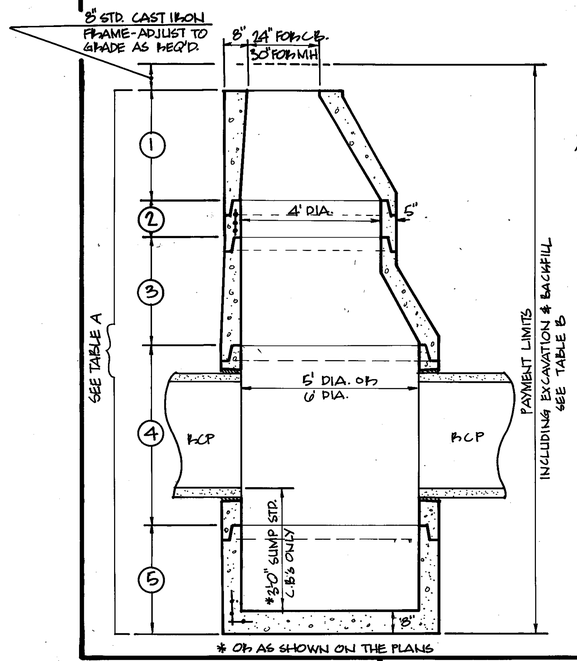
REVISIONS AFTER PROPOSAL (USE BOTTOM LINES FIRST)
NO. DATE STATION STATION DESCRIPTION
NOTEBOOKS
BOOK NO. PAGE NO. BOOK NO. PAGE NO.
PLAN TRACED R. SAKLAD DATE 5/29/64
PLAN CHECKED
PROFILE TRACED
PROFILE CHECKED
INKED DATE
CHECKED
BRUNING 34582

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N.H.	P-4104-A	15	

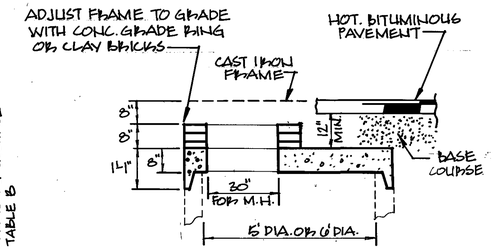


NOTE: NORMAL USE AT BOTTOM OF FILL SLOPE.

EROSION PROTECTION TYPE · A



* OR AS SHOWN ON THE PLANS



ALTERNATE TOP

DRAINAGE STRUCTURE NOTES

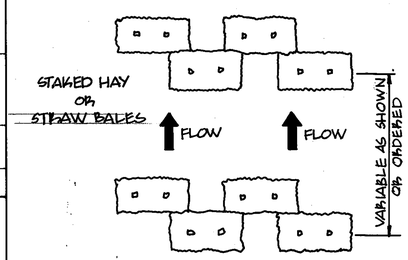
1. REINFORCING STEEL SHALL CONFORM TO LATEST ASTM A 185 SPEC.
2. ALL SECTIONS SHALL BE CONCRETE CLASS AA (4000 PSI).
3. ALTERNATE TOP SLABS AND FLAT SLAB REDUCER TO BE STEEL REINFORCED TO MEET OR EXCEED H-20 LOADING
4. FOR DETAILS OF TONGUE & GROOVE JOINT SEE N.H. STD. NO. 3-A.
5. THE TONGUE OR GROOVE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFER REINFORCEMENT OF: 5' DIA. = 0.15 SQ. IN.

SPECIAL DRAINAGE STRUCTURES – TABLE B

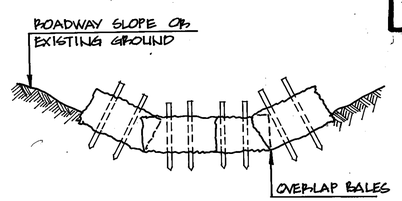
REF. NO.	LOCATION	ITEM NO.	TYPE	DIAMETER	DEPTH FT.
5	39+45	604.19101	C.B.-B	5'	8'
18	48+50	604.19103	C.B.-E	5'	4'
19	48+50	604.19104	C.B.-B	5'	8'
23	48+50	604.29101	C.B.-E	5'	8'
40	57+95	604.19106	C.B.-E	5'	13'
70	354+95	604.19108	C.B.-B	5	12'
62	48+50	604.19109	C.B.-B	5'	8'
79	419+95	604.19105	C.B.-B	5'	16'
26	46+25	604.39	MH	5	8'

TABLE A

NO.	SECTION	LENGTH	DIAMETER	WALL THICKNESS	REINFORCING STEEL
1	CONE	3' STD.	4' TO 2'	5"	0.12 SQ. IN./LIN. FT.
2	RISER	1' TO 4'	4'	5"	0.12 SQ. IN./LIN. FT.
3	REDUCER	3' STD.	5' TO 4'	6"	0.17 SQ. IN./LIN. FT.
		4' STD.	6' TO 4'	7"	0.17 SQ. IN./LIN. FT.
4	RISER	1' TO 5'	5'	6"	0.17 SQ. IN./LIN. FT.
			6'	7"	0.17 SQ. IN./LIN. FT.
5	MONOLITHIC BASE	2' TO 6'	5'	6"	0.17 SQ. IN./LIN. FT.
			6'	7"	0.17 SQ. IN./LIN. FT.



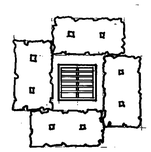
PLAN



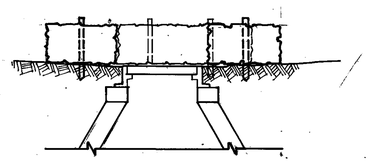
ELEVATION

NOTE: NORMAL USE IN WIDE DITCH SECTION.

EROSION PROTECTION TYPE · D



PLAN



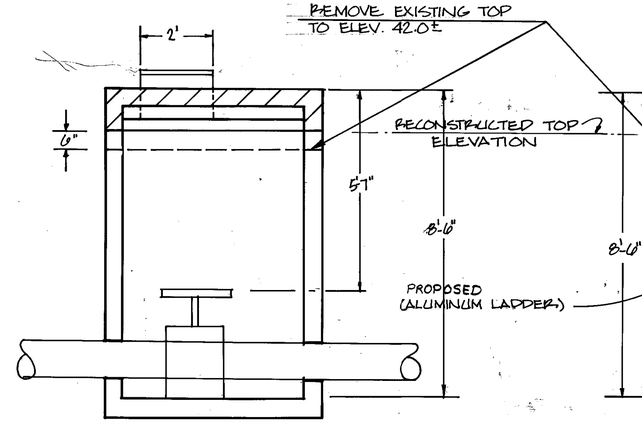
ELEVATION

CATCH BASIN EROSION PROTECTION DETAIL

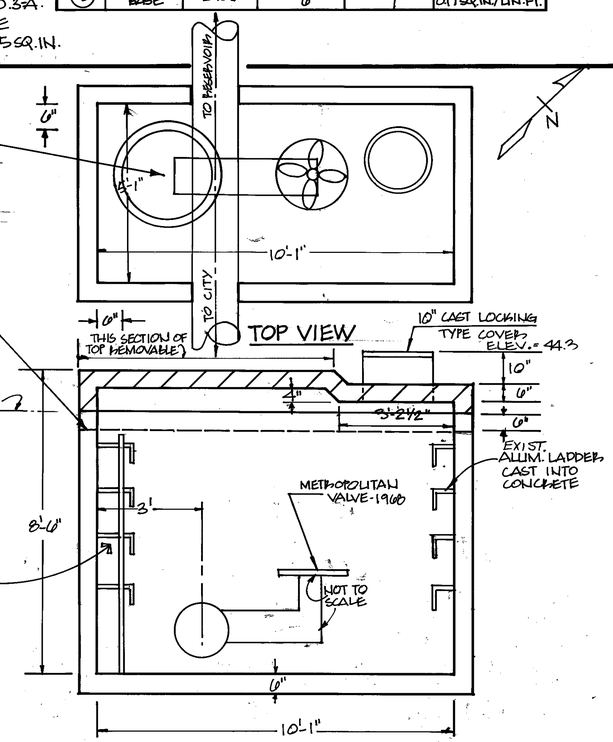
NOTE: HAY BALES SHALL BE USED IN CONFIGURATIONS SHOWN OR AS DIRECTED BY THE ENGINEER TO PREVENT SILTATION OF THE DRAINAGE SYSTEM DURING CONSTRUCTION.

PROPOSED NEW COVER LOCATION

DETAILS OF EXISTING WATER VALVE BOX AT STA. 46+55 SPAULDING TPK.
MEASURED BY T. CRAVENS
RECORDED BY P. SAMUEL
APRIL 20, 1984



SECTION LOOKING EAST



SECTION LOOKING NORTH

ITEM 611.99 - REMOVE AND RECONSTRUCT WATER VALVE BOX TOP

NOT TO SCALE

PROJ. NO	SHEET NO	TOTAL SHEETS
F-001-6(1)	15	118

(USE BOTTOM LINES FIRST)

REVISIONS AFTER PROPOSAL

NO.	DATE	STATION	STATION	DESCRIPTION

NOTEBOOKS

BOOK NO.	PAGE NO.

BOOK NO.	PAGE NO.

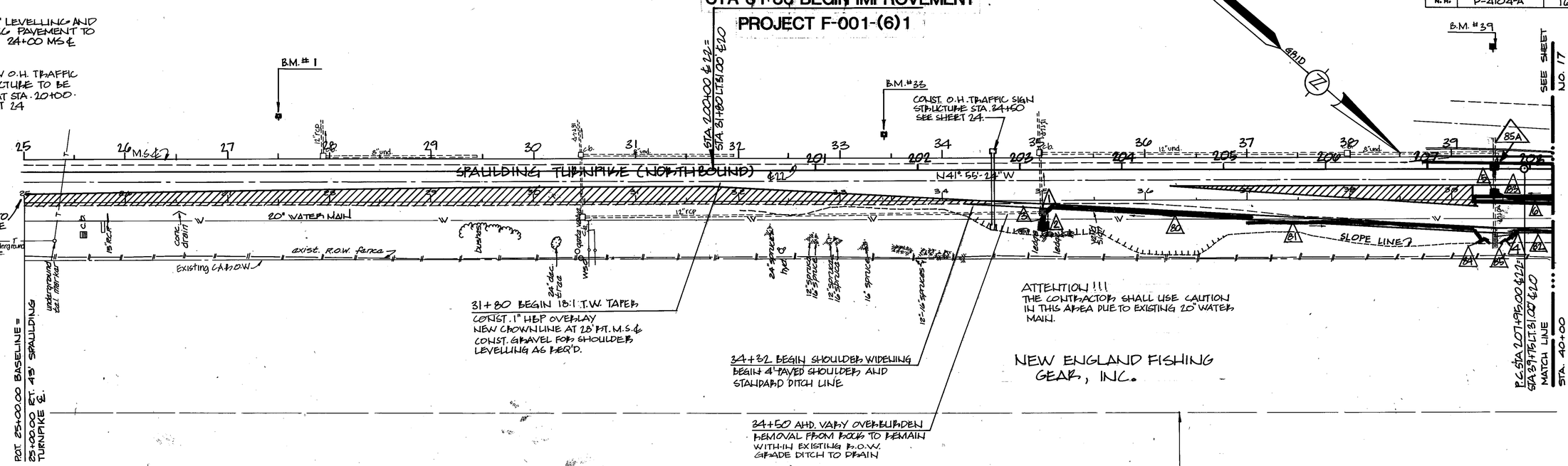
		DATE
PLAN TRACED		4 JUN 84
PLAN CHECKED		
PROFILE TRACED		
PROFILE CHECKED		
INKED		
CHECKED		

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-4104-A	16	

STA 31+80 BEGIN IMPROVEMENT
PROJECT F-001-(6)1

NOTE: 1/2" LEVELLING AND 1" WEARING PAVEMENT TO BEGIN AT 24+00 MS ℄

NOTE: NEW O.H. TRAFFIC SIGN STRUCTURE TO BE LOCATED AT STA. 20+00. SEE SHEET 24



B.M. NO. 1 _ STUD BOLT @ BASE OF LIGHT POLE NO. 48 LEFT OF SURVEY BASELINE STA. 27+50. ELEV. = 30.43

B.M. NO. 33 _ FILED "X" IN TOP OF STUD BOLT @ BASE OF LIGHT TOWER NO. 50, LT. 65' SURVEY BASELINE STA. 35+42. ELEV. = 32.08

B.M. NO. 39 _ FILED "X" IN TOP OF STUD BOLT @ BASE OF LIGHT TOWER NO. 51 LEFT OF SURVEY BASELINE STA. 39+41 ELEV. = 42.13

300' PUBLIC SERVICE OF N.H. BASEMENT

NEW ENGLAND FISHING GEAR, INC.

REMOVE EXISTING GRATE & FRAME
CONST. M.H. COVER & FRAME

(1) 35+00, RT. ✓

CONST. DROP INLET "E"

(2) 35+00, RT. ✓

CONST. 12" R.C.P.-2000D

(3) 35+00 RT. ✓ 8 L.F.

RETAIN EXISTING INLET GRADE DITCH TO DRAIN

(4) 39+45 RT.

CONST. C.B. "B" OVER EXIST. 30" R.C.P.

(5) 39+45 LT., 5'-0" DIA; ITEM 604.19101 ✓

GRADE ISLAND TO DRAIN

(6) 39+20 - 40+69

CONST. 6" PIPE UNDERDRAIN

(80) 35+00 - 37+00 RT. ✓ 205 L.F.

(81) 37+00 - 39+30 RT. (ADVERSE TO GRADE) 221 ~~240~~ L.F.

(81) 39+50 - ~~42+00~~ 44+30 RT. 488 ~~255~~ L.F.

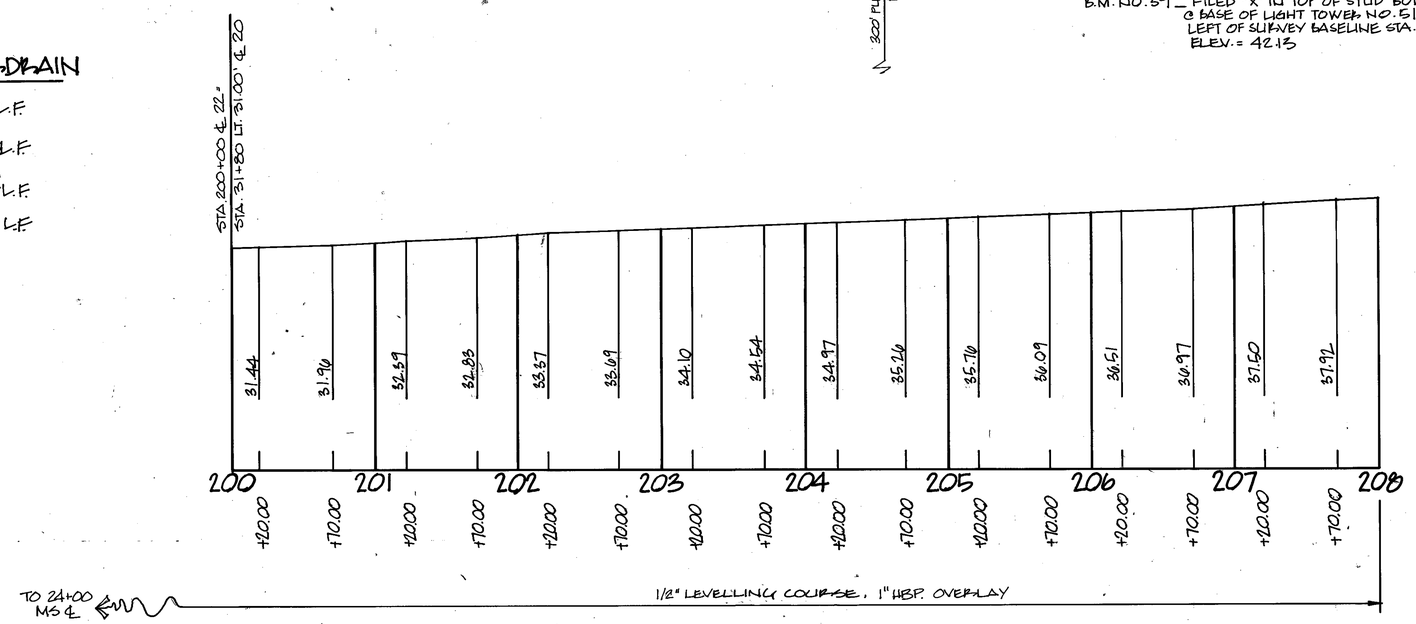
(82) 39+45 LT - 44+25 RT. 468 ~~485~~ L.F.

CONST. HEADWALL STRUCTURE LL-2

(84) 39+30 RT. ✓

(85) 39+50 RT. ✓

(85A) 39+45 CONST. D.I.-DB
CONST. 5'x12" RCP
RECONST. EXISTING C.B.



SPAULDING TURNPIKE NORTHBOUND

AS BUILT PLANS

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	16	118

R.O.W. Verified by George R. Dezziel - 1/23/89

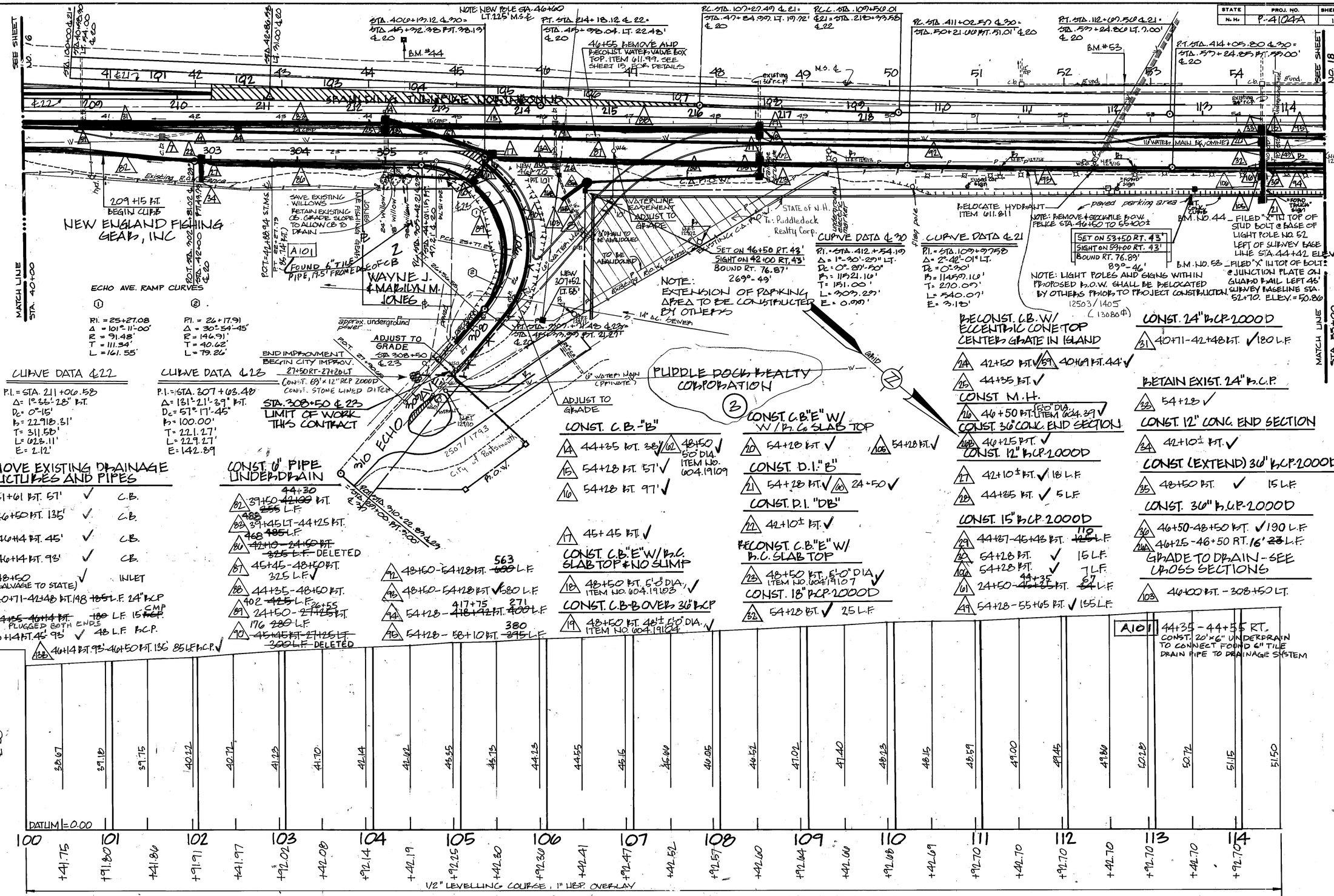
REVISIONS AFTER PROPOSAL (USE BOTTOM LINES FIRST)				
NO.	DATE	STATION	STATION	DESCRIPTION

NOTEBOOKS			
BOOK NO.	117	PAGE NO.	23-30
BOOK NO.	144	PAGE NO.	
BOOK NO.		PAGE NO.	

		DATE
PLAN TRACED		
PLAN CHECKED		
PROFILE TRACED		
PROFILE CHECKED		
INKED		
CHECKED		

BRUNING 5-382-3

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-4104A	17	



AS BUILT PLANS

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	17	118

(USE BOTTOM LINES FIRST)

REVISIONS AFTER PROPOSAL

NO.	DATE	STATION	STATION	DESCRIPTION

NOTEBOOKS

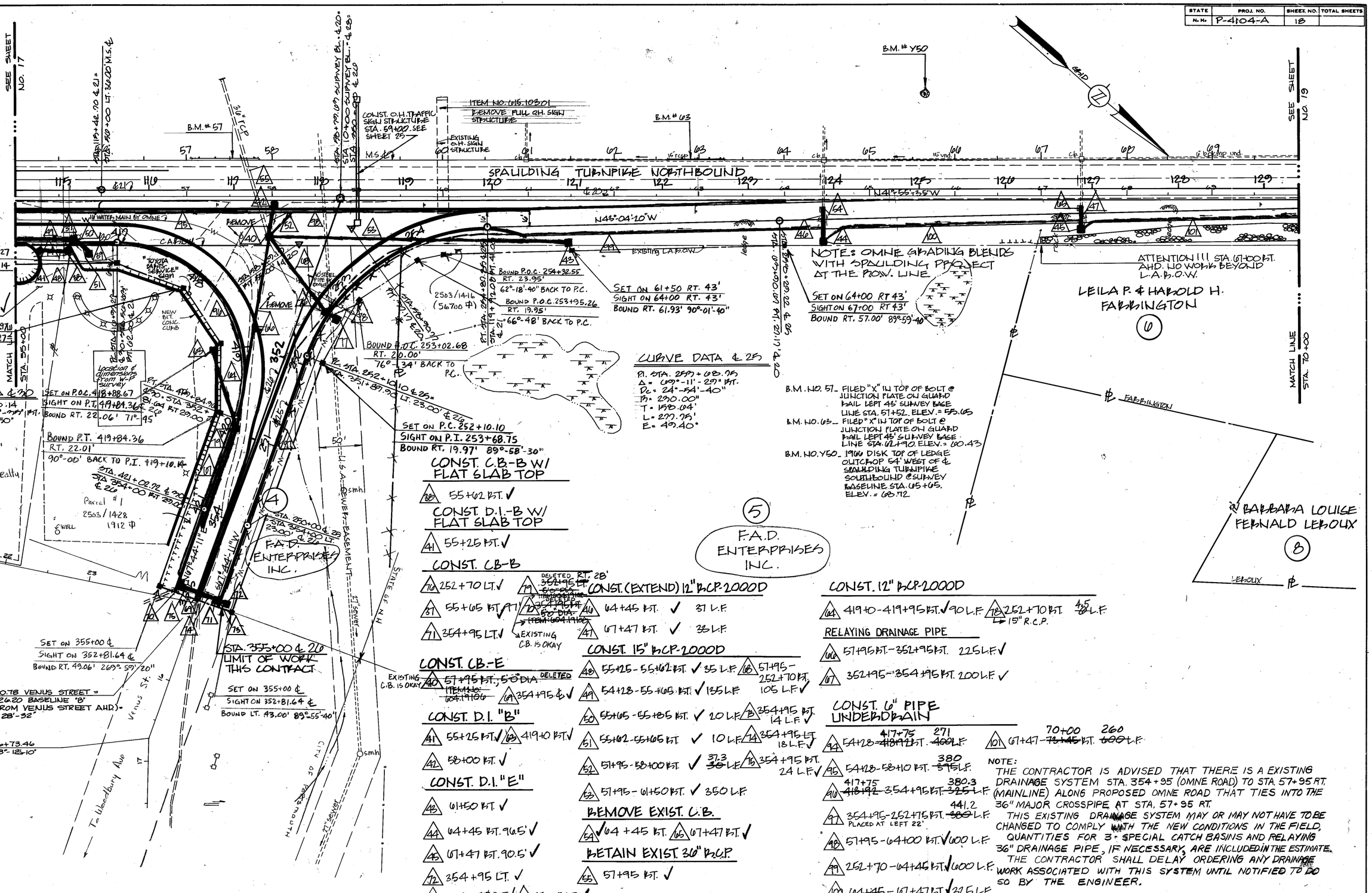
BOOK NO.	PAGE NO.	BOOK NO.	PAGE NO.

BOUNDS BOOK No. 11743

		DATE
PLAN TRACED	RAB	JUN 84
PLAN CHECKED		
PROFILE TRACED	RAB	JUN 84
PROFILE CHECKED		
INKED		
CHECKED		

BRUNING 34362-3

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-4104-A	18	



(USE BOTTOM LINES FIRST)

DESCRIPTION: R.O.W. Verified by George R. Dezie - 1/23/89

DEVISIONS AFTER PROPOSAL	NO.	DATE	STATION	STATION

NOTEBOOKS	BOOK NO.	PAGE NO.
	11744	49-57
	11744	1-9
	11744	41-43

BOUNDS BOOK NO. 11743

	DATE
PLAN TRACED	
PLAN CHECKED	
PROFILE TRACED	
PROFILE CHECKED	
INKED	
CHECKED	

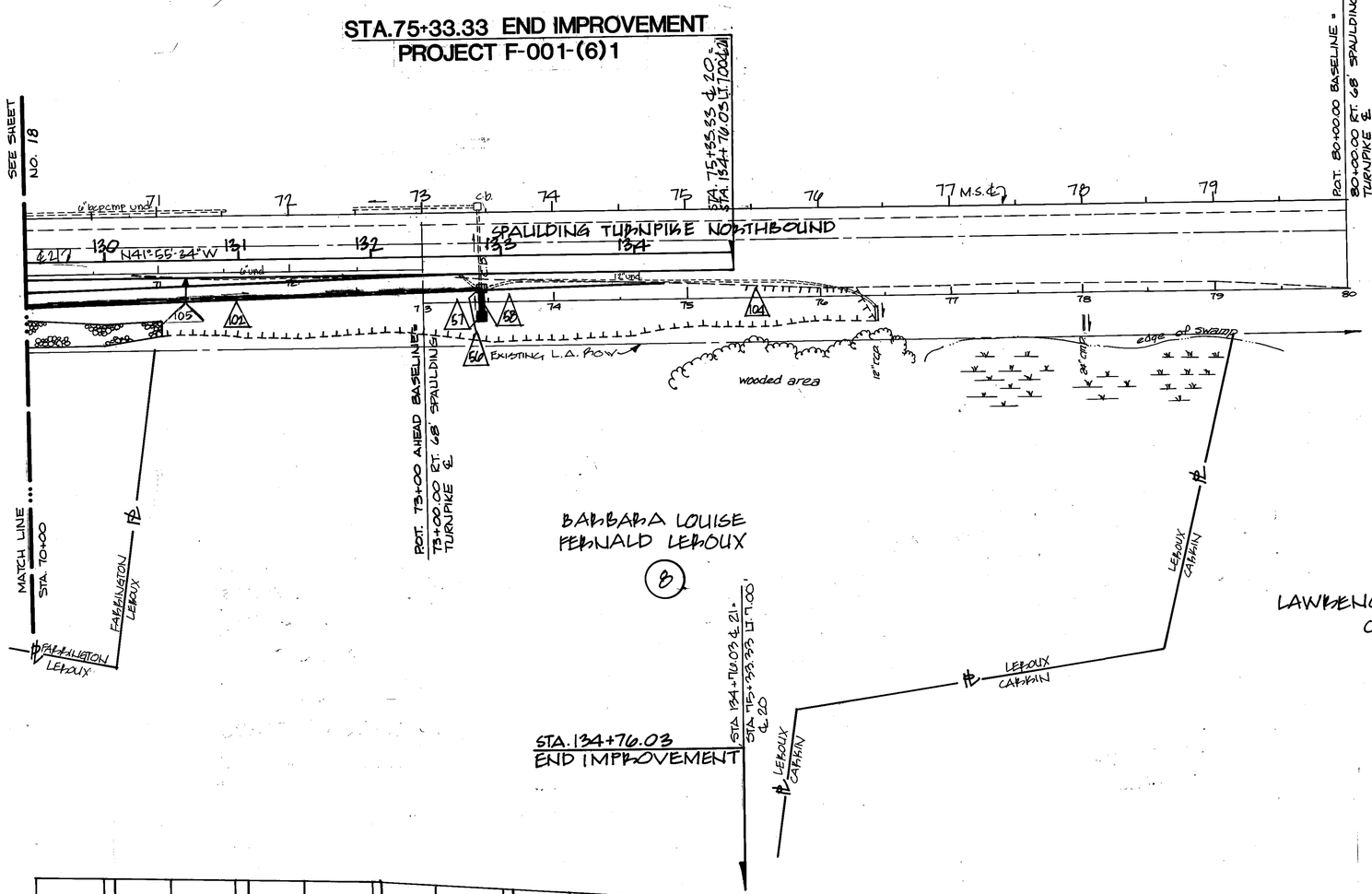
BRUNING 3-M 862-3

AS BUILT PLANS

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	18	118

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	F-4104-A	19	

STA.75+33.33 END IMPROVEMENT
PROJECT F-001-(6)1



REMOVE EXIST. C.B. GRATE & FRAME. CONST. M.H. COVER & FRAME

50 73+45 RT. ✓

CONST. D.I. "E"

57 73+45 RT. 78.5' ✓

CONST. ~~15"~~ 12" R.C.P. 2000D

58 73+45 ✓ 14 L.F.

CONST. 6" SLOTTED UNDERDRAIN

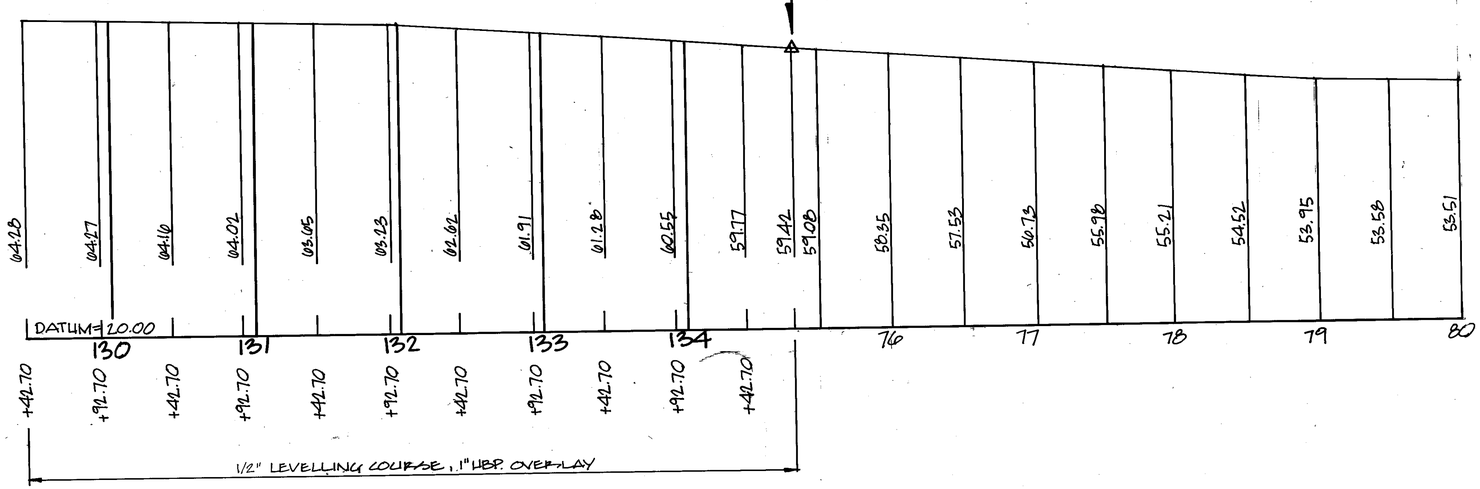
~~101~~ 102 ~~67+47~~ 70+00 - 73+45 ~~600~~ 339 L.F.

CONST. DITCH. GRADE TO DRAIN

104 75+33.33 - 76+50 ✓

CONST. 6" UNDERDRAIN

105 70+80 - 71+40 RT 60 L.F.
CONNECT TO EXIST. 6" UNDERDRAIN



SPAULDING TURNPIKE NORTHBOUND

REVISIONS AFTER F.C. 25AL (USE BOTTOM LINES FIRST)				
NO.	DATE	STATION	STATION	DESCRIPTION

R.O.W. Verified by George R. Deziel - 1/23/89

NOTEBOOKS			
BOOK NO.	117	PAGE NO.	57-62
" "		" "	
" "		" "	
BOOK NO.		PAGE NO.	

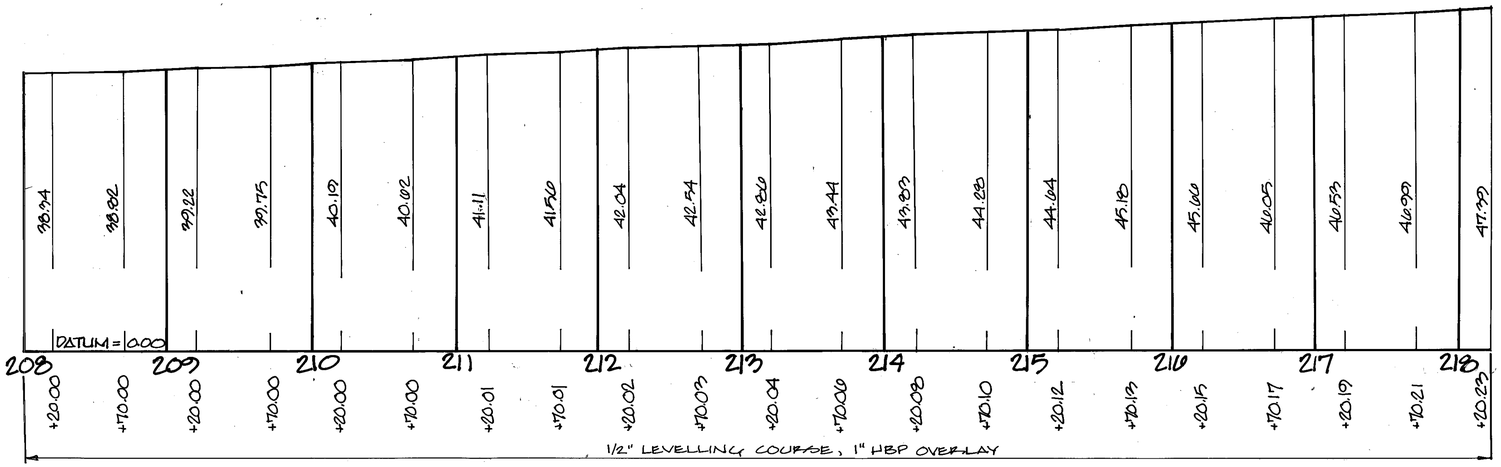
		DATE
PLAN TRACED	R.W.B.	1 JUN 84
PLAN CHECKED		1 JUN 84
PROFILE TRACED	R.W.B.	
PROFILE CHECKED		
INKED		
CHECKED		

BRUNING 34982-3

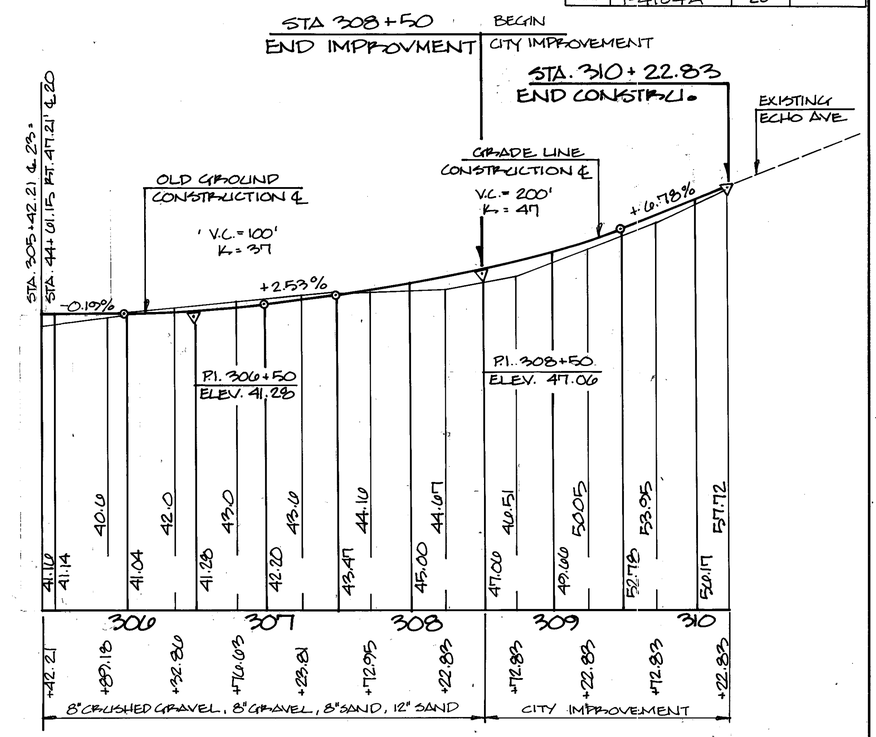
AS BUILT PLANS

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	19	118

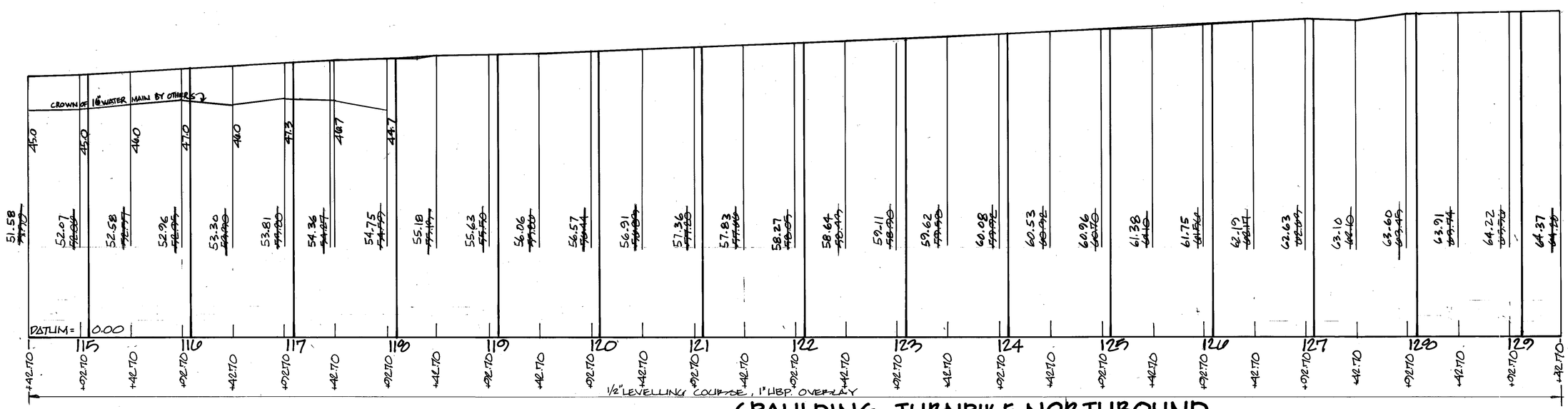
STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-4104A	20	



SPAULDING TURNPIKE NORTHBOUND



ECHO AVENUE



SPAULDING TURNPIKE NORTHBOUND

AS BUILT PLANS

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	28	118

REVISIONS AFTER PROPOSAL (USE BOTTOM LINES FIRST)

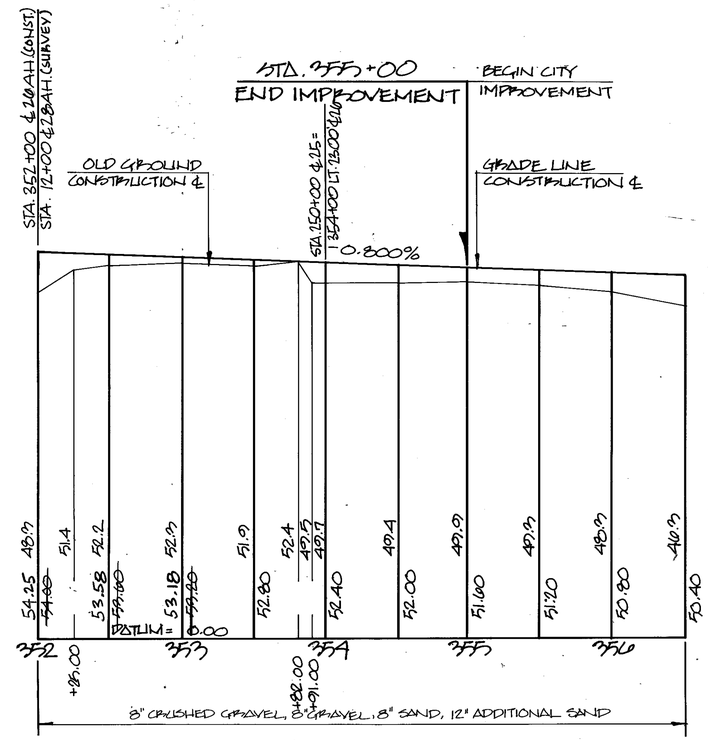
NO.	DATE	STATION	STATION	DESCRIPTION

NOTEBOOKS		
BOOK NO.	1174A	PAGE NO. 49-57
" "	1174A	" " 7-9
" "	1174A	" " 41-43

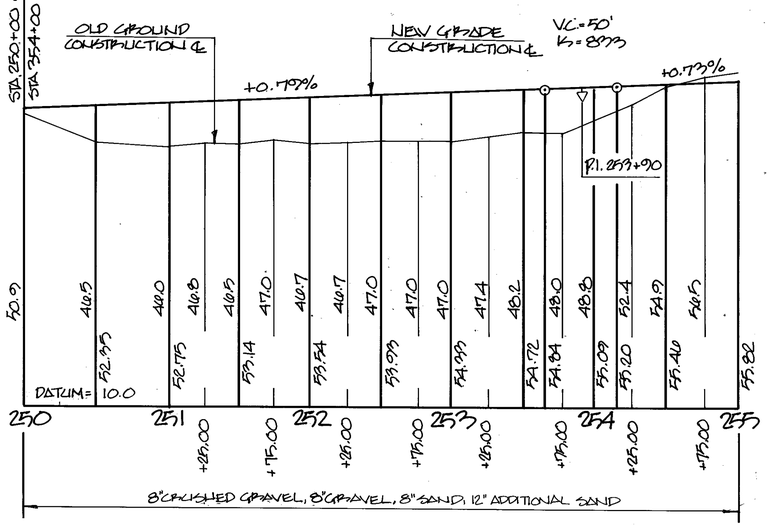
		DATE
PLAN TRACED	Kab	1 JUN 84
PLAN CHECKED		"
PROFILE TRACED	Kab	1 JUN 84
PROFILE CHECKED		"
INKED		"
CHECKED		DATE

BRUNING 34982-3

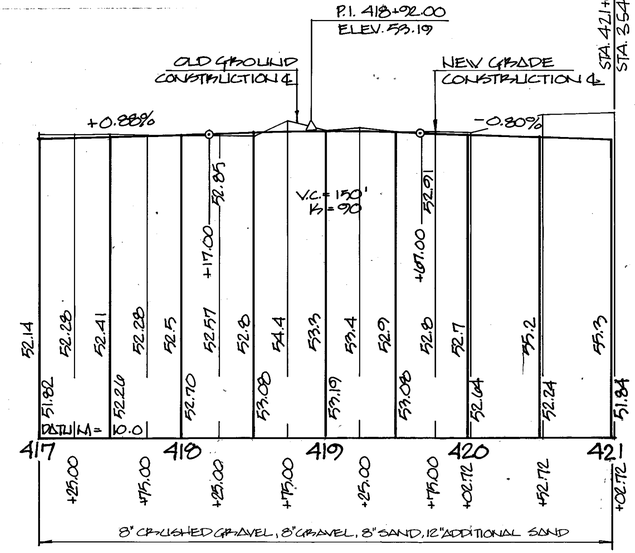
STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	F-4104-A	21	



OMNE ROAD



OMNE ROAD - ON RAMP



OMNE ROAD - OFF RAMP

AS BUILT PLANS

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	21	118

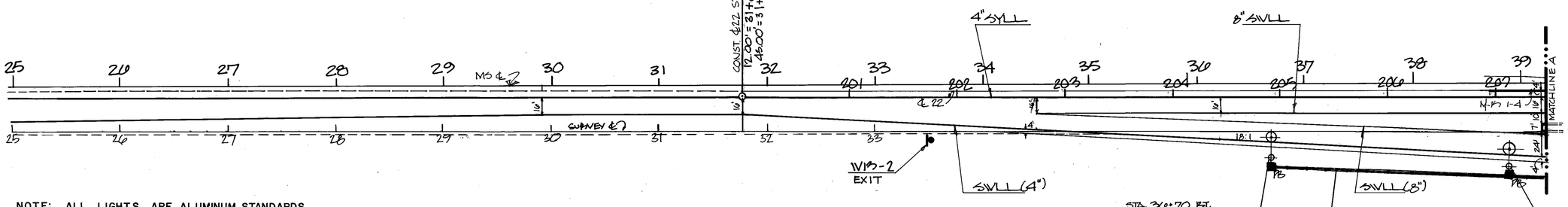
REVISIONS AFTER PROPOSAL (USE BOTTOM LINES FIRST)				
NO.	DATE	STATION	STATION	DESCRIPTION

NOTEBOOKS			
BOOK NO.	PAGE NO.	BOOK NO.	PAGE NO.

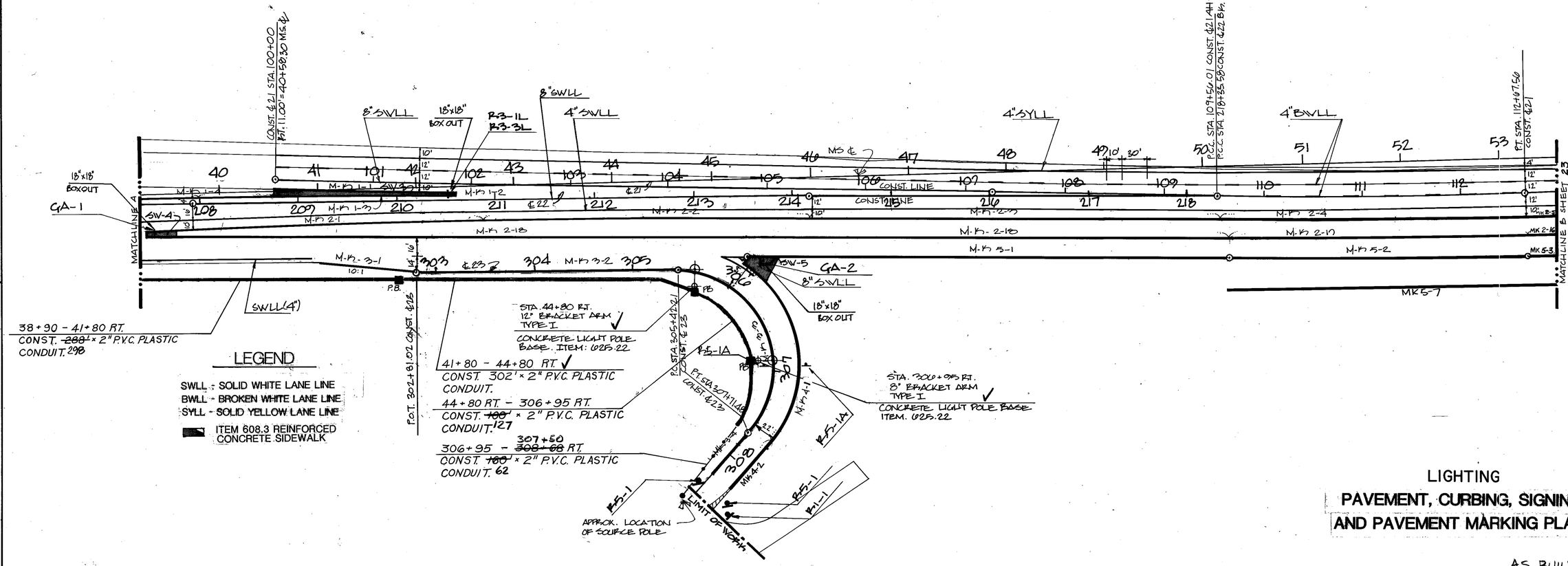
		DATE 14 JUN 84
PLAN TRACED	Rod Ks	
PLAN CHECKED		
PROFILE TRACED		
PROFILE CHECKED		
INKED		
CHECKED		DATE

BRUNING Sun-352-3

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-4104-A	23	



NOTE: ALL LIGHTS ARE ALUMINUM STANDARDS
250 WATT H.P.S. LUMINAIRE
40 FOOT MOUNTING HEIGHT.



LEGEND

SWLL - SOLID WHITE LANE LINE
BWLL - BROKEN WHITE LANE LINE
SYLL - SOLID YELLOW LANE LINE
ITEM 608.3 REINFORCED CONCRETE SIDEWALK

LIGHTING
PAVEMENT, CURBING, SIGNING AND PAVEMENT MARKING PLAN

AS BUILT PLANS

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	22 -	118

(USE BOTTOM LINES FIRST)

NO.	DATE	STATION	STATION	DESCRIPTION
REVISIONS AFTER PROPOSAL				

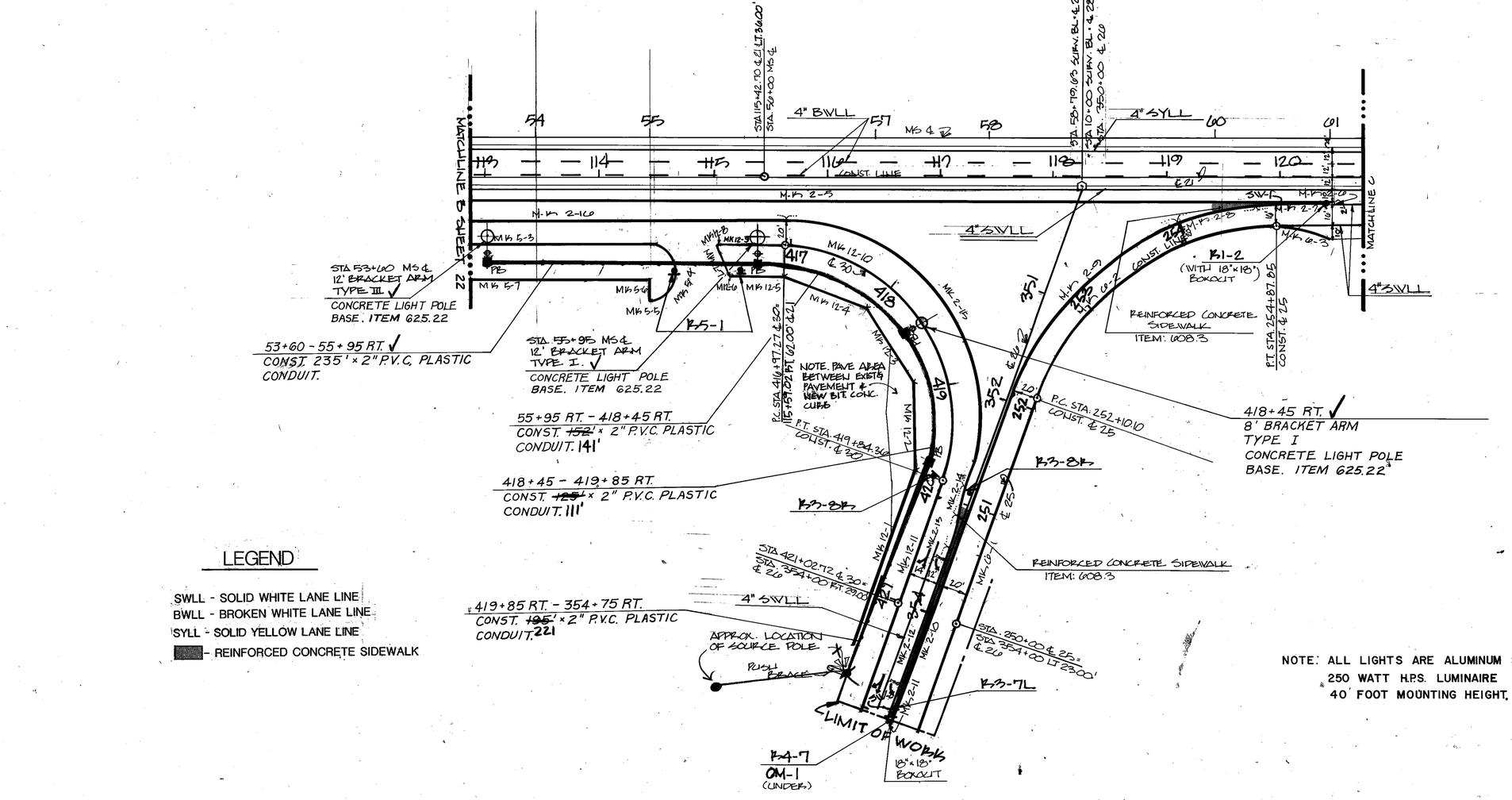
NOTEBOOKS

BOOK NO.	PAGE NO.	BOOK NO.	PAGE NO.
"	"	"	"
"	"	"	"
"	"	"	"

		DATE
PLAN TRACED	D.M. Hause	01/15/84
PLAN CHECKED		
PROFILE TRACED		
PROFILE CHECKED		
INKED		
CHECKED		

BRUNING 3x682-3

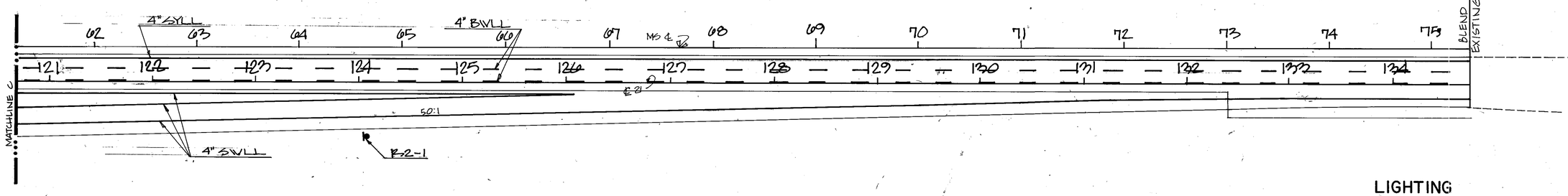
STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-4104-A	23	



LEGEND

SWLL - SOLID WHITE LANE LINE
BWLL - BROKEN WHITE LANE LINE
SYLL - SOLID YELLOW LANE LINE
- REINFORCED CONCRETE SIDEWALK

NOTE: ALL LIGHTS ARE ALUMINUM STANDARDS
250 WATT H.P.S. LUMINAIRE
40' FOOT MOUNTING HEIGHT.



LIGHTING
PAVEMENT, CURBING, SIGNING AND PAVEMENT MARKING PLAN

AS BUILT PLANS

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	23	118

(USE BOTTOM LINES FIRST)

NO.	DATE	STATION	STATION	DESCRIPTION

REVISIONS AFTER PROPOSAL

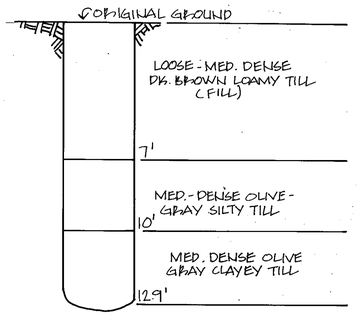
NOTEBOOKS

BOOK NO.	PAGE NO.	BOOK NO.	PAGE NO.

	DATE
PLAN TRACED	DATE 01/15/84
PLAN CHECKED	
PROFILE TRACED	
PROFILE CHECKED	
INKED	
CHECKED	

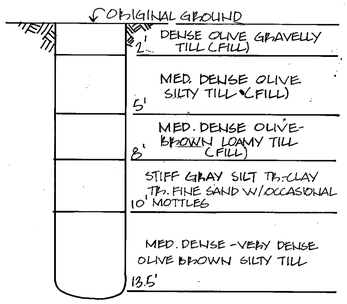
NING 34582-3

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N.H.	F-4104-A	24	



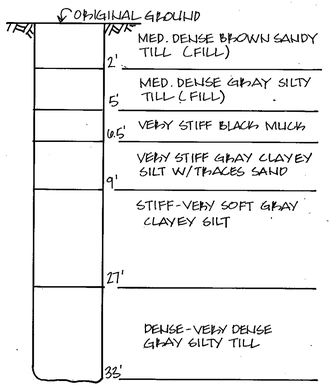
WATER OBSERVED @ 10.5' 5-15-84
REFUSAL @ 12.9'

TEST BORING NO. 3
(STA. 58+25 LT. 67'±)



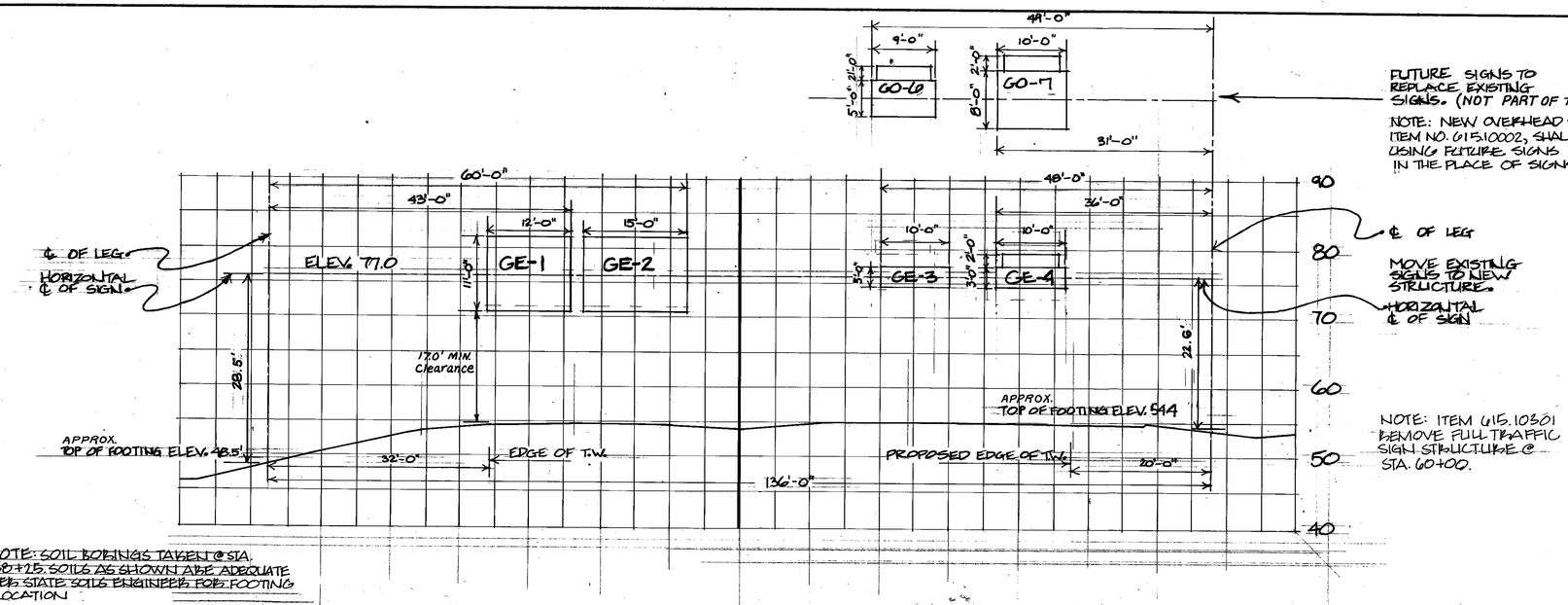
WATER OBSERVED @ 9.5' 5-11-84
REFUSAL @ 13.5'

TEST BORING NO. 2
(STA. 58+25 RT. 67'±)



WATER OBSERVED @ 4' 5-16-84
REFUSAL @ 33'

TEST BORING NO. 1
(STA. 20+00 RT. 60'±)



FUTURE SIGNS TO REPLACE EXISTING SIGNS. (NOT PART OF THIS PROJECT)

NOTE: NEW OVERHEAD SIGN STRUCTURE ITEM NO. 615.10002, SHALL BE DESIGNED USING FUTURE SIGNS GO-6 & GO-7 IN THE PLACE OF SIGNS GE-3 & GE-4

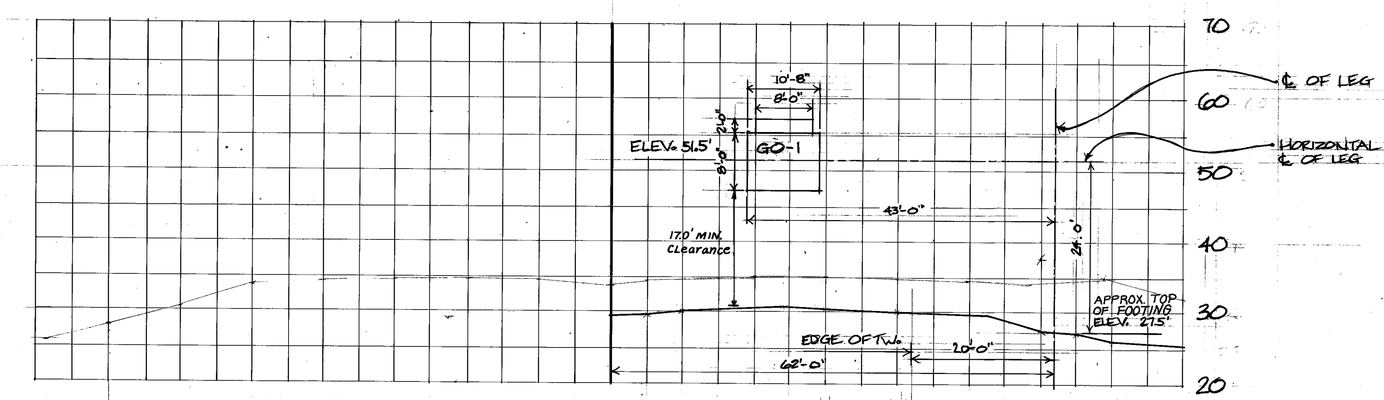
NOTE: ITEM 615.10501 REMOVE FULL TRAFFIC SIGN STRUCTURE @ STA. 60+00.

NOTE: SOIL BORINGS TAKEN @ STA. 58+25. SOILS AS SHOWN ARE ADEQUATE PER STATE SOILS ENGINEER FOR FOOTING LOCATION

OVERHEAD SIGN STRUCTURE @ STA. 59+00

ITEM NO. 615.10002

80 70 60 50 40 30 20 10 MS ℄ 10 20 30 40 50 60 70 80



OVERHEAD SIGN STRUCTURE @ STA. 20+00

ITEM NO. 615.10001

SCALE 1" : 10'-0"

OVERHEAD SIGN STRUCTURE LAYOUT

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-6(1)	24	118

(USE BOTTOM LINES FIRST)

REVISIONS AFTER PROPOSAL

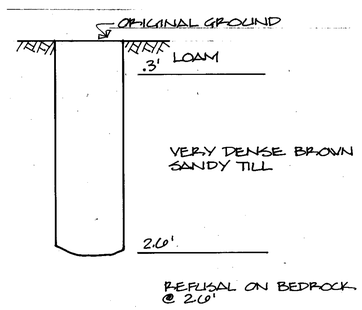
NO.	DATE	STATION	STATION	DESCRIPTION
1	12-14-84	58+85	58+50	MOVE STRUCTURE FROM STA. 68+50 TO 58+85

NOTEBOOKS

BOOK NO.	PAGE NO.

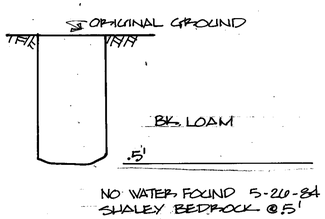
		DATE
PLAN TRACED	E. SAKLAD	5/22/84
PLAN CHECKED		
PROFILE TRACED		
PROFILE CHECKED		
INKED		
CHECKED		

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N.H.	P-4104-A	25	



TEST PIT

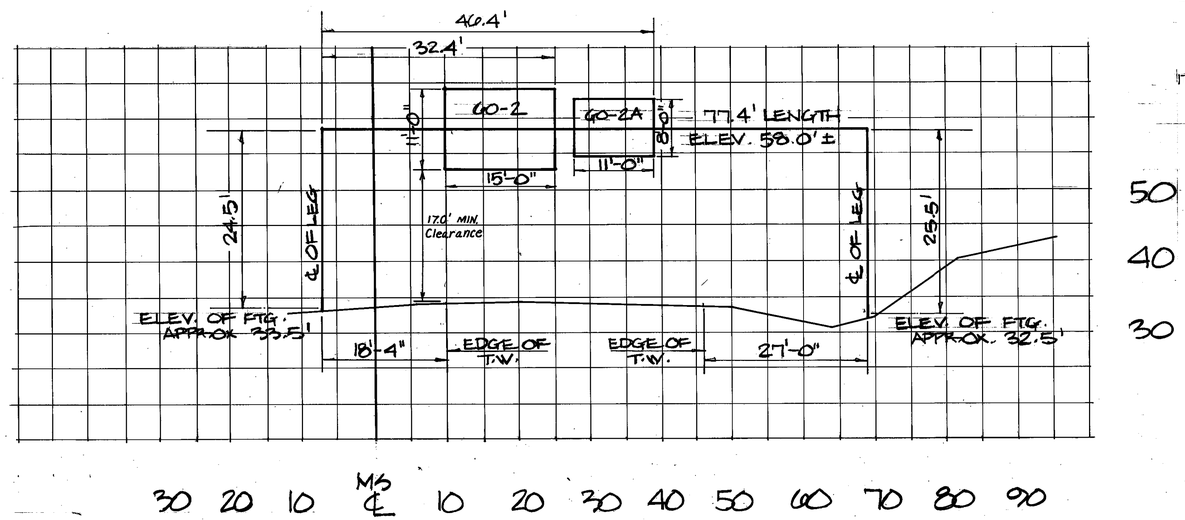
STA. 34 + 50 LT. 65.00'



TEST PIT

STA. 34 + 50 RT. 65.00'

NOTE: FIELD ADJUSTMENTS MAY BE NECESSARY AND BASE ELEVATIONS MAY NEED TO BE FIELD ADJUSTED. NEW ANCHOR BOLT SHALL BE SUPPLIED BY THE CONTRACTOR, AND SHALL BE SUBSIDIARY.



OVERHEAD SIGN STRUCTURE @ STA. 34 + 50

ITEM NO. 615.10601

SCALE : 1" = 10'

ITEM 615.10601: FULL TRAFFIC SIGN STRUCTURE SUPPLIED BY OTHERS: NOTE: GENERAL STRUCTURE BASE SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER. THE APPROX. LOCATION FOR THIS STRUCTURE IS STA. 34+50. THE EXACT LOCATION SHALL BE DETERMINED IN THE FIELD AND BASE ELEVATIONS MAY NEED TO BE FIELD ADJUSTED TO FIT THE EXISTING SIGN STRUCTURE.

NEW ANCHOR BOLTS SHALL BE SUPPLIED BY THE CONTRACTOR, AND SHALL BE SUBSIDIARY TO THIS ITEM.

THE SIGN STRUCTURE SUPPLIED BY OTHERS SHALL BE AVAILABLE TO THE CONTRACTOR, AT THE HAMPTON MAINTENANCE SHED, LOCATED APPROX. 0.5 MILES SOUTH OF THE I-95 TOLL PLAZA. CONTACT PATROLMAN HARRY MARTIN, TEL. # 603-926-6862 TO ARRANGE FOR PICK-UP.

OVERHEAD SIGN STRUCTURE LAYOUT

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-(013)	25	118

REVISIONS AFTER PROPOSAL (USE BOTTOM LINES FIRST)

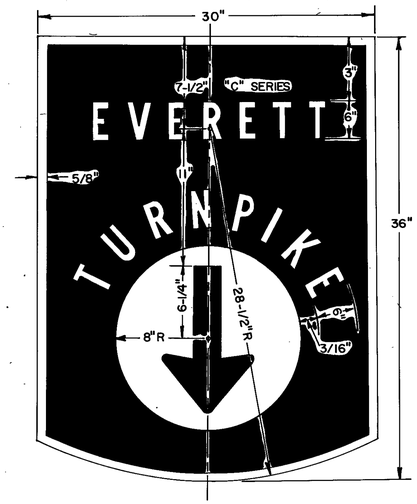
NO.	DATE	STATION	STATION	DESCRIPTION

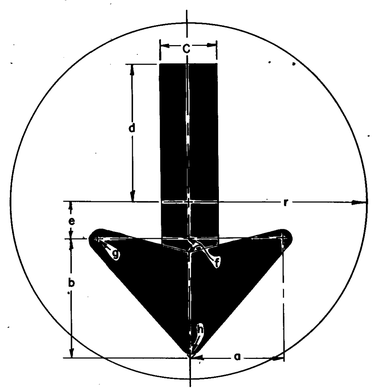
NOTEBOOKS

BOOK NO.	PAGE NO.	BOOK NO.	PAGE NO.
" "	" "	" "	" "

		DATE
PLAN TRACED	D.M. Lavoie	01/21/84
PLAN CHECKED		"
PROFILE TRACED		"
PROFILE CHECKED		"
INKED		"
CHECKED		"

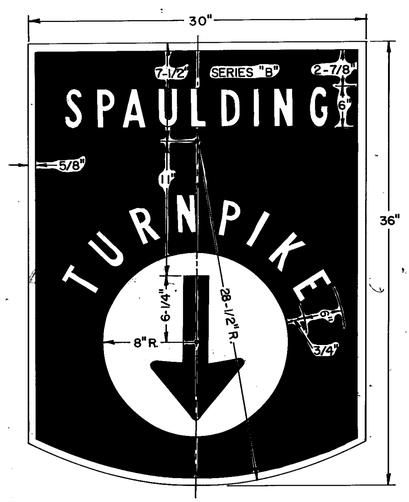
STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-4104-A	210	





	20"X24"	30"X 36"
a	20"	30"
b	24"	36"
c	8"	8"
d	3-1/4"	11"
e	4-3/4"	6-1/4"
f	1/2"	5/8"
g	6-1/8"R	
h	2"	2-7/8"
j	5"D	8"E
k	3"C	6"B
m	1-1/4"	3/4"
r	17"	28-1/2"

	20"X24"	30"X 36"
a	2-1/4"	2-11/16"
b	4"	4-3/4"
c	1-3/4"	2-1/2"
d	4-3/4"	6-1/4"
e	1-1/4"	1-3/4"
f	5/16"	7/8"
g	5/16"R	5/16"R
h	1/4"R	1/4"R
r	6-1/8"R	8"R



NOTES:

BACKGROUND FOR ALL SHIELDS SHALL BE SILVER ENCAPSULATED LENS SHEETING.

THE F.E.EVERETT TURNPIKE SHIELDS SHALL UTILIZE A SILK SCREEN PROCESS TO PRODUCE EITHER SILVER TEXT, BORDER & DISK ON A GREEN BACKGROUND OR GREEN TEXT, BORDER AND DISK ON A SILVER BACKGROUND AS CALLED FOR ON THE PLANS.

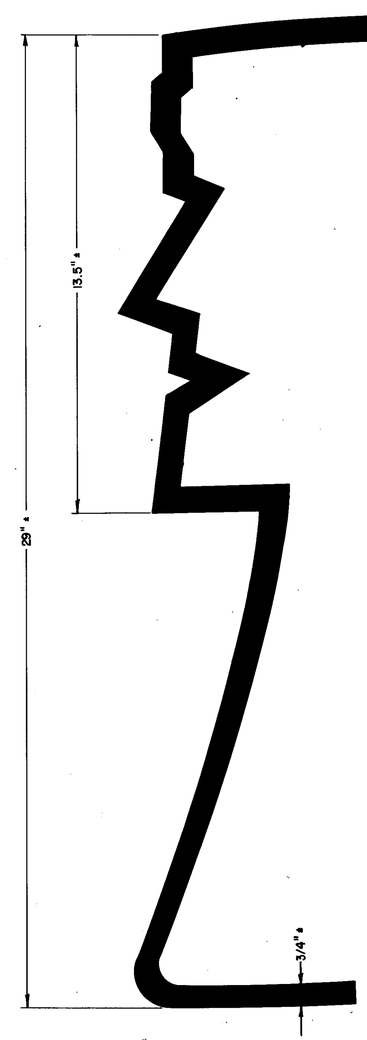
THE SPAULDING TURNPIKE SHIELD SHALL HAVE SILVER TEXT, BORDER & DISK ON A BLUE BACKGROUND.

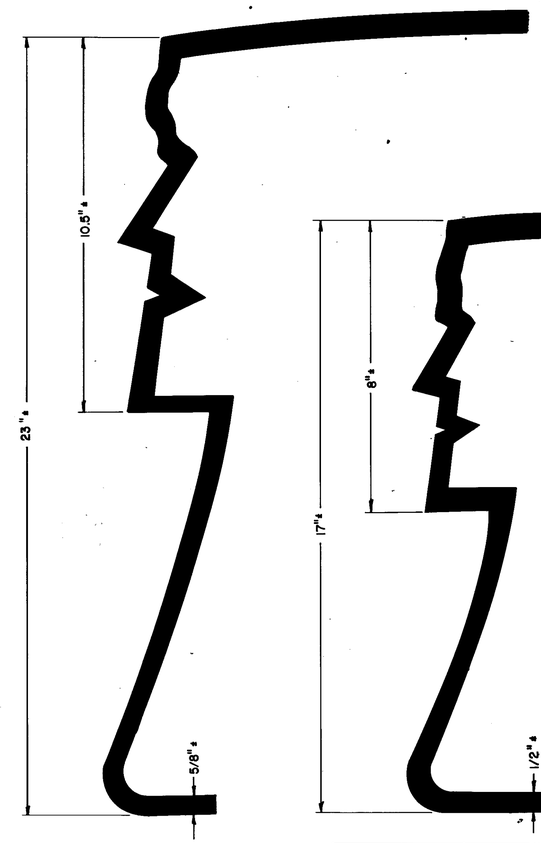
THE DEGREE OF ARROW INCLINATION FOR EACH SIGN SHALL BE INDICATED IN THE SIGN TEXT SHEET.

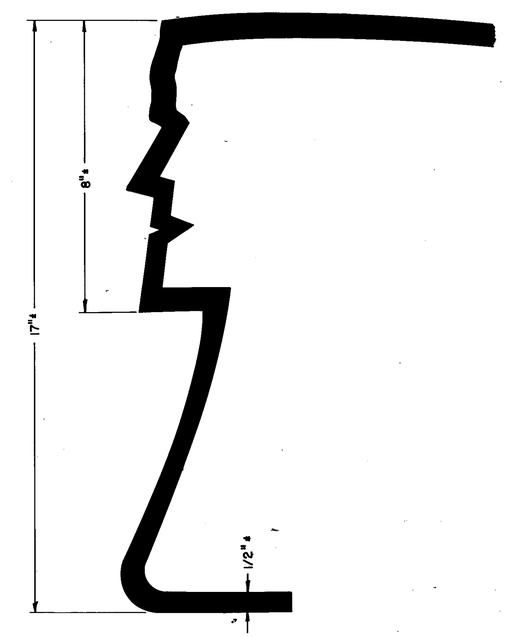
THE SHIELDS AS OVERLAYS SHALL BE CONSTRUCTED OF A MINIMUM OF 0.064 GAUGE ALUMINUM.

THE NEW HAMPSHIRE ROUTE MARKERS SHALL BE BLACK NUMBERS AND/OR LETTERS AND BORDER ON SILVER ENCAPSULATED LENS SHEETING.

INTERSTATE AND U.S. ROUTE MARKERS SHALL CONFORM TO SPECIFICATIONS IN THE M.U.T.C.D.







STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
TRAFFIC DIVISION

SIGNING STANDARDS

ROUTE MARKER DETAILS

REVISIONS

APPROVED

Richard W West 5-7-79
DEPUTY COMMISSIONER AND CHIEF ENGINEER

Frank B Lindell Jr.
TRAFFIC ENGINEER

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-(43)	210	118

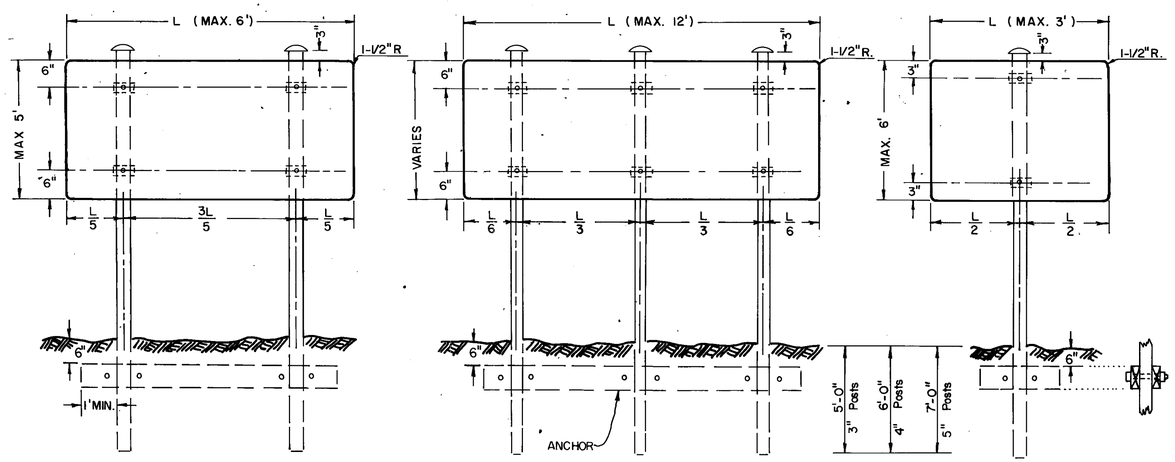
REVISIONS AFTER PROPOSAL				
NO.	DATE	STATION	STATION	DESCRIPTION

NOTEBOOKS		
BOOK NO.	PAGE NO.	
" "	" "	
" "	" "	
BOOK NO.	PAGE NO.	

		DATE
PLAN TRACED	Kimball	
PLAN CHECKED		"
PROFILE TRACED		"
PROFILE CHECKED		"
INKED		"
CHECKED		DATE

BRUNING 3456

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-4104-A	27	



NOTES:

ALL SIGNS TO BE FASTENED WITH BRACKETS AS PER DETAIL.

WHEN SIGN EXCEEDS 4'-0" IN HEIGHT, USE 3 BRACKETS PER POST.

POSTS TO BE EQUIPPED WITH CAST ALUMINUM CAP AS SHOWN.

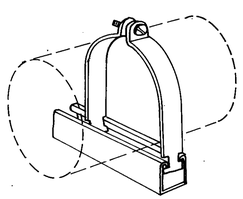
ANCHORS: USE 2 PIECES OF 2"x12" ROUGH PLANK (CREOSOTED) CLAMPED POST TO POST WITH A MINIMUM OF 1' OVERHANG; TO BE PARRALLEL WITH GROUND LINE.

ALL SIGNS ON ALUMINUM POSTS SHALL BE ERECTED AT A MINIMUM HEIGHT OF 7' ABOVE THE LEVEL OF THE NEAR EDGE OF PAVEMENT.

THE MINIMUM CLEARANCE TO ANY SIGN SHALL BE 6' BEYOND THE SHOULDER BREAK OR 2' BEYOND THE FACE OF UNMOUNTABLE CURB, UNLESS OTHERWISE NOTED.

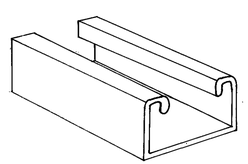
ALUMINUM POSTS AND FOOTINGS

(MAY BE USED FOR SPACING FOR "U" POSTS)



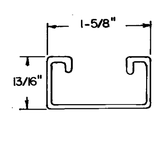
POST CLAMP

P-2046 3" DIA. 12GA.
P-1120 4" DIA. 11GA.
P-2062 5" DIA 10GA.



UNISTRUT OR EQUAL

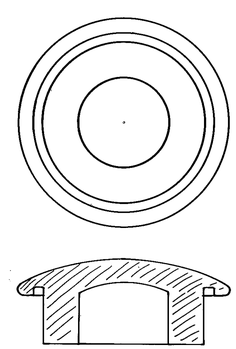
FINISH - ELECTO-GALVANIZED



CHANNEL

P-4100 14 GA.
P-4100T 14 GA.
P-4100 14 GA.

USE - 5/16" Stainless steel cap screw with 7/8" O.D. washer and locknut.



CAST ALUMINUM CAP

CAP SHOWN IS DESIGNED FOR DRIVE FIT

STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
TRAFFIC DIVISION

SIGNING STANDARDS

ALUMINUM POST MOUNTS

REVISIONS

APPROVED
Harold W. Wolff 4-21-80
DEPUTY COMMISSIONER AND CHIEF ENGINEER
Franklin B. Lindsay
TRAFFIC ENGINEER

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-(43)	217	1187

(USE BOTTOM LINES FIRST)

NO.	DATE	DESCRIPTION

REVISIONS AFTER PROPOSAL

NO.	DATE	STATION	STATION

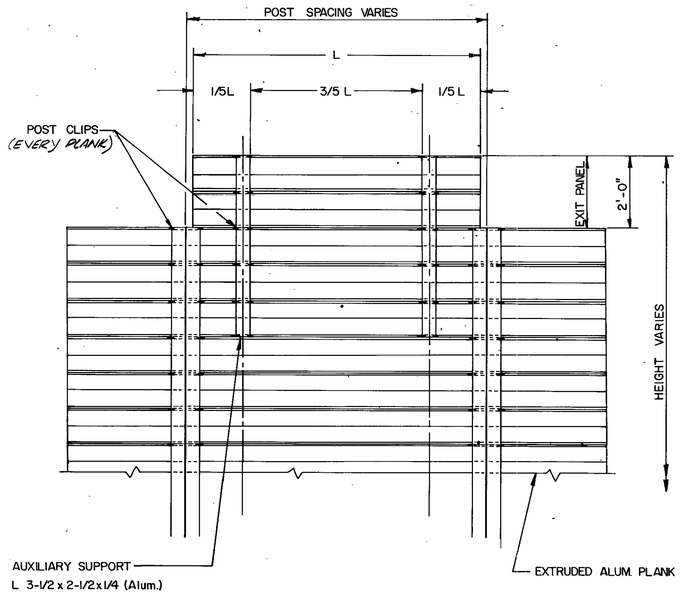
NOTEBOOKS

BOOK NO.	PAGE NO.	BOOK NO.	PAGE NO.
" "	" "	" "	" "

		DATE
PLAN TRACED	Wordell	"
PLAN CHECKED		"
PROFILE TRACED		"
PROFILE CHECKED		"
INKED		"
CHECKED		DATE

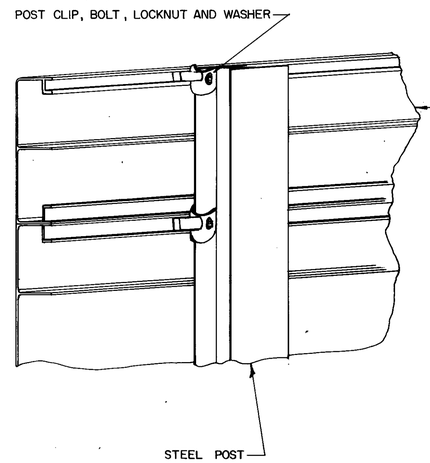
BRUNING 34582

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-4104-A	28	123

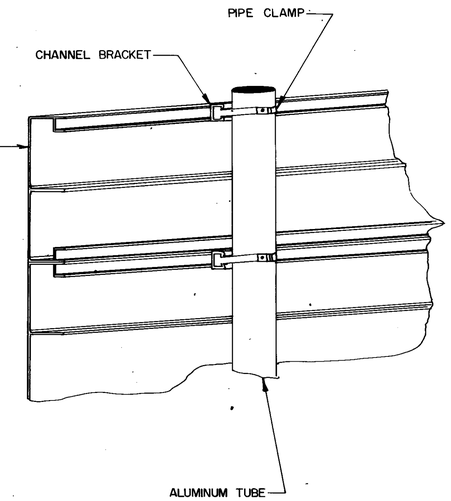


AUXILIARY SUPPORTS SHALL BE OMITTED AND THE POSTS EXTENDED TO TOP OF EXIT PANEL WHEN PANEL IS WIDE ENOUGH TO BE CLIP FASTENED DIRECTLY TO BOTH SIDES OF EACH POST.

ATTACHMENT OF AUXILIARY PANEL

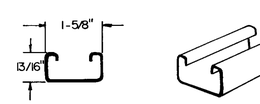


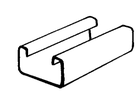
PLANK MOUNTED ON STEEL



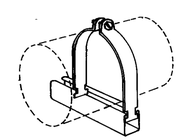
PLANK MOUNTED ON TUBING

EXTRUDED PLANK





FINISH: ELECTRO-GALV.



USE 5/16" Stainless steel cap screw with 7/8" O.D. Washer and locknut.

CHANNEL

PIPE CLAMP

UNISTRUT OR EQUAL

P-4100	CHANNEL	14 GA.	
P-4100T	"	"	
P-4100HS	"	"	
P-2046	POST CLAMP	3" DIA.	12 GA.
P-1120	" "	4" DIA.	11 GA.
P-2062	" "	5" DIA.	10 GA.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
TRAFFIC DIVISION

SIGNING STANDARDS

ALUMINUM PLANK DETAILS 2 of 2

REVISIONS

APPROVED
Reuel W Wolff 9-21-80
DEPUTY COMMISSIONER AND CHIEF ENGINEER
Leach B. Lindh Jr.
TRAFFIC ENGINEER

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-(61)	28	118

REVISIONS AFTER PROPOSAL (USE BOTTOM LINES FIRST)

NO.	DATE	STATION	STATION	DESCRIPTION

NOTEBOOKS

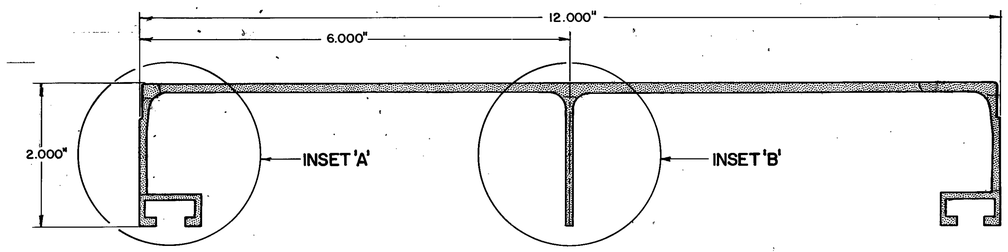
BOOK NO.	PAGE NO.	DATE

BOOK NO.	PAGE NO.	DATE

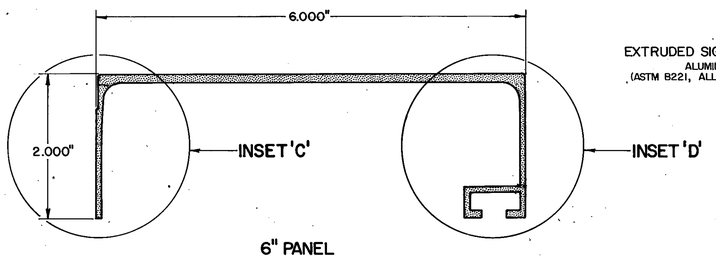
		DATE
PLAN TRACED	Kimball	
PLAN CHECKED		
PROFILE TRACED		
PROFILE CHECKED		
INKED		
CHECKED		

BRUNING 34582

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-A104-A	29	123

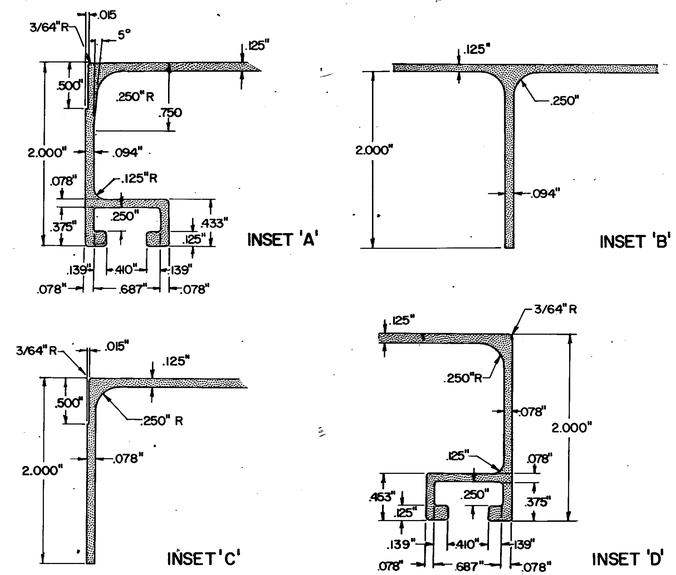


12" PANEL

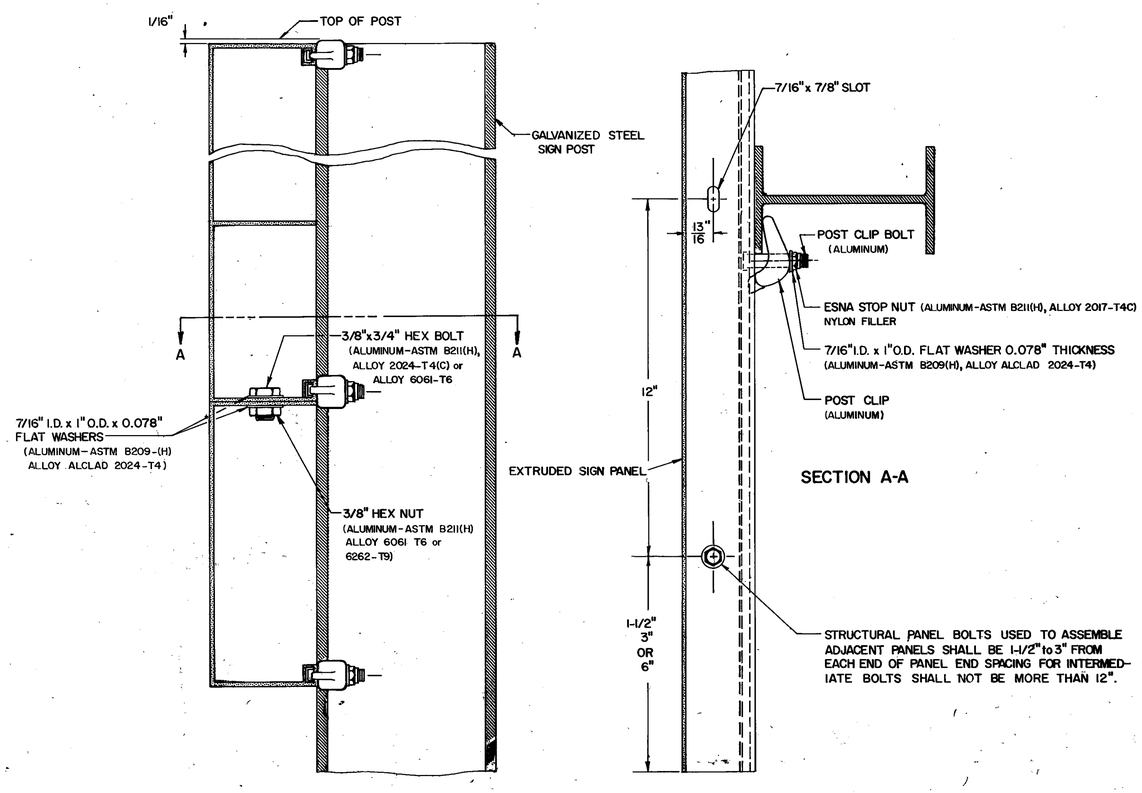


6" PANEL

EXTRUDED SIGN PANEL WIDTHS
ALUMINUM
(ASTM B221, ALLOY 6063-T6)

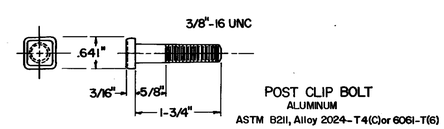


EXTRUDED STIFFENERS
ALUMINUM
(ASTM B211, Alloy 2024-T4(C) or 6061-T16)

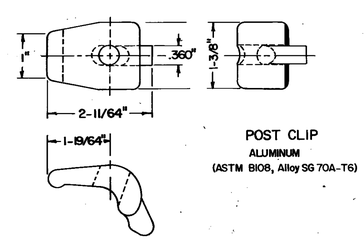


END VIEW

SECTION A-A



POST CLIP BOLT
ALUMINUM
ASTM B211, Alloy 2024-T4(C) or 6061-T(6)



POST CLIP
ALUMINUM
(ASTM B108, Alloy SG 70A-T6)

NOTES:

EXTRUDED PANEL TOLERANCE

1. GAP BETWEEN TWO ADJACENT PANELS SHALL NOT EXCEED 1/16 INCH.
2. ALLOWABLE LATERAL BOW IN PANEL SHALL NOT EXCEED ± 1/8 INCH.
3. LENGTH OF PANEL SHALL NOT EXCEED ± 1/8 INCH FROM SPECIFIED LENGTH.
4. ALL INSIDE AND OUTSIDE CORNERS ARE TO BE .031 INCH RADIUS UNLESS OTHERWISE SPECIFIED.

EXTRUDED PANEL WIDTH ASSEMBLY

1. FOR EXTRUDED PANEL SIGNS WITH AN OVERALL HEIGHT IN EVEN FEET, USE ONLY THE (12) INCH WIDE PANEL.
2. FOR EXTRUDED PANEL SIGNS WITH AN OVERALL HEIGHT IN INTERVALS OF (6) INCHES, USE THE (6) INCH WIDE PANEL AT THE TOP OR BOTTOM OF THE SIGN. ALL OTHER PANELS ARE TO BE THE (12) INCH WIDE PANEL.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
TRAFFIC DIVISION

SIGNING STANDARDS

ALUMINUM PLANK DETAILS 1 of 2

REVISIONS

APPROVED
Richard W. Wolff 5-7-79
DEPUTY COMMISSIONER AND CHIEF ENGINEER
Frank P. Lindsay
TRAFFIC ENGINEER

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-(021)	29	118

(USE BOTTOM LINES FIRST)

REVISIONS AFTER PROPOSAL

NO.	DATE	STATION	STATION	DESCRIPTION

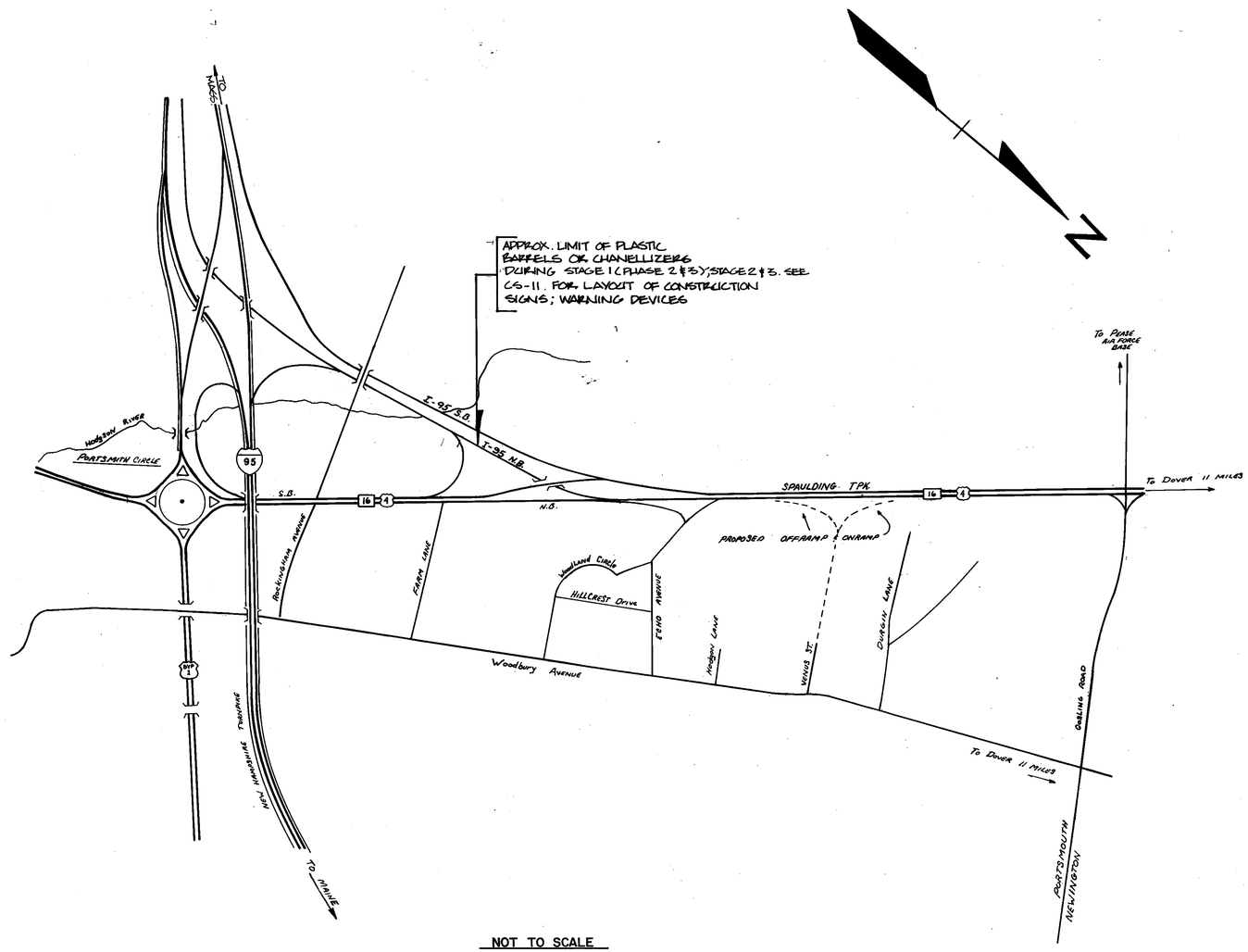
NOTEBOOKS

BOOK NO.	PAGE NO.	DATE

		DATE
PLAN TRACED	Kimball	
PLAN CHECKED		
PROFILE TRACED		
PROFILE CHECKED		
INKED		
CHECKED		

BRUNING 34582

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N. H.	P-4104-A	30	123



NOT TO SCALE

CONSTRUCTION SIGNING PLAN

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-(61)	30	118

REVISIONS AFTER PROPOSAL (USE BOTTOM LINES FIRST)

NO.	DATE	STATION	STATION	DESCRIPTION

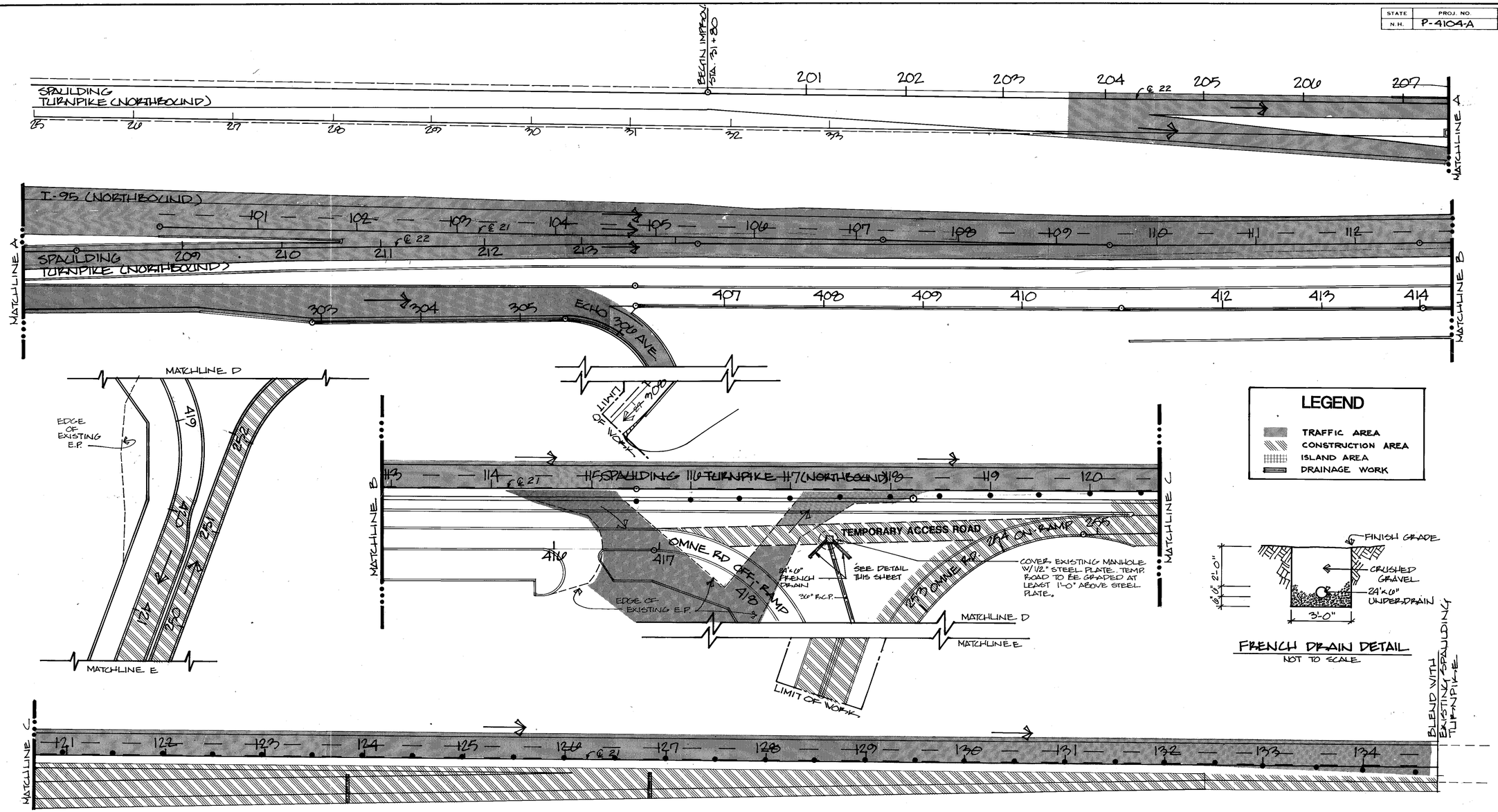
NOTEBOOKS

BOOK NO.	PAGE NO.	BOOK NO.	PAGE NO.
" "	" "	" "	" "

	DATE
PLAN TRACED	
PLAN CHECKED	" "
PROFILE TRACED	" "
PROFILE CHECKED	" "
INKED	
CHECKED	

BRUNING 3a...J3

STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
N.H.	P-4104-A	31	123



LEGEND

- TRAFFIC AREA
- CONSTRUCTION AREA
- ISLAND AREA
- DRAINAGE WORK

FRENCH DRAIN DETAIL
NOT TO SCALE

GENERAL NOTES

TRAFFIC CONTROL

Speed limit will be reduced to 45 m.p.h. through the construction area. Traffic on I-95 and the Spaulding Turnpike will travel in the existing travel lanes. Plastic barrels or plastic channelizers will be placed between the travel area and the construction area. They will be placed on the right edge of the paved shoulder starting at Sta. 115 + 50, then on a 45 to 1 taper to the left edge of the paved shoulder at Sta. 120 + 0, then along the right edge of the traveled way through the construction area. Traffic to the two automobile dealers will be existing conditions. Echo Avenue off ramp will remain open. The Echo Avenue on ramp shall be closed and a turnaround shall be constructed by others on Echo Avenue.

CONSTRUCTION ACTIVITIES

Drainage extensions from Sta. 117 + 00 to 135 + 00 will be completed, and the OMNE Road off ramp from Sta. 419 + 85 to limit of work, and all of the on ramp, including taper, will be constructed up to binder pavement. Complete this phase of constructing the temporary road as shown, including french drain.

TRAFFIC CONTROL PLANS: STAGE 1

Phase 1

(USE BOTTOM LINES FIRST)

REVISIONS AFTER PROPOSAL

NO.	DATE	STATION	STATION	DESCRIPTION

NOTEBOOKS

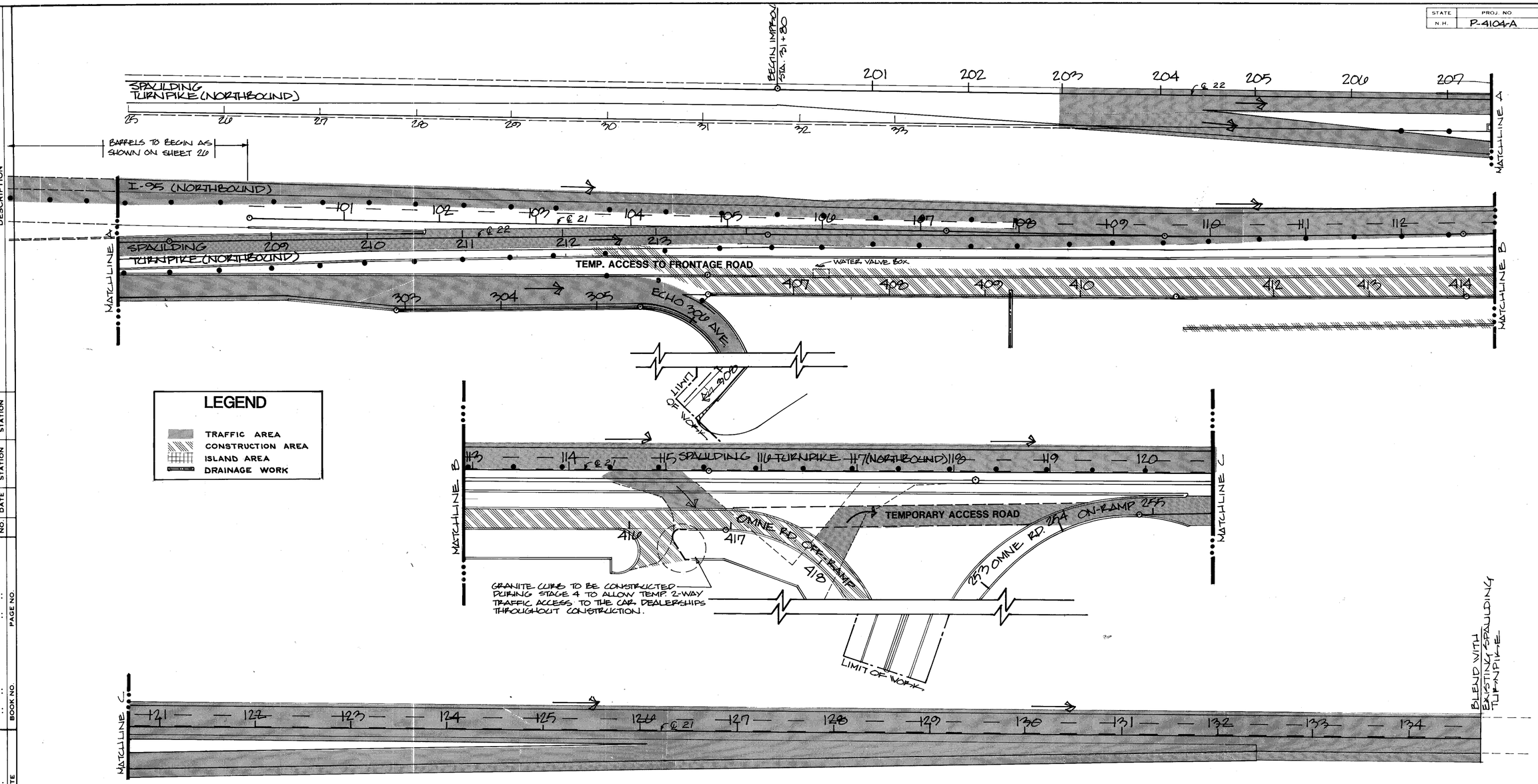
BOOK NO.	PAGE NO.

BOOK NO.	PAGE NO.

		DATE
PLAN TRACED	DM	6/15/84
PLAN CHECKED		
PROFILE TRACED		
PROFILE CHECKED		
INKED		
CHECKED		

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-(011)	31	

STATE	PROJ. NO	SHEET NO.	TOTAL SHEETS
N.H.	P-4104-A	32	123



LEGEND

- TRAFFIC AREA
- CONSTRUCTION AREA
- ISLAND AREA
- DRAINAGE WORK

GENERAL NOTES

TRAFFIC CONTROL

Speed limit will be reduced to 45 m.p.h. through the construction area. Travel on I-95 and Spaulding Turnpike will be limited to one lane each. Plastic barrels or plastic channelizers will be placed between the travel area and the construction area. They will be placed starting at the left edge of the paved shoulder at Sta. 206 + 50, then on 45 to 1 taper to the right edge of the travel lane at Sta. 211 + 00 continuing along the right edge of the travel lane through the construction area. Access to the automobile dealers will be made by adjusting the location of the barricades during construction. Access from the automobile dealers will be via the temporary road/acceleration lane.

CONSTRUCTION ACTIVITIES

Construction will begin with placement of a 1/2-inch hot butuminous overlay on the Spaulding Turnpike pavement from Sta. 25 + 00 MS ℄ to Sta. 209 + 20 construction ℄ 22, to remove existing striping. Extend existing drainage at Sta. 409 + 25 and wherever else that is needed in this work area. Construct frontage road from Sta. 406 + 10 to where it matches Phase 1, OMNE Road construction. Construct temporary access to frontage road from edge of existing paved shoulder of the Spaulding Turnpike. From Sta. 212 + 00 of the Spaulding Turnpike to the left edge of the frontage road at Sta. 406 + 25, temporary crossover will be 20 feet in width. This work will be complete to binder course, except where the temporary roads are being placed. Construction will be limited to about one-half the width of the island between the frontage road and Spaulding Turnpike.

TRAFFIC CONTROL PLANS: STAGE 1

Phase 2

PROJ NO	SHEET NO	TOTAL SHEETS
F-001-(013)	32	118

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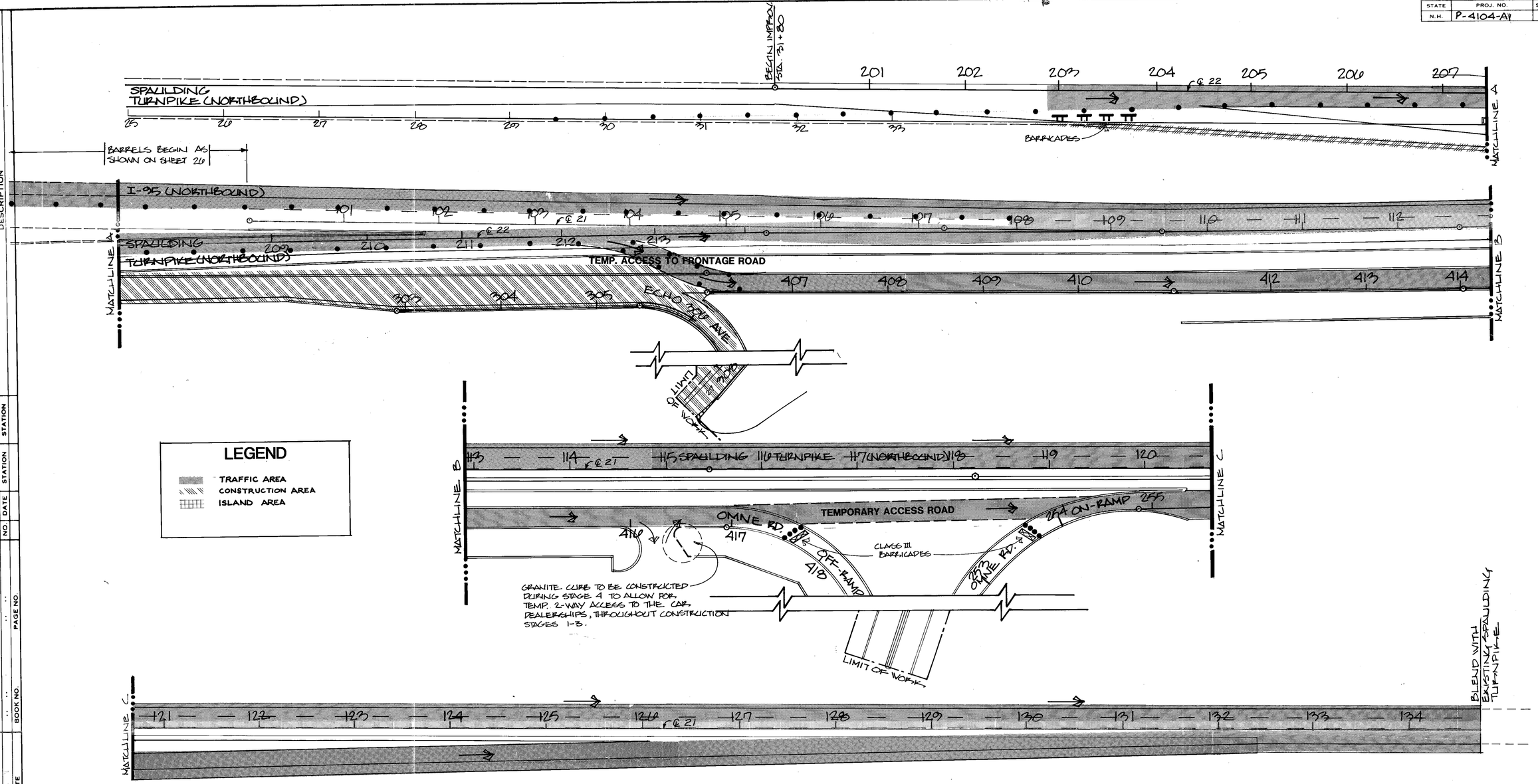

LEGEND

- TRAFFIC AREA
- CONSTRUCTION AREA
- ISLAND AREA

GENERAL NOTES

TRAFFIC CONTROL

Speed limit will be reduced to 45 m.p.h. through the construction area. Traffic on I-95 and the Spaulding Turnpike will be limited to one lane each. Traffic to the automobile dealers will travel across the temporary road from Sta. 406 + 25 of the frontage road, then along the frontage road to the dealerships. Traffic may go to and from the dealerships via the frontage road. Echo Avenue will be closed to traffic from the Spaulding Turnpike. Plastic barrels or plastic channelizers will be placed between the traffic and construction areas. They will be placed starting at the right edge of the right paved shoulder of the Spaulding Turnpike at Sta. 29 + 50, then on a 45 to 1 taper to the left edge of the paved shoulder at Sta. 207 + 50 ±, then along the right edge of the traveled way through the construction area. They will also be required at the temporary roadway leading to the frontage road. Traffic will not be permitted to enter or leave the OMNE entrance.

CONSTRUCTION ACTIVITIES

Constructon will include the widening of the shoulder from Sta. 203 + 0 to 209 + 0; the construction of the entrance ramp to the frontage road and Echo Avenue off ramp; matching the work done on the frontage road under Phase 2; construction of the new ramp to Echo Avenue and to the limits of work on Echo Avenue. Work will be complete to the binder course. State will provide the detour pavement markings for the detour of Echo Avenue on ramp.

TRAFFIC CONTROL PLANS: STAGE 1

Phase 3

PROJ NO	SHEET NO	TOTAL SHEETS
F-001-(011)	33	118

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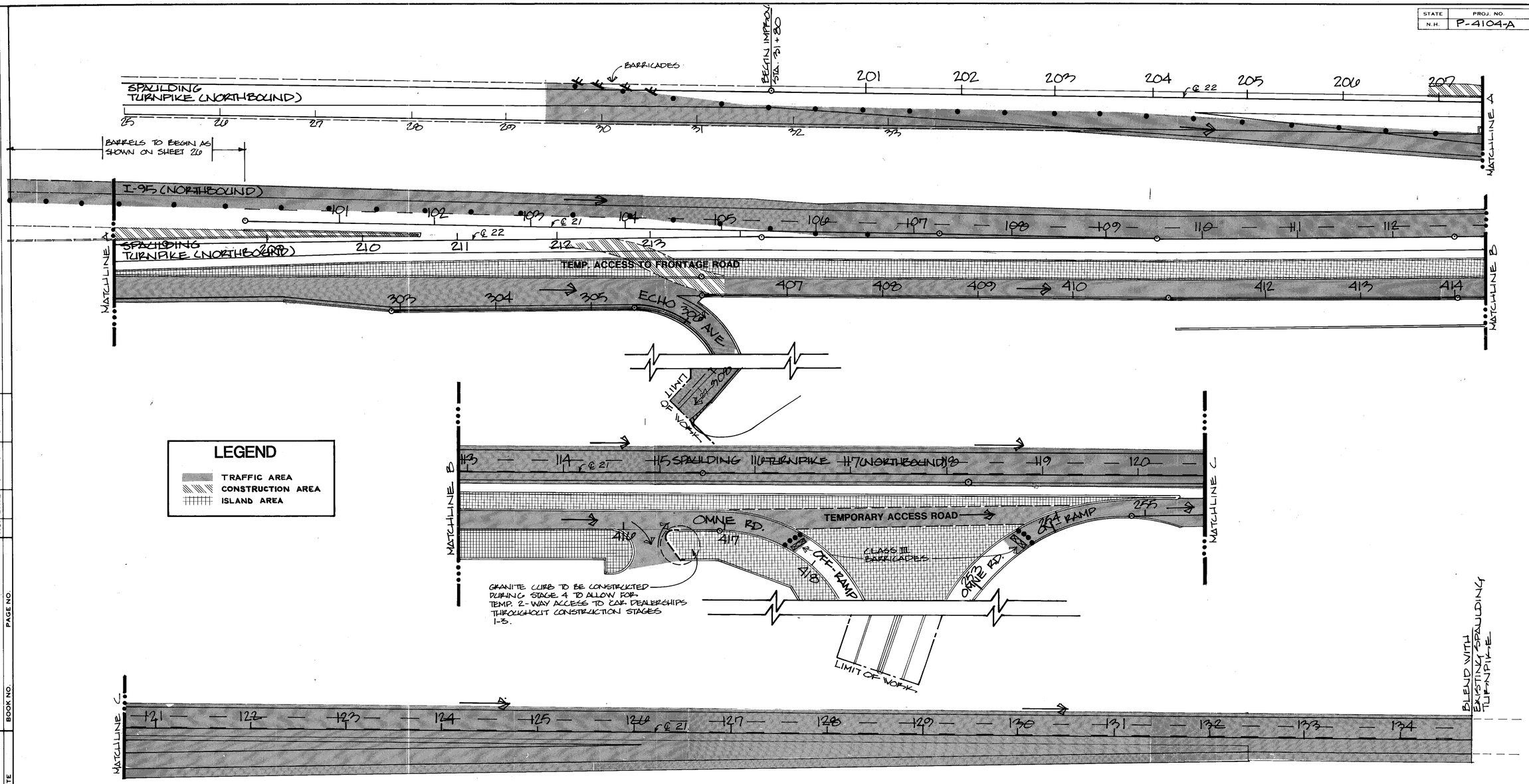

LEGEND

- TRAFFIC AREA
- CONSTRUCTION AREA
- ISLAND AREA

GENERAL NOTES

TRAFFIC CONTROL

Speed limit will be reduced to 45 m.p.h. through the construction area. Spaulding Turnpike traffic will merge right and travel along the frontage road. Traffic to Echo Avenue will be on the newly constructed ramp. Traffic to and from the automobile dealers will be on the frontage road. No traffic will be permitted to or from the OMNE entrance road.

I-95 traffic will merge to the left travel lane from Sta. 97 + 50 to Sta. 104 + 00. Plastic barrels or plastic channelizers will be used between traffic and construction areas. They will be placed starting at the left edge of traveled way of the Spaulding Turnpike at Sta. 23 + 50, then on a 45 to 1 taper to a point that intersects the new pavement of Stage 1, Phase 3, then along edge of new pavement to the curbing on frontage road.

On I-95, barriers will begin at the right edge of traveled way at Sta. 92 + 00, then on a 45 to 1 taper to Sta. 97 + 50, then along the center line to Sta. 105 + 00.

CONSTRUCTION ACTIVITIES

Construction of a new island between I-95 and the Spaulding Turnpike from Sta. 206 + 95 to Sta. 210 + 60. Work will be completed to the binder course. Temporary roadway from Sta. 212 + 00 to the frontage will be removed.

TRAFFIC CONTROL PLANS: STAGE 2

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-(61)	34	118

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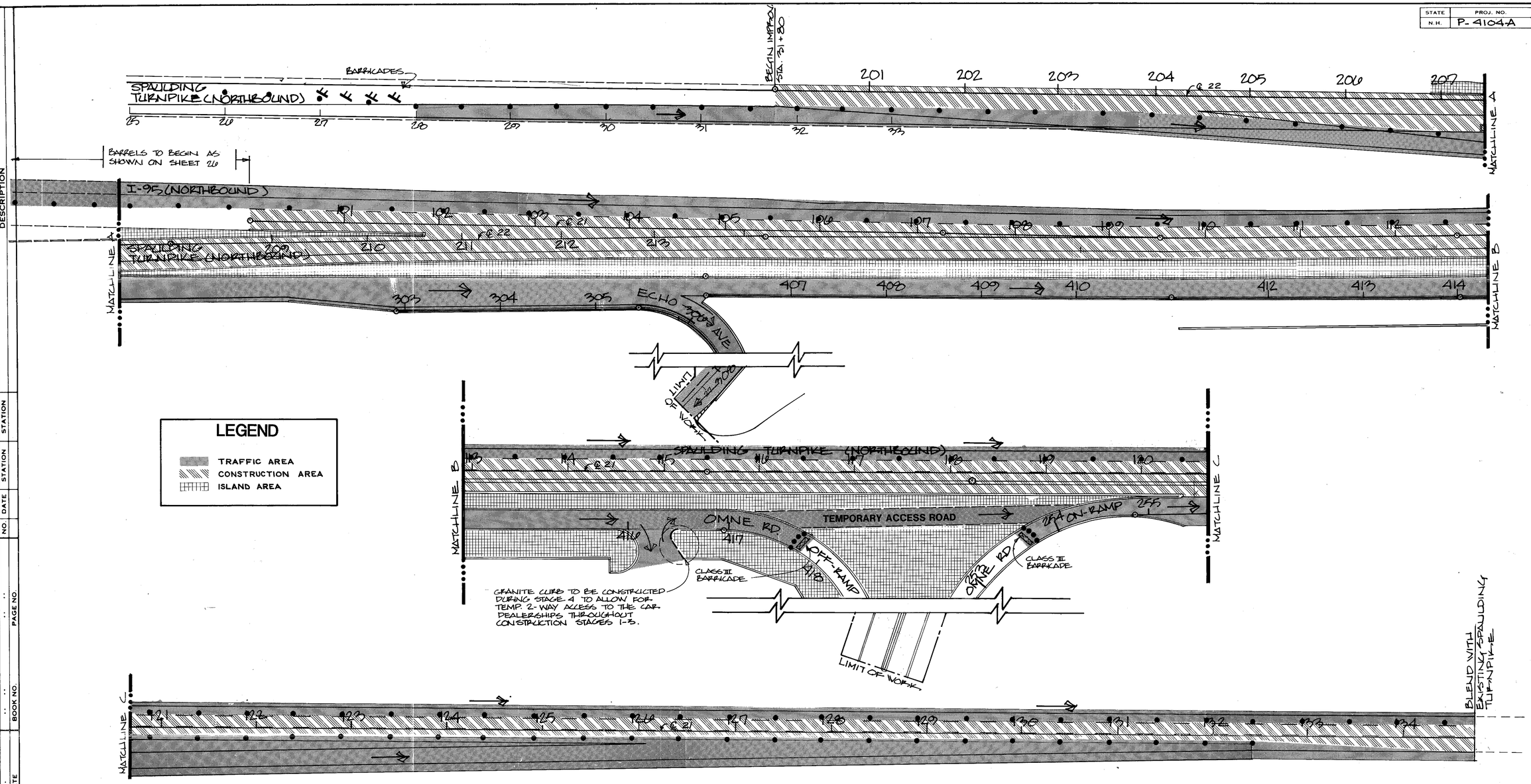

LEGEND

- TRAFFIC AREA
- CONSTRUCTION AREA
- ISLAND AREA

GENERAL NOTES

TRAFFIC CONTROL

Speed limit will be reduced to 45 m.p.h.

Traffic on I-95 will merge to left travel lane. Traffic on Spaulding Turnpike will merge right and travel on the frontage road and temporary roadway at OMNE entrance. Access to and from the automobile dealers will be maintained on the frontage road. Echo Avenue traffic will be maintained. Traffic to and from OMNE entrance will be prohibited. Plastic barrels or plastic channelizers will be used between traffic and work areas. On I-95, barriers will begin at the right edge of traveled way at Sta. 92 + 00, then on a 45 to 1 taper to Sta. 97 + 50, then along the center line through the area of construction. On the Spaulding Turnpike, barriers will begin on the left edge of traveled way at Sta. 23 + 50, then on a 45 to 1 taper until it intersects the edge of new pavement for the frontage road and Echo Avenue ramp, then along the edge of new pavement to the left curb line of the frontage road at Sta. 207 + 40.

CONSTRUCTION ACTIVITIES

On I-95, there will be a shim coat placed on the right travel lane from Sta. 100 + 00 to Sta. 134 + 75.

Spaulding Turnpike shimming will be done on traveled way from Sta. 200 + 00 to the intersection of I-95. The shoulder area will be built up with heavy shimming to be a part of a new travel lane. The remaining portion of the new travel lane and a new 10-foot-wide shoulder will be constructed on the right until it intersects the new on ramp from OMNE entrance. Also, the remaining portion of the island between the Turnpike and the frontage road will be completed with the exception of the temporary roadway between the ramps at the OMNE entrance. The work shall include all grading, curbing, shimming and binder course pavement.

TRAFFIC CONTROL PLANS: STAGE 3

PROJ. NO.	SHEET NO.	TOTAL SHEETS
F-001-(061)	35	118

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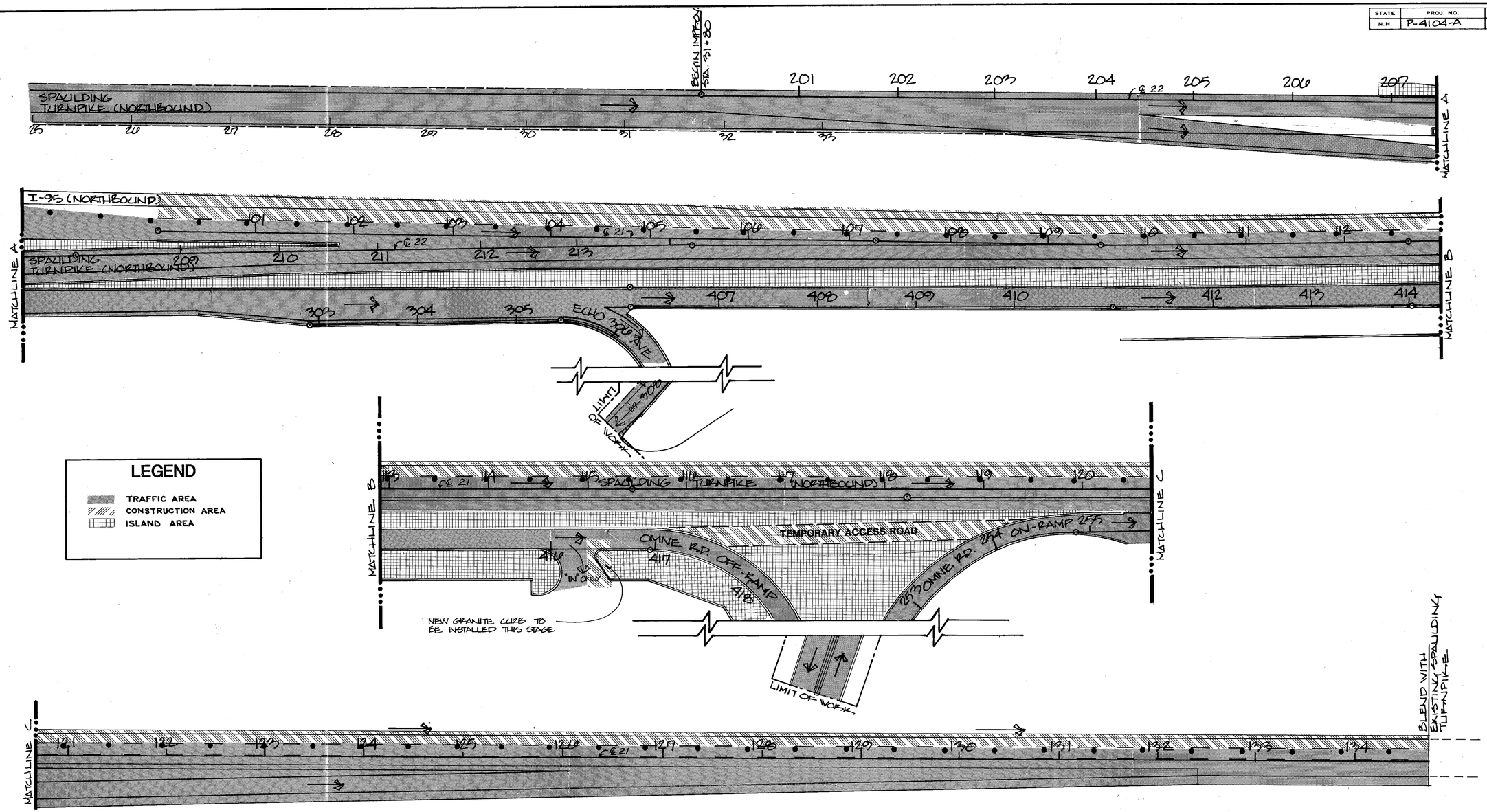

LEGEND

- TRAFFIC AREA
- CONSTRUCTION AREA
- ISLAND AREA

GENERAL NOTES

TRAFFIC CONTROL

Speed limit will be reduced to 45 m.p.h. through the construction area.

Spaulding Turnpike will merge to the newly constructed right lane; Echo Avenue and frontage road traffic will travel on newly constructed areas. Traffic to automobile dealers will be limited to "in" only. Traffic to and from the OMNE entrance will now be permitted. I-95 traffic will merge to the right travel lane. Plastic barrels or plastic channelizers will be placed between the traffic and work areas.

On I-95, barriers will be placed on the left edge of traveled way beginning 800 feet prior to Sta. 100 + 00, and then taper on a 45 to 1 to the center line 250 feet prior to Sta. 100 + 00, then along the center line through the work area.

CONSTRUCTION ACTIVITIES

I-95 work will consist of shimming the left travel lane. The temporary roadway between the OMNE entrance ramps will now be removed and curbing set in the locations. The curbing at the automobile dealers will be set to prohibit entrance to the frontage road, final grading and landscaping will be completed. Final paving of the wearing course will be placed in the spring.

TRAFFIC CONTROL PLANS: STAGE 4

PROJ NO	SHEET NO	TOTAL SHEETS
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