

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

PLAN AND PROFILE OF RECONSTRUCTION OF ATLANTIC AVENUE AND RELATED WORK

IN THE CITY/TOWN OF
HULL
PLYMOUTH COUNTY

FEDERAL AID PROJECT NO.

HULL ATLANTIC AVENUE			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	42
PROJECT FILE NO.		601607	

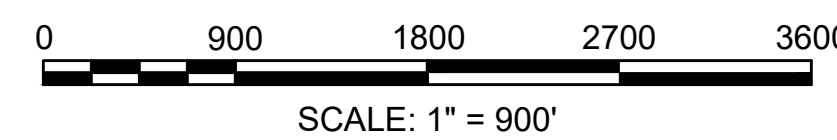
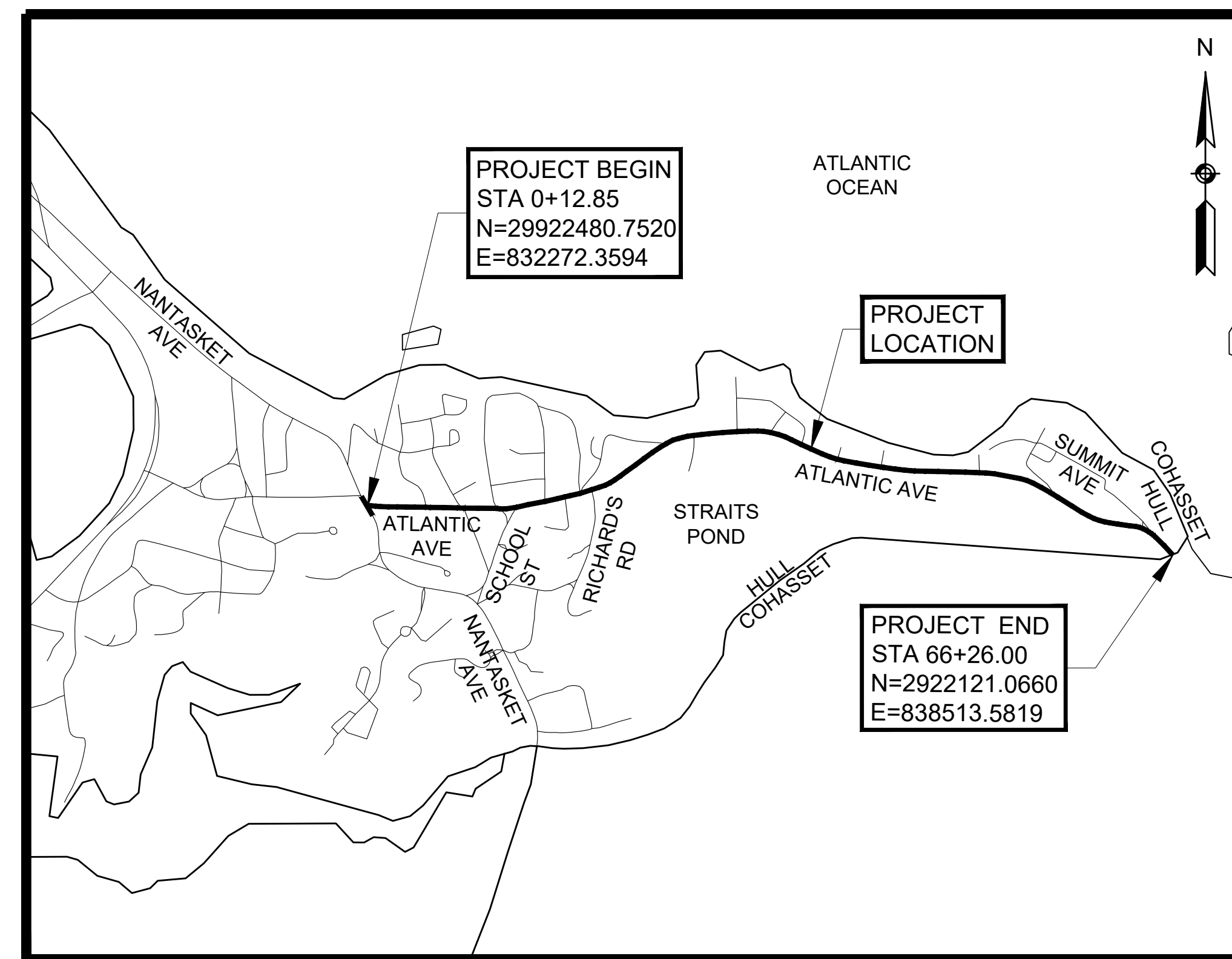
TITLE SHEET & INDEX

NOTICE OF INTENT
PERMITTING PLANS
REVISED AUGUST 10, 2021

THESE PLANS ARE SUPPLEMENTED BY THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 2021, THE SUPPLEMENTAL SPECIFICATIONS DATED JUNE 30, 2021, THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING MASSACHUSETTS AMENDMENTS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

NOTICE OF INTENT PLANS

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LENGTH OF PROJECT = 6607.15 FEET = 1.251 MILES



CHIA
141 Longwater Drive
Norwell, MA 02061
Main: (781) 982-5400 www.chacompanies.com

DATE	DESCRIPTION	REV #
8/10/2021	REVISED PER PERMITTING COMMENTS	1
9/28/2020	NOTICE OF INTENT FILING	-

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER ON BRIDGE OR JERSEY BARRIER
		CATCH BASIN
		CATCH BASIN CURB INLET
		FLAG POLE
		GAS PUMP
		MAIL BOX
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/ FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
		WATER GATE
		PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCE STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		HAY BALES/SILT FENCE
		TREE LINE OR LIMIT OF CLEARING AND GRUBBING
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		MICROWAVE DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
		RAILROAD SIGNAL
		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
		MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
		LEGEND "ONLY" - WHITE
		STOP LINE
		CROSSWALK
		SOLID WHITE LINE
		SOLID YELLOW LINE
		BROKEN WHITE LINE
		BROKEN YELLOW LINE
		DOTTED WHITE LINE
		DOTTED YELLOW LINE
		DOTTED WHITE LINE EXTENSION
		DOTTED YELLOW LINE EXTENSION
		DOUBLE WHITE LINE
		DOUBLE YELLOW LINE

ABBREVIATIONS

GENERAL	DESCRIPTION
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BB	BITUMINOUS BERM
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CFT	COMPOST FILTER TUBE
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CRW	CONCRETE RETAINING WALL
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PKF	PICKET FENCE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PPF	PLASTIC PICKET FENCE
PRC	POINT OF REVERSE CURVATURE
PRF	POST AND RAIL FENCE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW

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LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL	DESCRIPTION
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SCB	SEDIMENT CONTROL BARRIER
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SMRW	STONE MASONRY RETAINING WALL
SRW	STONE RETAINING WALL
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UGE	UNDERGROUND ELECTRIC
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
VCC	VERTICAL CONCRETE CURB
WCR	WHEEL CHAIR RAMP
WDF	WOOD FENCE
WG	WATER GATE
WIF	WROUGHT IRON FENCE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
WRW	WOOD RETAINING WALL
X-SECT	CROSS SECTION

GENERAL NOTES

- ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH MASSDOT AND THE TOWN OF HULL STANDARD DETAILS AND SPECIFICATIONS.
- SUBSURFACE OBSERVABLE INFORMATION SHOWN HEREON IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY CHA COMPANIES ON OR BETWEEN NOVEMBER AND DECEMBER 2009.
- PROPERTY LINE INFORMATION SHOWN HERE IS COMPILED FROM VARIOUS SOURCES AND DOES NOT REPRESENT A PROPERTY LINE RETRACEMENT SURVEY. ALL DEED REFERENCES ARE TO WORCESTER COUNTY REGISTRY OF DEEDS UNLESS OTHERWISE NOTED.
- TOPOGRAPHY, CONTOURS AND BENCHMARKS ARE BASED ON NAVD 88 VERTICAL DATUM. TEMPORARY BENCHMARKS, REFERENCED TO THE DATUM ARE INDICATED ON THE SURVEY.

IN THE EVENT THAT BENCHMARKS (TBM'S), ESTABLISHED FOR THIS PROJECT AND PUBLISHED ON THIS SURVEY ARE DESTROYED, NOT RECOVERABLE OR A DISCREPANCY IS FOUND, THE USER SHOULD NOTIFY THIS FIRM IN WRITING PRIOR TO COMMENCING OR CONTINUING ANY WORK.
- LOCATIONS OF SUBSURFACE UTILITIES SHOWN HEREON ARE APPROXIMATE AND ADDITIONAL UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THIS PLAN. LOCATIONS ARE COMPILED FROM UTILITY PLANS OF RECORD AND DIG-SAFE FIELD MARKINGS. RIM AND INVERT INFORMATION HAS BEEN COMPILED AND FIELD VERIFIED WHERE POSSIBLE. THIS INFORMATION IS NOT TO BE USED FOR CONSTRUCTION. PRIOR TO ANY CONSTRUCTION, CONTACT DIG-SAFE AT (1-800-344-7233) TO FIELD VERIFY LOCATION OF ALL UTILITIES.
- DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATION OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTIBILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE AND GRADE UP TO A DEPTH OF 5 FEET SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5 FEET WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.
- THE CONTRACTOR WILL COORDINATE ALL PRIVATE CASTINGS AND POLES THAT ARE TO BE ADJUSTED, RESET OR RELOCATED WITH THE APPROPRIATE UTILITY PURVEYOR. THE RELOCATION, INSTALLATION OR REMOVAL OF PRIVATE UTILITIES SHALL BE ACCOMPLISHED BY THEIR OWNER. THE CONTRACTOR SHALL COOPERATE WITH THE PRIVATE UTILITY PURVEYORS AND ALLOW THEM ADEQUATE TIME TO COMPLETE THEIR WORK IN ADVANCE OF PERFORMING ANY PAVING OPERATIONS OR OTHER FINISH WORK.
- THE CONTRACTOR SHALL MAKE DETERMINATIONS OF SUBSURFACE CONDITIONS, INCLUDING THE LOCATION OF ROCK AND THE ACTUAL LOCATION OF UTILITIES OR OTHER FEATURES WHICH MAY AFFECT THE WORK.

- 6' LENGTH GRANITE TRANSITION CURBS SHALL BE INSTALLED WHERE PROPOSED GRANITE CURB ENDS AND HMA BERM OR NO EDGE TREATMENT BEGINS.
- THE CONTRACTOR SHALL CAUSE AS LITTLE INTERFERENCE AND INCONVENIENCE TO ADJUTERS AS POSSIBLE. THE CONTRACTOR SHALL MAINTAIN SAFE AND CONVENIENT ACCESS TO PRIVATE PROPERTIES AT ALL TIMES.
- THE FLOW OF TRAFFIC THROUGH CONSTRUCTION ZONES IN EXISTING PUBLIC WAYS SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE SPECIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.
- ALL PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
- A MINIMUM OF 4" LOAM AND SEED SHALL BE PLACED AS NOTED ON THE PLANS AND ON DISTURBED AREAS.
- THE WORD "CERTIFY" IS UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE LAND SURVEYOR THAT IS BASED ON HIS BEST KNOWLEDGE, INFORMATION, AND BELIEF, FORMULATED IN ACCORDANCE WITH COMMONLY ACCEPTED PROCEDURES CONSISTENT WITH APPLICABLE STANDARDS OF PRACTICE, AND AS SUCH IT CONSTITUTES NEITHER A GUARANTEE NOR WARRANTY, EITHER EXPRESS OR IMPLIED. THE CERTIFICATIONS SHOWN ARE NOT CERTIFICATIONS TO THE TITLE OF OWNERSHIP OF THE PROPERTIES SHOWN.
- PLAN REFERENCES:
PLYMOUTH COUNTY LAYOUT 1894, PLYMOUTH COUNTY LAYOUT 1904, PLYMOUTH COUNTY DECREE PLAN 1010, LAND COURT PLAN 2595G, PLAN BK 3 PAGE 197, PLAN BK 4 PAGE 979, PLAN BK N PAGE 59, PLAN BK 419 PAGE 189, PLAN BK 4 PAGE 388, PLAN BK 48 PAGE 912, PLAN BK 10 PAGE 112, PLAN BK 35 PAGE 728, PLAN BK 38 PAGE 1128, PLAN BK 15 PAGE 695, PLAN BK 3 PAGE 649, UNRECORDED PLAN ON FILE AT THE TOWN OF HULL CLERKS OFFICE.
- WETLAND FLAGS SHOWN HERE ON ARE BASED ON A FIELD DELINEATION BY CHA CONSULTING, INC. DURING OCTOBER 2009.
- FOR OTHER NOTES, REFER TO SPECIFIC PLANS AND DETAILS.

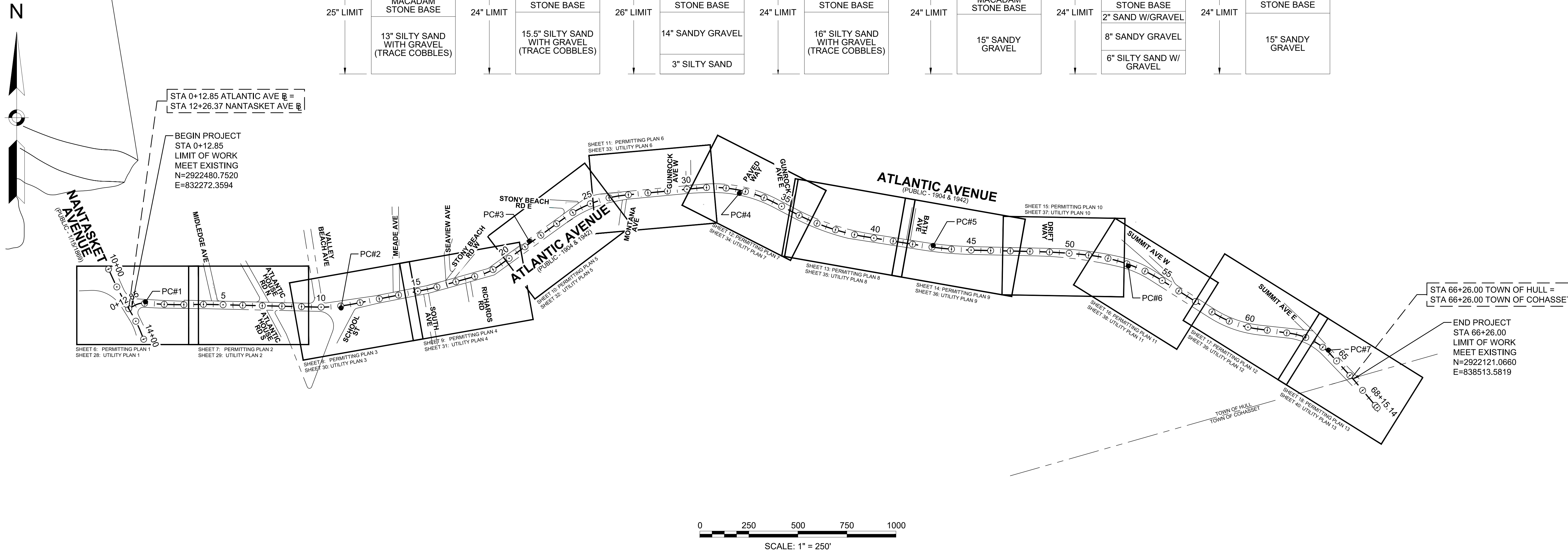
**HULL
ATLANTIC AVENUE**

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MA	-	3	43
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KEY PLAN & BORING LOCATIONS

PAVEMENT CORE LOGS

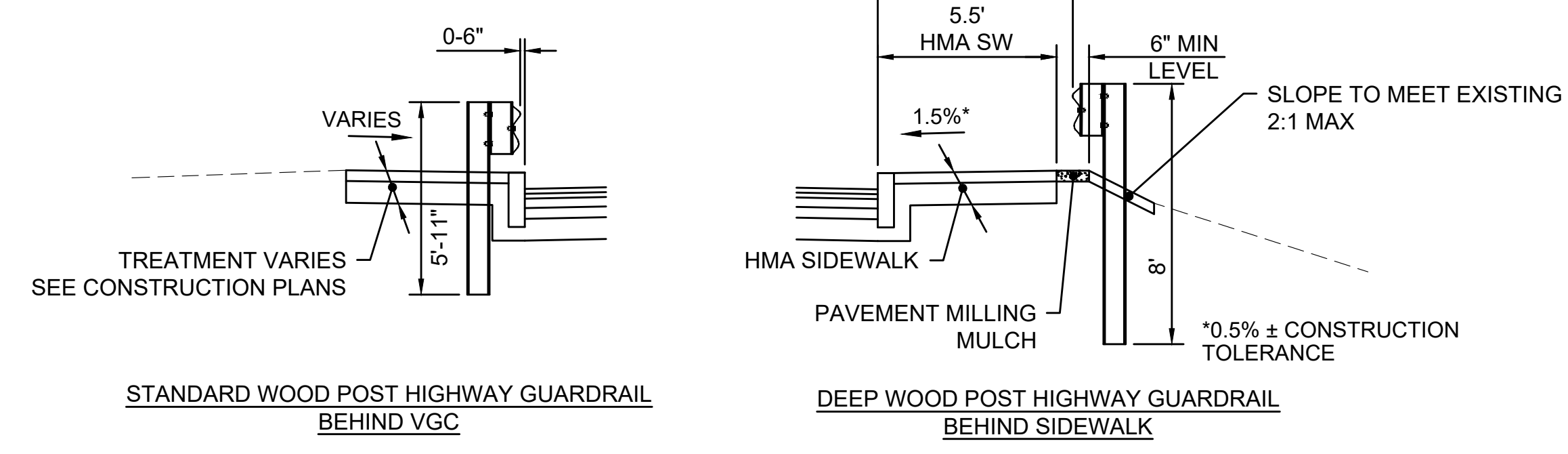
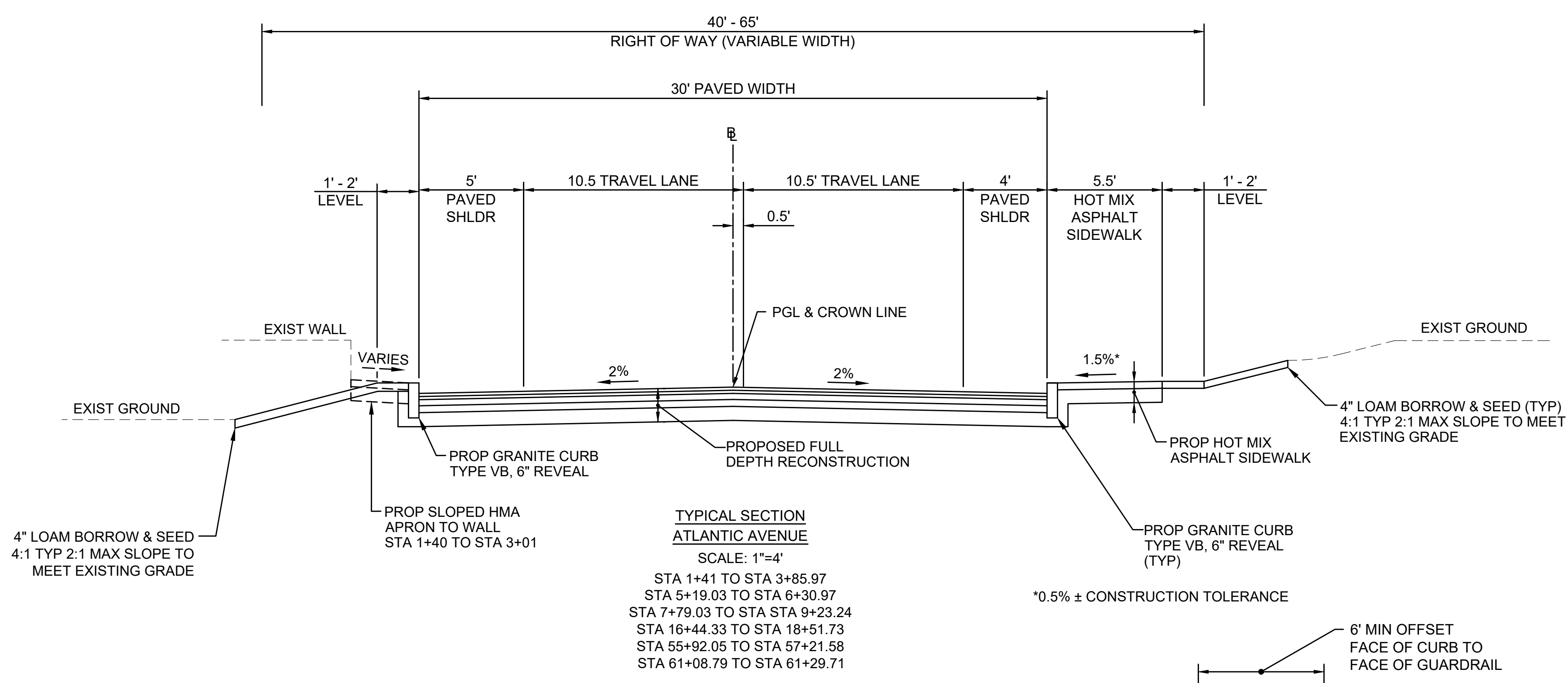
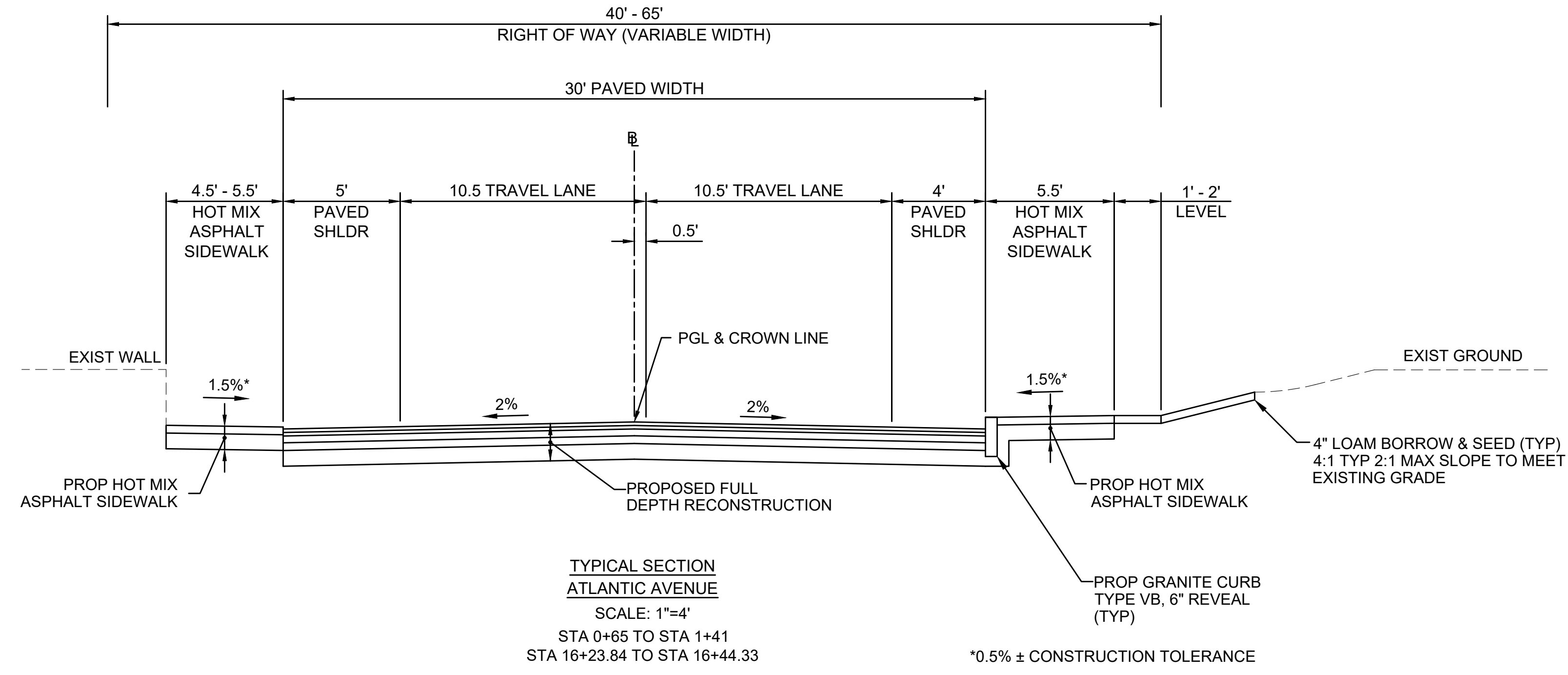
PAVEMENT CORE #1	PAVEMENT CORE #2	PAVEMENT CORE #3	PAVEMENT CORE #4	PAVEMENT CORE #5	PAVEMENT CORE #6	PAVEMENT CORE #7
25" LIMIT	24" LIMIT	26" LIMIT	24" LIMIT	24" LIMIT	24" LIMIT	24" LIMIT
7.5" H.M.A.	5.5" H.M.A.	5.25" H.M.A.	5.0" H.M.A.	4.5" H.M.A.	4.5" H.M.A.	4.0" H.M.A.
4.5" -1.5" MACADAM STONE BASE	3.0" -1.5" MACADAM STONE BASE	3.75" -1.5" MACADAM STONE BASE	3.0" -1.5" MACADAM STONE BASE	4.5" -1.5" MACADAM STONE BASE	3.5" -1.5" MACADAM STONE BASE	5.0" -1.5" MACADAM STONE BASE
13" SILTY SAND WITH GRAVEL (TRACE COBBLES)	15.5" SILTY SAND WITH GRAVEL (TRACE COBBLES)	14" SANDY GRAVEL	16" SILTY SAND WITH GRAVEL (TRACE COBBLES)	15" SANDY GRAVEL	2" SAND W/GRAVEL	15" SANDY GRAVEL
		3" SILTY SAND			8" SANDY GRAVEL	
					6" SILTY SAND W/ GRAVEL	



**HULL
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TYPICAL SECTIONS - 1



PAVEMENT NOTES

PROPOSED PAVEMENT MILLING & OVERLAY
SURFACE: 1.75" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER 1.75" PAVEMENT FINE MILLING

ASPHALT EMULSION FOR TACK COAT @ 0.07-0.09 GAL/SY OVER EXISTING PAVEMENT OR MILLED SURFACE

NOTE: RESURFACING IS PROPOSED AT THE LIMITS OF FULL DEPTH RECONSTRUCTION. SEE SHEET 76 FOR DETAILS.

PROPOSED FULL DEPTH PAVEMENT RECONSTRUCTION

SURFACE: 1.75" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT @ 0.06-0.08 GAL/SY OVER

INTERMEDIATE: 1.75" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER ASPHALT EMULSION FOR TACK COAT @ 0.06-0.08 GAL/SY OVER

BASE: 3.5" SUPERPAVE BASE COURSE 25.0 (SBC-25.0) OVER

SUBBASE: 4" DENSE GRADED CRUSHED STONE OVER 8" GRAVEL BORROW - TYPE B

PROPOSED HOT MIX ASPHALT DRIVEWAY

SURFACE: 4.0" HOT MIX ASPHALT PLACED IN TWO LAYERS: 1.5" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER 2.5" SUPERPAVE SURFACE COURSE 12.5 (SIC-12.5)

SUBBASE: 8" GRAVEL BORROW - TYPE B

PROPOSED CEMENT CONCRETE SIDEWALK/PEDESTRIAN CURB RAMP

SURFACE: 4" CEMENT CONCRETE

SUBBASE: 8" GRAVEL BORROW - TYPE B

PROPOSED CEMENT CONCRETE DRIVEWAY/ CEMENT CONCRETE SIDEWALK AT DRIVEWAY

SURFACE: 6" CEMENT CONCRETE (PAY ITEM 701.1)

SUBBASE: 8" GRAVEL BORROW - TYPE B

PROPOSED HOT MIX ASPHALT SIDEWALK / APRON

SURFACE: 3.0" HOT MIX ASPHALT PAVEMENT PLACED IN TWO LAYERS: 1.25" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER 1.75" SUPERPAVE SURFACE COURSE 12.5 (SIC-12.5)

SUBBASE: 8" GRAVEL BORROW - TYPE B

REMOVED AND RESET BRICK WALK

SURFACE: EXISTING BRICK PAVERS HAND TIGHT JOINTS - SWEEP W/ 6:1 STONE DUST: DRY CEMENT MIX VIBRATED AND MISTED TACK COAT - 2% NEOPRENE OXIDIZED ASPHALT OVER 3/4" - 1" HOT MIX ASPHALT LEVELING BED 7% ASPHALT - 93% SAND OVER

SUBBASE: 8" GRAVEL BORROW - TYPE B

PROPOSED PERMANENT HMA TRENCH PATCH

SURFACE: 1.75" SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT @ 0.06-0.08 GAL/SY

INTERMEDIATE: 1.75" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) OVER ASPHALT EMULSION FOR TACK COAT @ 0.06-0.08 GAL/SY

BASE: 3.50" SUPERPAVE BASE COURSE - 25.0 (SBC-25.0) OVER

SUBBASE: 12" GRAVEL BORROW - TYPE B COMPACTED 95% IN NOT TO EXCEED 6" LAYERS OVER TRENCH BACKFILL COMPACTED 95% IN NOT TO EXCEED 6" LAYERS

PROPOSED TEMPORARY HMA TRENCH PATCH

SURFACE: 2.5" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5) OVER

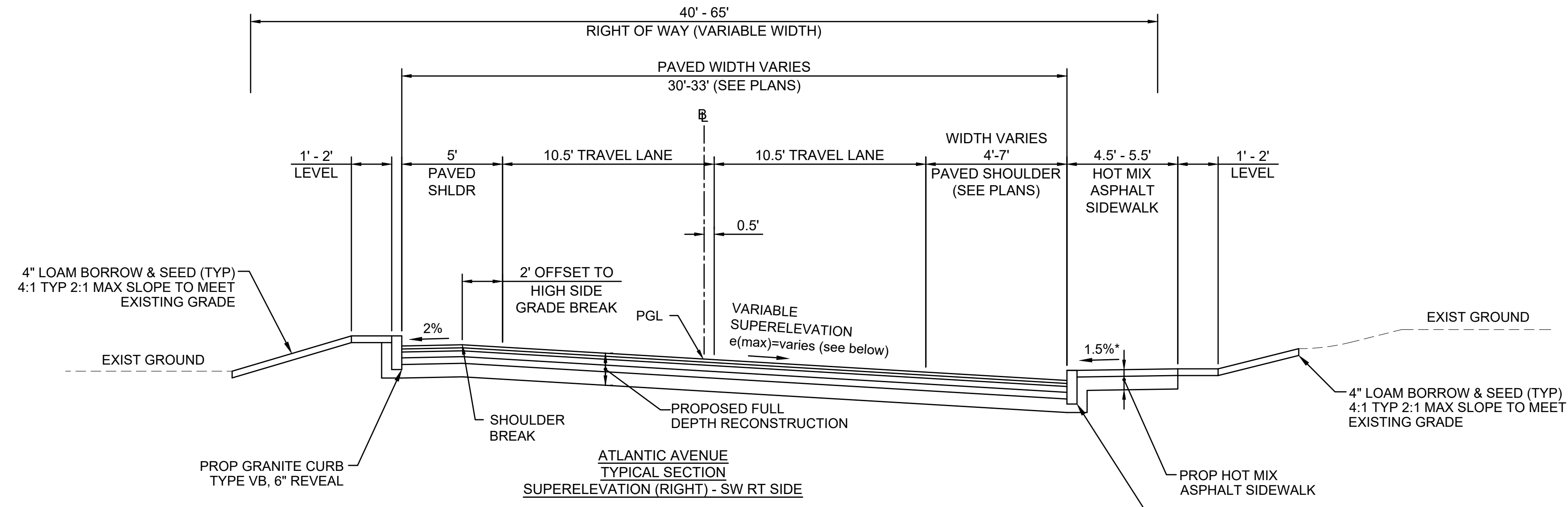
SUBBASE: 12" GRAVEL BORROW - TYPE B COMPACTED 95% IN NOT TO EXCEED 6" LAYERS OVER TRENCH BACKFILL COMPACTED 95% IN NOT TO EXCEED 6" LAYERS

PROPOSED GRAVEL DRIVEWAY

SURFACE: 8" GRAVEL BORROW TYPE B

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TYPICAL SECTIONS - 2



*0.5% ± CONSTRUCTION TOLERANCE

STA 3+85.97 TO STA 5+19.03 ($e(\max)=4.00\%$, NO HIGH SIDE GRADE BREAK)

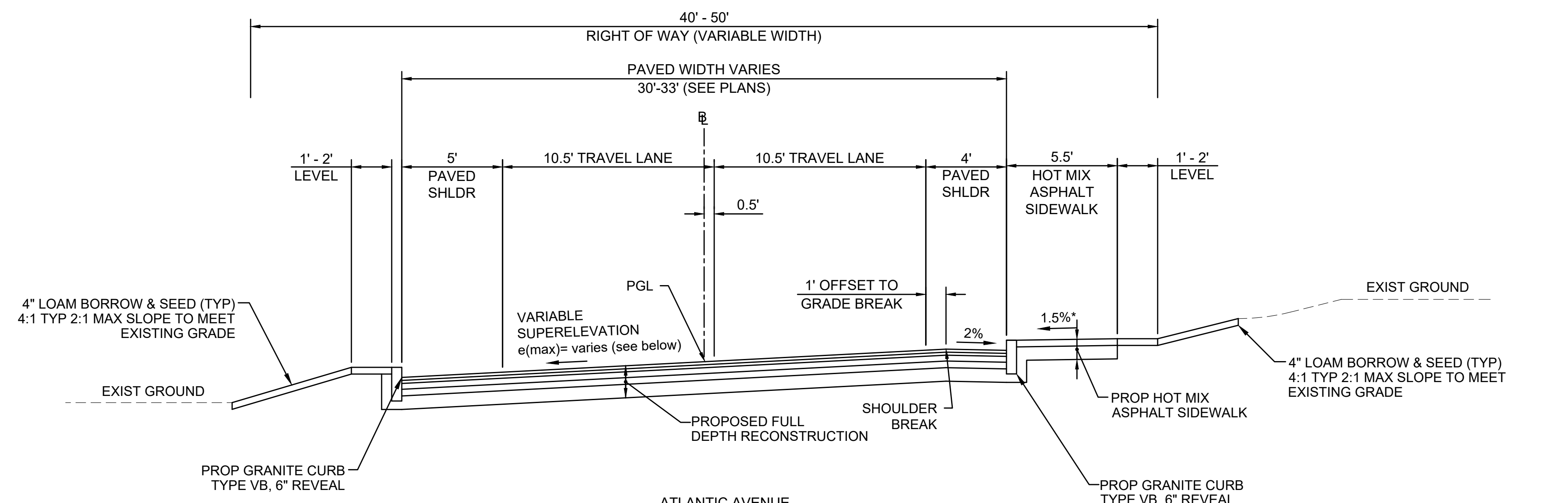
STA 6+30.97 TO STA 7+79.03 ($e(\max)=1.00\%$, NO HIGH SIDE GRADE BREAK)

STA 22+81.14 TO STA 25+87.72 ($e(\max)=2.00\%$)

STA 47+59.54 TO STA 50+75.24 ($e(\max)=2.40\%$)

STA 50+75.24 TO STA 55+92.05 ($e(\max)=3.80\%$)

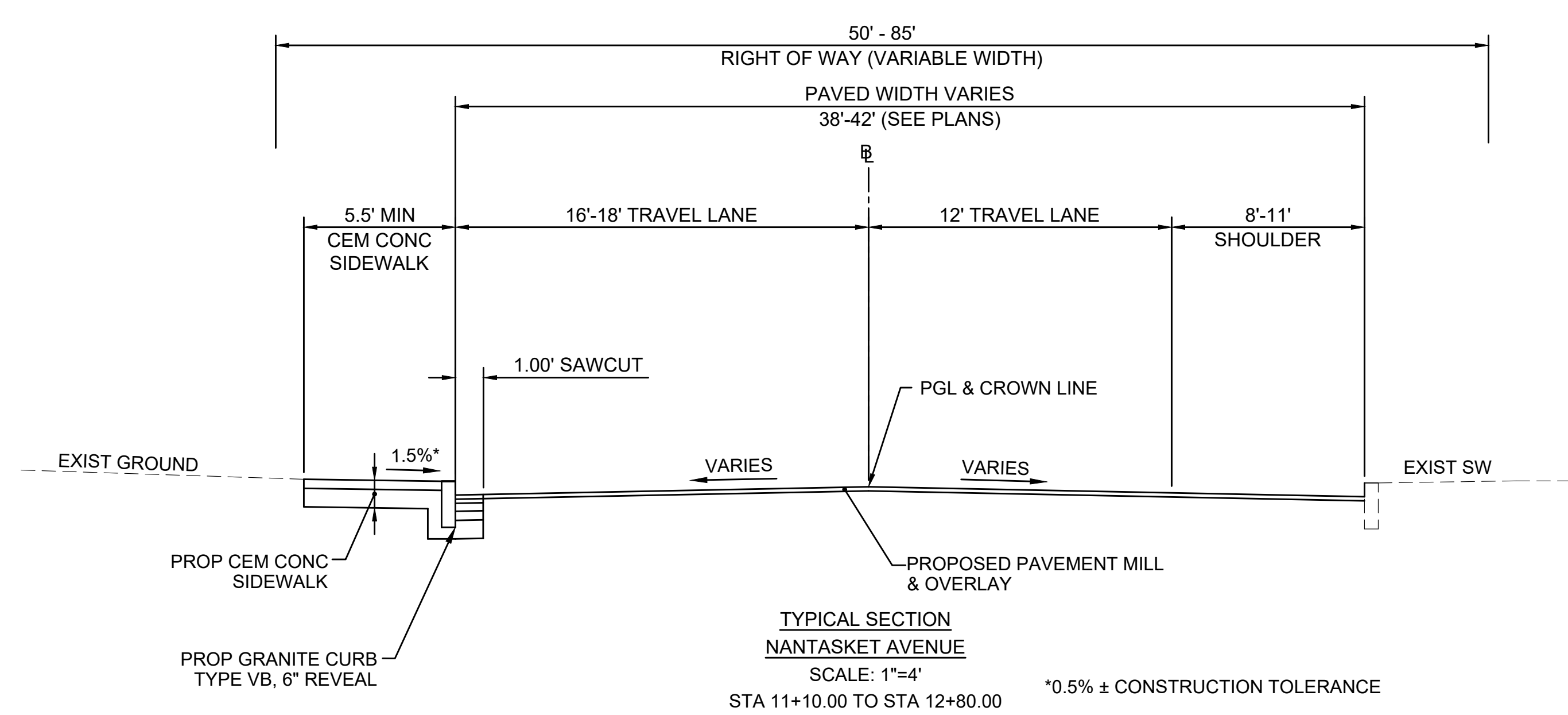
STA 61+29.71 TO STA 66+26.00 ($e(\max)=4.00\%$)



*0.5% ± CONSTRUCTION TOLERANCE

1"=4'

STA 57+21.58 TO STA 61+08.79 ($e(\max)=4.00\%$)



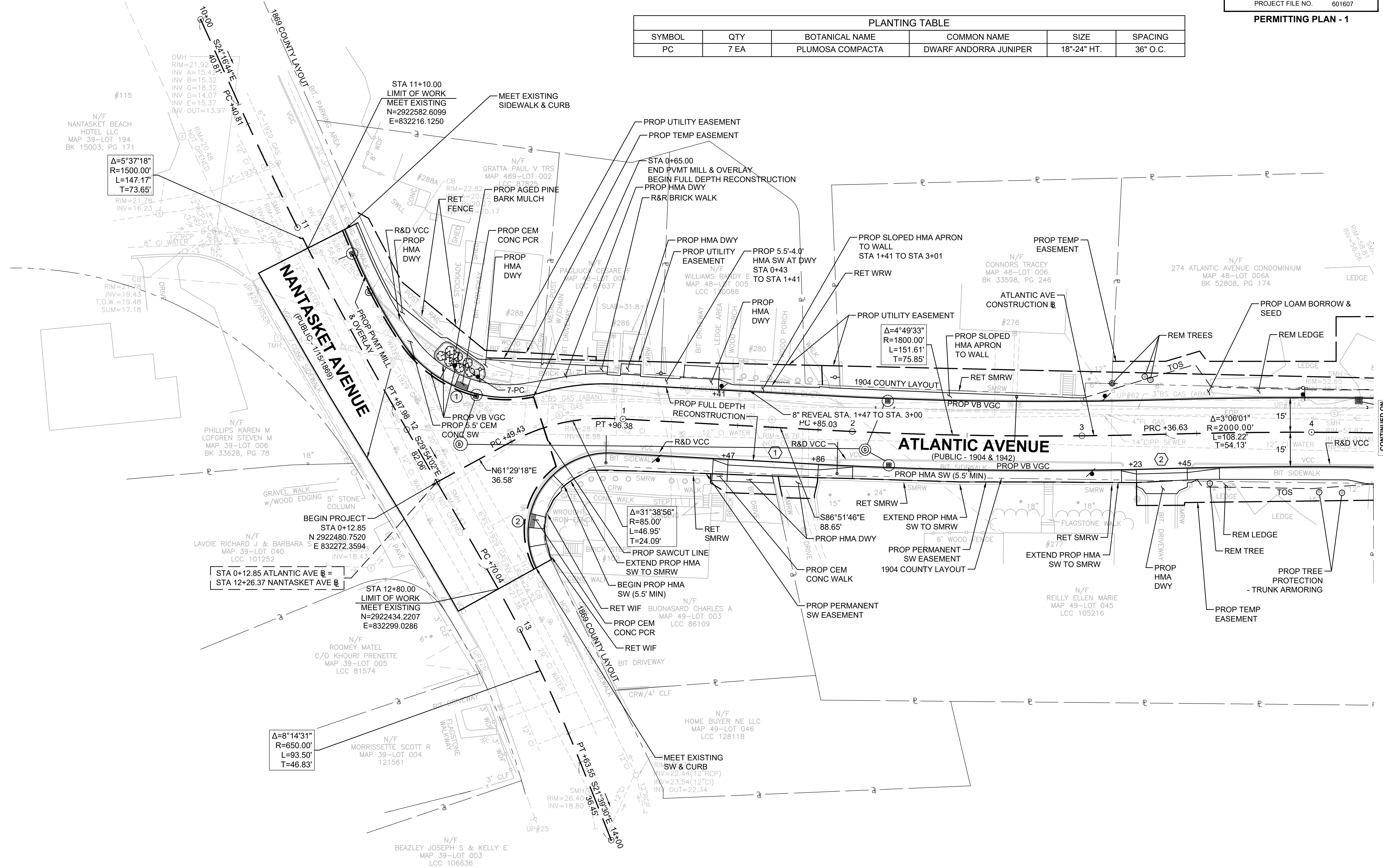
STA 11+10.00 TO STA 12+80.00 *0.5% ± CONSTRUCTION TOLERANCE

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	43
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PERMITTING PLAN - 1

PLANTING TABLE					
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
PC	7 EA	PLUMOSA COMPACTA	DWARF ANDORRA JUNIPER	18"-24" HT.	36" O.C.



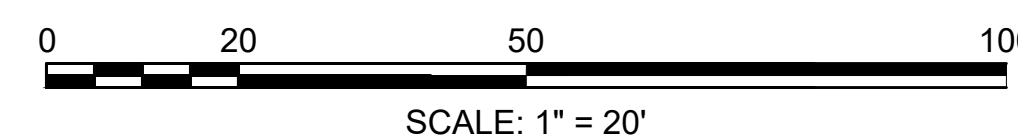
STA 0+12.85 ATLANTIC AVE =
STA 12+26.37 NANTASKET AVE

$\Delta=8^{\circ}14'31''$
 $R=650.00'$
 $L=93.50'$
 $T=46.83'$

$\Delta=31^{\circ}38'56''$
 $R=85.00'$
 $L=46.95'$
 $T=24.09'$

$\Delta=4^{\circ}49'33''$
 $R=1800.00'$
 $L=151.61'$
 $T=75.85'$

$\Delta=3^{\circ}06'01''$
 $R=2000.00'$
 $L=108.22'$
 $T=54.13'$

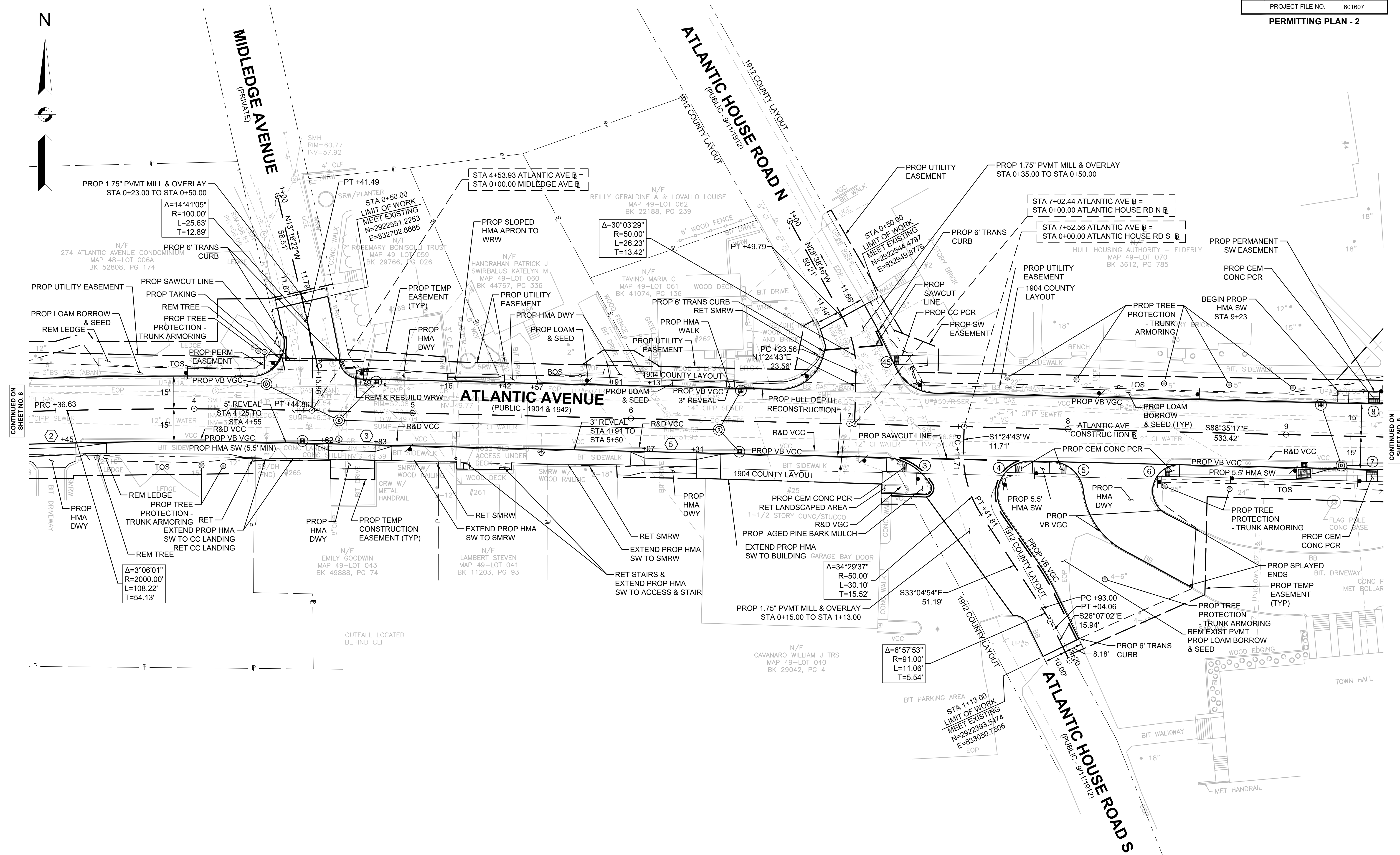
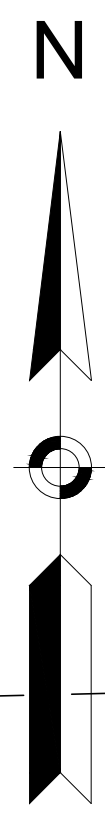


CONTINUED ON
SHEET NO. 7

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

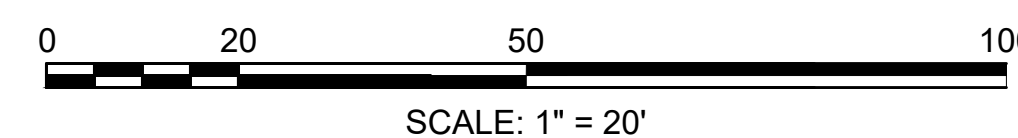
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	43
PROJECT FILE NO.		601607	

PERMITTING PLAN - 2



CONTINUED ON SHEET NO. 6

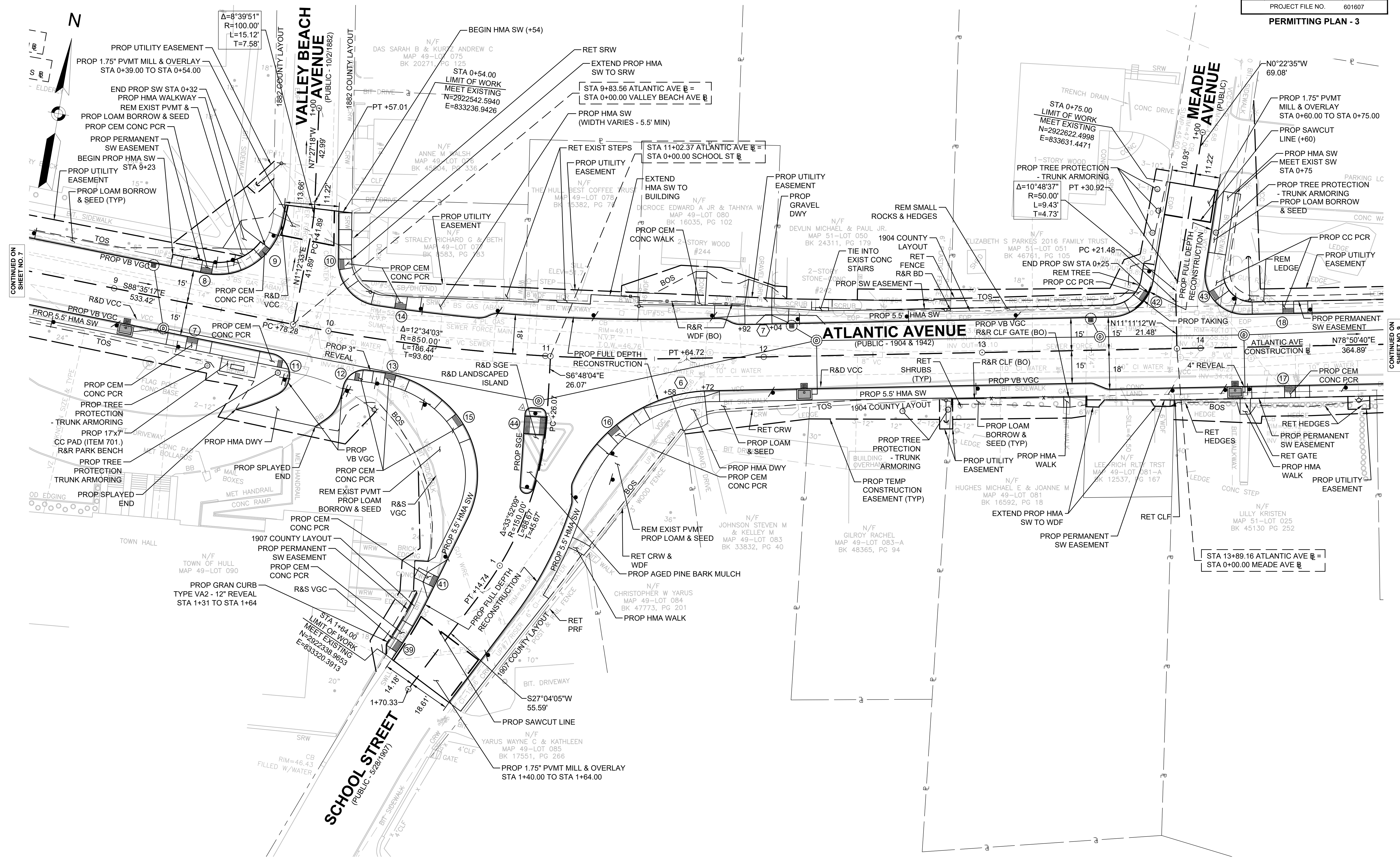
CONTINUED ON SHEET NO. 8



**HULL
ATLANTIC AVENUE RECONSTRUCTION**

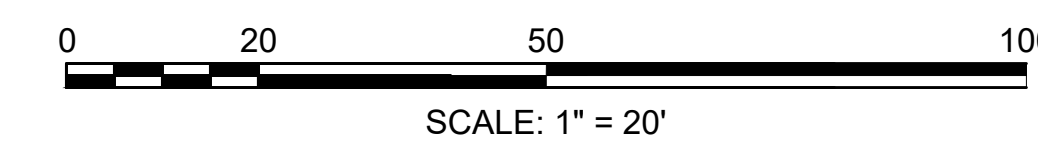
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	43
PROJECT FILE NO.		601607	

PERMITTING PLAN - 3



CONTINUED ON
SHEET NO. 7

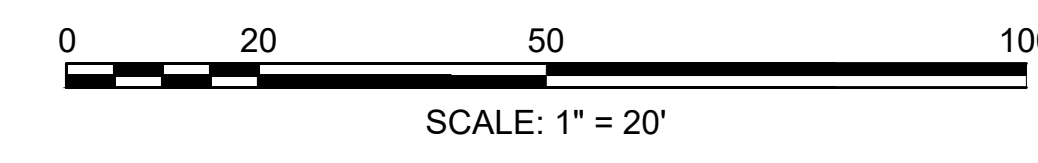
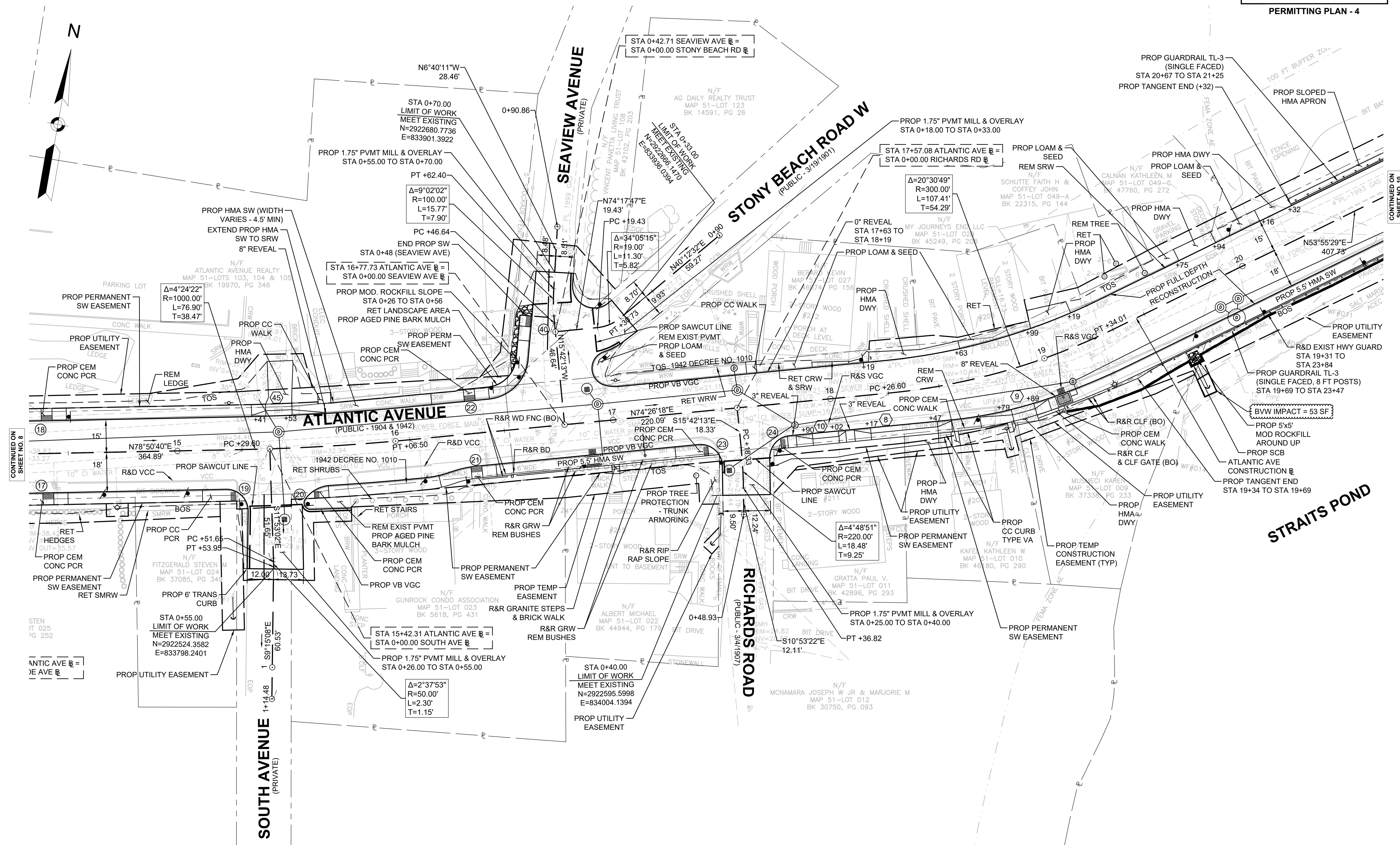
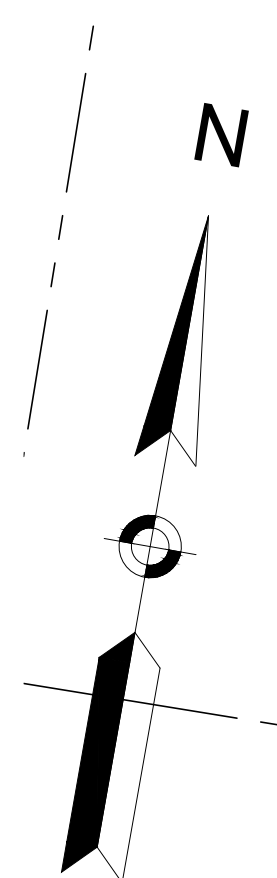
CONTINUED ON
SHEET NO. 9



**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	43
PROJECT FILE NO.		601607	

PERMITTING PLAN - 4



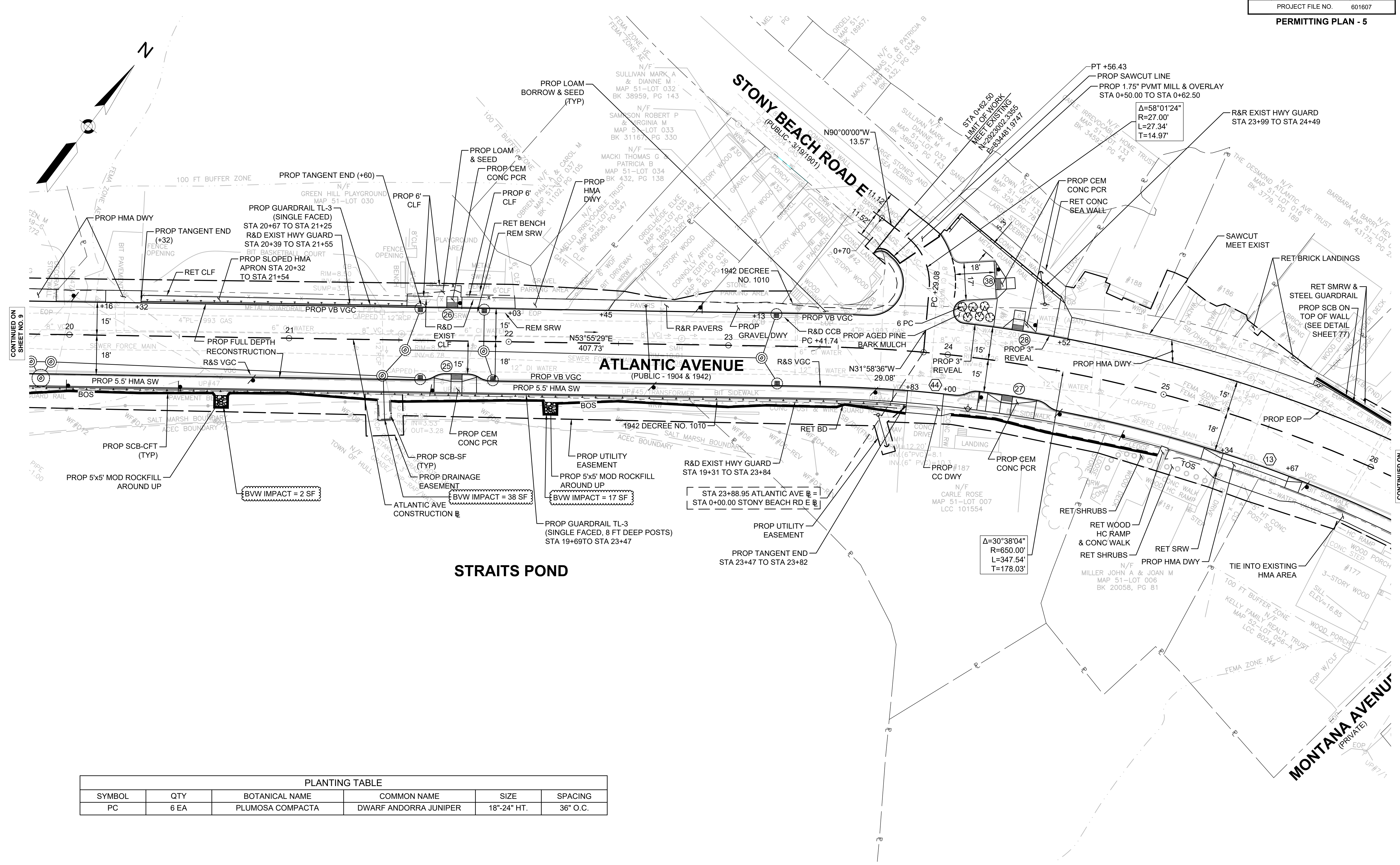
CONTINUED ON
SHEET NO. 8

CONTINUED ON
SHEET NO. 10

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	43
PROJECT FILE NO. 601607			

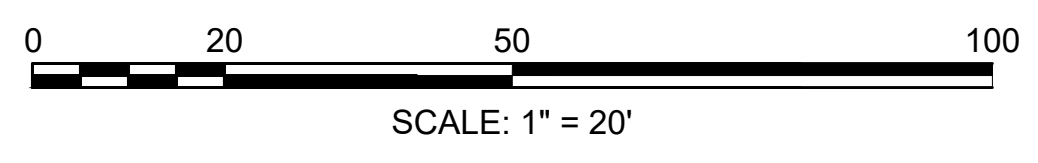
PERMITTING PLAN - 5



CONTINUED ON
SHEET NO. 9

CONTINUED ON
SHEET NO. 11

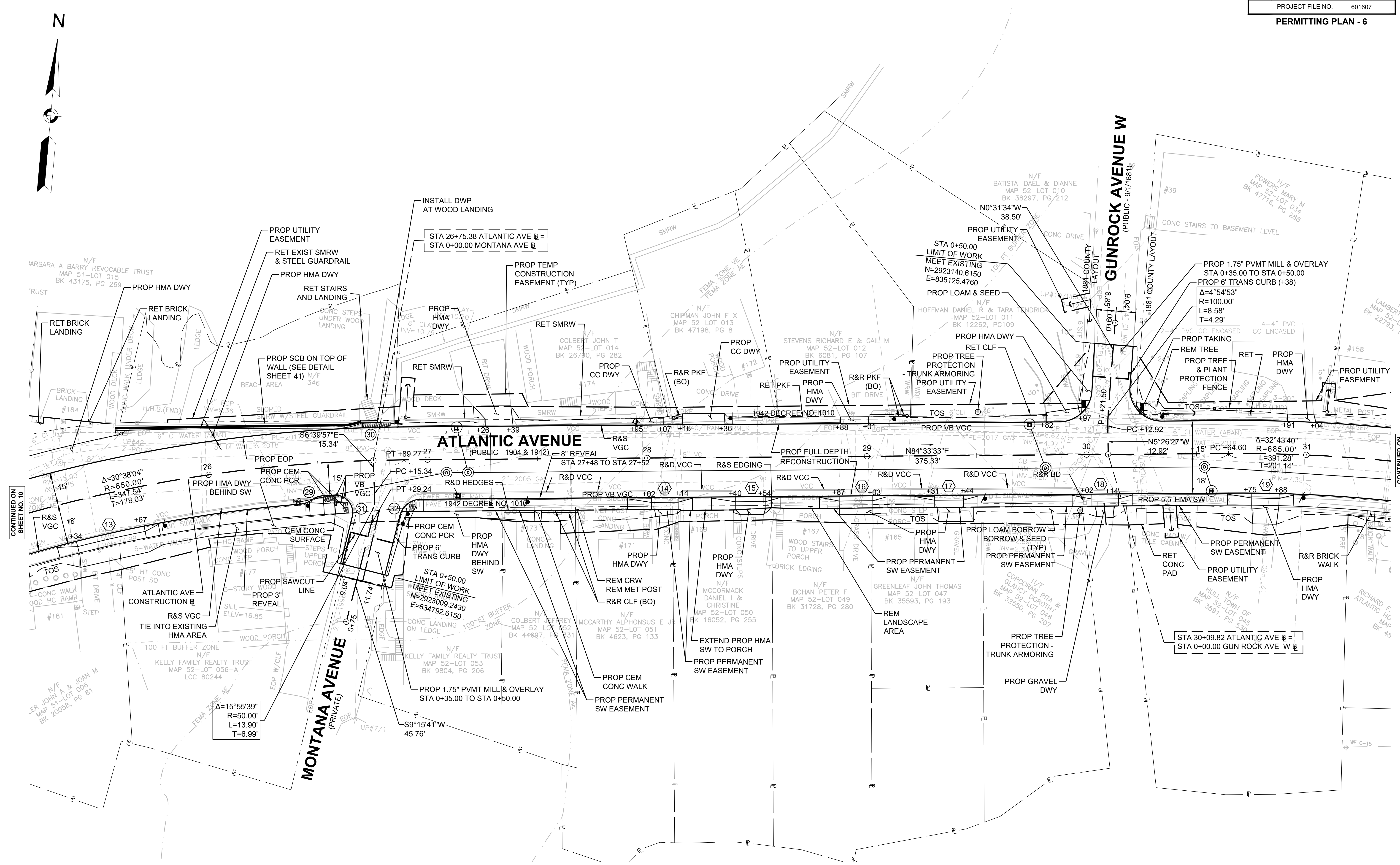
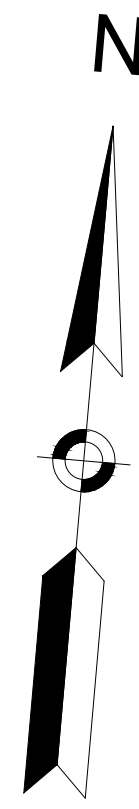
PLANTING TABLE					
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
PC	6 EA	PLUMOSA COMPACTA	DWARF ANDORRA JUNIPER	18"-24" HT.	36" O.C.



**HULL
ATLANTIC AVENUE RECONSTRUCTION**

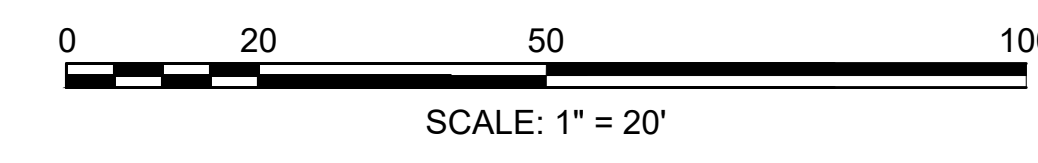
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	43
PROJECT FILE NO.		601607	

PERMITTING PLAN - 6



CONTINUED ON
SHEET NO. 10

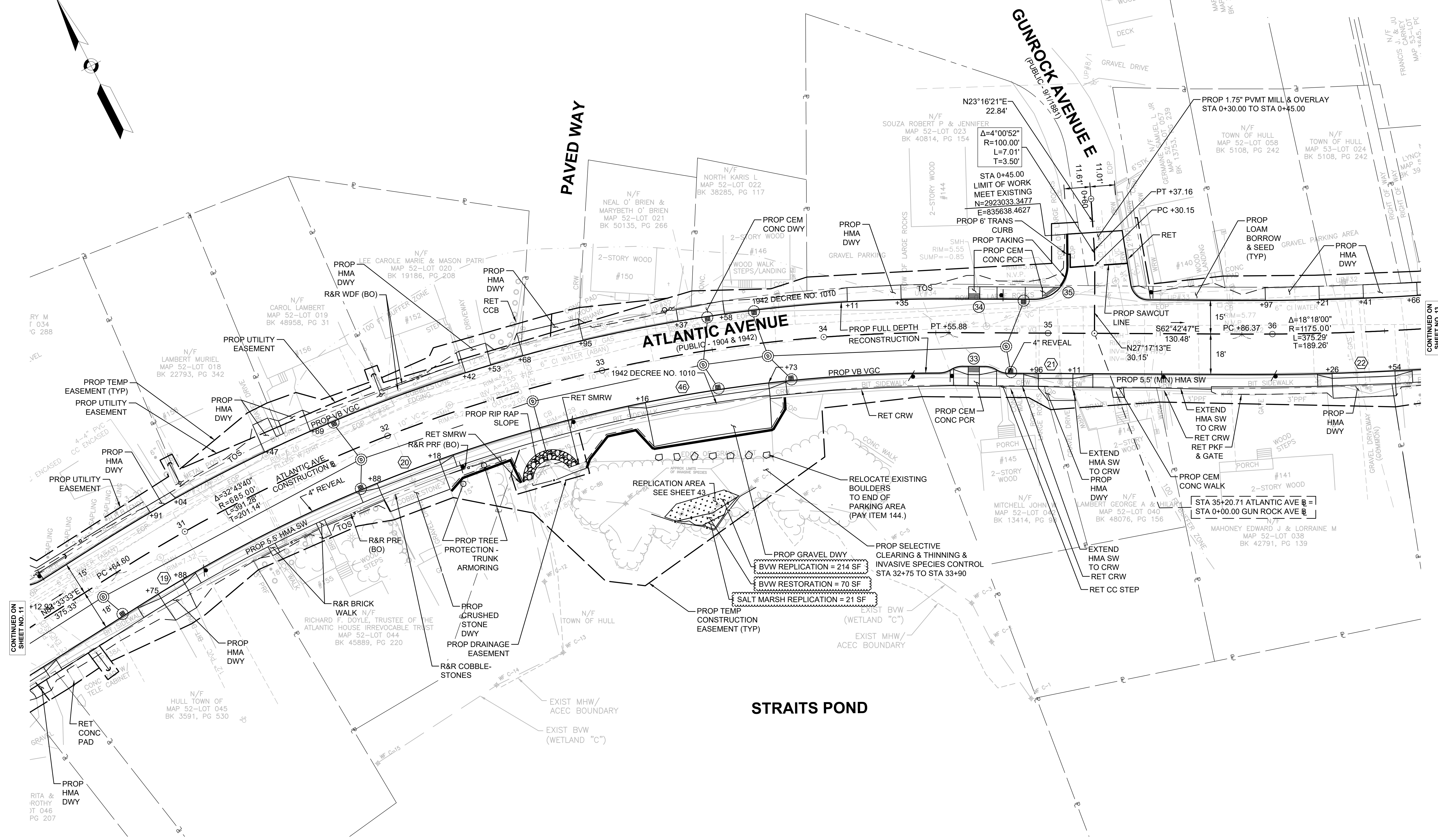
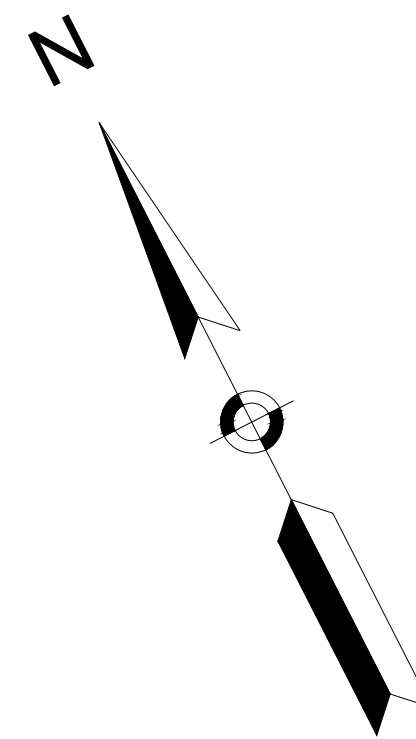
CONTINUED ON
SHEET NO. 12



**HULL
ATLANTIC AVENUE RECONSTRUCTION**

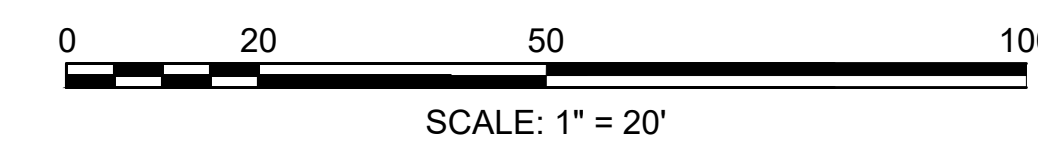
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	43
PROJECT FILE NO. 601607			

PERMITTING PLAN - 7



CONTINUED ON
SHEET NO. 11

CONTINUED ON
SHEET NO. 13

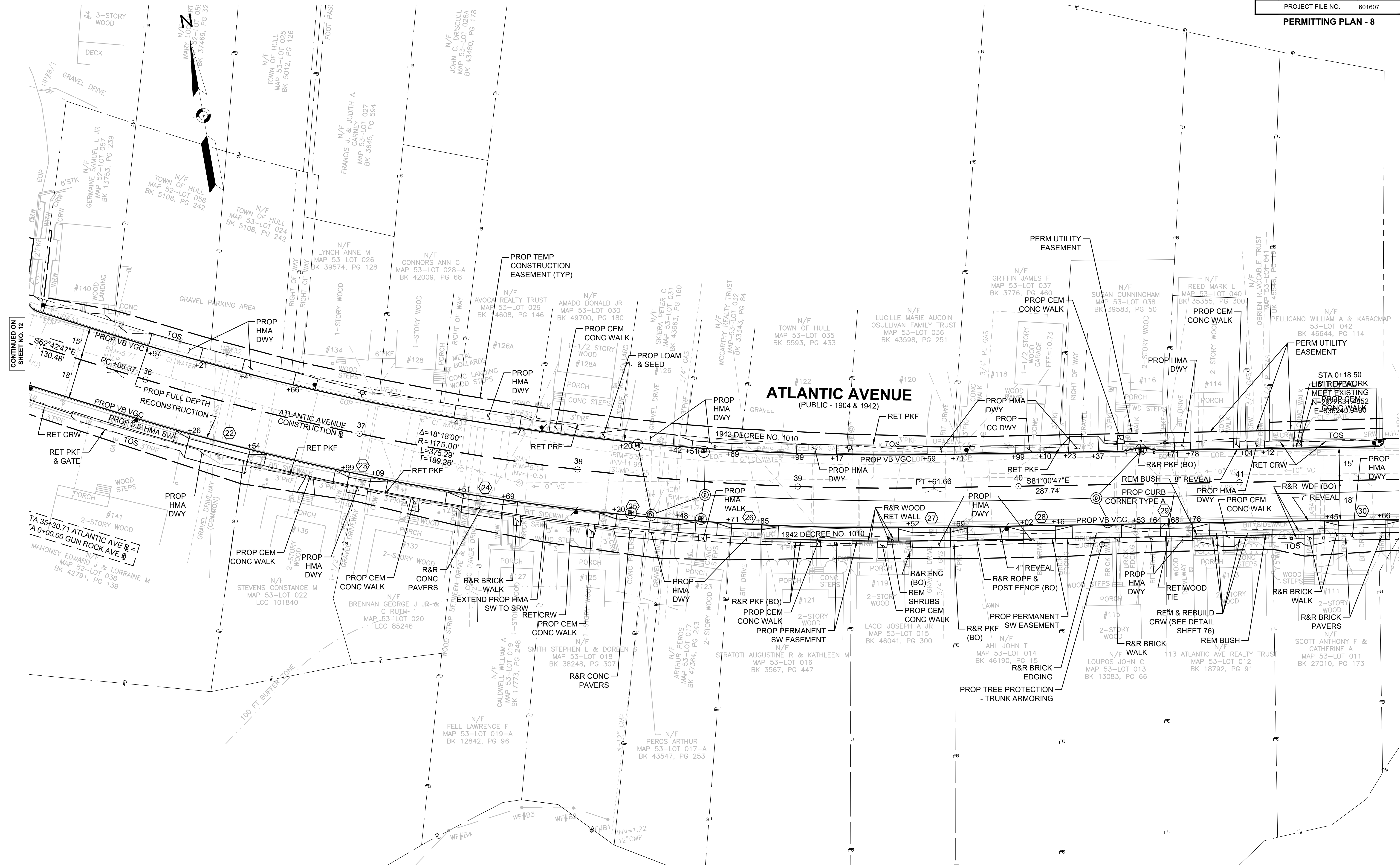


**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	43

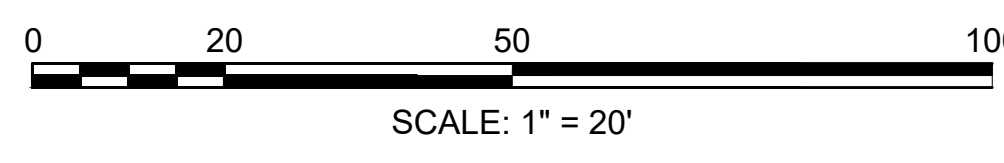
PROJECT FILE NO. 601607

PERMITTING PLAN - 8



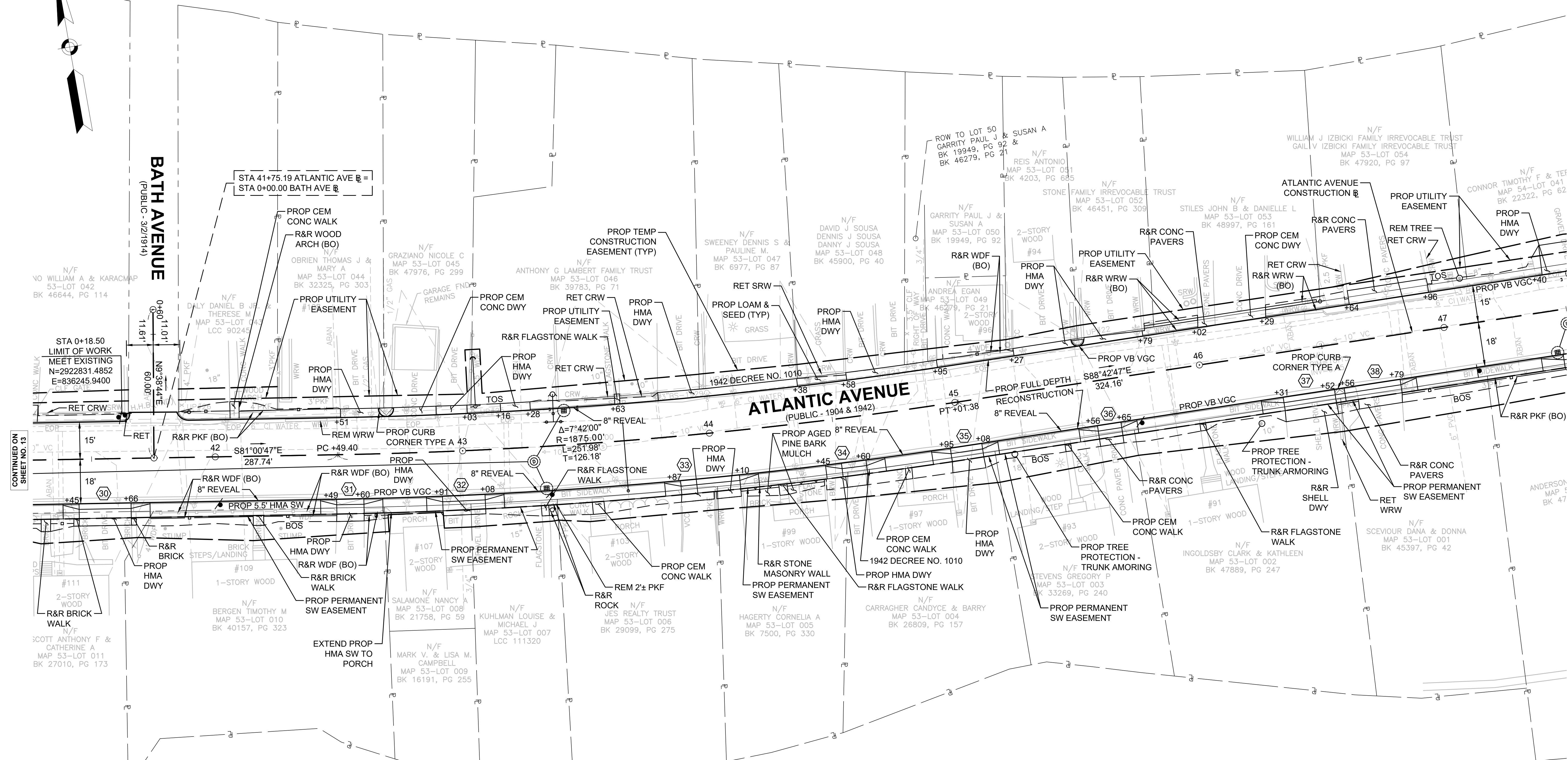
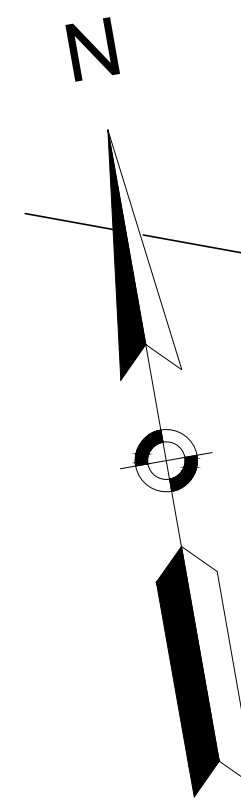
CONTINUED ON
SHEET NO. 12

CONTINUED ON
SHEET NO. 14



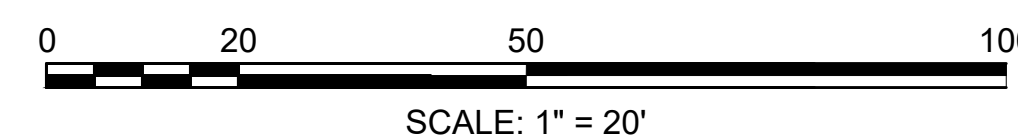
HULL
ATLANTIC AVENUE RECONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	43
PROJECT FILE NO. 601607			
PERMITTING PLAN - 9			



CONTINUED ON
SHEET NO. 13

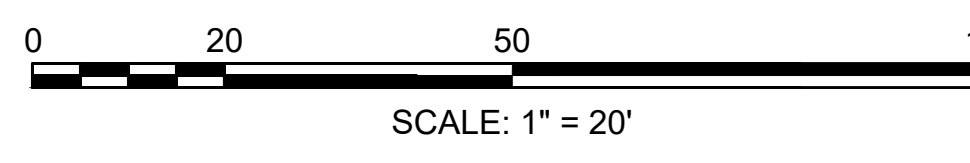
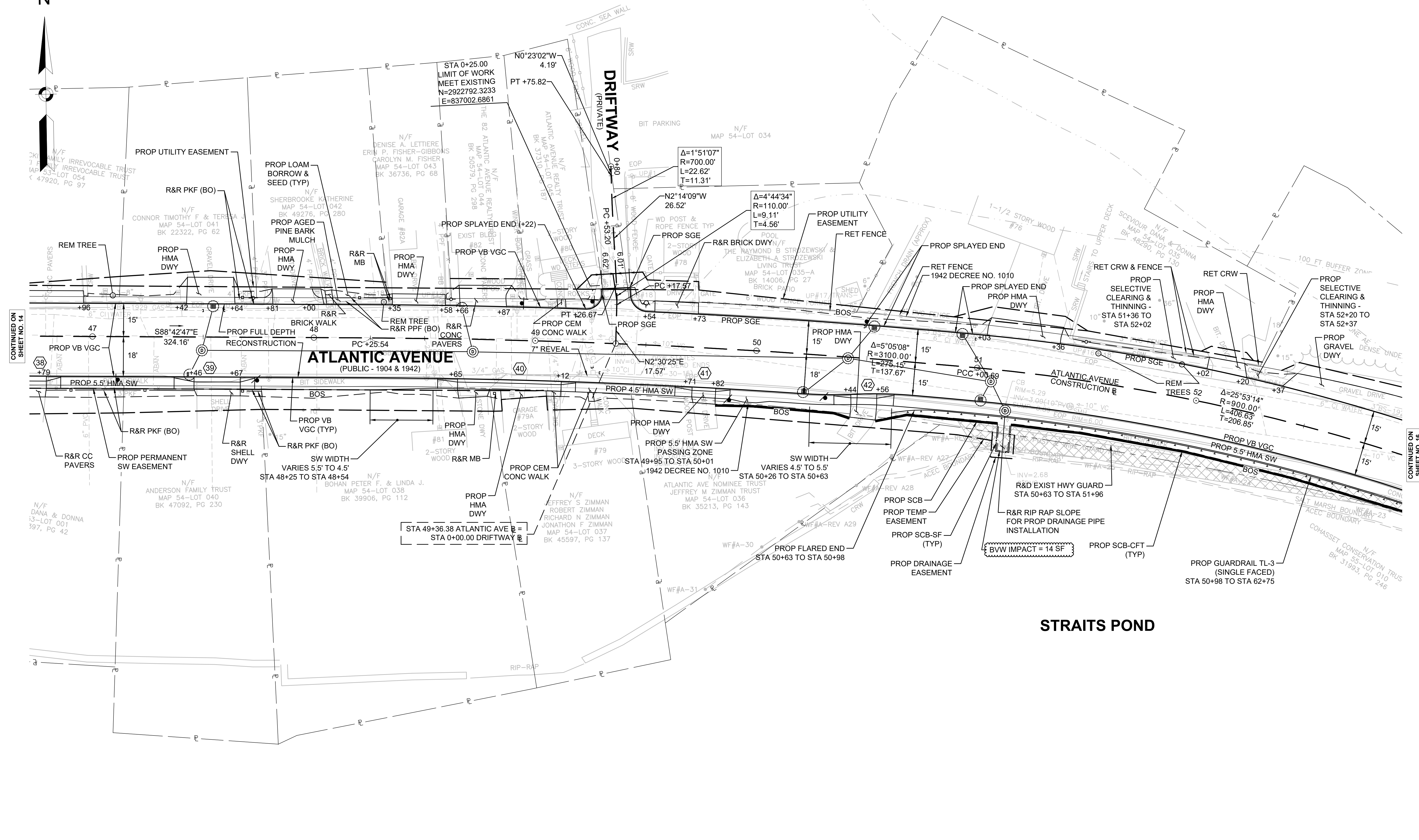
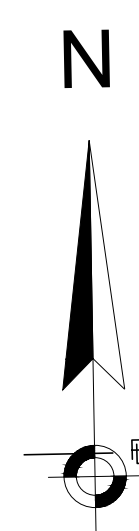
CONTINUED ON
SHEET NO. 15



**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	43
PROJECT FILE NO.		601607	

PERMITTING PLAN - 10



CONTINUED ON
SHEET NO. 14

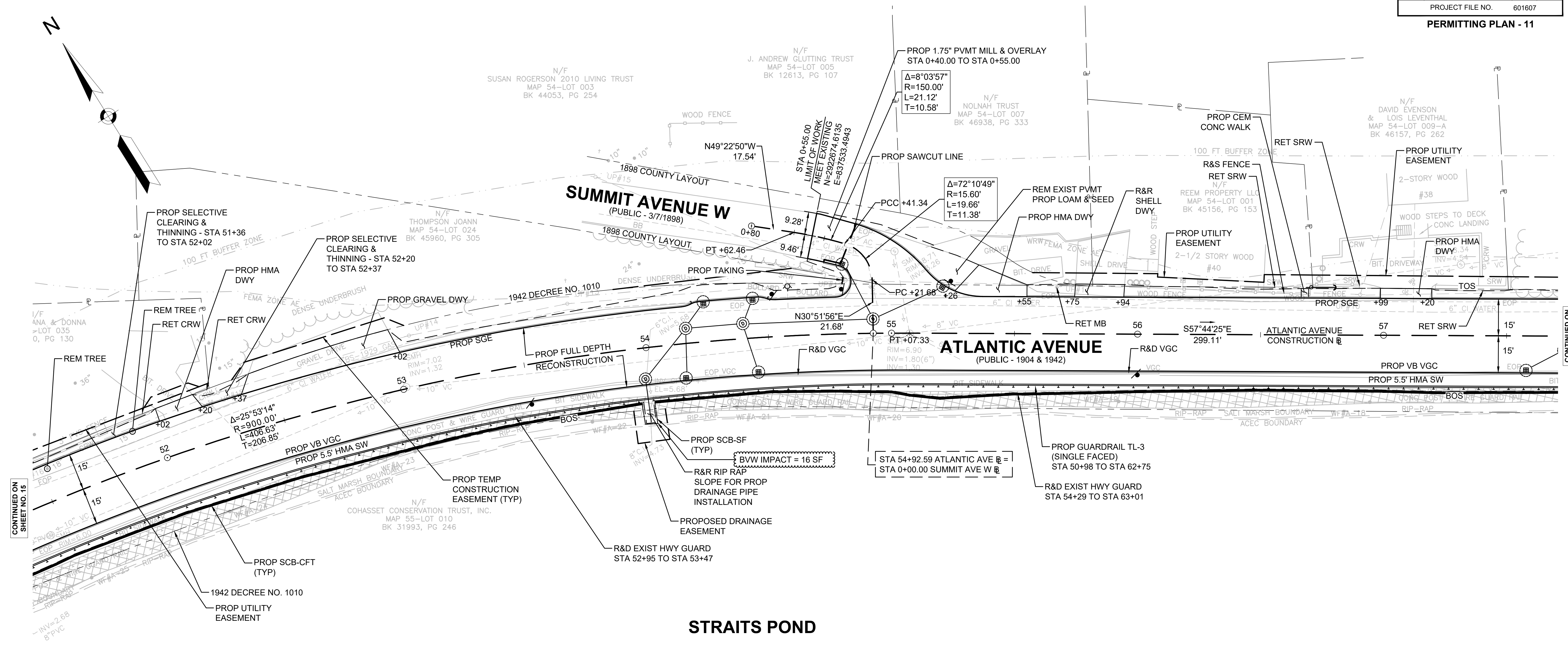
CONTINUED ON
SHEET NO. 16

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	43

PROJECT FILE NO. 601607

PERMITTING PLAN - 11

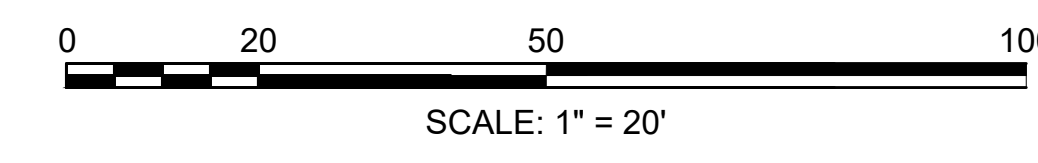


CONTINUED ON SHEET NO. 15

CONTINUED ON SHEET NO. 17

STRAITS POND

STRAITS POND

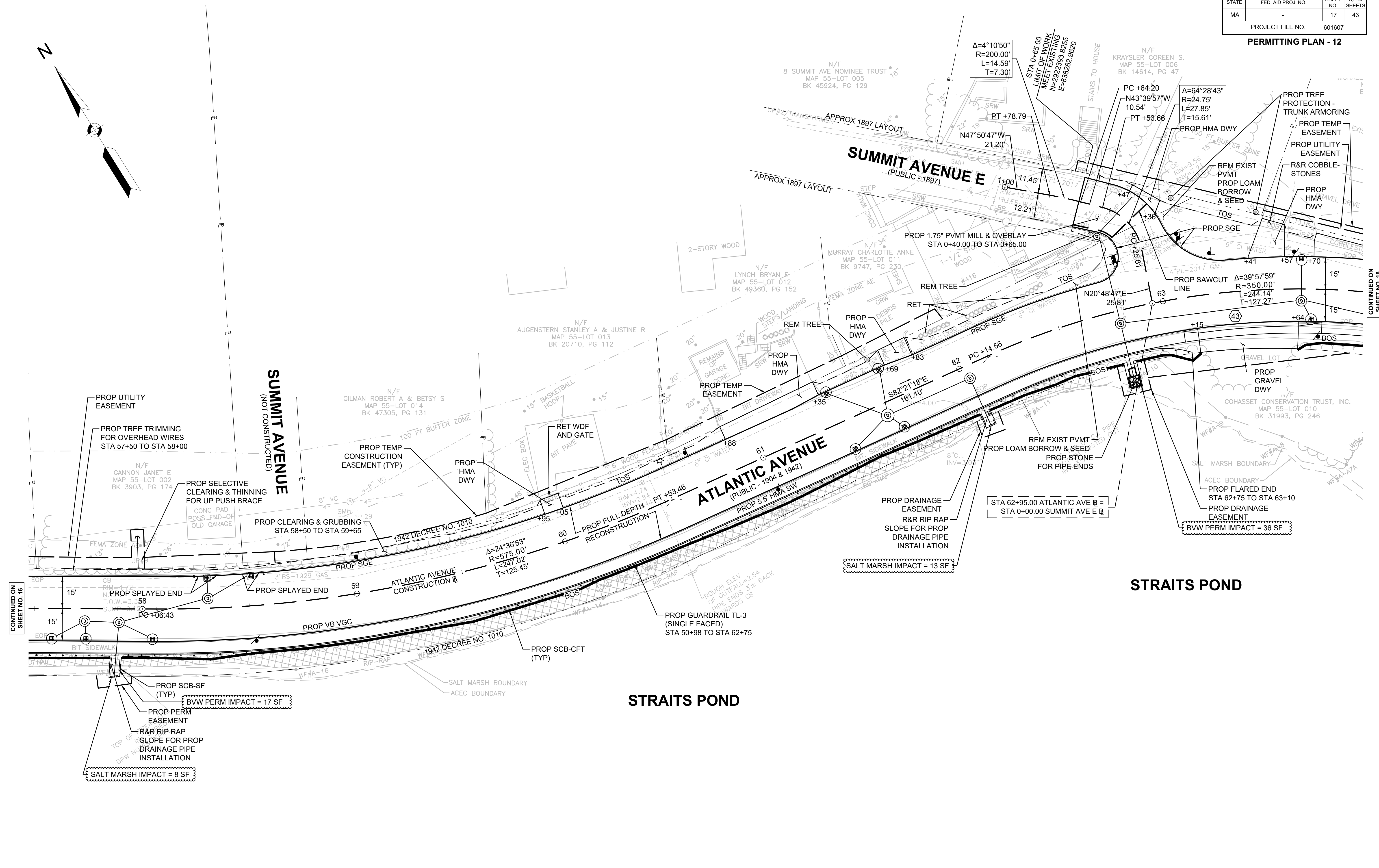
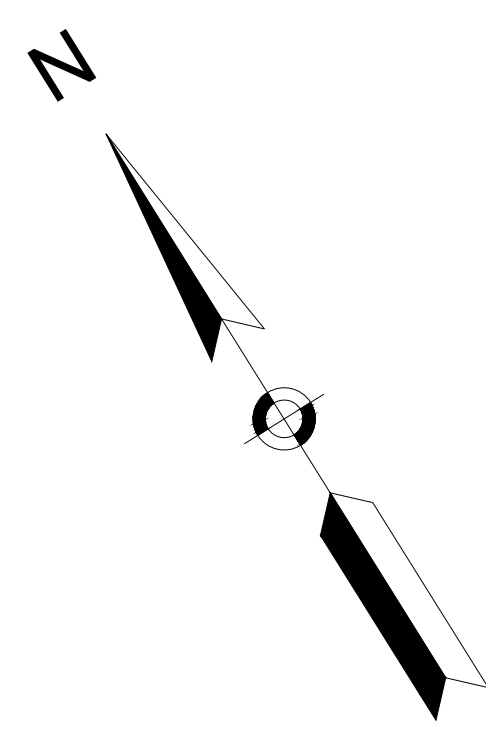


**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	43

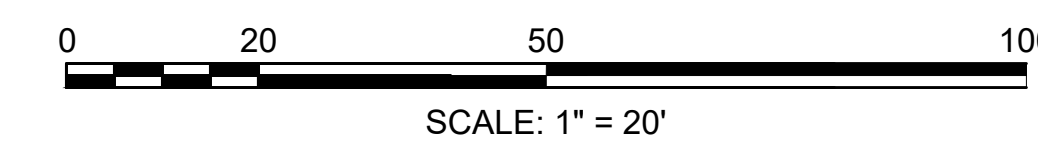
PROJECT FILE NO. 601607

PERMITTING PLAN - 12



CONTINUED ON SHEET NO. 16

CONTINUED ON SHEET NO. 18

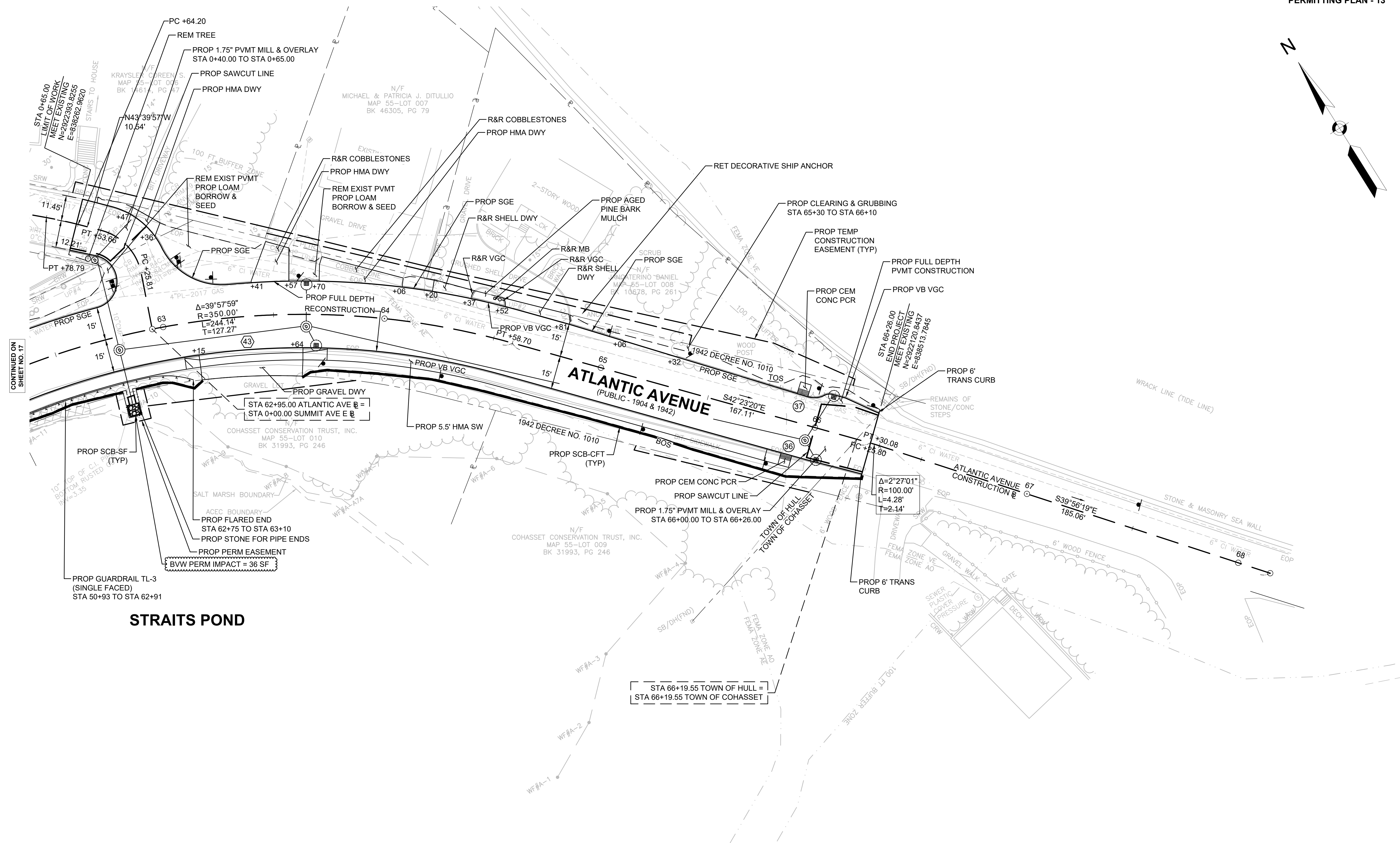
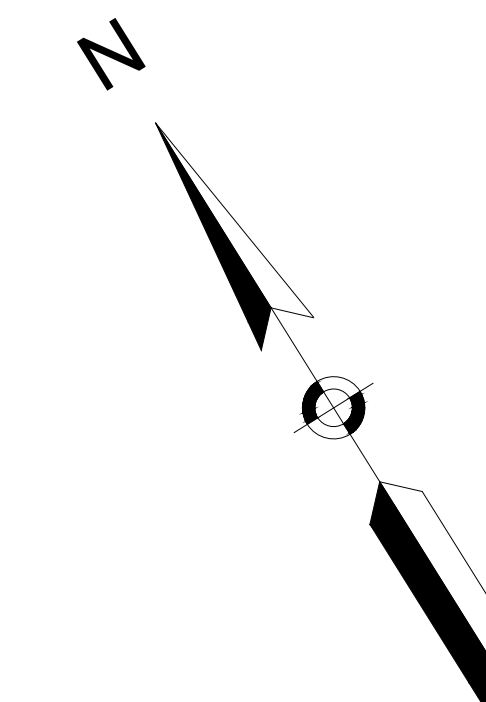


**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	43

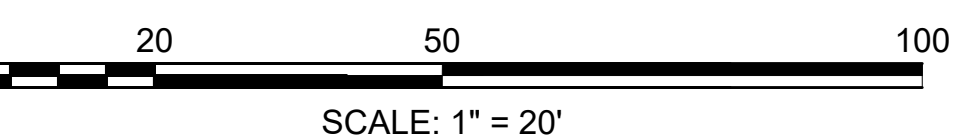
PROJECT FILE NO. 601607

PERMITTING PLAN - 13



CONTINUED ON
SHEET NO. 17

STRAITS POND

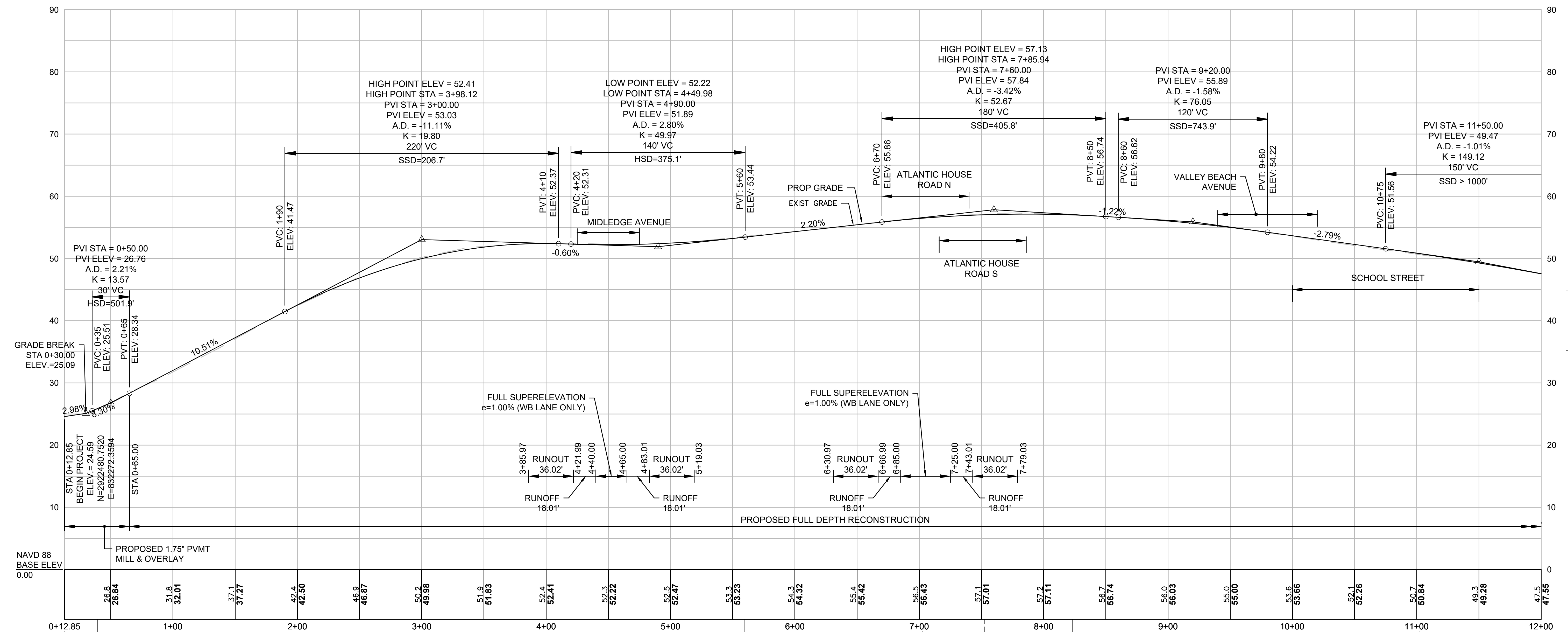


**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	43

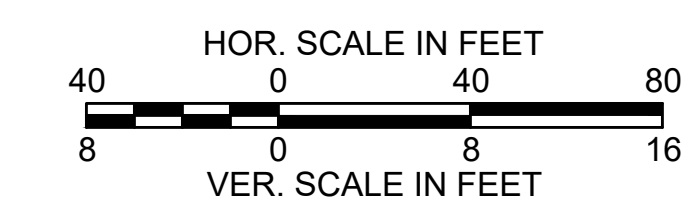
PROJECT FILE NO. 601607
**ATLANTIC AVENUE
PROFILE - 1**

ATLANTIC AVE



CONTINUED ON
SHEET NO. 20

Station	Temp Benchmark Set	Temp Benchmark Set	Temp Benchmark Set	Temp Benchmark Set	Temp Benchmark Set	Temp Benchmark Set	Temp Benchmark Set	Temp Benchmark Set	Temp Benchmark Set	
0+12.85	STA 0+12.85 ATLANTIC AVE @ STA 12+26.37 NANTASKET AVE @	TEMP BENCHMARK SET: L.O.C. CONC LANDING HOUSE #288 ELEV=27.71 STA 0+39.21, 32.92 LT	TEMP BENCHMARK SET: DUPLEX NAIL IN UTILITY POLE ELEV=42.57 STA 1+94.07, 11.14 LT	TEMP BENCHMARK SET: L.O.C.L.S.S. AT SIDEWALK ELEV=50.22 STA 2+67.36, 20.19 RT	STA 4+53.93 ATLANTIC AVE @ STA 0+00 MIDDLEGE AVE @	TEMP BENCHMARK SET: X-CUT SET ON HYD BOLT ELEV=55.01 STA 5+59.03, 16.53 RT	STA 7+02.44 ATLANTIC AVE @ STA 0+00 ATLANTIC HOUSE RD N @	TEMP BENCHMARK SET: NAIL IN UTILITY POLE #58 ELEV=58.12 STA 8+23.18, 15.57 LT	STA 9+83.56 ATLANTIC AVE @ STA 0+00 VALLEY BEACH AVE @	TEMP BENCHMARK SET: SPIKE IN UTILITY POLE #55 ELEV=49.61 STA 11+42.80, 25.15 LT



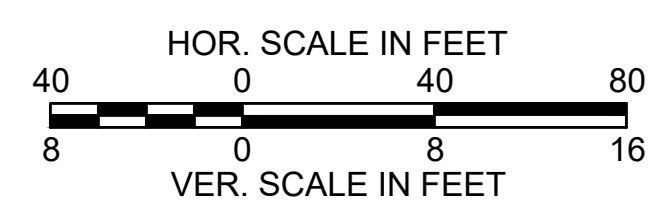
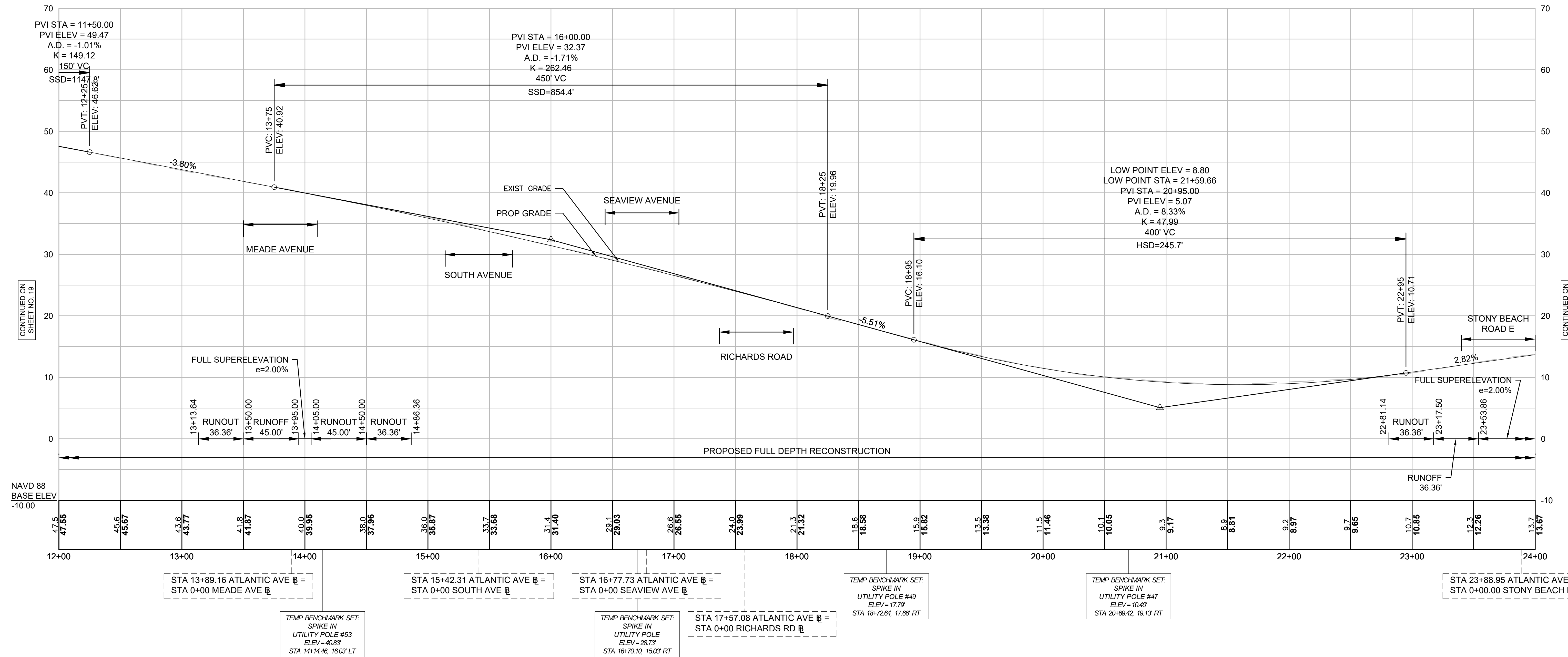
FOR CONSTRUCTION PLANS SEE SHEETS 6-8

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	43

PROJECT FILE NO. 601607
**ATLANTIC AVENUE
PROFILE - 2**

ATLANTIC AVE



FOR CONSTRUCTION PLANS SEE SHEETS 8-10

CONTINUED ON
SHEET NO. 19

CONTINUED ON
SHEET NO. 21

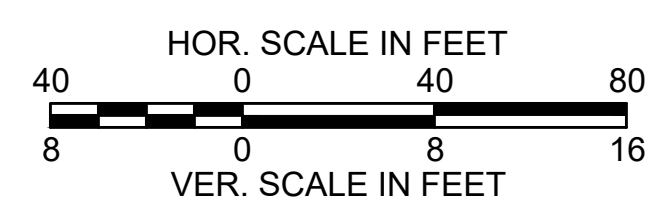
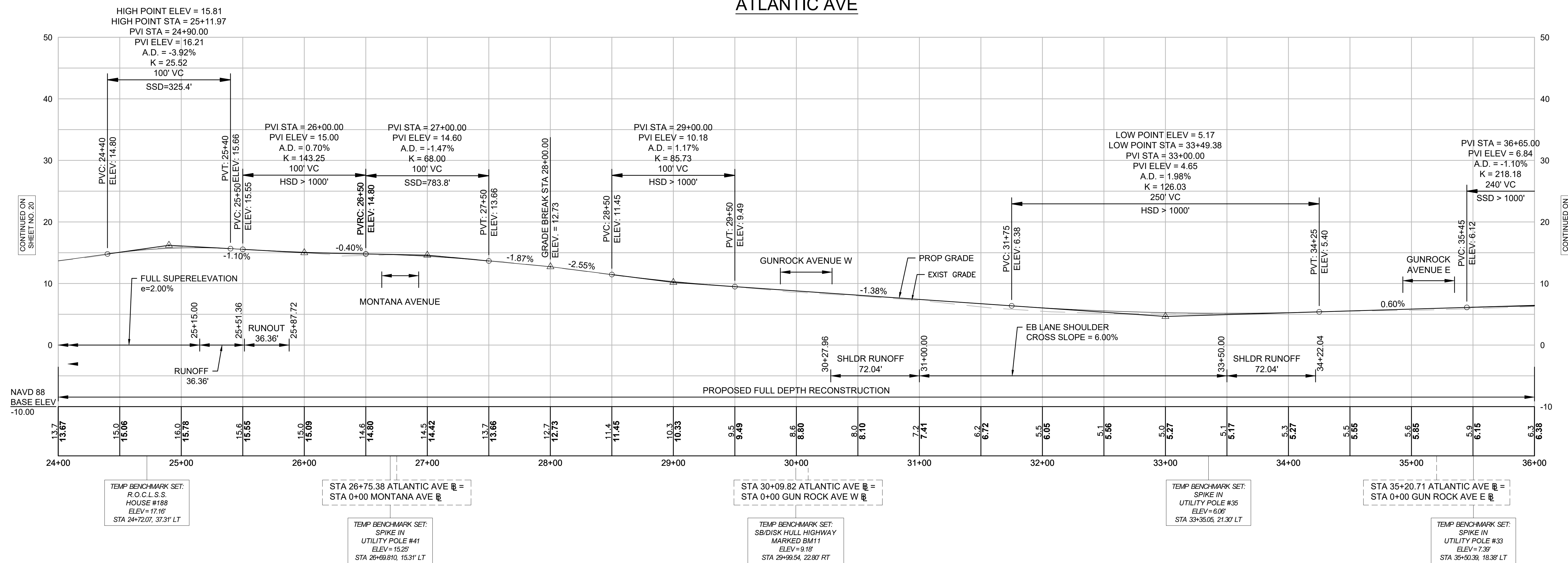
601607_NOI(PROFILES-ATLANTIC_AVE).DWG Plotted on 10-Aug-2021 10:33 AM

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	43

PROJECT FILE NO. 601607
**ATLANTIC AVENUE
PROFILE - 3**

ATLANTIC AVE



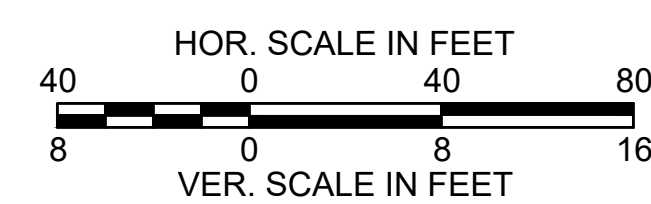
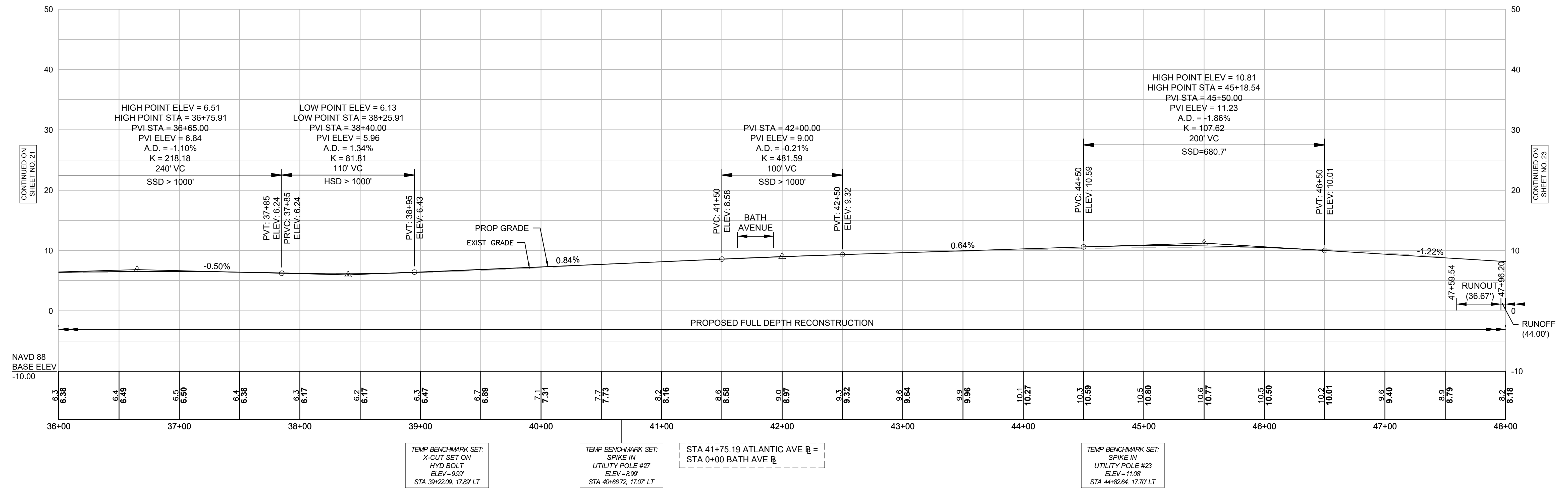
FOR CONSTRUCTION PLANS SEE SHEETS 10-12

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	43

PROJECT FILE NO. 601607
**ATLANTIC AVENUE
PROFILE - 4**

ATLANTIC AVE



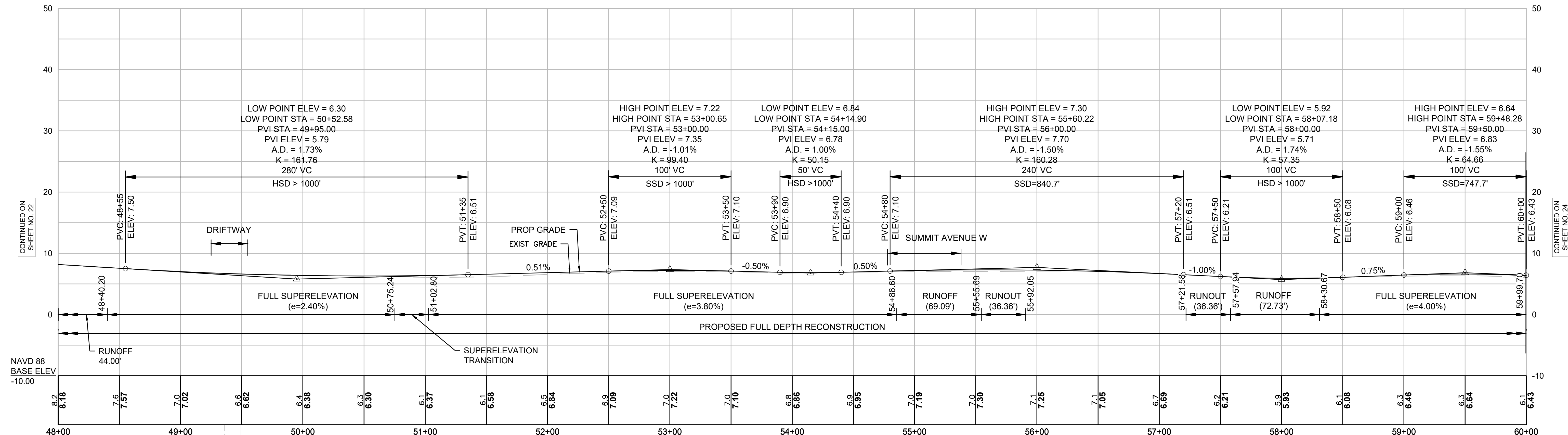
FOR CONSTRUCTION PLANS SEE SHEETS 12-14

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	43
PROJECT FILE NO. 601607			

**ATLANTIC AVENUE
PROFILE - 5**

ATLANTIC AVE



CONTINUED ON
SHEET NO. 22

CONTINUED ON
SHEET NO. 24

NAVD 88
BASE ELEV
-10.00

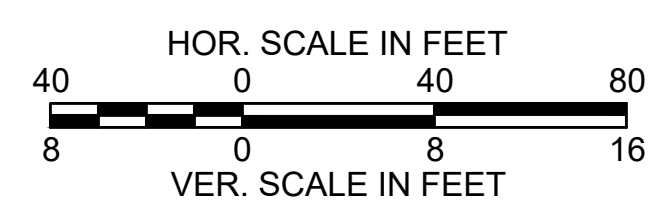
STA 49+36.38 ATLANTIC AVE @ =
STA 0+00 DRIFTWAY @

TEMP BENCHMARK SET:
X-CUT SET ON
HYD BOLT
ELEV=9.42'
STA 49+49.40, 15.99' LT

TEMP BENCHMARK SET:
SPIKE IN
UTILITY POLE #14
ELEV=9.02'
STA 53+07.04, 21.16' LT

STA 54+92.59 ATLANTIC AVE @ =
STA 0+00 SUMMIT AVE W @

TEMP BENCHMARK SET:
SPIKE IN
UTILITY POLE #10
ELEV=8.06'
STA 56+91.14, 16.66' LT



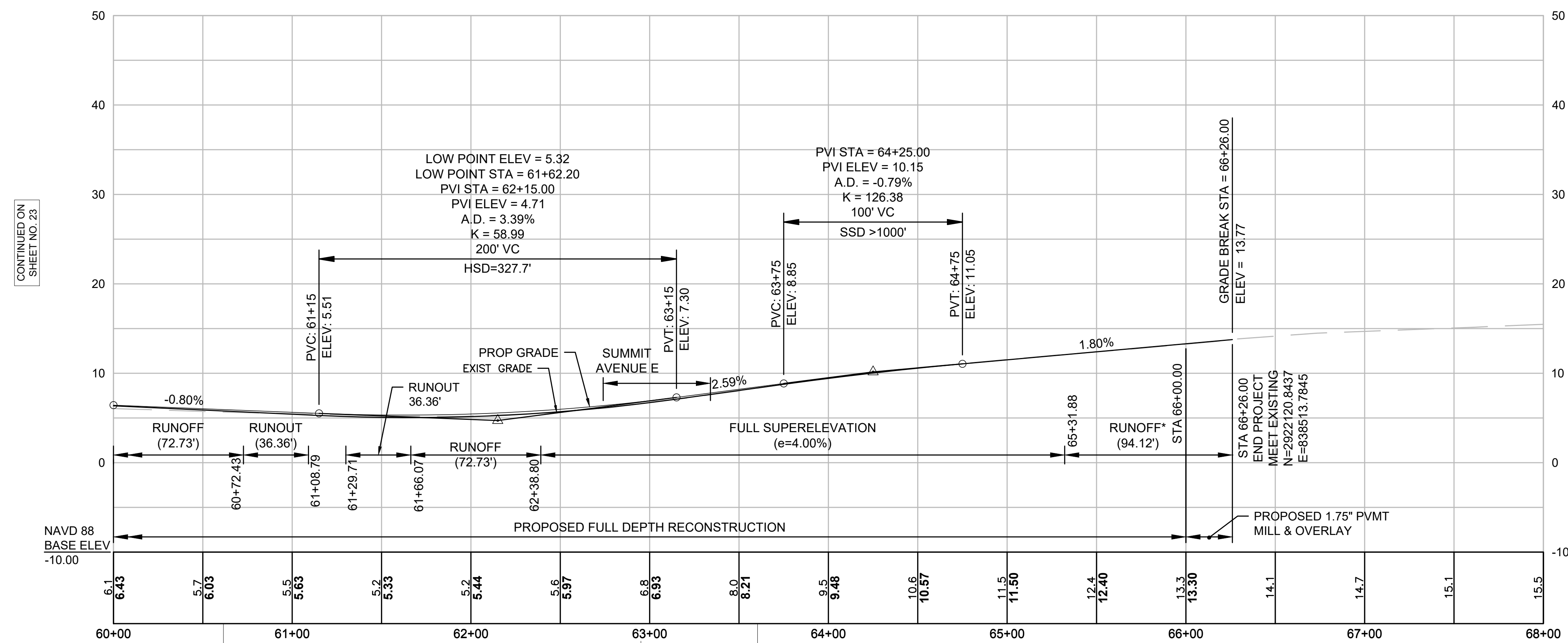
FOR CONSTRUCTION PLANS SEE SHEETS 14-16

HULL
ATLANTIC AVENUE RECONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	24	43

PROJECT FILE NO. 601607
ATLANTIC AVENUE
PROFILE - 6

ATLANTIC AVE



CONTINUED ON
SHEET NO. 23

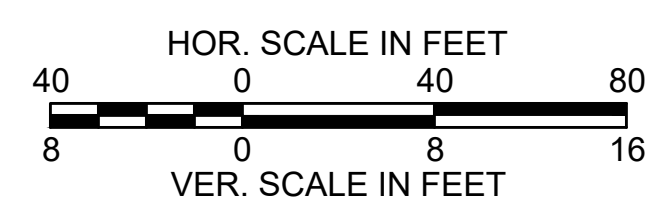
NAVD 88
BASE ELEV
-10.00

TEMP BENCHMARK SET:
SPIKE IN
UTILITY POLE #6
ELEV=6.95'
STA 60+61.55, 19.88' LT

STA 62+95.00 ATLANTIC AVE @ =
STA 0+00 SUMMIT AVE E @

TEMP BENCHMARK SET:
SPIKE IN
UTILITY POLE #3
ELEV=10.69'
STA 63+60.37, 28.93' LT

*RUNOFF IS DESIGNED TO TRANSITION FROM FULL SUPER (e=4.00%) TO EXISTING CROSS SLOPES AT THE PROJECT LIMITS. CONTRACTOR TO MEET PROPOSED GRADES INDICATED ON THE CURB TIE AND GRADING PLANS.



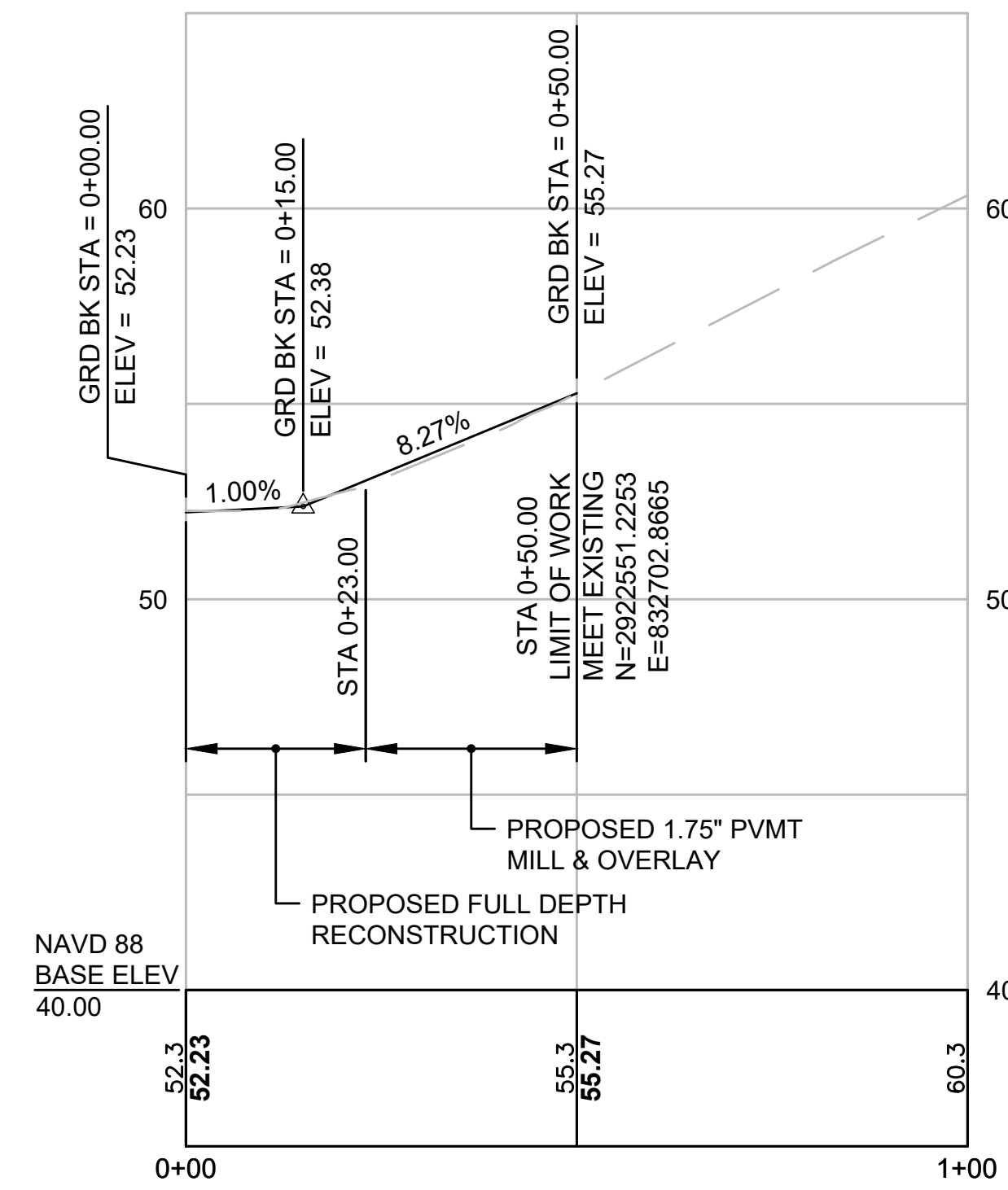
FOR CONSTRUCTION PLANS SEE SHEETS 16-18

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	43
PROJECT FILE NO.		601607	

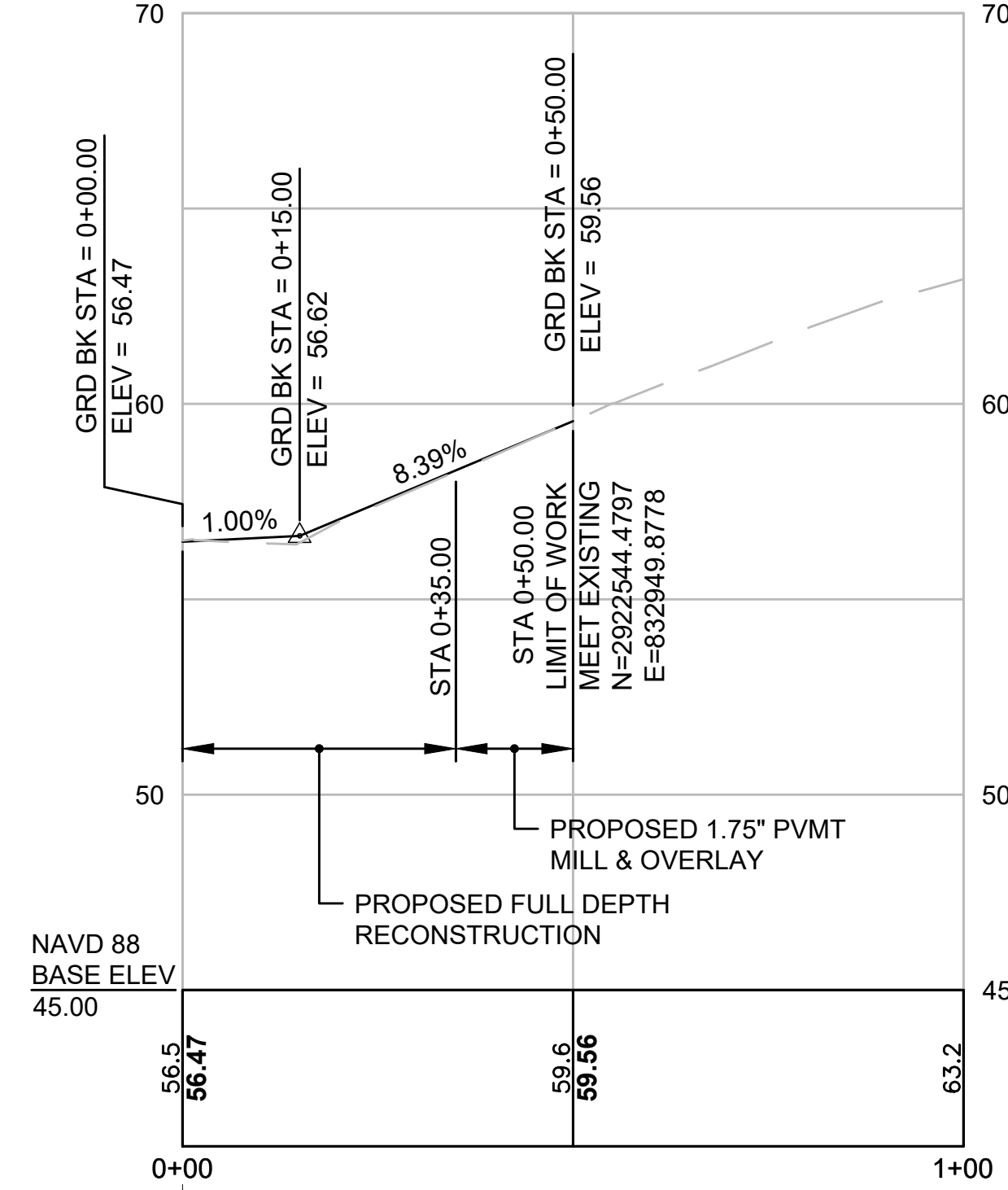
SIDE STREETS PROFILE - 7

MIDLEDGE AVE



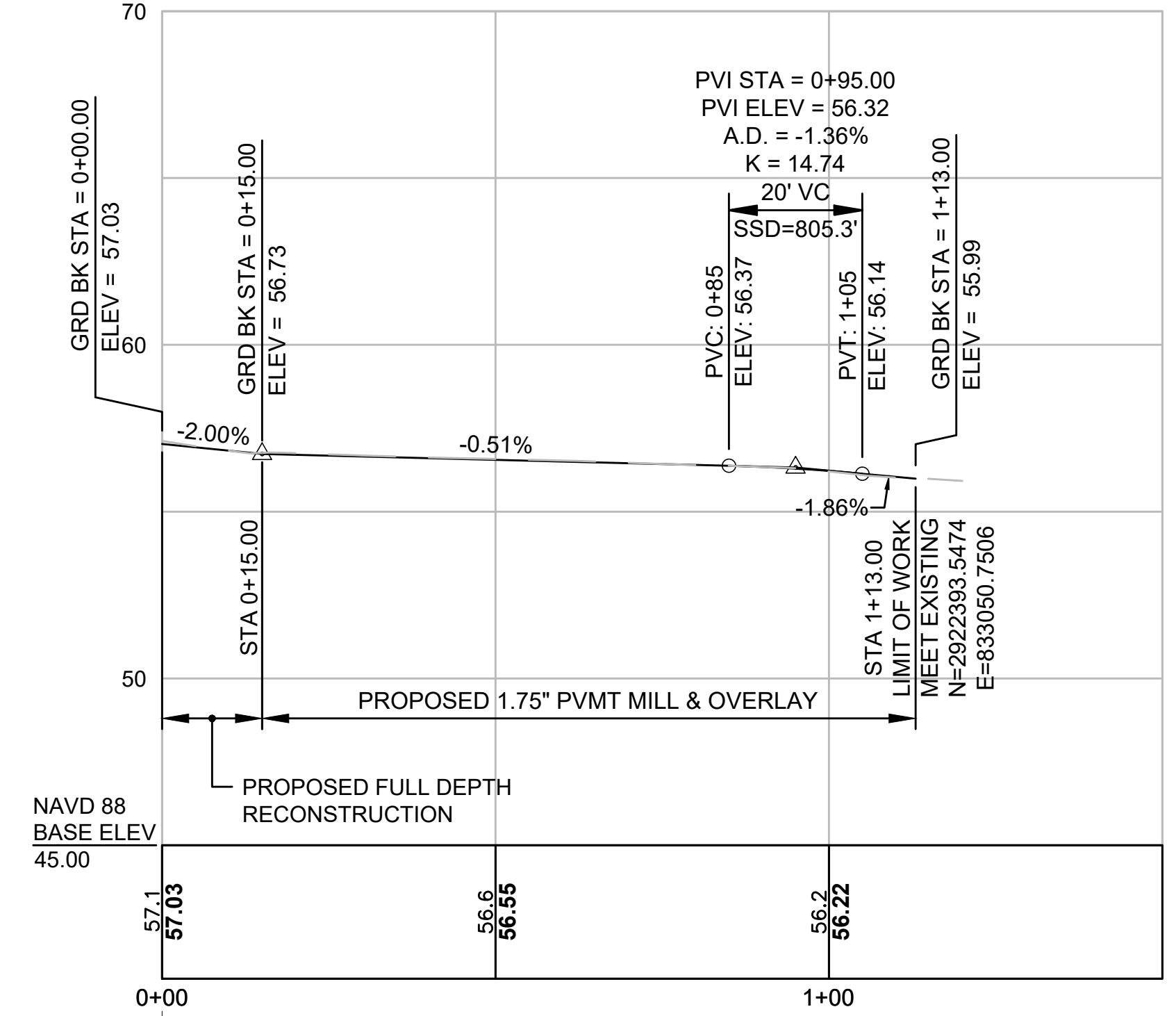
STA 4+53.93 ATLANTIC AVE @ =
STA 0+00 MIDDLEGE AVE @

ATLANIC HOUSE RD N



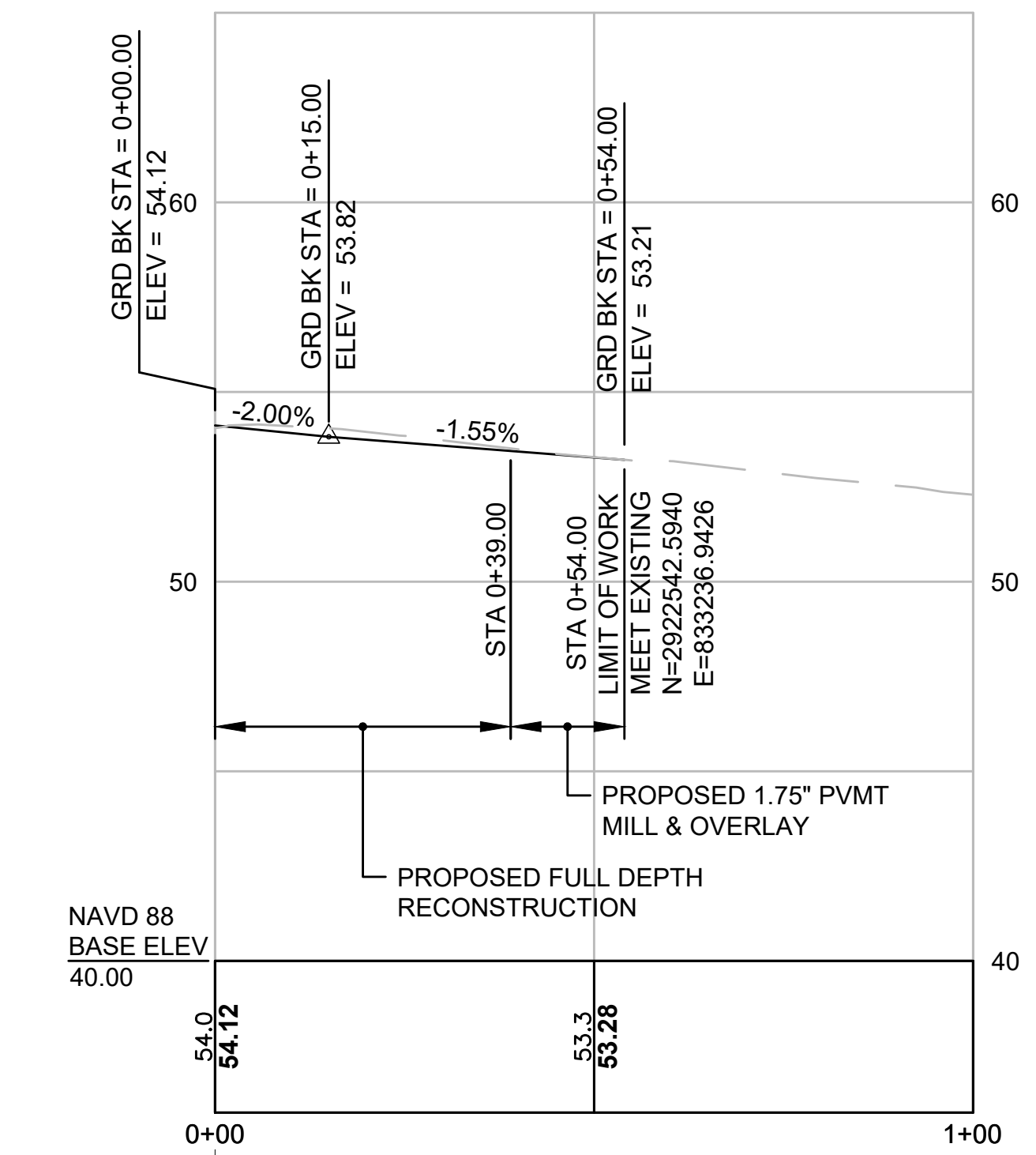
STA 7+02.44 ATLANTIC AVE @ =
STA 0+00 ATLANTIC HOUSE RD N @

ATLANIC HOUSE RD S



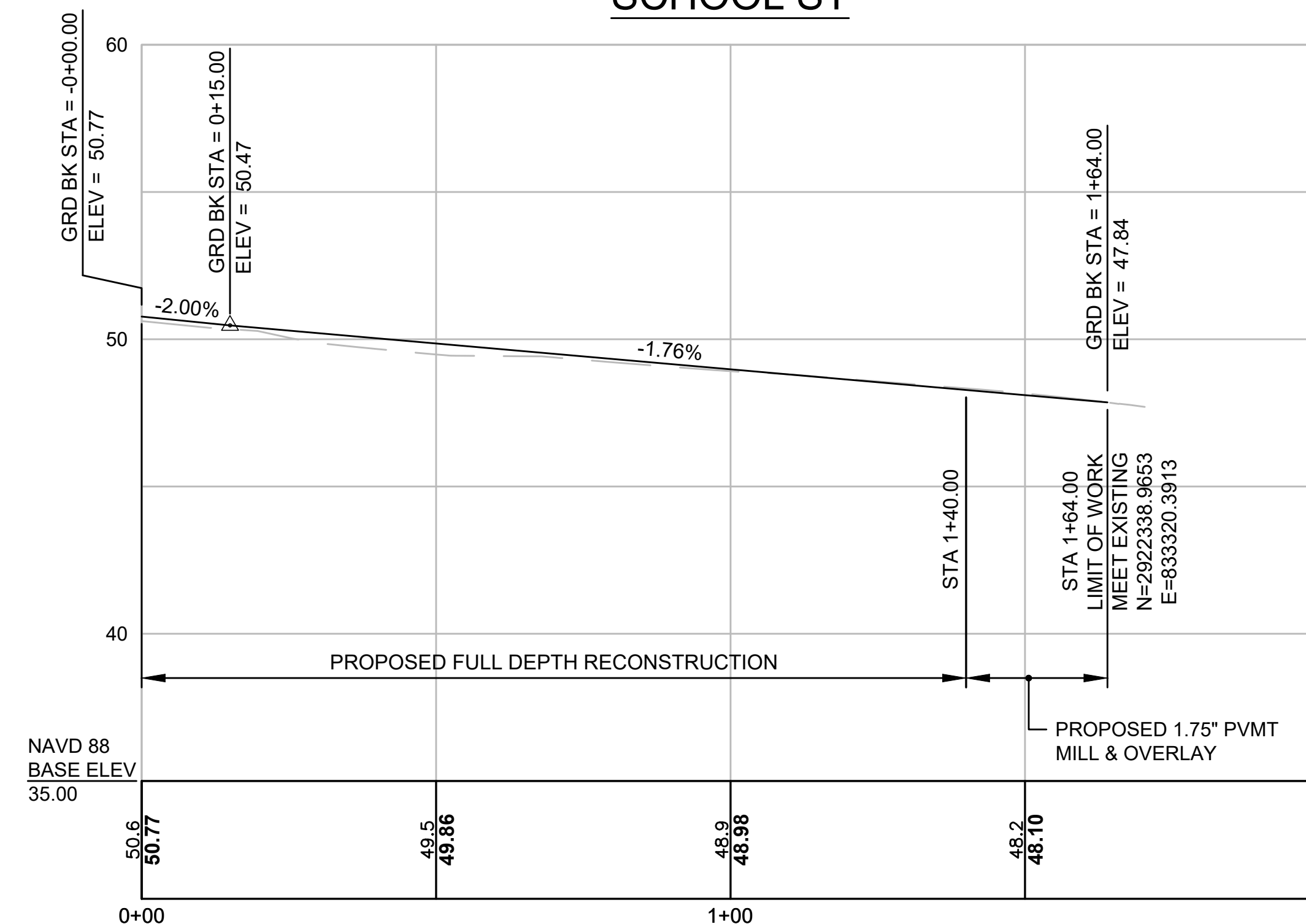
STA 7+52.56 ATLANTIC AVE @ =
STA 0+00 ATLANTIC HOUSE RD S @

VALLEY BEACH AVE



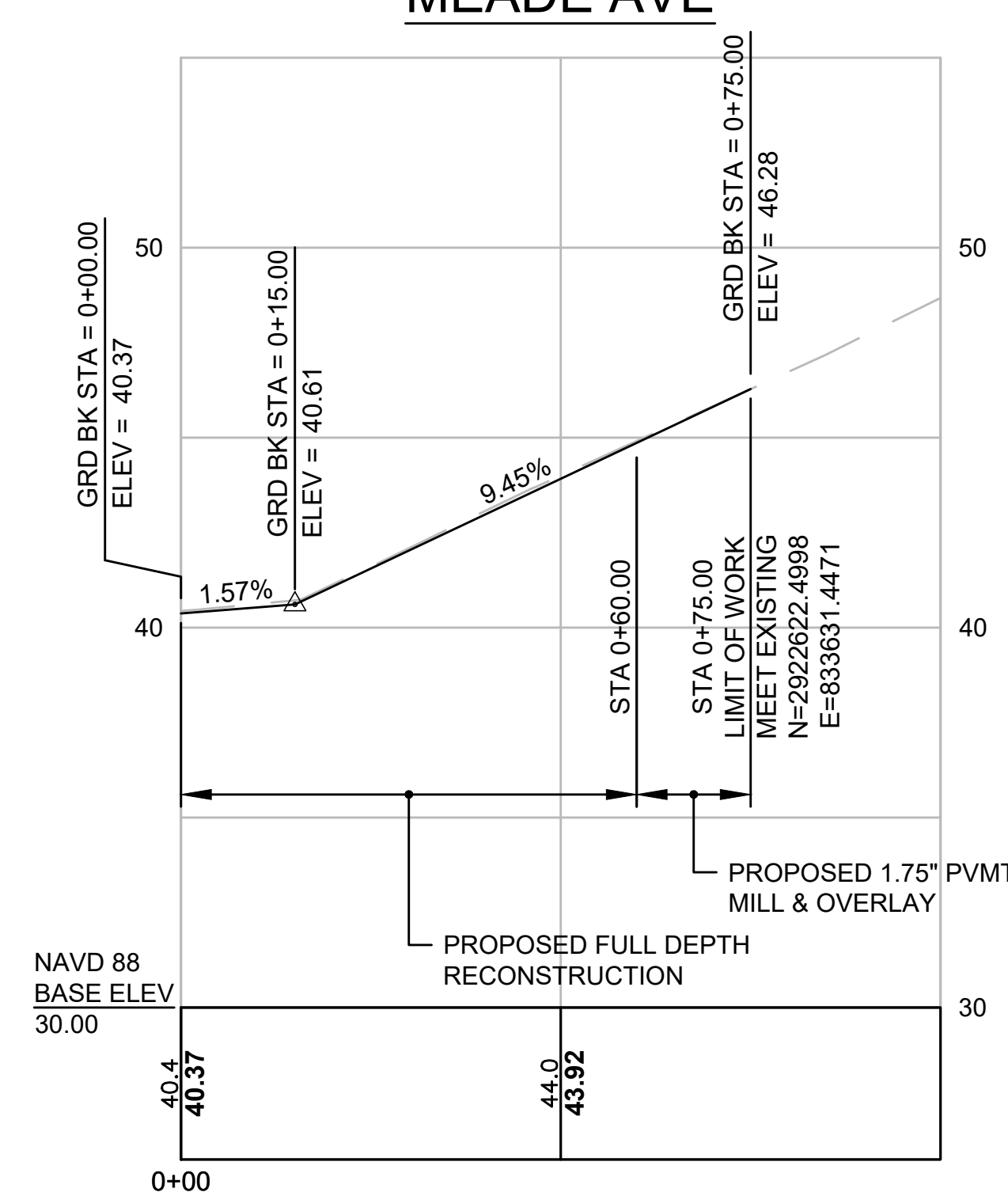
STA 9+83.56 ATLANTIC AVE @ =
STA 0+00 VALLEY BEACH AVE @

SCHOOL ST



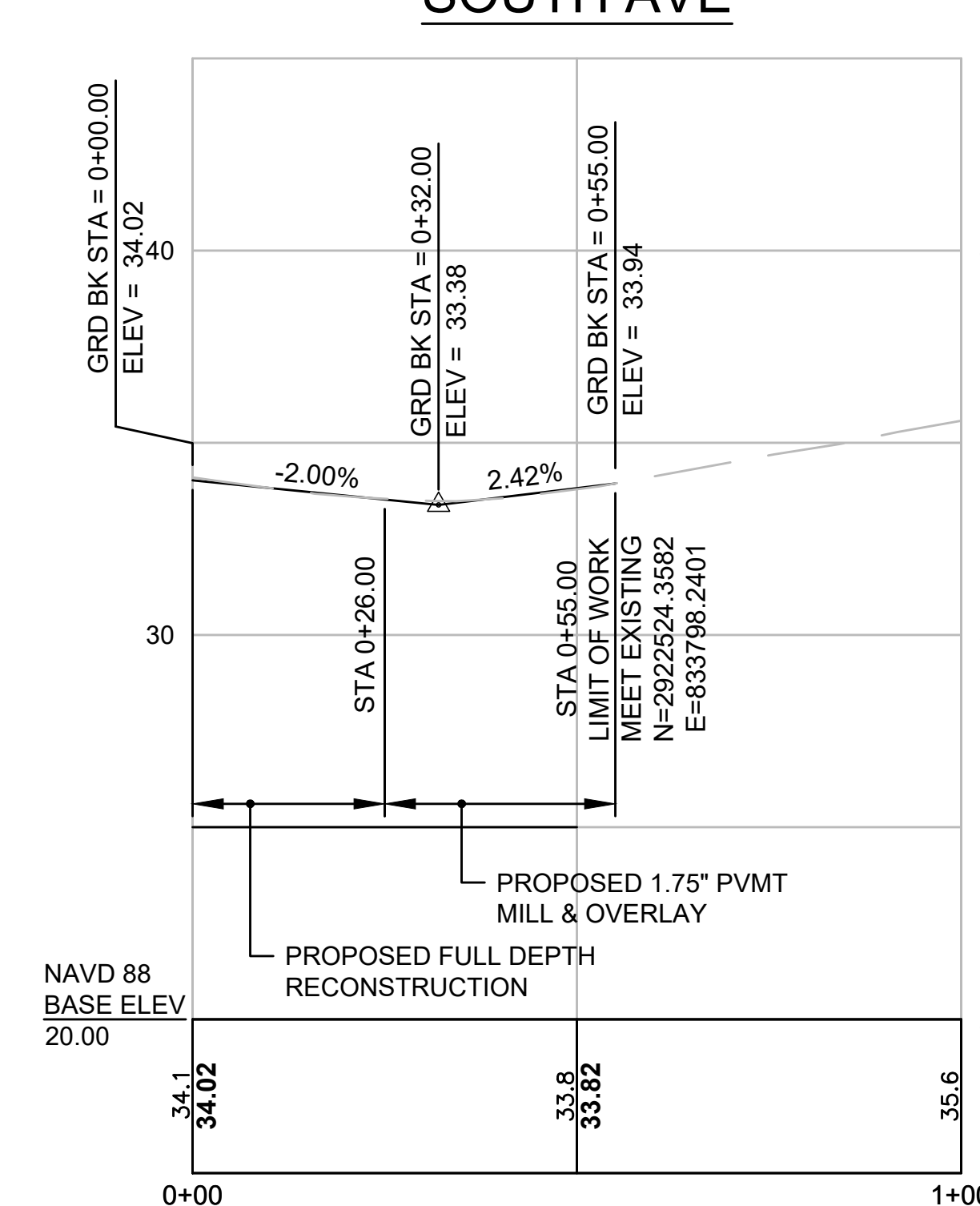
STA 11+02.37 ATLANTIC AVE @ =
STA 0+00 SCHOOL ST @

MEADE AVE



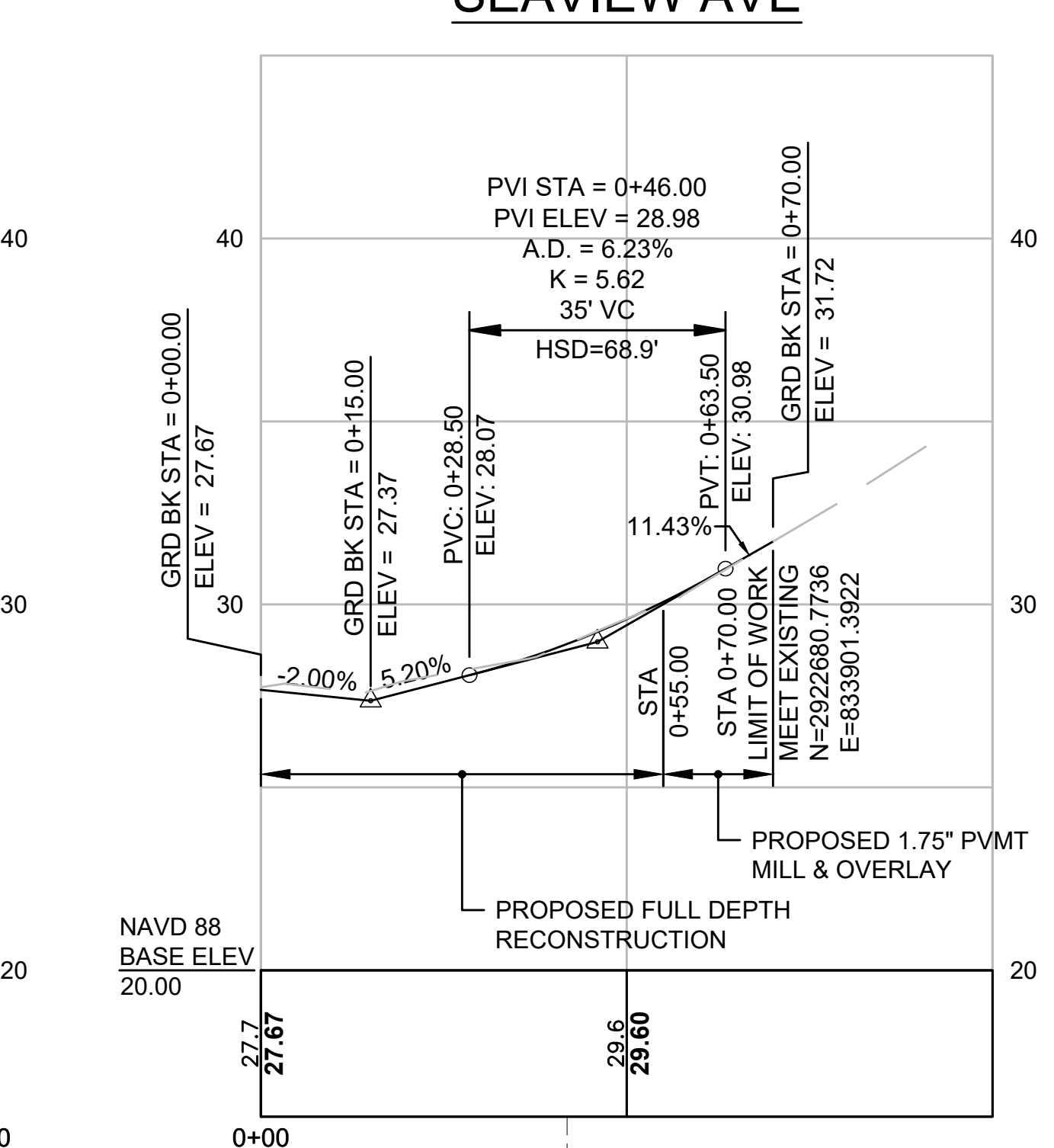
STA 13+89.16 ATLANTIC AVE @ =
STA 0+00 MEADE AVE @

SOUTH AVE



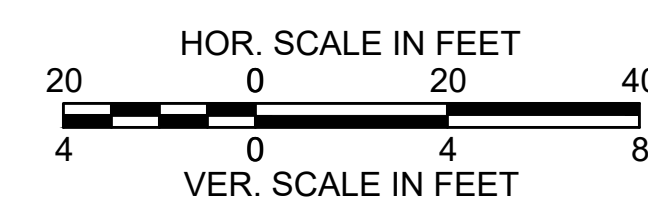
STA 15+42.31 ATLANTIC AVE @ =
STA 0+00 SOUTH AVE @

SEAVIEW AVE



STA 16+77.73 ATLANTIC AVE @ =
STA 0+00 SEAVIEW AVE @

STA 0+42.71 SEAVIEW AVE @ =
STA 0+00.00 STONY BEACH RD W @

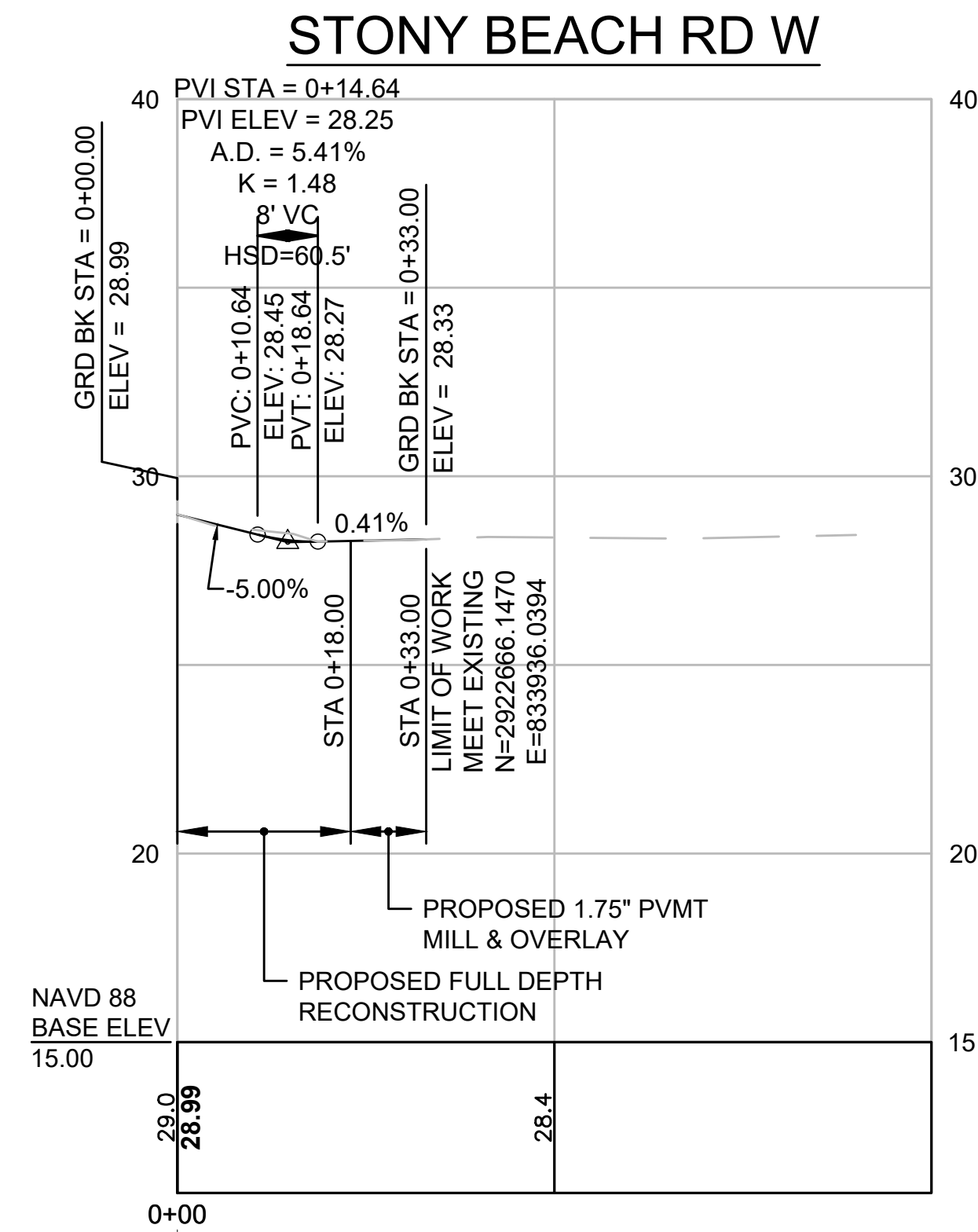


FOR CONSTRUCTION PLANS SEE SHEETS 7 - 9

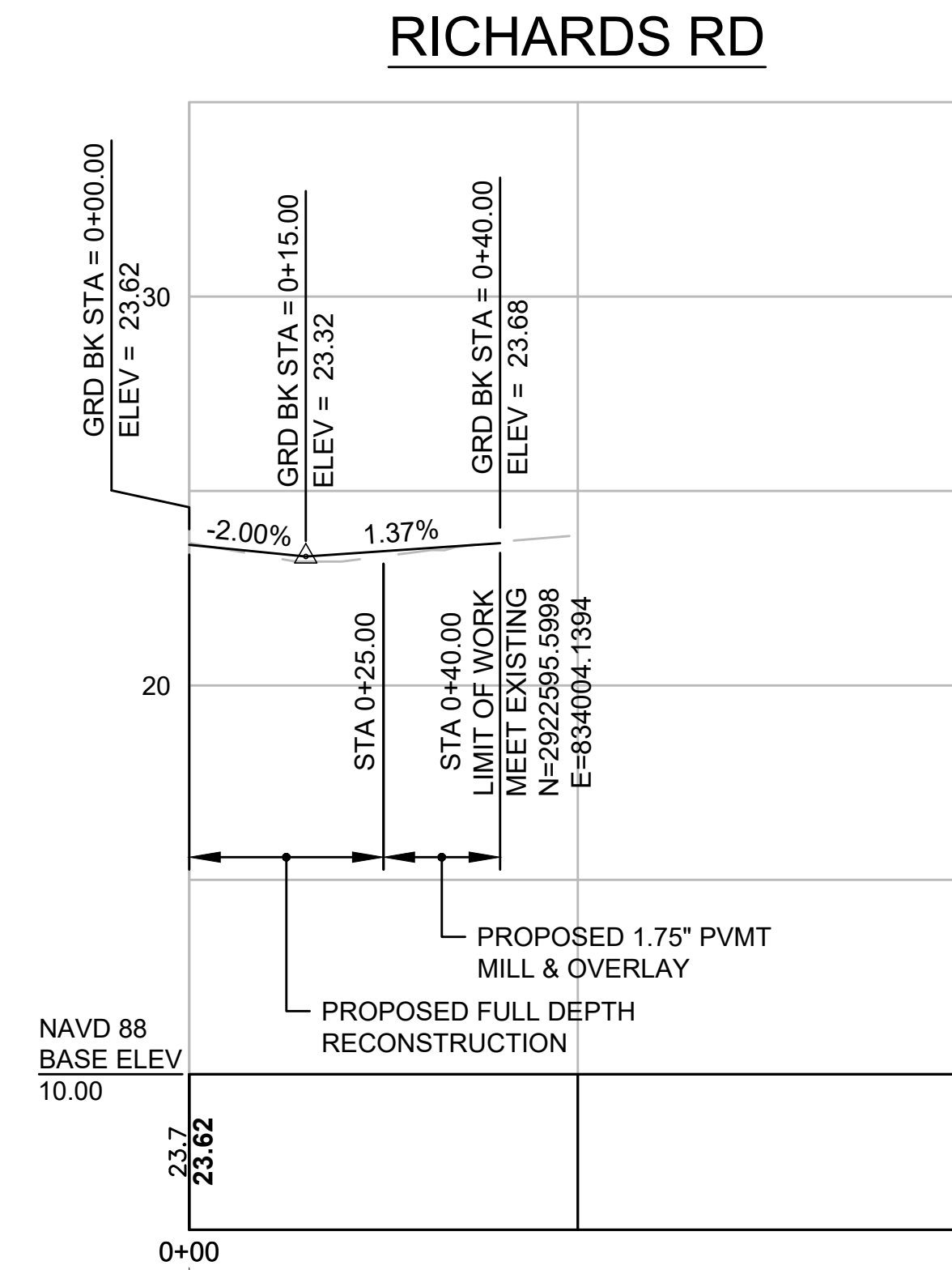
**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	43
PROJECT FILE NO. 601607			

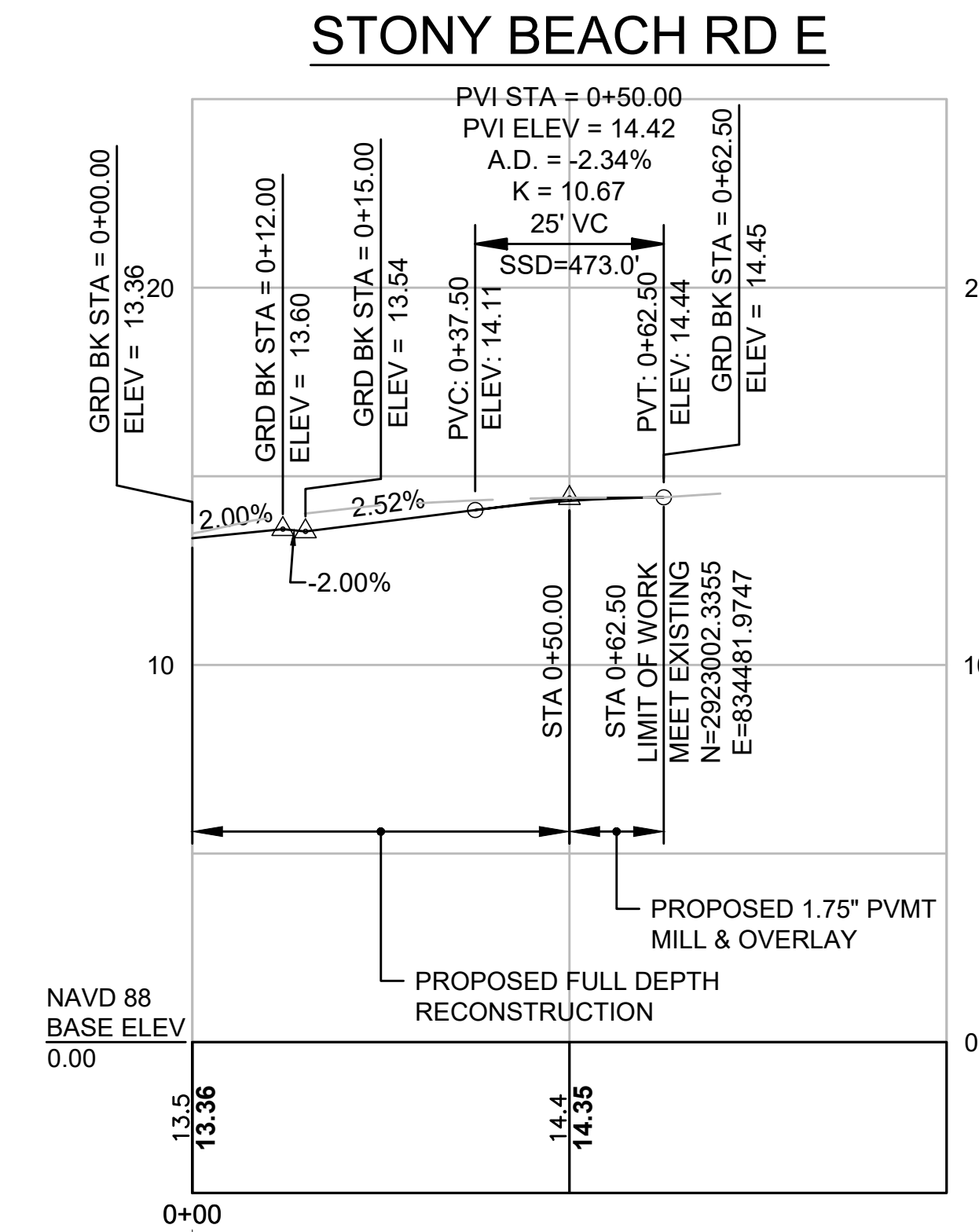
SIDE STREETS PROFILE - 8



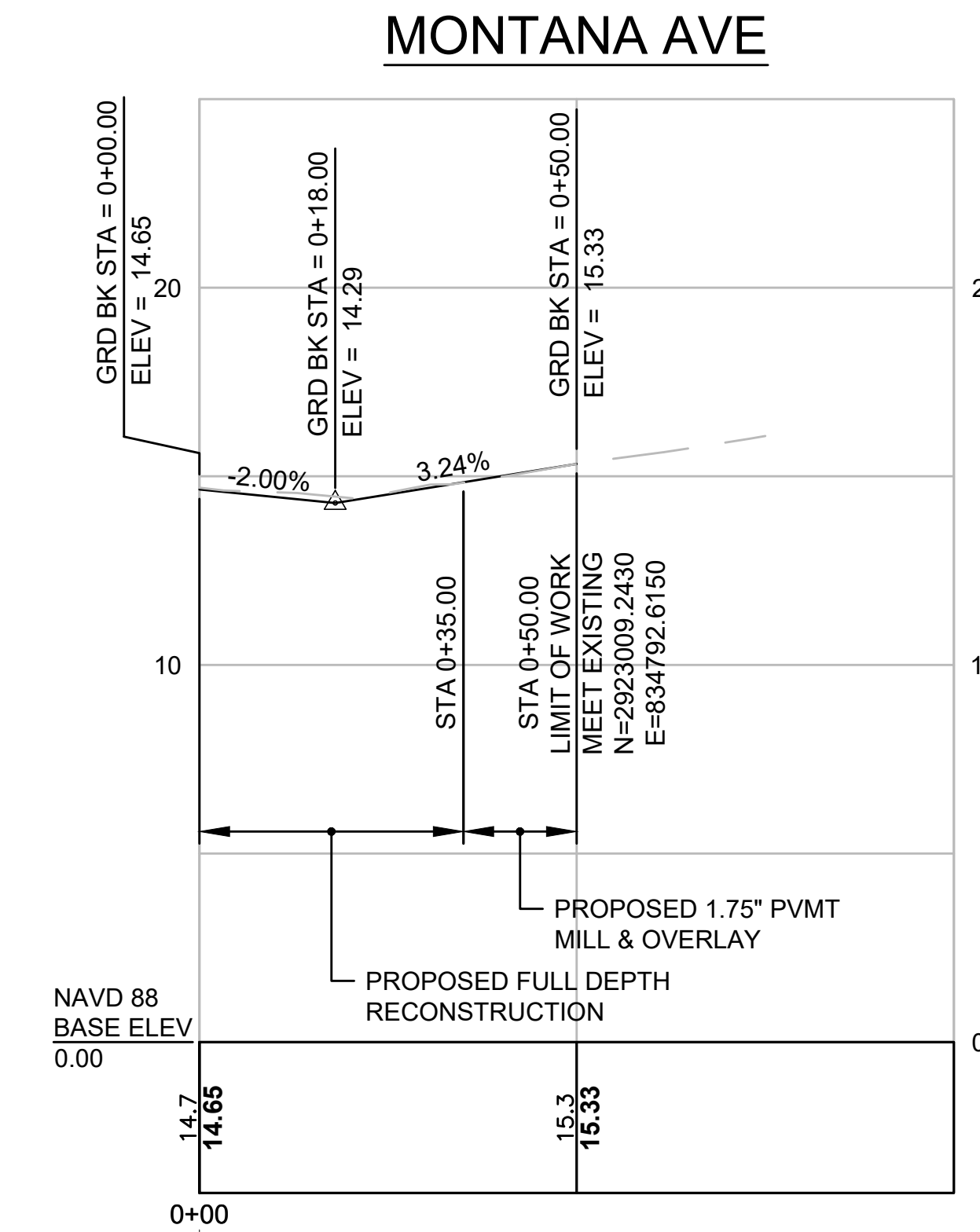
STA 0+00.00 STONY BEACH RD W @ =
STA 0+42.71 SEAVIEW AVE @



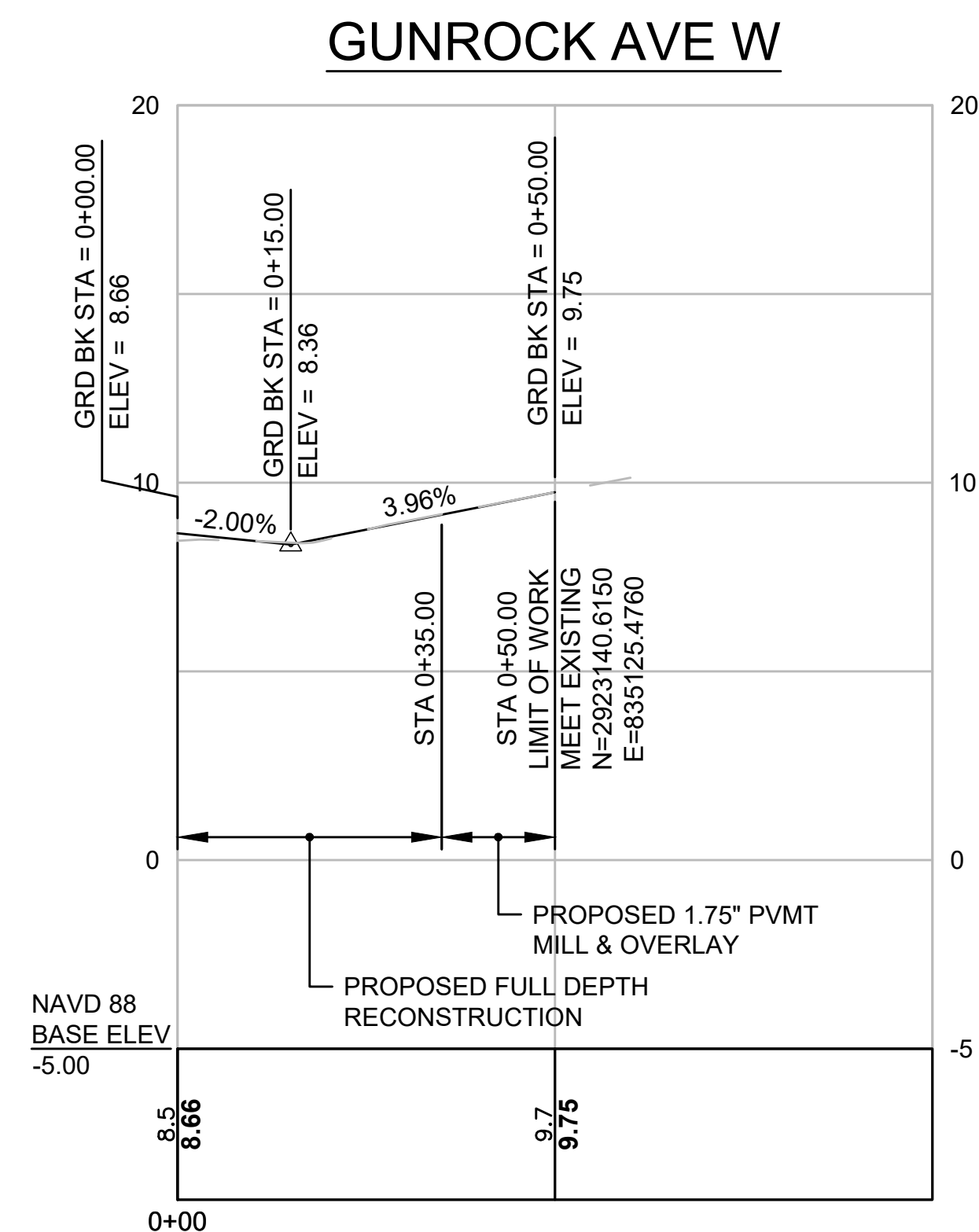
STA 17+57.08 ATLANTIC AVE @ =
STA 0+00 RICHARDS RD @



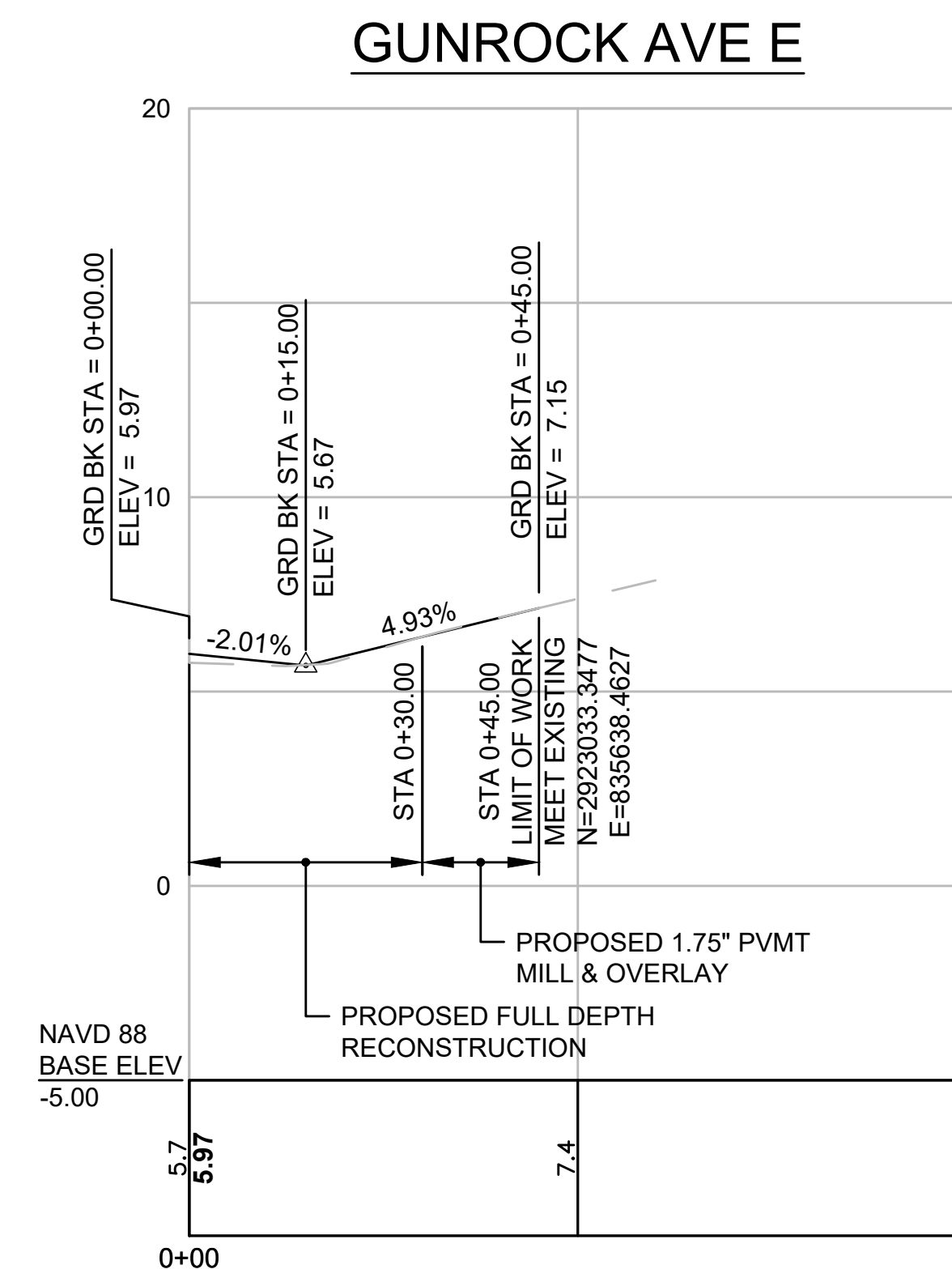
STA 23+88.95 ATLANTIC AVE @ =
STA 0+00.00 STONY BEACH RD E @



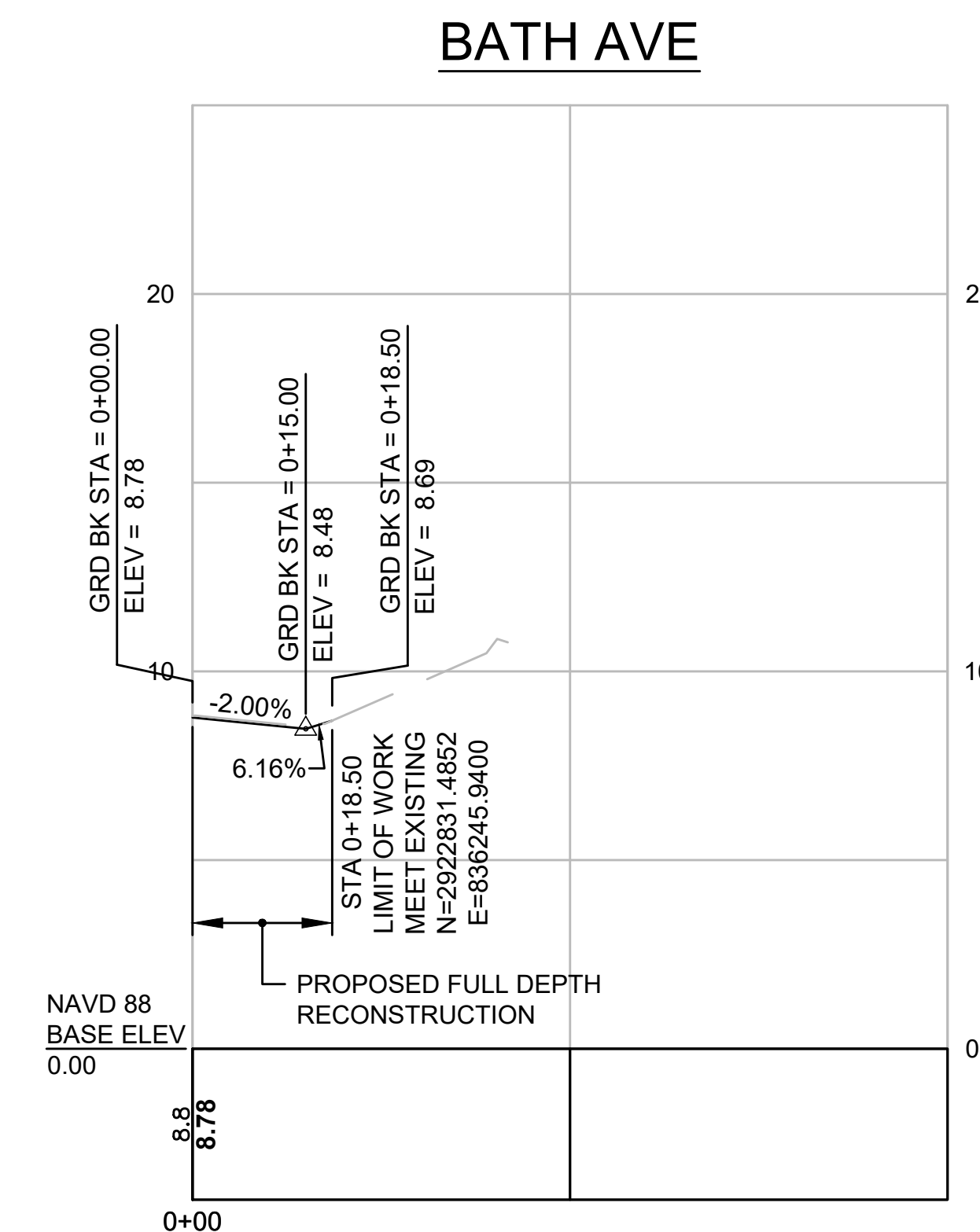
STA 26+75.38 ATLANTIC AVE @ =
STA 0+00 MONTANA AVE @



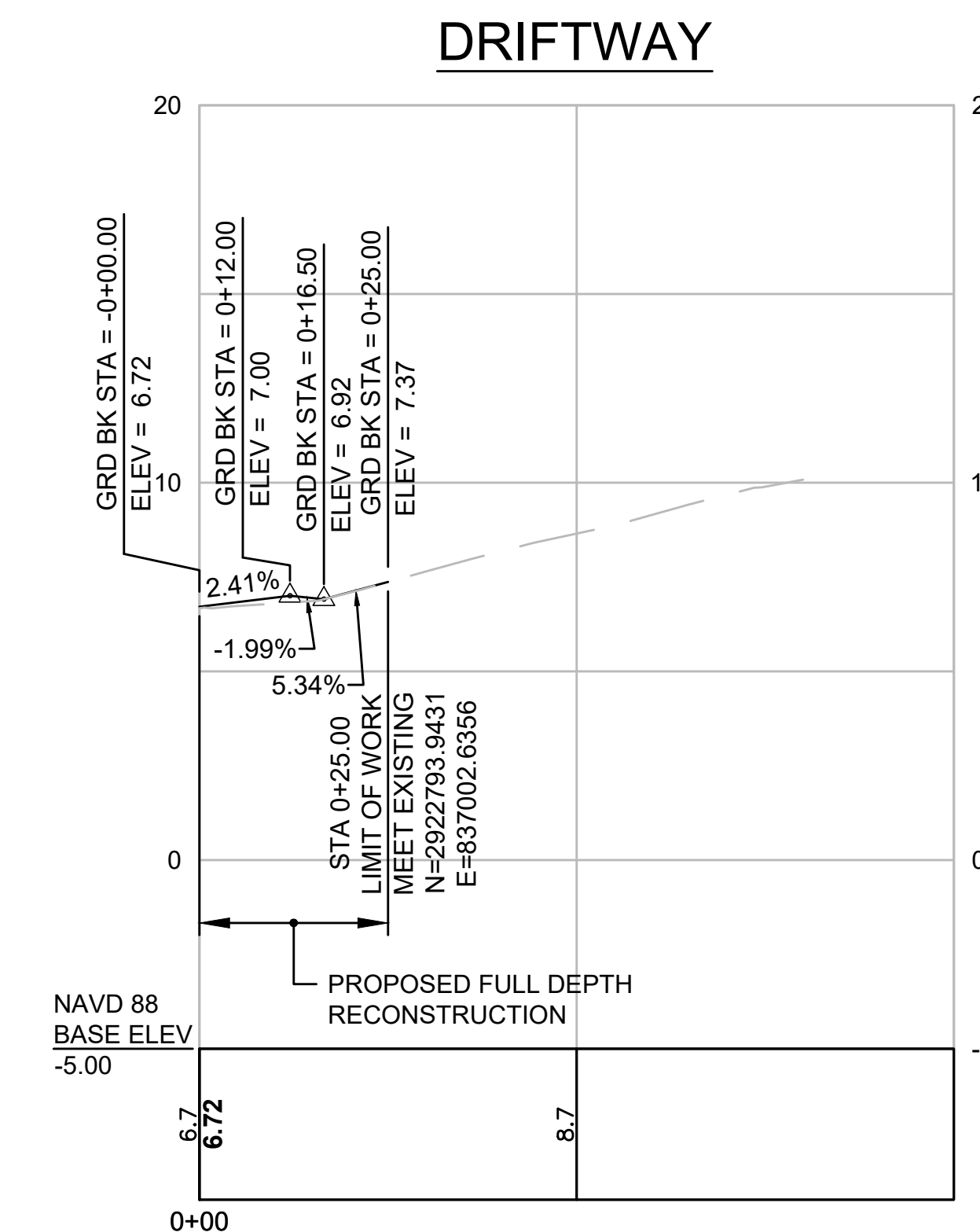
STA 30+09.82 ATLANTIC AVE @ =
STA 0+00 GUN ROCK AVE W @



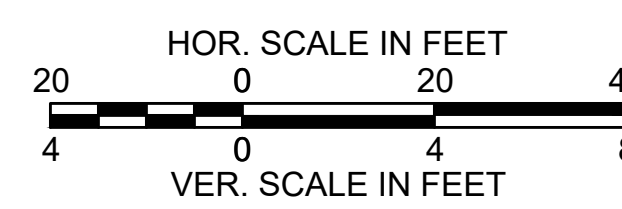
STA 35+20.71 ATLANTIC AVE @ =
STA 0+00 GUN ROCK AVE E @



STA 41+75.19 ATLANTIC AVE @ =
STA 0+00 BATH AVE @



STA 49+36.38 ATLANTIC AVE @ =
STA 0+00 DRIFTWAY @

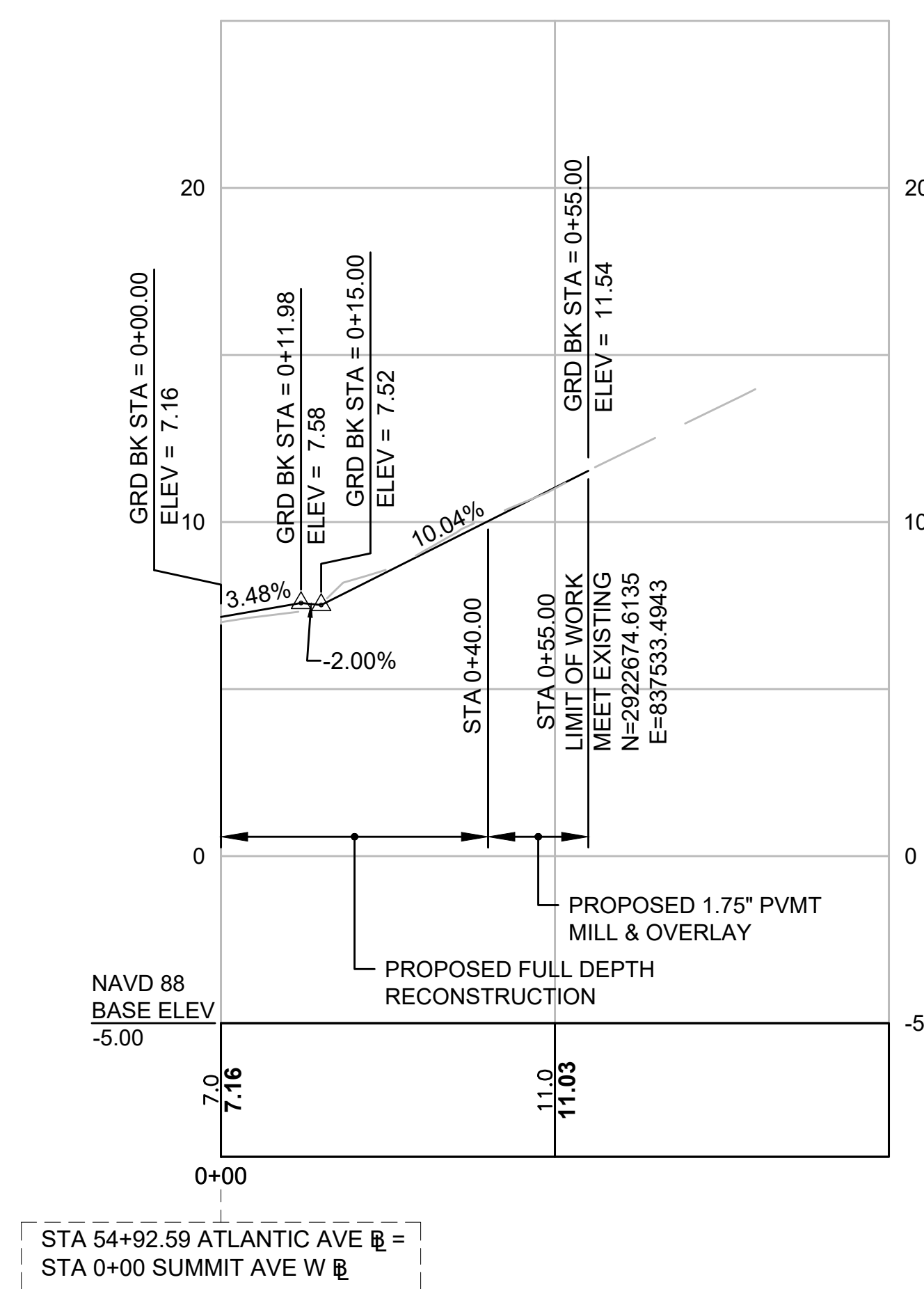


HULL
ATLANTIC AVENUE RECONSTRUCTION

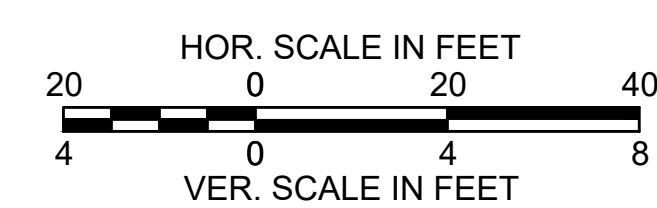
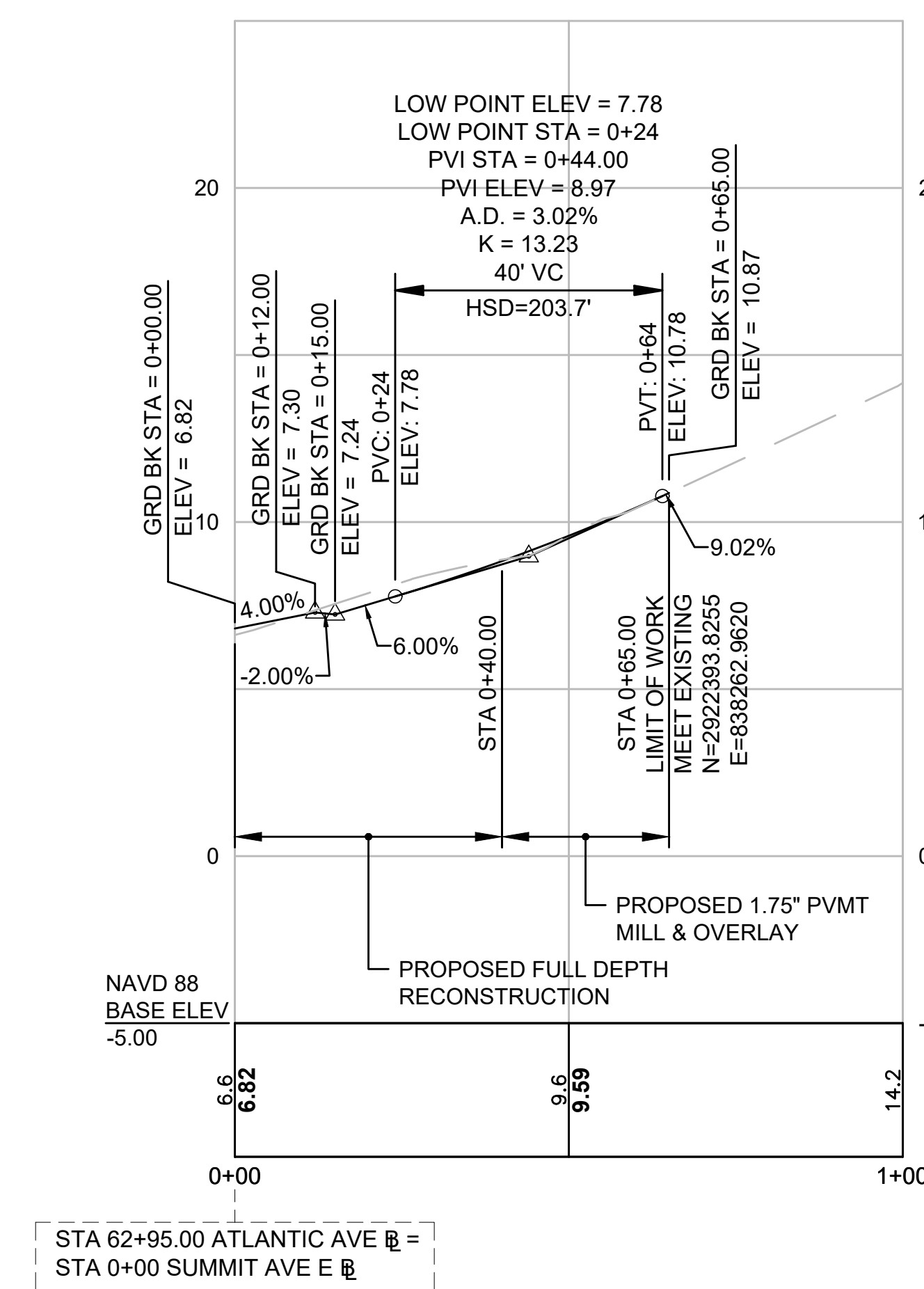
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	43
PROJECT FILE NO.		601607	

SIDE STREETS PROFILE - 9

SUMMIT AVE W



SUMMIT AVE E

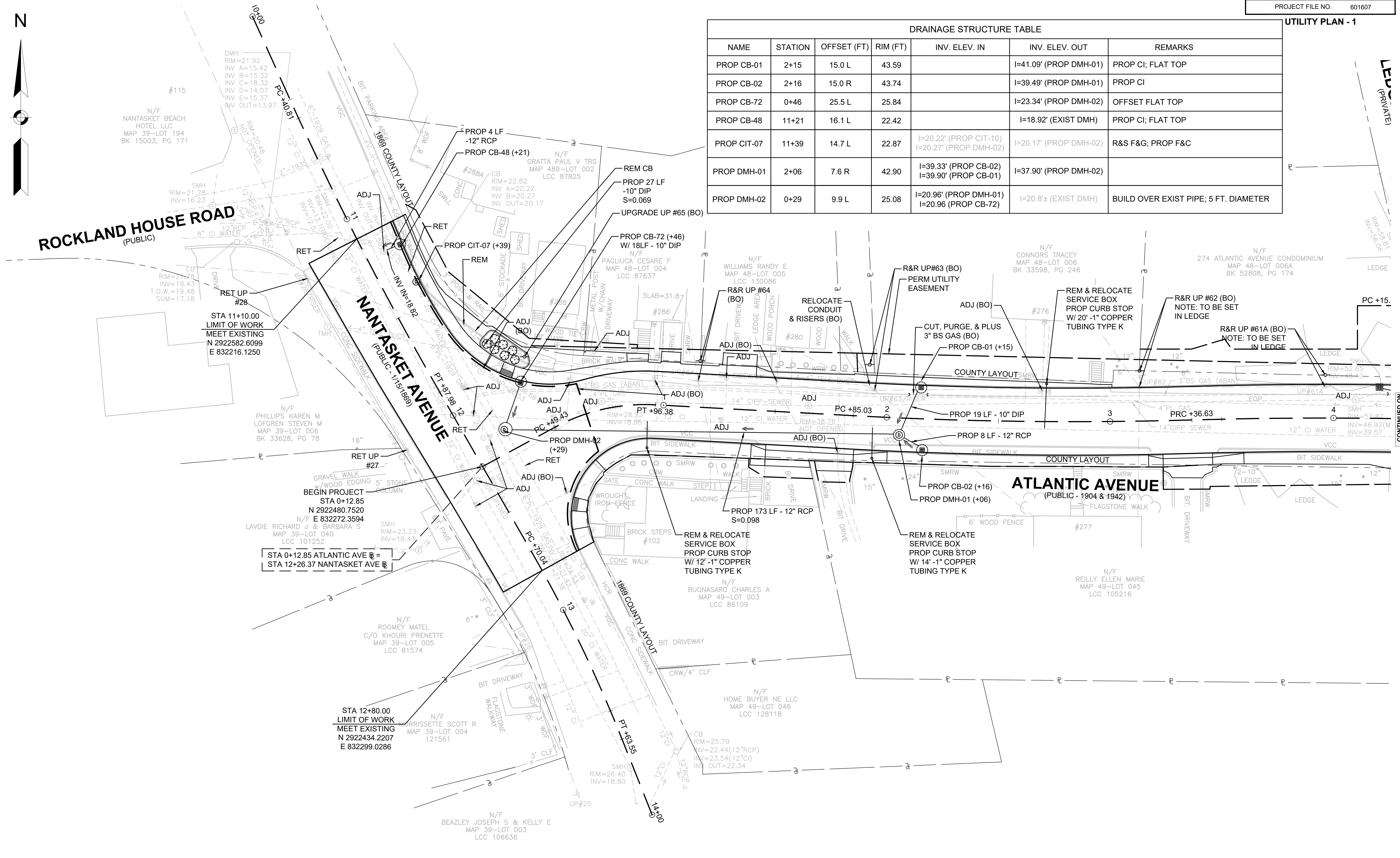
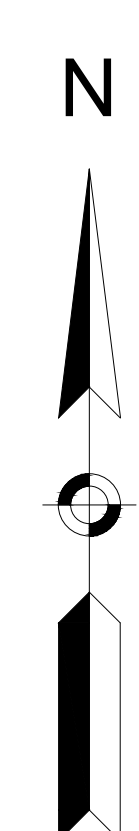


**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	43
PROJECT FILE NO.		601607	

UTILITY PLAN - 1

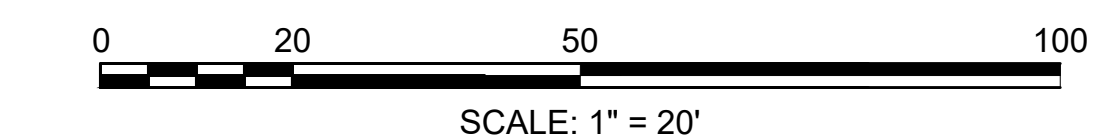
DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-01	2+15	15.0 L	43.59		I=41.09' (PROP DMH-01)	PROP CI; FLAT TOP
PROP CB-02	2+16	15.0 R	43.74		I=39.49' (PROP DMH-01)	PROP CI
PROP CB-72	0+46	25.5 L	25.84		I=23.34' (PROP DMH-02)	OFFSET FLAT TOP
PROP CB-48	11+21	16.1 L	22.42		I=18.92' (EXIST DMH)	PROP CI; FLAT TOP
PROP CIT-07	11+39	14.7 L	22.87	I=20.22' (PROP CIT-10) I=20.27' (PROP DMH-02)	I=20.17' (PROP DMH-02)	R&S F&G; PROP F&C
PROP DMH-01	2+06	7.6 R	42.90	I=39.33' (PROP CB-02) I=39.90' (PROP CB-01)	I=37.90' (PROP DMH-02)	
PROP DMH-02	0+29	9.9 L	25.08	I=20.96' (PROP DMH-01) I=20.96' (PROP CB-72)	I=20.8± (EXIST DMH)	BUILD OVER EXIST PIPE; 5 FT. DIAMETER



STA 11+10.00
LIMIT OF WORK
MEET EXISTING
N 2922582.6099
E 832216.1250

STA 0+12.85 ATLANTIC AVE @
STA 12+26.37 NANTASKET AVE @

STA 12+80.00
LIMIT OF WORK
MEET EXISTING
N 2922434.2207
E 832299.0286



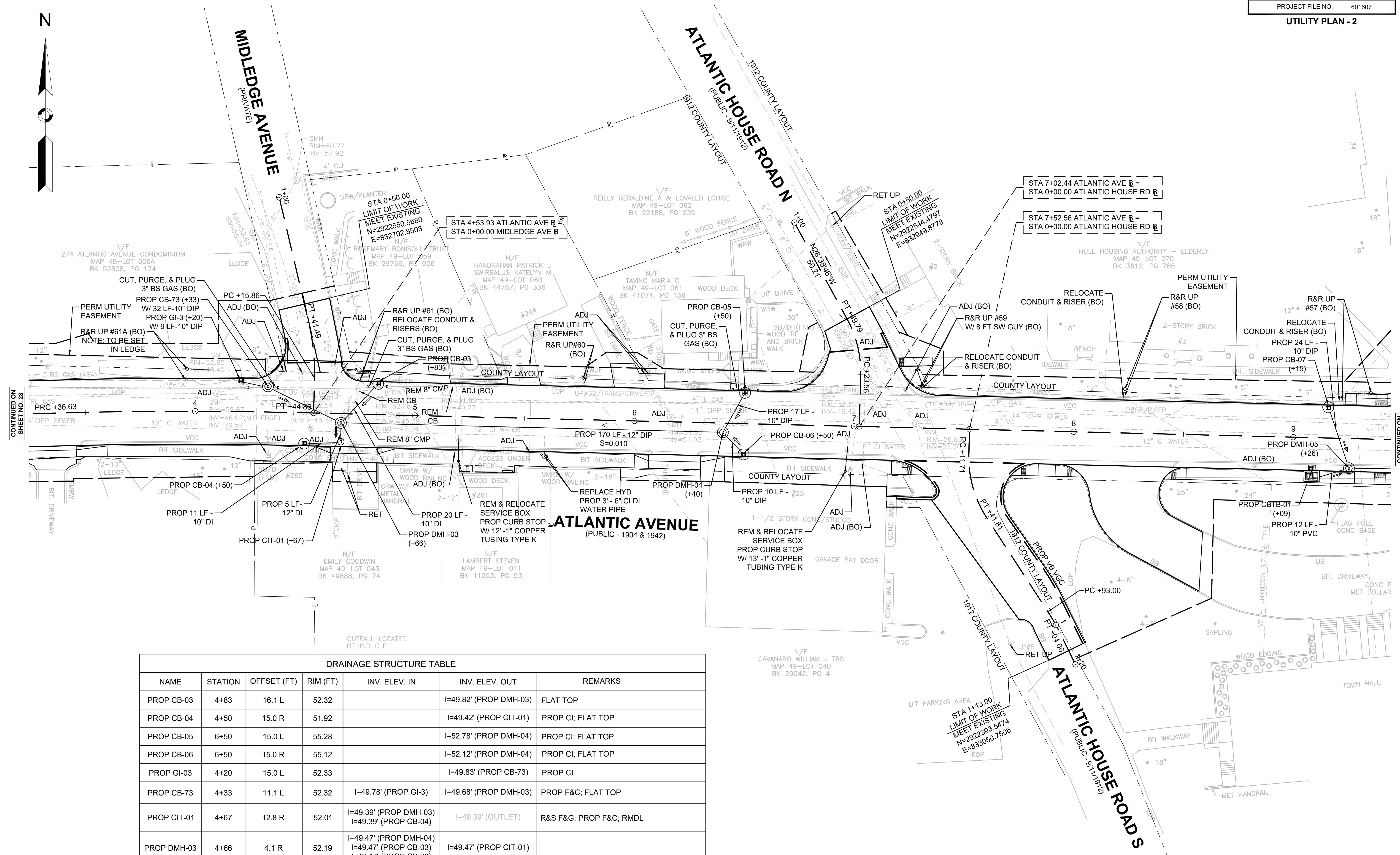
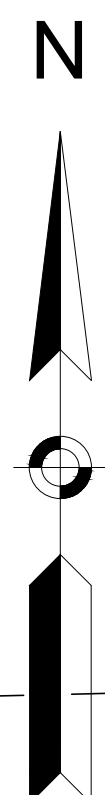
FOR PROFILE SEE SHEET 19

CONTINUED ON
SHEET NO. 29

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

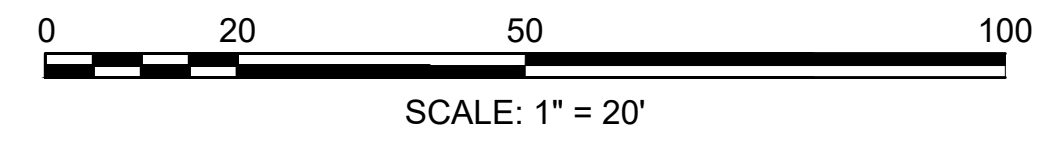
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	43
PROJECT FILE NO.		601607	

UTILITY PLAN - 2



DRAINAGE STRUCTURE TABLE

NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-03	4+83	16.1 L	52.32	I=49.82' (PROP DMH-03)	I=49.82' (PROP DMH-03)	FLAT TOP
PROP CB-04	4+50	15.0 R	51.92	I=49.42' (PROP CIT-01)	I=49.42' (PROP CIT-01)	PROP CI; FLAT TOP
PROP CB-05	6+50	15.0 L	55.28	I=52.78' (PROP DMH-04)	I=52.78' (PROP DMH-04)	PROP CI; FLAT TOP
PROP CB-06	6+50	15.0 R	55.12	I=52.12' (PROP DMH-04)	I=52.12' (PROP DMH-04)	PROP CI; FLAT TOP
PROP GI-03	4+20	15.0 L	52.33	I=49.83' (PROP CB-73)	I=49.83' (PROP CB-73)	PROP CI
PROP CB-73	4+33	11.1 L	52.32	I=49.78' (PROP GI-3)	I=49.68' (PROP DMH-03)	PROP F&C; FLAT TOP
PROP CIT-01	4+67	12.8 R	52.01	I=49.39' (PROP DMH-03) I=49.39' (PROP CB-04)	I=49.39' (OUTLET)	R&S F&G; PROP F&C; RMDL
PROP DMH-03	4+66	4.1 R	52.19	I=49.47' (PROP DMH-04) I=49.47' (PROP CB-03) I=49.47' (PROP CB-73)	I=49.47' (PROP CIT-01)	
PROP DMH-04	6+40	4.2 R	55.12	I=51.22' (PROP CB-05) I=51.22' (PROP CB-06)	I=51.12' (PROP DMH-03)	



FOR PROFILE SEE SHEET 19 & 25

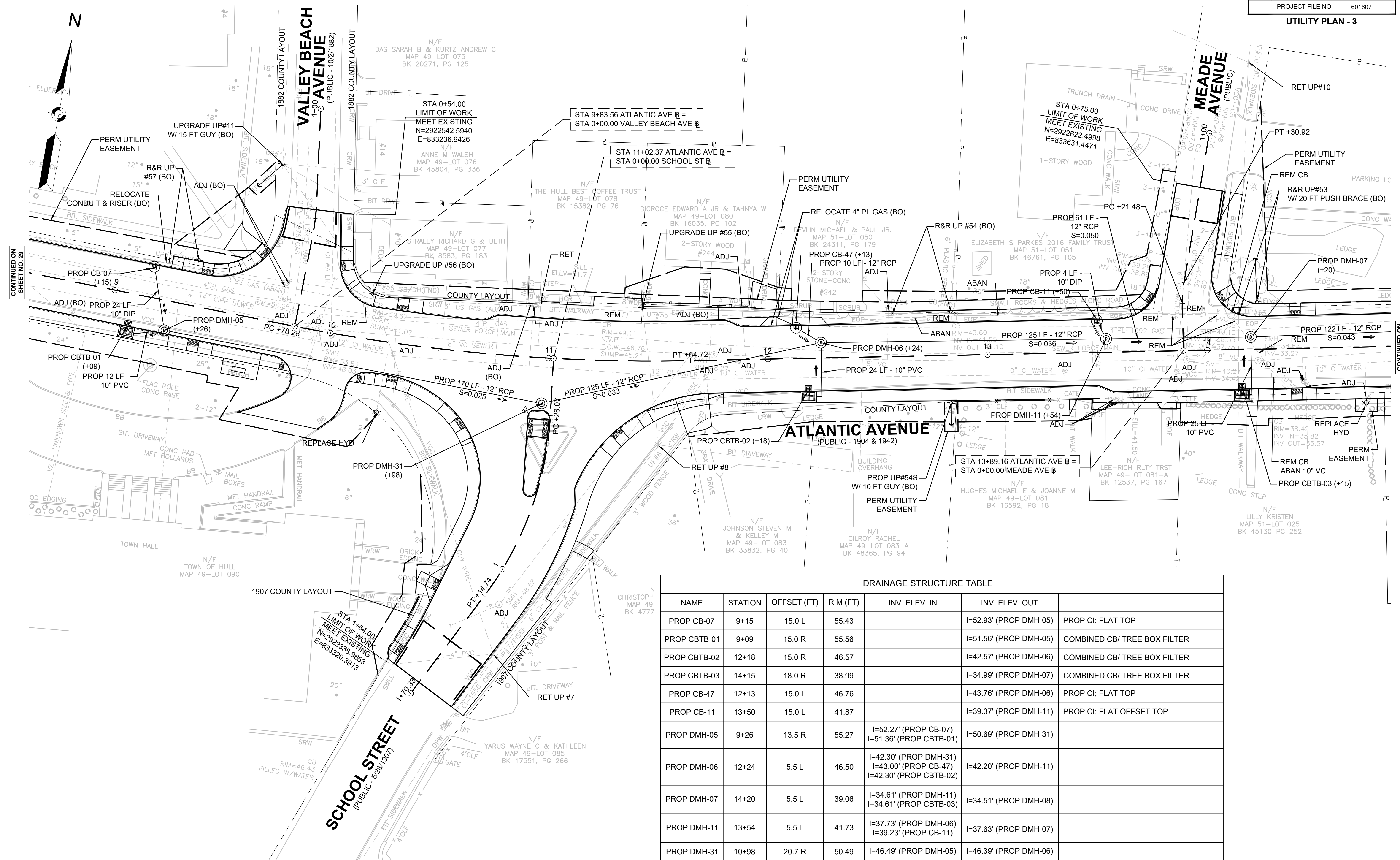
CONTINUED ON SHEET NO. 28

CONTINUED ON SHEET NO. 30

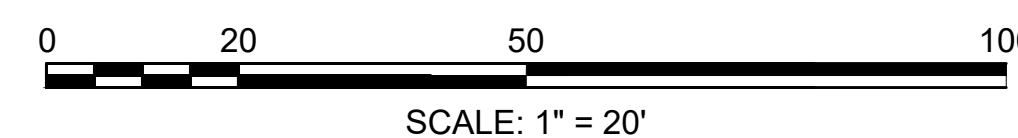
**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	43
PROJECT FILE NO. 601607			

UTILITY PLAN - 3



DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	
PROP CB-07	9+15	15.0 L	55.43		I=52.93' (PROP DMH-05)	PROP CI, FLAT TOP
PROP CBTB-01	9+09	15.0 R	55.56		I=51.56' (PROP DMH-05)	COMBINED CB/ TREE BOX FILTER
PROP CBTB-02	12+18	15.0 R	46.57		I=42.57' (PROP DMH-06)	COMBINED CB/ TREE BOX FILTER
PROP CBTB-03	14+15	18.0 R	38.99		I=34.99' (PROP DMH-07)	COMBINED CB/ TREE BOX FILTER
PROP CB-47	12+13	15.0 L	46.76		I=43.76' (PROP DMH-06)	PROP CI, FLAT TOP
PROP CB-11	13+50	15.0 L	41.87		I=39.37' (PROP DMH-11)	PROP CI, FLAT OFFSET TOP
PROP DMH-05	9+26	13.5 R	55.27	I=52.27' (PROP CB-07) I=51.36' (PROP CBTB-01)	I=50.69' (PROP DMH-31)	
PROP DMH-06	12+24	5.5 L	46.50	I=42.30' (PROP DMH-31) I=43.00' (PROP CB-47) I=42.30' (PROP CBTB-02)	I=42.20' (PROP DMH-11)	
PROP DMH-07	14+20	5.5 L	39.06	I=34.61' (PROP DMH-11) I=34.61' (PROP CBTB-03)	I=34.51' (PROP DMH-08)	
PROP DMH-11	13+54	5.5 L	41.73	I=37.73' (PROP DMH-06) I=39.23' (PROP CB-11)	I=37.63' (PROP DMH-07)	
PROP DMH-31	10+98	20.7 R	50.49	I=46.49' (PROP DMH-05)	I=46.39' (PROP DMH-06)	



FOR PROFILE SEE SHEETS 19-20 & 25

CONTINUED ON SHEET NO. 29

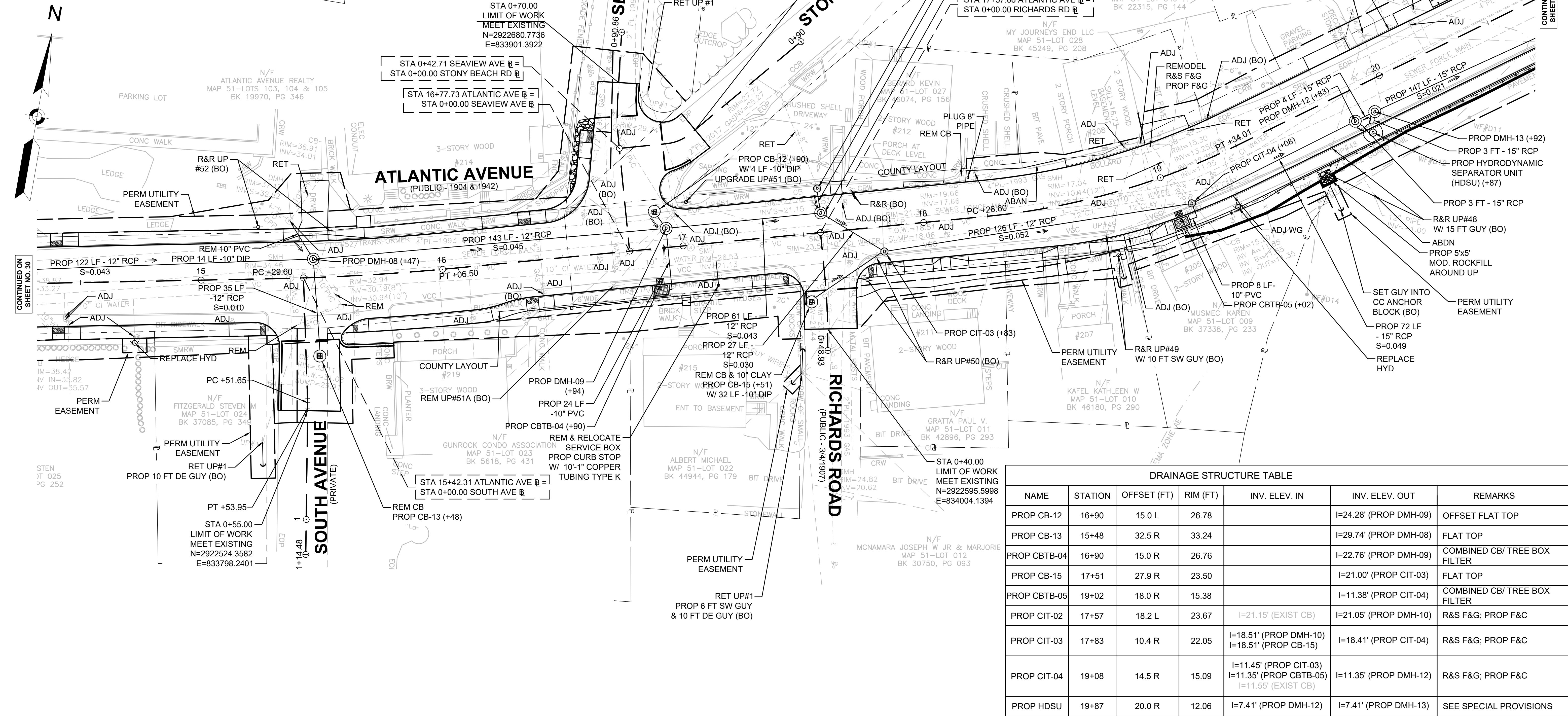
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**HULL
ATLANTIC AVENUE RECONSTRUCTION**

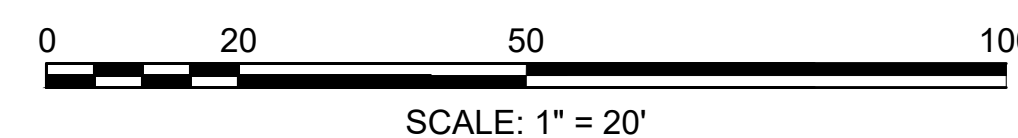
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	43
PROJECT FILE NO.		601607	

UTILITY PLAN - 4

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP DMH-08	15+47	7.6 L	33.68	I=31.18' (EXIST DMH) I=29.39' (PROP CB-13) I=29.29' (PROP DMH-07)	I=29.19' (PROP DMH-09)	
PROP DMH-09	16+94	7.9 L	26.71	I=22.71' (PROP DMH-08) I=22.51' (PROP CBTB-04) I=24.00' (PROP CB-12)	I=22.04' (PROP DMH-10)	
PROP DMH-10	17+58	8.0 L	23.41	I=20.66' (PROP CIT-02) I=19.41' (PROP DMH-09)	I=19.31' (PROP CIT-03)	
PROP DMH-12	19+83	12.5 R	11.81	I=7.81' (PROP CIT-04)	I=7.76' (PROP DMH-13) I=7.51' (PROP HDSU)	
PROP DMH-13	19+92	12.5 R	11.49	I=7.31' (PROP DMH-12) I=7.31' (PROP HDSU)	I=7.21' (PROP DMH-47)	



DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-12	16+90	15.0 L	26.78		I=24.28' (PROP DMH-09)	OFFSET FLAT TOP
PROP CB-13	15+48	32.5 R	33.24		I=29.74' (PROP DMH-08)	FLAT TOP
PROP CBTB-04	16+90	15.0 R	26.76		I=22.76' (PROP DMH-09)	COMBINED CB/ TREE BOX FILTER
PROP CB-15	17+51	27.9 R	23.50		I=21.00' (PROP CIT-03)	FLAT TOP
PROP CBTB-05	19+02	18.0 R	15.38		I=11.38' (PROP CIT-04)	COMBINED CB/ TREE BOX FILTER
PROP CIT-02	17+57	18.2 L	23.67	I=21.15' (EXIST CB)	I=21.05' (PROP DMH-10)	R&S F&G; PROP F&C
PROP CIT-03	17+83	10.4 R	22.05	I=18.51' (PROP DMH-10) I=18.51' (PROP CB-15)	I=18.41' (PROP CIT-04)	R&S F&G; PROP F&C
PROP CIT-04	19+08	14.5 R	15.09	I=11.45' (PROP CIT-03) I=11.35' (PROP CBTB-05) I=11.55' (EXIST CB)	I=11.35' (PROP DMH-12)	R&S F&G; PROP F&C
PROP HDSU	19+87	20.0 R	12.06	I=7.41' (PROP DMH-12)	I=7.41' (PROP DMH-13)	SEE SPECIAL PROVISIONS

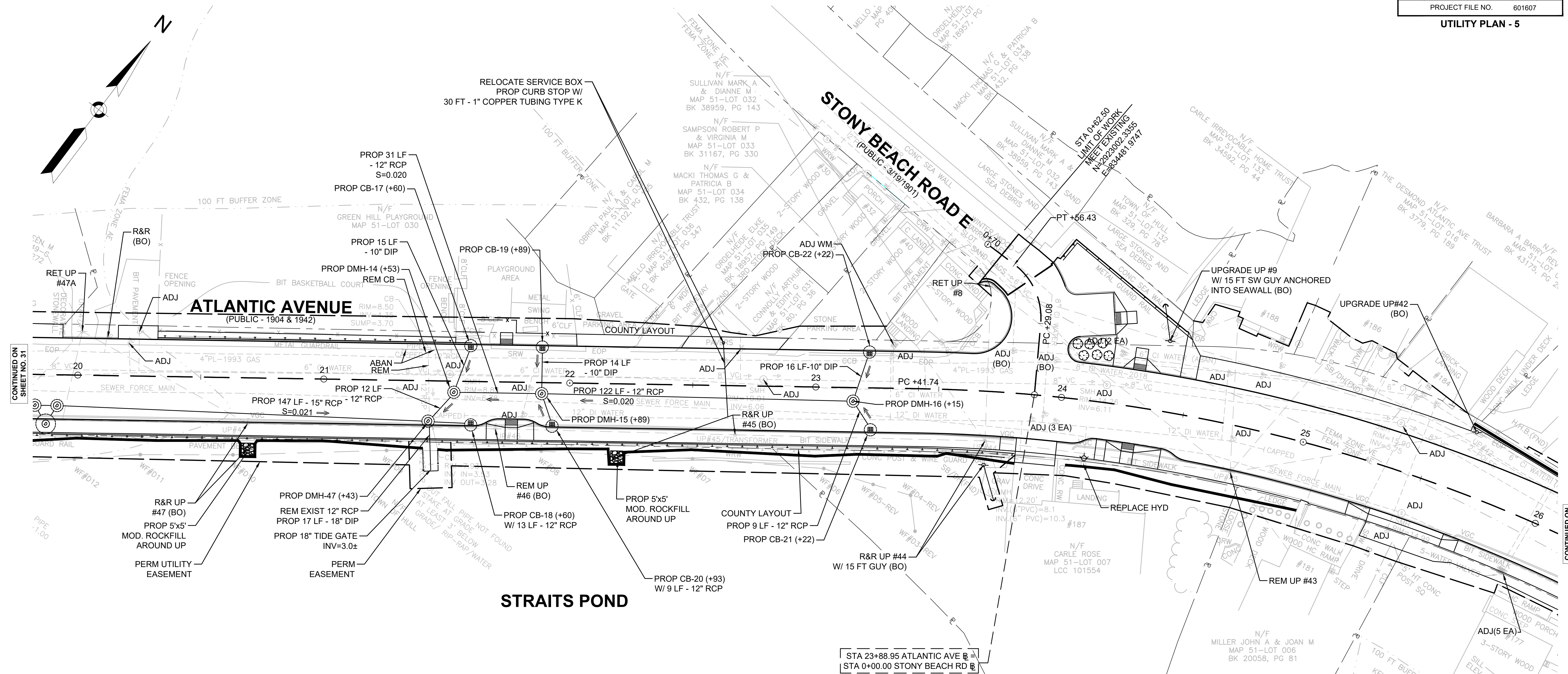


FOR PROFILE SEE SHEET 20 & 25-26

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

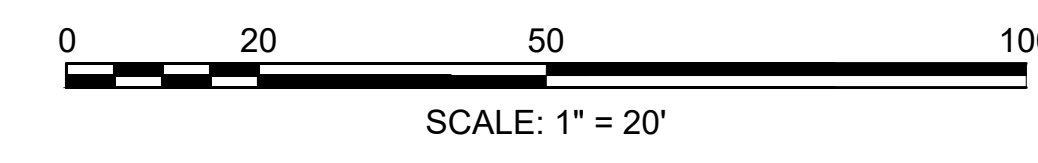
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	43
PROJECT FILE NO.		601607	

UTILITY PLAN - 5



NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-17	21+60	15.0 L	8.50	I=6.00' (PROP DMH-14)	I=6.00' (PROP DMH-14)	PROP CI; FLAT TOP
PROP CB-18	21+60	18.0 R	8.44	I=4.94' (PROP DMH-47)	I=4.94' (PROP DMH-47)	PROP CI; OFFSET FLAT TOP
PROP CB-19	21+89	15.0 L	8.59	I=6.09' (PROP DMH-15)	I=6.09' (PROP DMH-15)	PROP CI; FLAT TOP
PROP CB-20	21+93	18.0 R	8.56	I=5.56' (PROP DMH-15)	I=5.56' (PROP DMH-15)	PROP CI; OFFSET FLAT TOP
PROP CB-21	23+22	18.0 R	11.12	I=8.12' (PROP DMH-16)	I=8.12' (PROP DMH-16)	PROP CI; FLAT TOP
PROP CB-22	23+22	15.0 L	11.43	I=8.93' (PROP DMH-16)	I=8.93' (PROP DMH-16)	PROP CI; FLAT TOP

NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP DMH-47	21+43	16.3 R	8.52	I=3.53' (PROP DMH-14) I=4.12' (PROP DMH-13) I=4.68' (PROP CB-18)	I=3.30' (OUTLET)	R&S F&G; PROP F&C; RMDL
PROP DMH-14	21+53	4.5 R	8.71	I=4.78' (PROP CB-17) I=3.91' (PROP DMH-15)	I=3.81' (PROP DMH-47)	
PROP DMH-15	21+89	4.5 R	8.79	I=5.24' (PROP CB-19) I=4.74' (PROP CB-20) I=4.63' (PROP DMH-16)	I=4.53' (PROP DMH-14)	
PROP DMH-16	23+15	5.5 R	11.17	I=8.17' (PROP CB-22) I=8.00' (PROP CB-21)	I=7.07' (PROP DMH-15)	



FOR PROFILE SEE SHEETS 20-21 & 26

CONTINUED ON
SHEET NO. 31

CONTINUED ON
SHEET NO. 33

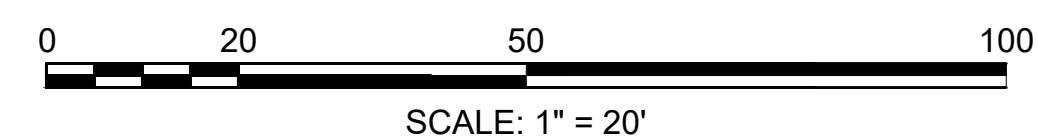
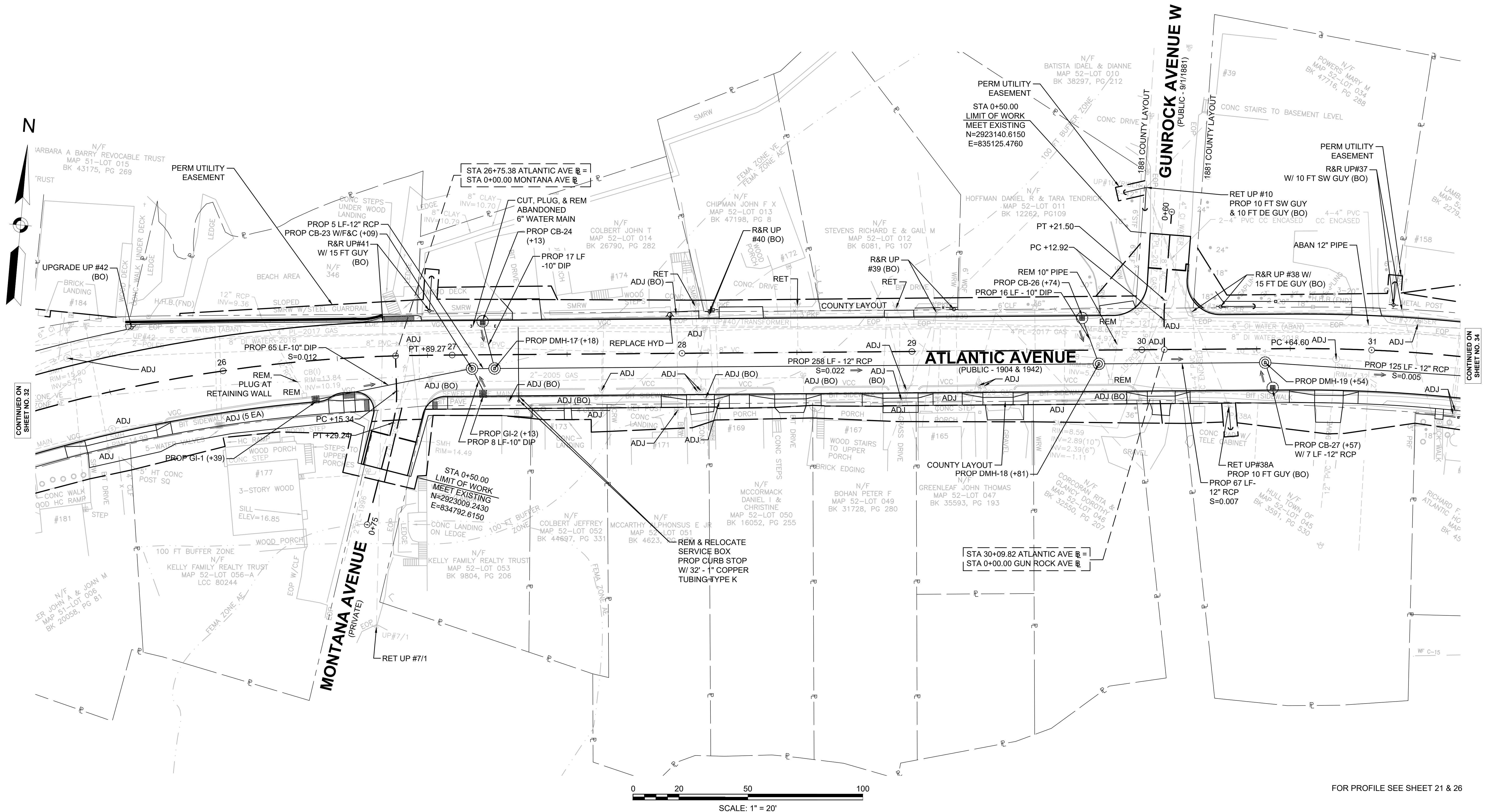
**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	43
PROJECT FILE NO. 601607			

UTILITY PLAN - 6

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-23	27+09	6.0 R	14.19	I=11.19' (PROP GI-1) I=11.23' (PROP GI-2)	I=11.09' (PROP DMH-17)	WITH F&C; FLAT TOP
PROP CB-24	27+13	15.0 L	13.97		I=11.47' (PROP DMH-17)	PROP CI; FLAT TOP
PROP CB-26	29+74	15.0 L	8.85		I=6.35' (PROP DMH-18)	PROP CI; FLAT TOP
PROP CB-27	30+57	18.0 R	7.56		I=4.56' (PROP DMH-19)	PROP CI; FLAT TOP
PROP GI-1	26+39	18.0 R	14.50		I=12.00' (PROP CB-23)	PROP CI
PROP GI-2	27+13	18.0 R	13.89		I=11.39' (PROP CB-23)	PROP CI

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP DMH-17	27+18	6.0 R	14.06	I=10.99' (PROP CB-23) I=11.05' (PROP CB-24)	I=10.06' (PROP DMH-18)	
PROP DMH-18	29+81	6.0 R	8.94	I=4.42' (PROP DMH-17) I=5.54' (PROP CB-26)	I=4.14 (PROP DMH-19)	
PROP DMH-19	30+54	6.0 R	7.93	I=3.66 (PROP DMH-18) I=4.42' (PROP CB-27)	I=3.56' (PROP DMH-20)	



FOR PROFILE SEE SHEET 21 & 26

CONTINUED ON SHEET NO. 32

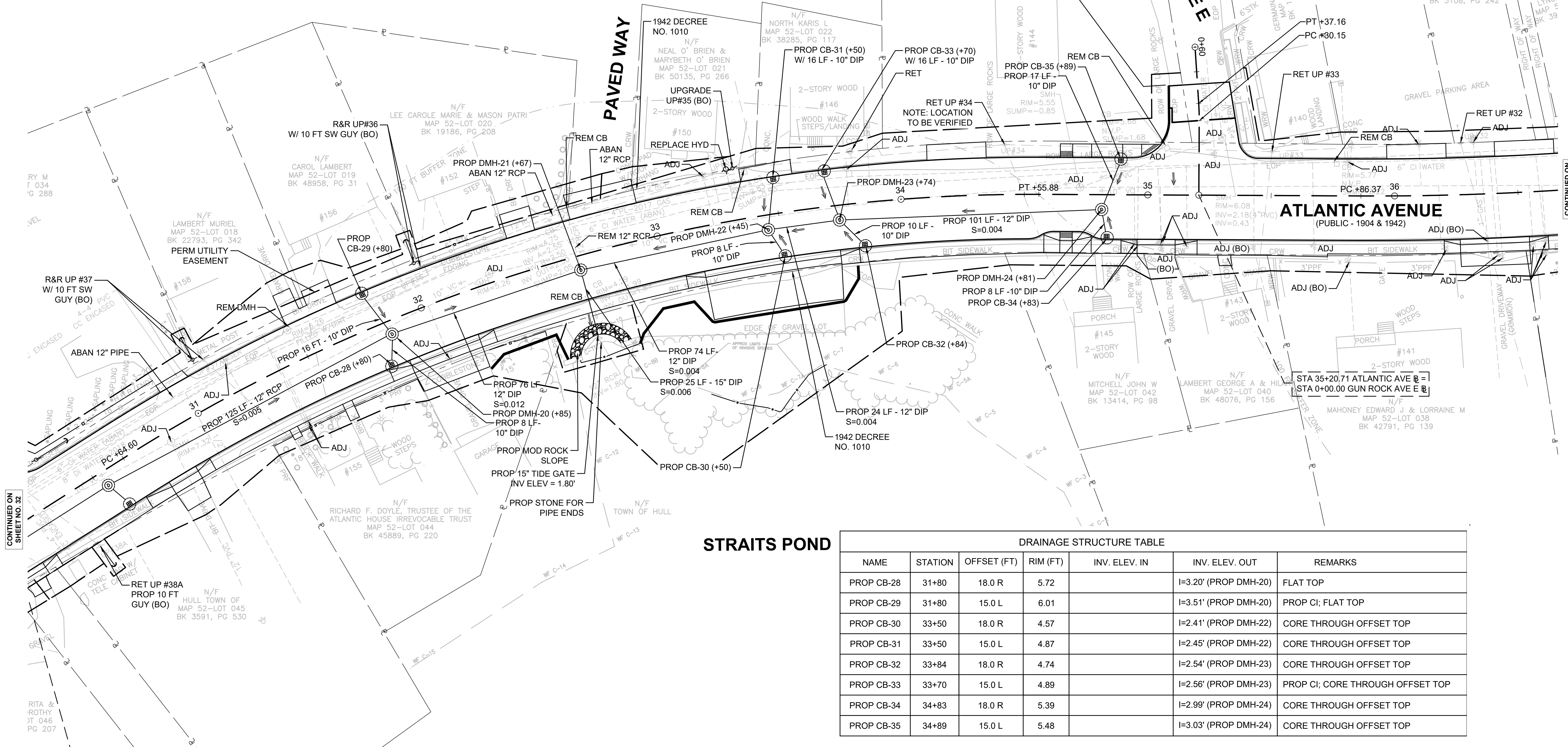
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**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	34	43
PROJECT FILE NO.		601607	

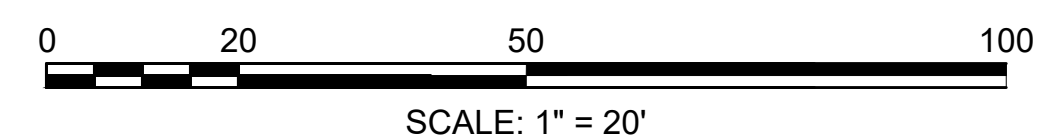
UTILITY PLAN - 7

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP DMH-20	31+85	5.5 R	6.14	I=3.10' (PROP CB-28) I=3.10' (PROP CB-29) I=2.93' (PROP DMH-18)	I=2.93' (PROP DMH-21)	
PROP DMH-21	32+67	5.8 R	5.33	I=2.03' (PROP DMH-20) I=2.03' (PROP DMH-22)	I=1.95' (OUTLET)	
PROP DMH-22	33+45	6.0 R	5.06	I=2.37' (PROP CB-30) I=2.37' (PROP CB-31) I=2.37' (PROP DMH-23)	I=2.32' (PROP DMH-21)	
PROP DMH-23	33+74	6.0 R	5.07	I=2.51' (PROP CB-32) I=2.51' (PROP CB-33) I=2.51' (PROP DMH-24)	I=2.46' (PROP DMH-22)	
PROP DMH-24	34+81	6.0 R	5.61	I=2.95' (PROP CB-34) I=2.95' (PROP CB-35)	I=2.90' (PROP DMH-23)	



STRAITS POND

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-28	31+80	18.0 R	5.72		I=3.20' (PROP DMH-20)	FLAT TOP
PROP CB-29	31+80	15.0 L	6.01		I=3.51' (PROP DMH-20)	PROP CI; FLAT TOP
PROP CB-30	33+50	18.0 R	4.57		I=2.41' (PROP DMH-22)	CORE THROUGH OFFSET TOP
PROP CB-31	33+50	15.0 L	4.87		I=2.45' (PROP DMH-22)	CORE THROUGH OFFSET TOP
PROP CB-32	33+84	18.0 R	4.74		I=2.54' (PROP DMH-23)	CORE THROUGH OFFSET TOP
PROP CB-33	33+70	15.0 L	4.89		I=2.56' (PROP DMH-23)	PROP CI; CORE THROUGH OFFSET TOP
PROP CB-34	34+83	18.0 R	5.39		I=2.99' (PROP DMH-24)	CORE THROUGH OFFSET TOP
PROP CB-35	34+89	15.0 L	5.48		I=3.03' (PROP DMH-24)	CORE THROUGH OFFSET TOP



FOR PROFILE SEE SHEETS 21-22 & 26

CONTINUED ON
SHEET NO. 32

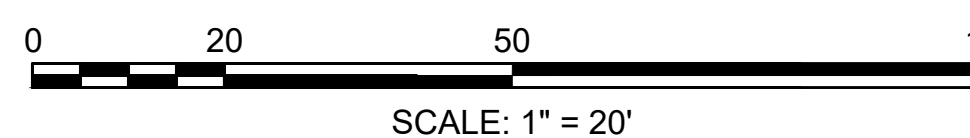
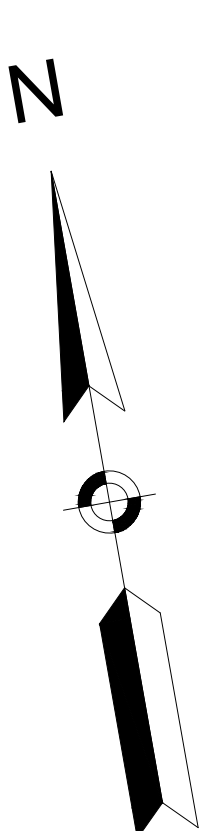
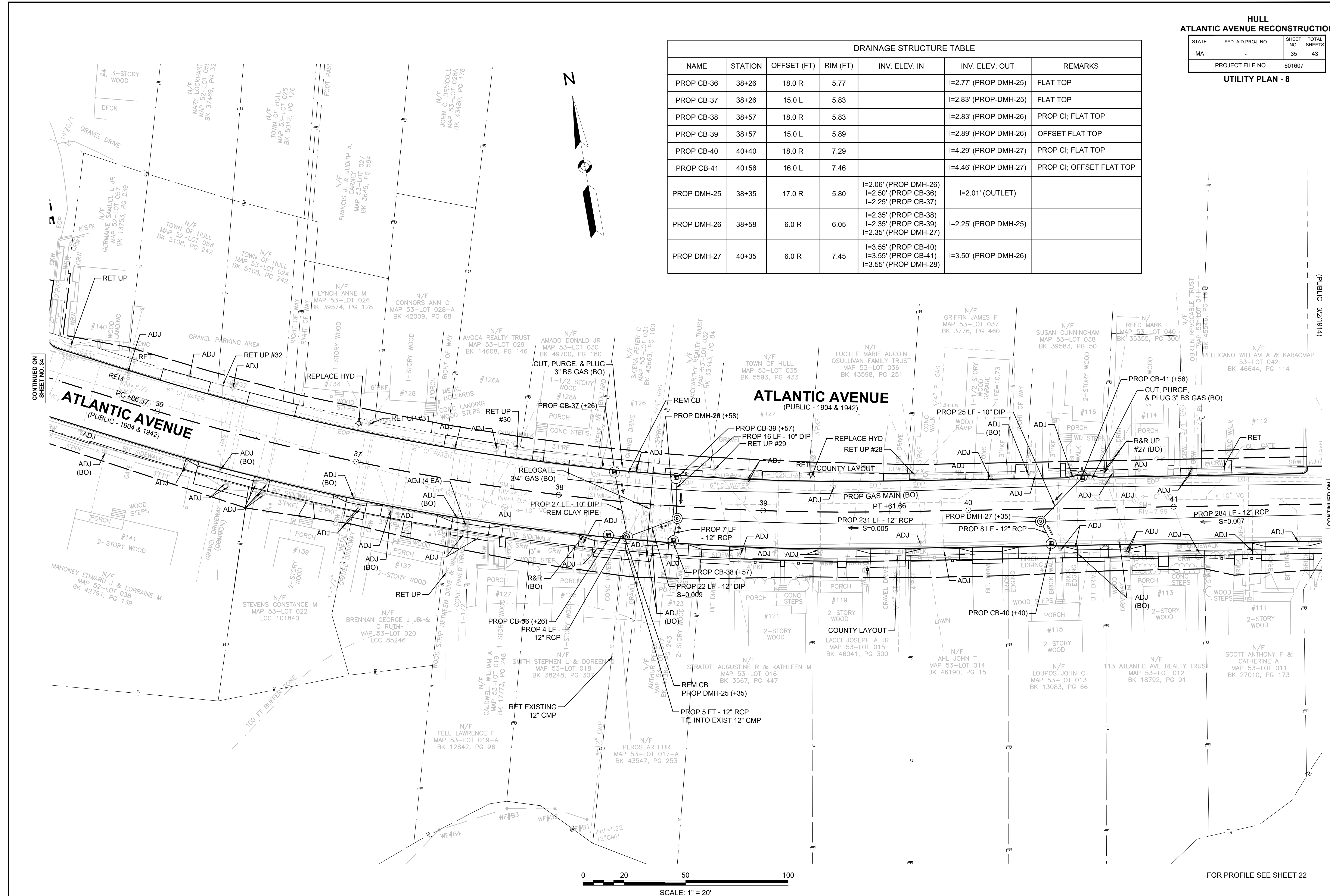
CONTINUED ON
SHEET NO. 35

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	43
PROJECT FILE NO.		601607	

UTILITY PLAN - 8

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-36	38+26	18.0 R	5.77		I=2.77' (PROP DMH-25)	FLAT TOP
PROP CB-37	38+26	15.0 L	5.83		I=2.83' (PROP DMH-25)	FLAT TOP
PROP CB-38	38+57	18.0 R	5.83		I=2.83' (PROP DMH-26)	PROP CI; FLAT TOP
PROP CB-39	38+57	15.0 L	5.89		I=2.89' (PROP DMH-26)	OFFSET FLAT TOP
PROP CB-40	40+40	18.0 R	7.29		I=4.29' (PROP DMH-27)	PROP CI; FLAT TOP
PROP CB-41	40+56	16.0 L	7.46		I=4.46' (PROP DMH-27)	PROP CI; OFFSET FLAT TOP
PROP DMH-25	38+35	17.0 R	5.80	I=2.06' (PROP DMH-26) I=2.50' (PROP CB-36) I=2.25' (PROP CB-37)	I=2.01' (OUTLET)	
PROP DMH-26	38+58	6.0 R	6.05	I=2.35' (PROP CB-38) I=2.35' (PROP CB-39) I=2.35' (PROP DMH-27)	I=2.25' (PROP DMH-25)	
PROP DMH-27	40+35	6.0 R	7.45	I=3.55' (PROP CB-40) I=3.55' (PROP CB-41) I=3.55' (PROP DMH-28)	I=3.50' (PROP DMH-26)	



FOR PROFILE SEE SHEET 22

CONTINUED ON SHEET NO. 34

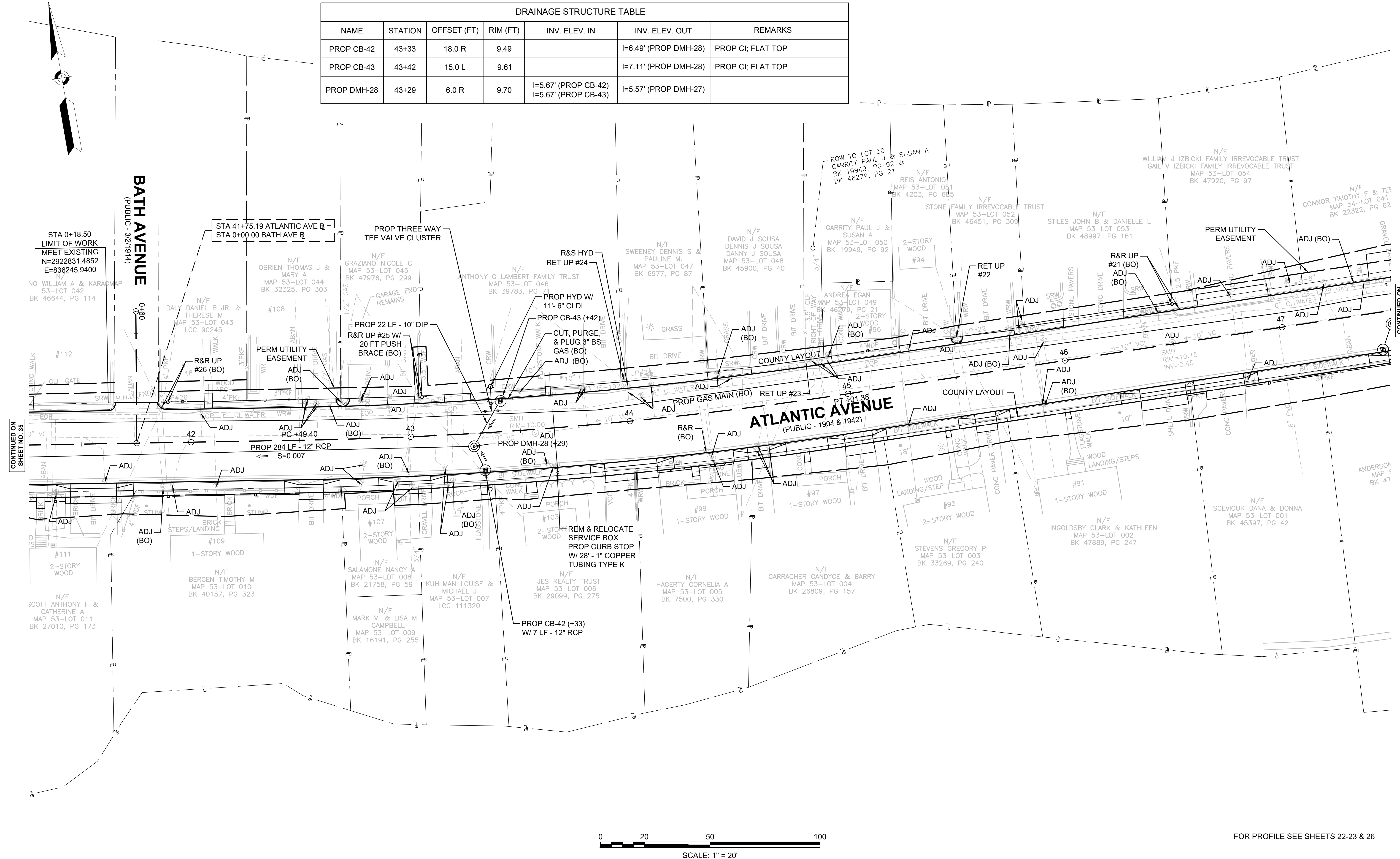
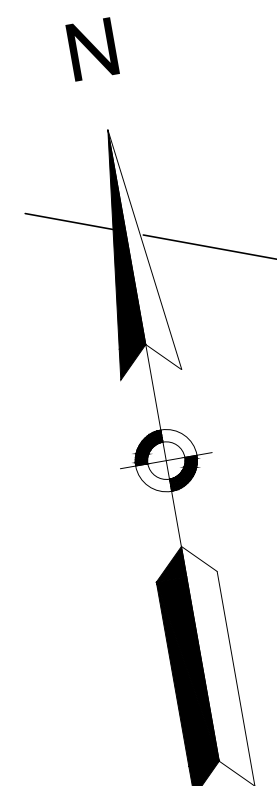
CONTINUED ON SHEET NO. 36

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	43
PROJECT FILE NO.		601607	

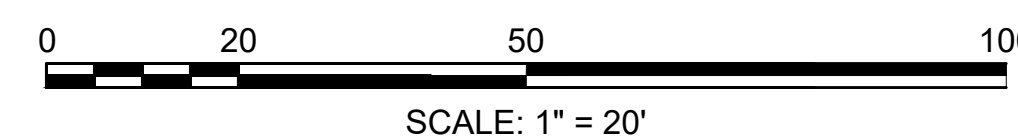
UTILITY PLAN - 9

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-42	43+33	18.0 R	9.49		I=6.49' (PROP DMH-28)	PROP CI; FLAT TOP
PROP CB-43	43+42	15.0 L	9.61		I=7.11' (PROP DMH-28)	PROP CI; FLAT TOP
PROP DMH-28	43+29	6.0 R	9.70	I=5.67' (PROP CB-42) I=5.67' (PROP CB-43)	I=5.57' (PROP DMH-27)	



CONTINUED ON SHEET NO. 35

CONTINUED ON SHEET NO. 37

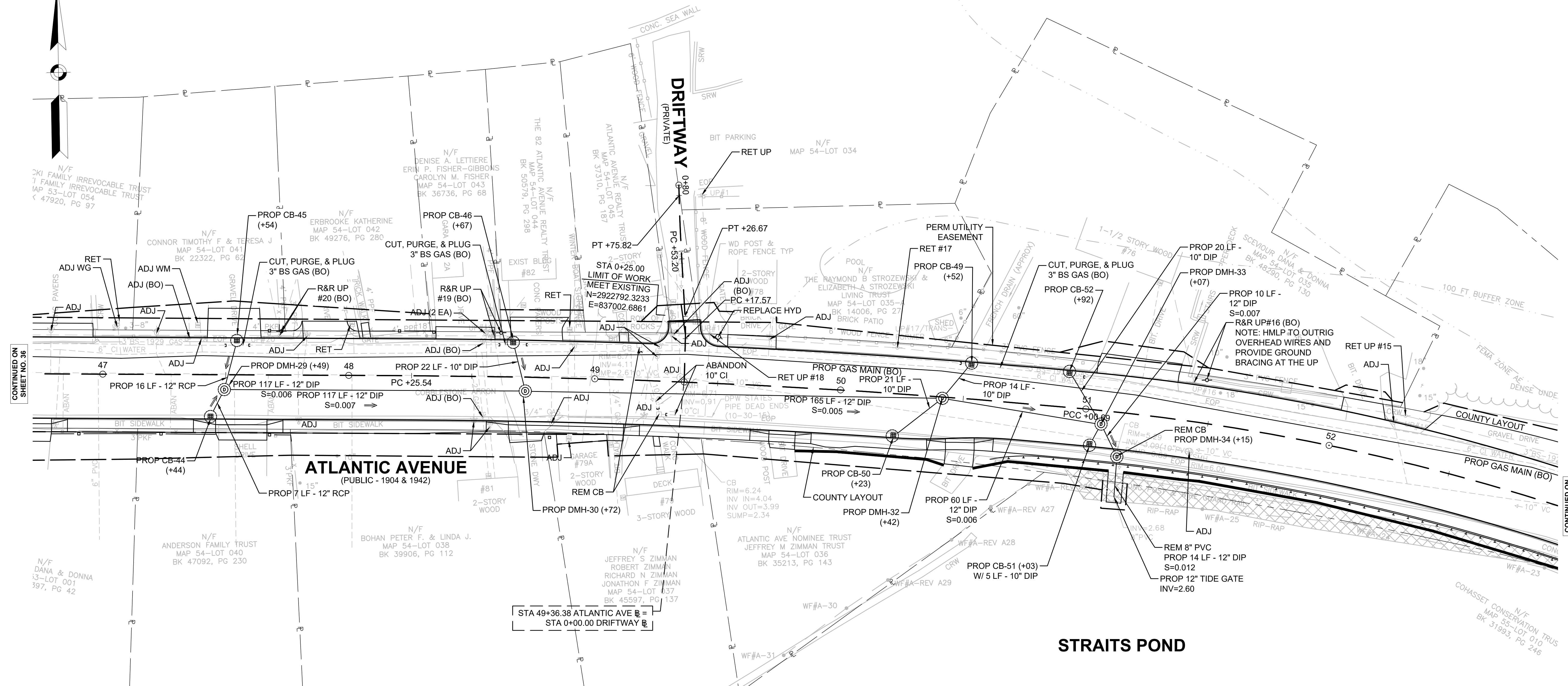


FOR PROFILE SEE SHEETS 22-23 & 26

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

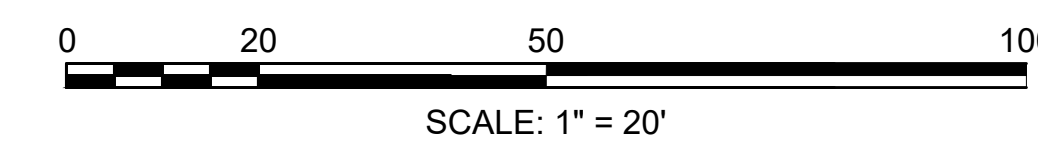
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	43
PROJECT FILE NO. 601607			

UTILITY PLAN - 10



DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-44	47+44	18.0 R	8.56	I=5.56' (PROP DMH-29)		FLAT TOP
PROP CB-45	47+54	15.0 L	8.44	I=5.44' (PROP DMH-29)		FLAT TOP
PROP CB-46	48+67	15.0 L	7.68	I=4.68' (PROP DMH-30)		FLAT TOP
PROP CB-49	50+52	15.0 L	6.53	I=4.03' (PROP DMH-32)		PROP CI; OFFSET FLAT TOP
PROP CB-50	50+23	18.0 R	5.88	I=3.38' (PROP DMH-32)		PROP CI; OFFSET FLAT TOP
PROP CB-51	51+03	15.0 R	5.81	I=3.31' (PROP DMH-33)		PROP CI; OFFSET FLAT TOP
PROP CB-52	50+92	15.0 L	6.68	I=4.18' (PROP DMH-33)		PROP CI; OFFSET FLAT TOP

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP DMH-29	47+49	6.0 R	8.68	I=5.21' (PROP CB-44) I=5.12' (PROP CB-45)	I=5.02' (PROP DMH-30)	
PROP DMH-30	48+72	10.0 R	7.07	I=4.17' (PROP DMH-29) I=4.28' (PROP CB-46)	I=4.12' (PROP DMH-32)	
PROP DMH-32	50+42	0.5 R	6.29	I=3.29' (PROP DMH-30) I=3.53' (PROP CB-49) I=3.29' (PROP CB-50)	I=3.24' (PROP DMH-33)	
PROP DMH-33	51+07	5.5 R	6.18	I=2.94' (PROP DMH-32) I=3.13' (PROP CB-51) I=3.13' (PROP CB-52)	I=2.89' (PROP DMH-34)	
PROP DMH-34	51+15	18.0 R	6.39	I=2.82' (PROP DMH-33)	I=2.77' (OULET)	



FOR PROFILE SEE SHEET 23 & 26

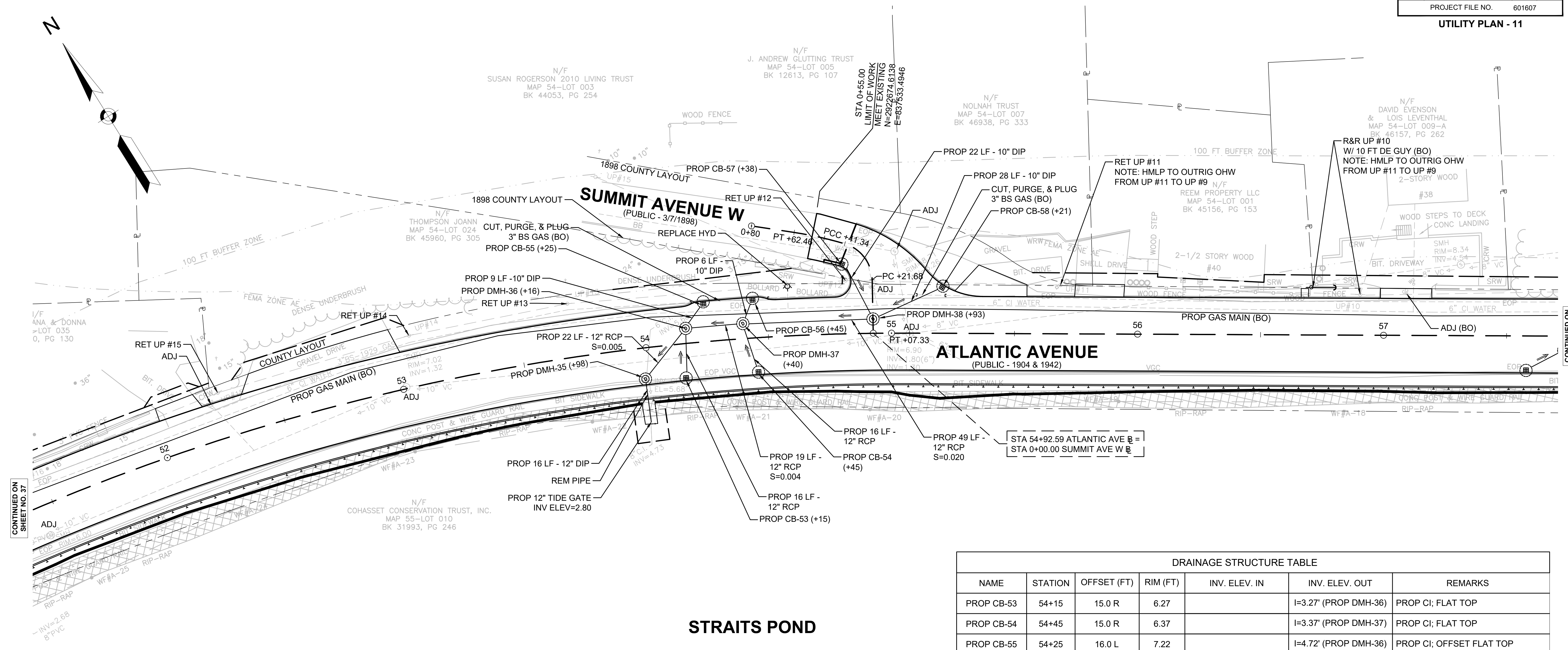
CONTINUED ON SHEET NO. 36

CONTINUED ON SHEET NO. 38

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	38	43
PROJECT FILE NO. 601607			

UTILITY PLAN - 11



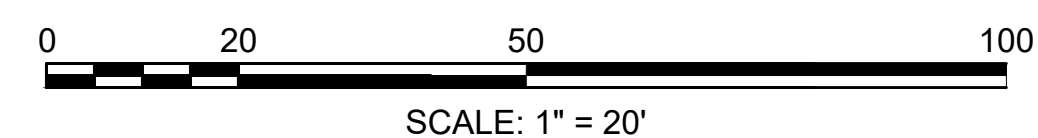
CONTINUED ON SHEET NO. 37

CONTINUED ON SHEET NO. 39

STRAITS POND

STRAITS POND

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-53	54+15	15.0 R	6.27		I=3.27' (PROP DMH-36)	PROP CI; FLAT TOP
PROP CB-54	54+45	15.0 R	6.37		I=3.37' (PROP DMH-37)	PROP CI; FLAT TOP
PROP CB-55	54+25	16.0 L	7.22		I=4.72' (PROP DMH-36)	PROP CI; OFFSET FLAT TOP
PROP CB-56	54+45	16.0 L	7.29		I=4.79' (PROP DMH-37)	PROP CI; OFFSET FLAT TOP
PROP CB-57	0+38	9.0 L	9.61		I=7.11' (PROP DMH-38)	FLAT TOP
PROP CB-58	55+21	19.5 L	7.76		I=5.26' (PROP DMH-38)	OFFSET FLAT TOP
PROP DMH-35	53+98	12.6 R	6.39	I=2.95' (PROP DMH-36)	I=2.95' (OUTLET)	
PROP DMH-36	54+16	6.0 L	7.07	I=3.16' (PROP DMH-37) I=3.16' (PROP CB-53) I=3.56' (PROP CB-55)	I=3.06' (PROP DMH-35)	
PROP DMH-37	54+40	6.0 L	7.14	I=3.39' (PROP DMH-38) I=3.31' (PROP CB-54) I=3.64' (PROP CB-56)	I=3.24' (PROP DMH-36)	
PROP DMH-38	54+93	6.0 L	7.37	I=4.37' (PROP CB-57) I=4.37' (PROP CB-58)	I=4.27' (PROP DMH-37)	



FOR PROFILE SEE SHEETS 23-24 & 27

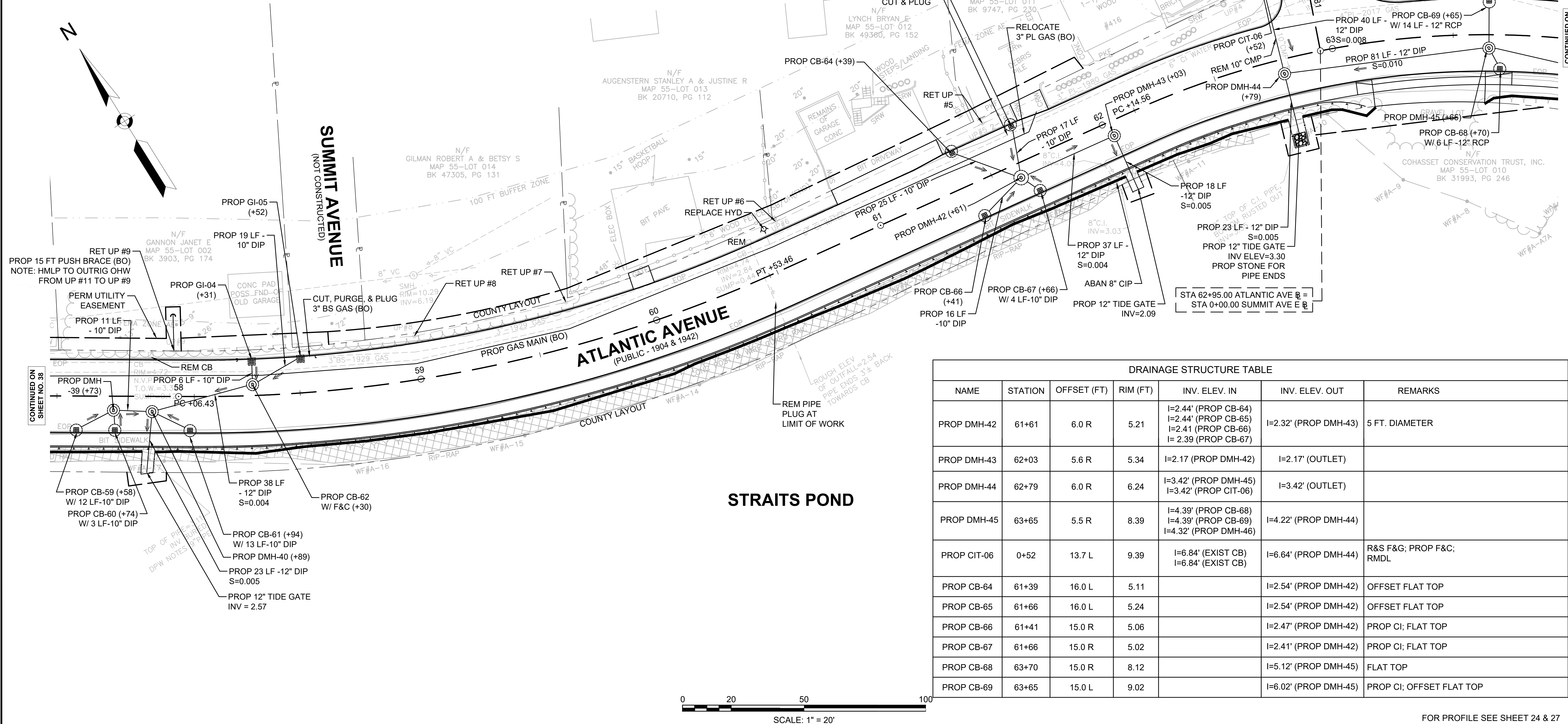
**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	39	43

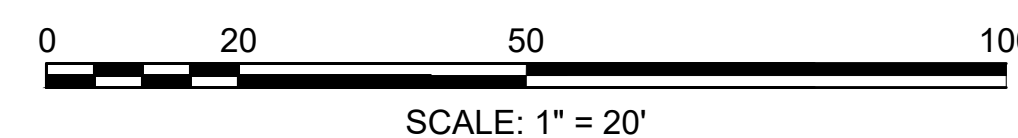
PROJECT FILE NO. 601607

UTILITY PLAN - 12

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-59	57+58	15.0 R	6.07		I=3.57' (PROP DMH-39)	PROP CI; FLAT TOP
PROP CB-60	57+74	15.0 R	6.05		I=3.55' (PROP DMH-39)	PROP CI; FLAT TOP
PROP CB-61	57+94	15.0 R	6.14		I=3.14' (PROP DMH-40)	PROP CI; FLAT TOP
PROP CB-62	58+30	4.5 R	5.80	I=2.98' (PROP GI-04) I=2.98' (PROP GI-05)	I=2.93' (PROP DMH-40)	PROP F&C; FLAT TOP
PROP GI-04	58+31	15.0 L	5.37		I=3.04' (PROP CB-62)	PROP CI
PROP GI-05	58+52	15.0 L	5.49		I=3.08' (PROP CB-62)	PROP CI
PROP DMH-39	57+73	5.5 R	6.06	I=3.45' (PROP CB-59) I=3.50' (PROP CB-60)	I=3.40' (PROP DMH-40)	
PROP DMH-40	57+89	6.0 R	6.09	I=3.00' (PROP CB-61) I=3.00' (PROP DMH-39) I=2.76' (PROP CB-62)	I=2.68' (OUTLET)	



DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP DMH-42	61+61	6.0 R	5.21	I=2.44' (PROP CB-64) I=2.44' (PROP CB-65) I=2.41' (PROP CB-66) I=2.39' (PROP CB-67)	I=2.32' (PROP DMH-43)	5 FT. DIAMETER
PROP DMH-43	62+03	5.6 R	5.34	I=2.17' (PROP DMH-42)	I=2.17' (OUTLET)	
PROP DMH-44	62+79	6.0 R	6.24	I=3.42' (PROP DMH-45) I=3.42' (PROP CIT-06)	I=3.42' (OUTLET)	
PROP DMH-45	63+65	5.5 R	8.39	I=4.39' (PROP CB-68) I=4.39' (PROP CB-69) I=4.32' (PROP DMH-46)	I=4.22' (PROP DMH-44)	
PROP CIT-06	0+52	13.7 L	9.39	I=6.84' (EXIST CB) I=6.84' (EXIST CB)	I=6.64' (PROP DMH-44)	R&S F&G; PROP F&C; RMDL
PROP CB-64	61+39	16.0 L	5.11		I=2.54' (PROP DMH-42)	OFFSET FLAT TOP
PROP CB-65	61+66	16.0 L	5.24		I=2.54' (PROP DMH-42)	OFFSET FLAT TOP
PROP CB-66	61+41	15.0 R	5.06		I=2.47' (PROP DMH-42)	PROP CI; FLAT TOP
PROP CB-67	61+66	15.0 R	5.02		I=2.41' (PROP DMH-42)	PROP CI; FLAT TOP
PROP CB-68	63+70	15.0 R	8.12		I=5.12' (PROP DMH-45)	FLAT TOP
PROP CB-69	63+65	15.0 L	9.02		I=6.02' (PROP DMH-45)	PROP CI; OFFSET FLAT TOP



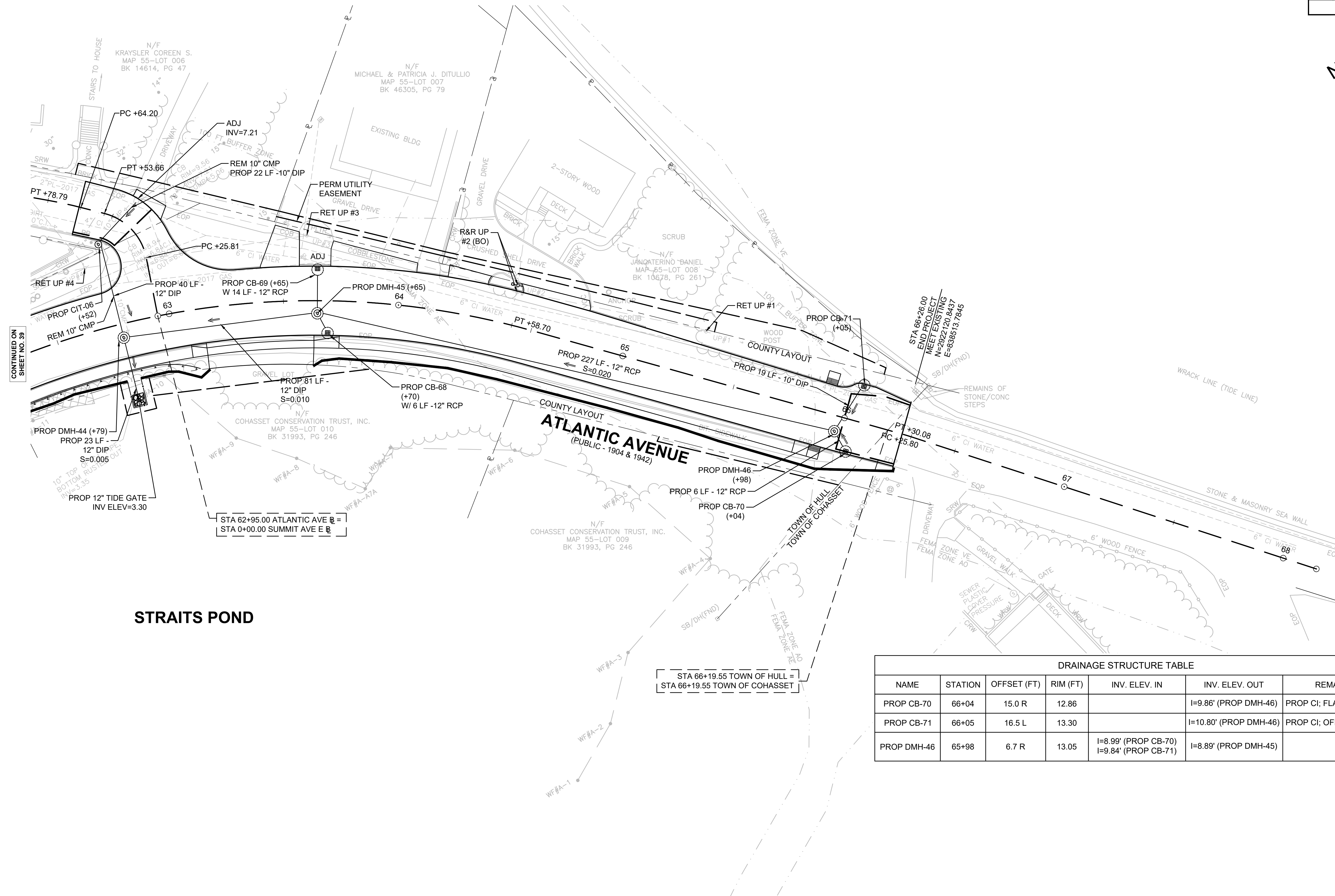
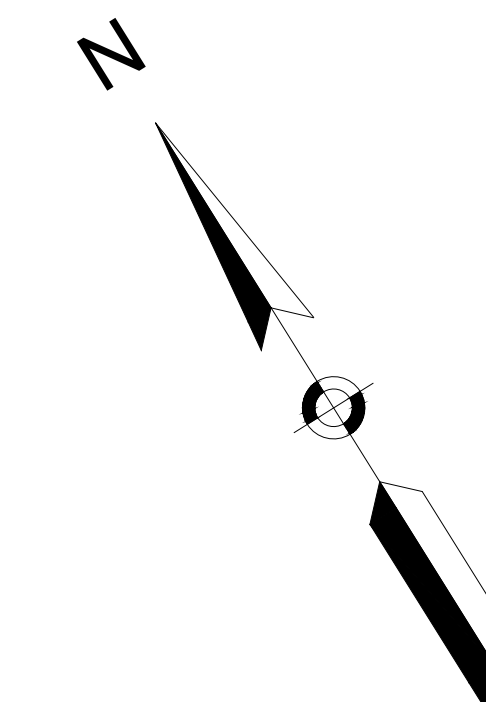
FOR PROFILE SEE SHEET 24 & 27

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	40	43

PROJECT FILE NO. 601607

UTILITY PLAN - 13



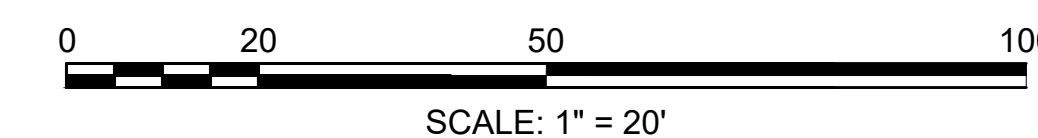
CONTINUED ON
SHEET NO. 39

STRAITS POND

STA 62+95.00 ATLANTIC AVE E =
STA 0+00.00 SUMMIT AVE E

STA 66+19.55 TOWN OF HULL =
STA 66+19.55 TOWN OF COHASSET

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-70	66+04	15.0 R	12.86		I=9.86' (PROP DMH-46)	PROP CI; FLAT TOP
PROP CB-71	66+05	16.5 L	13.30		I=10.80' (PROP DMH-46)	PROP CI; OFFSET FLAT TOP
PROP DMH-46	65+98	6.7 R	13.05	I=8.99' (PROP CB-70) I=9.84' (PROP CB-71)	I=8.89' (PROP DMH-45)	

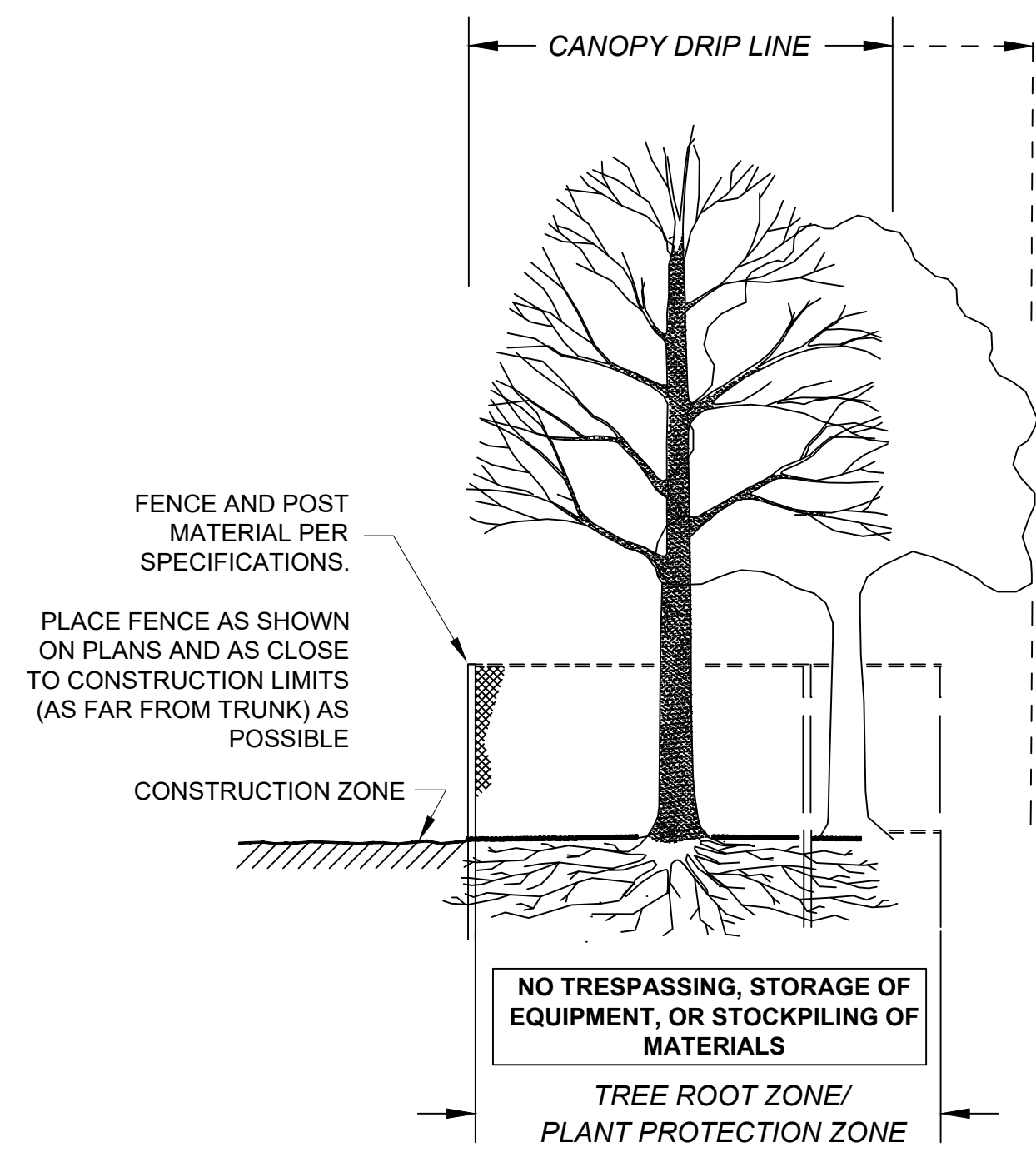


FOR PROFILE SEE SHEET 24 & 27

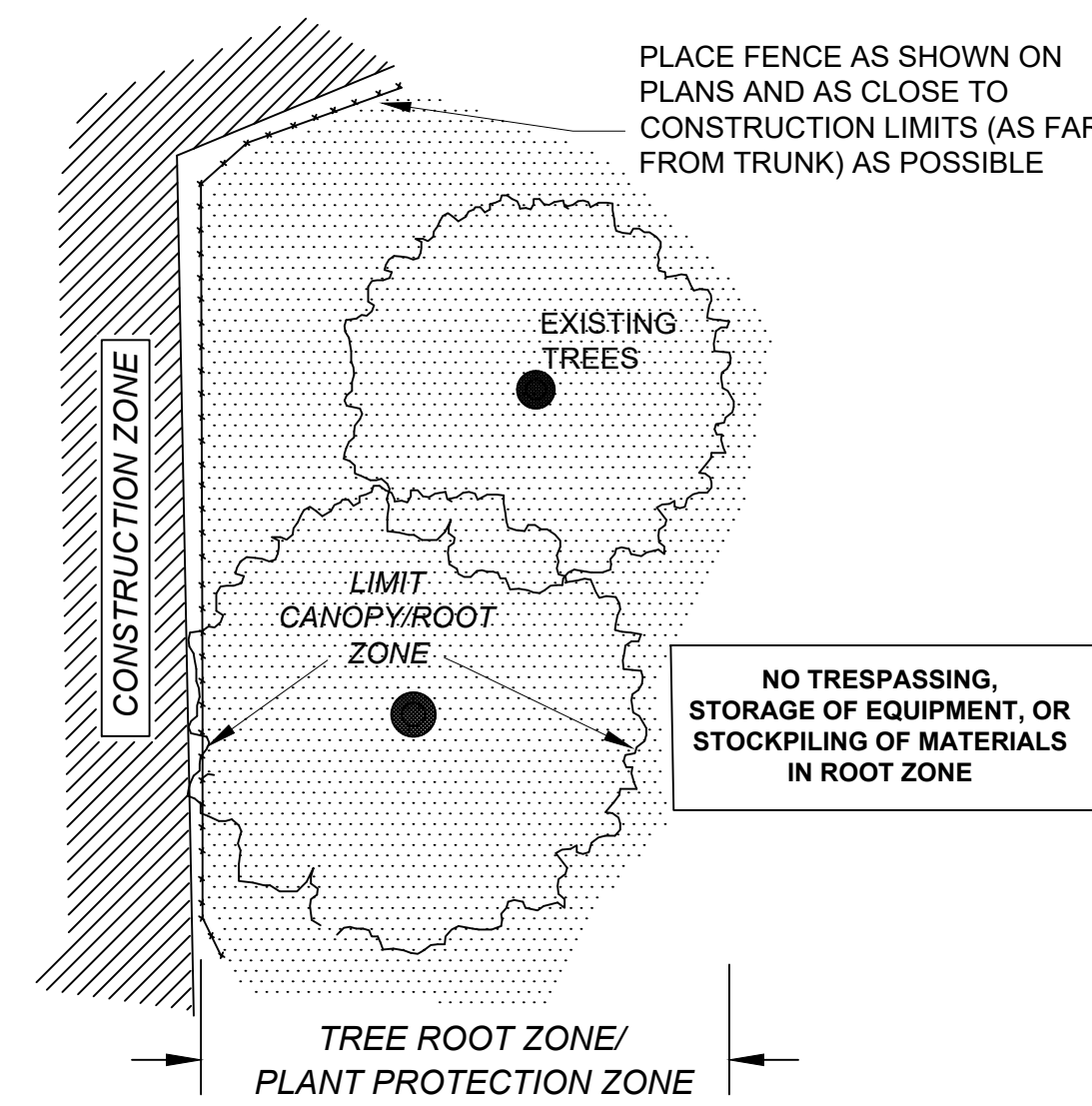
**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	41	43
PROJECT FILE NO. 601607			

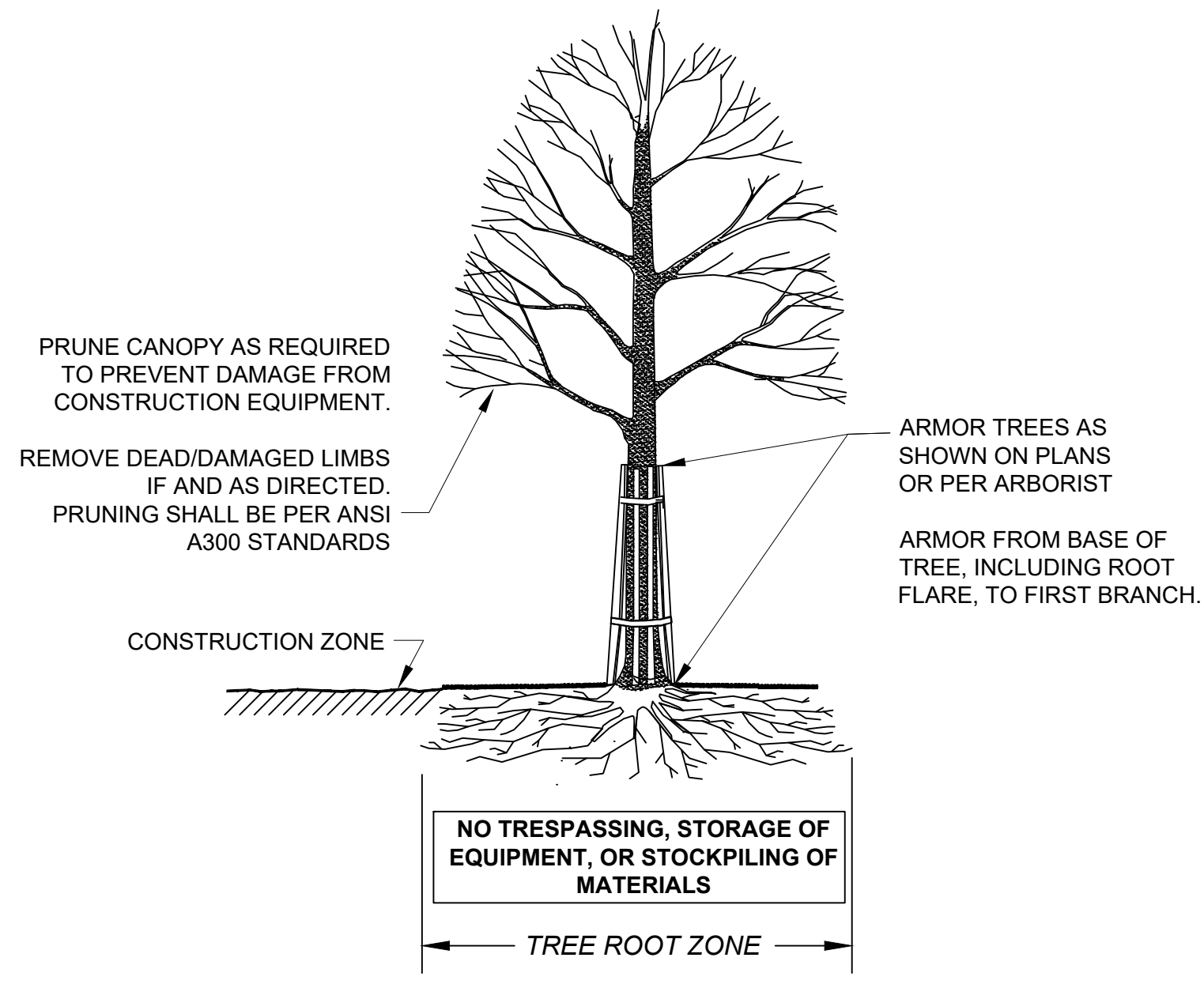
CONSTRUCTION DETAILS - 1



SECTION - FENCE PROTECTION OF ROOT ZONE



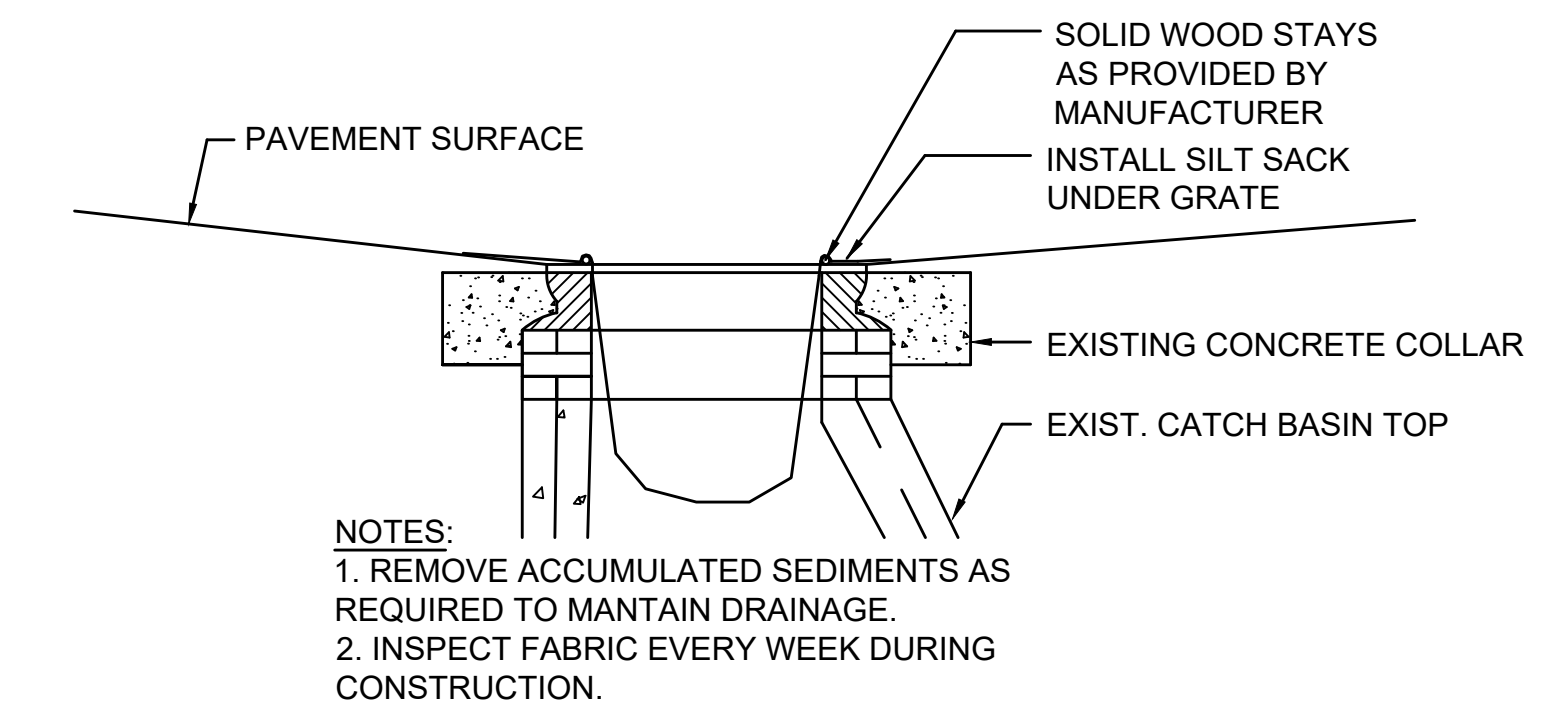
PLAN VIEW - FENCE PROTECTION OF ROOT ZONE



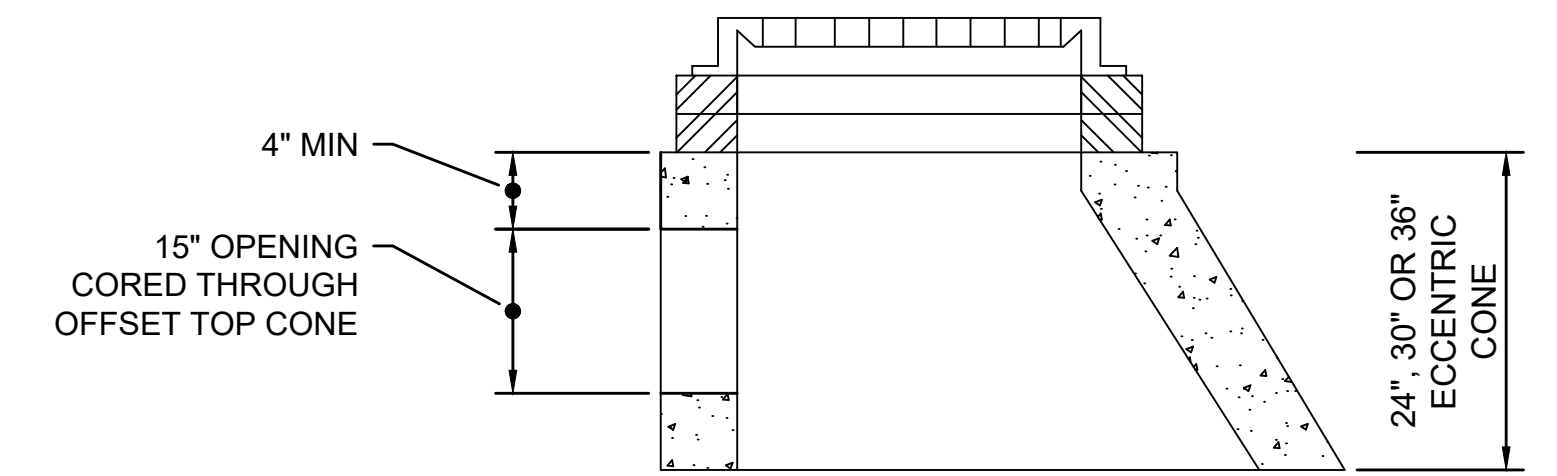
SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION - EXISTING TREE(S)

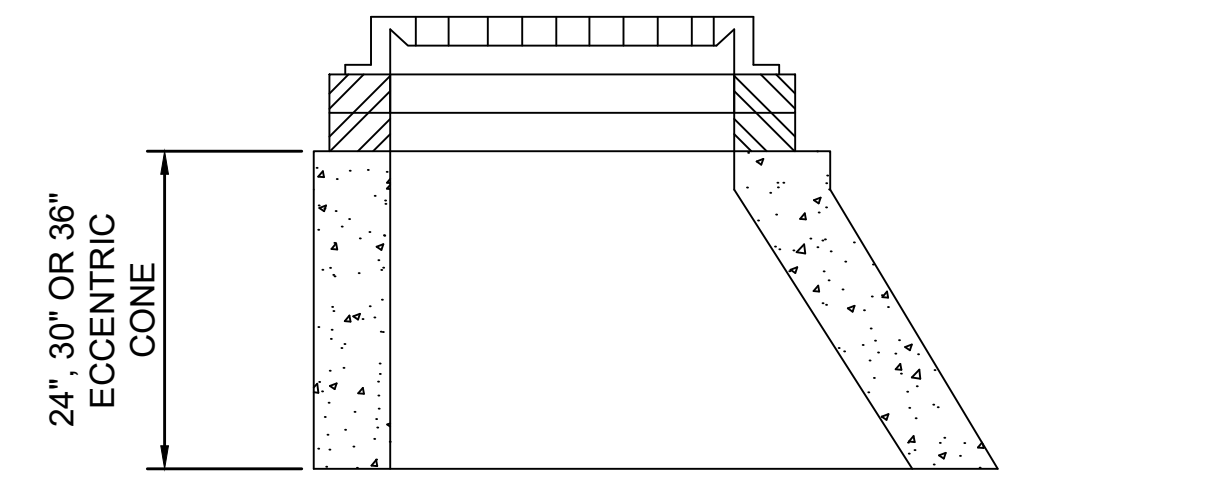
NOT TO SCALE



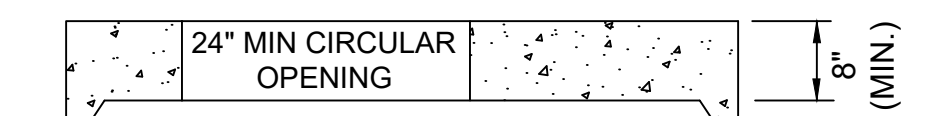
SILT SACK
NOT TO SCALE



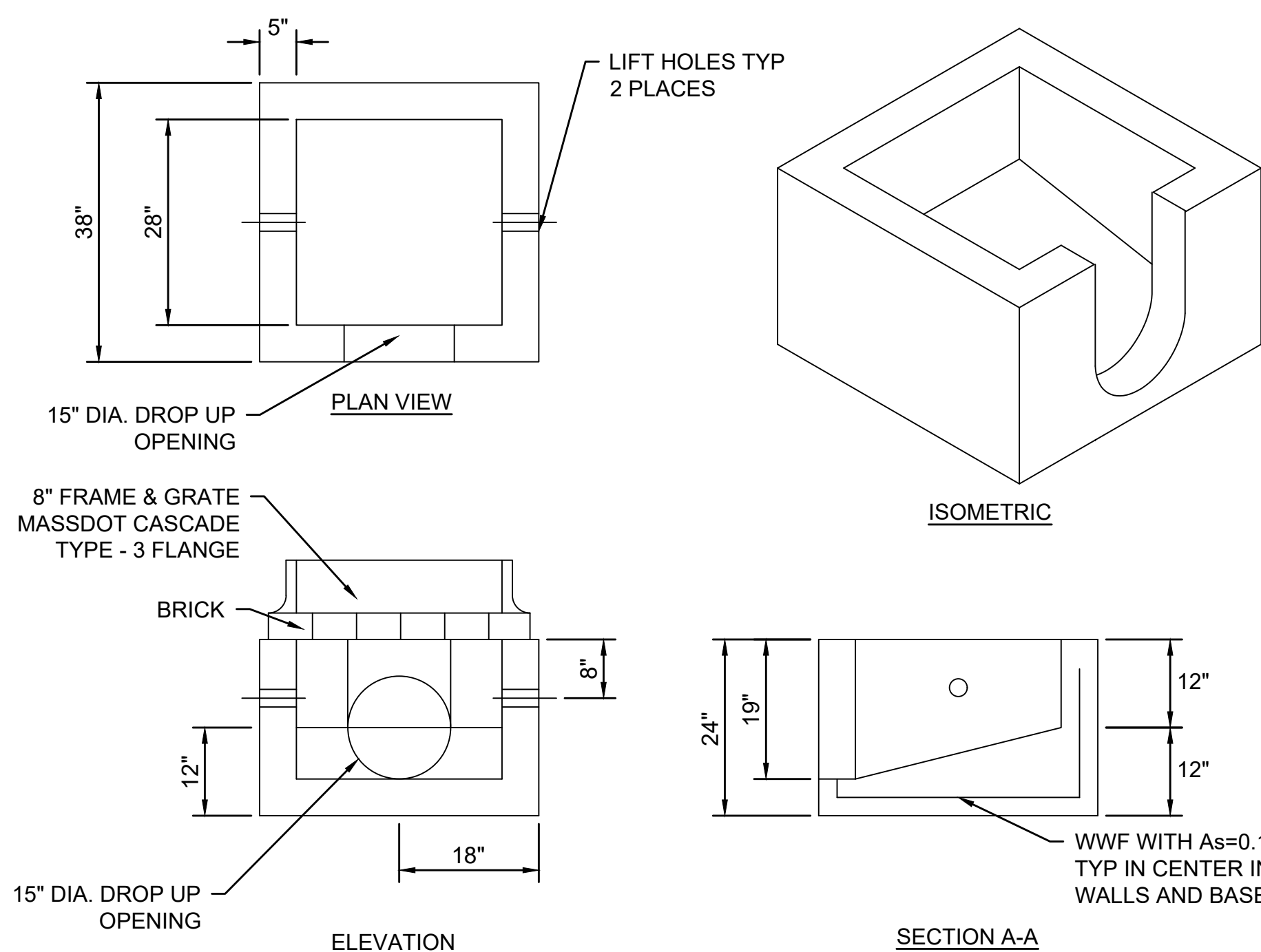
**ALTERNATIVE CORED-THROUGH
OFFSET TOP CONE SECTION**



ALTERNATIVE OFFSET TOP CONE SECTION



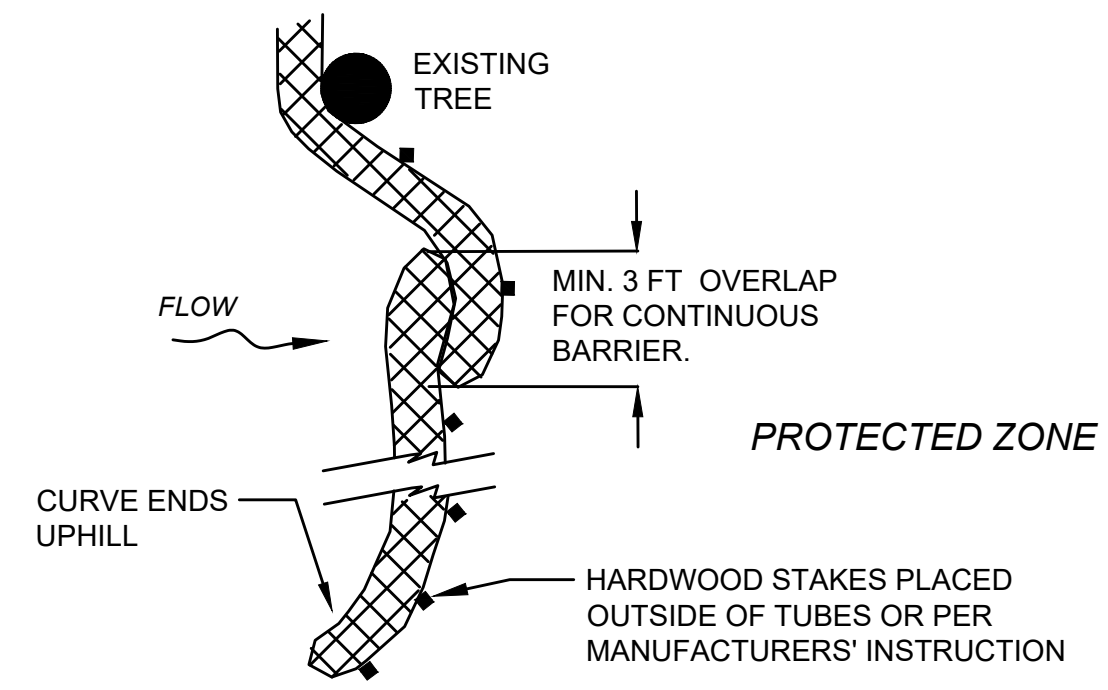
ALTERNATIVE OFFSET FLAT TOP SLAB



- NOTES:
1. ONLY TO BE USED AT THE DIRECTION OF THE ENGINEER
 2. DESIGNED FOR AASHTO HS25-44 LOADING
 3. CONCRETE STRENGTH $f_c = 4000$ PSI
 4. REINFORCING STEEL: ASTM A185 (wwf) $f_y = 60,000$ PSI
 5. CURB INLETS ARE REQUIRED WHEN GUTTER INLETS ARE INSTALLED AGAINST CURBING

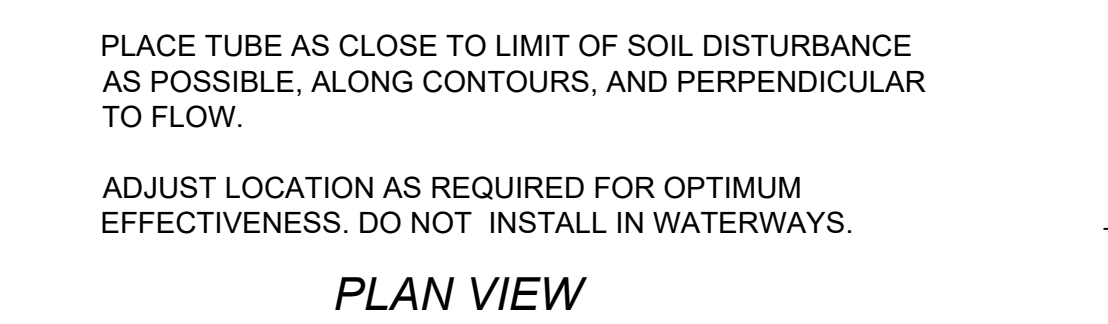
PRE-CAST GUTTER INLET - SPECIAL

NOT TO SCALE



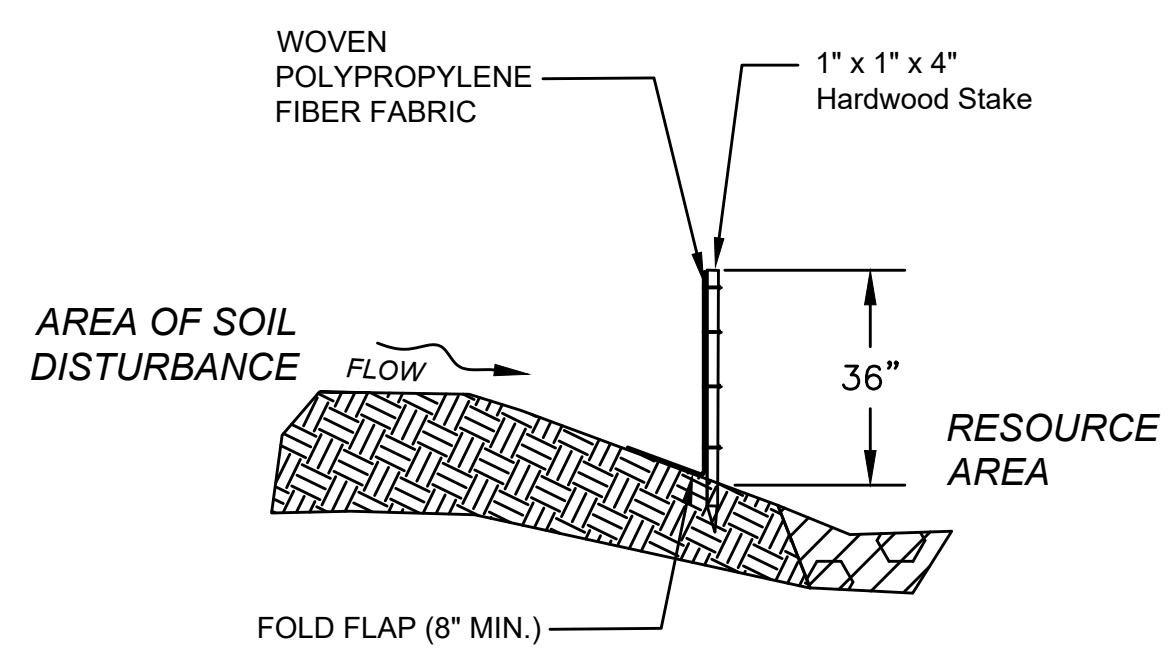
**SEDIMENT CONTROL BARRIER
ON TOP OF WALL (STA 25+60 - STA 26+70 LT)**

NOT TO SCALE



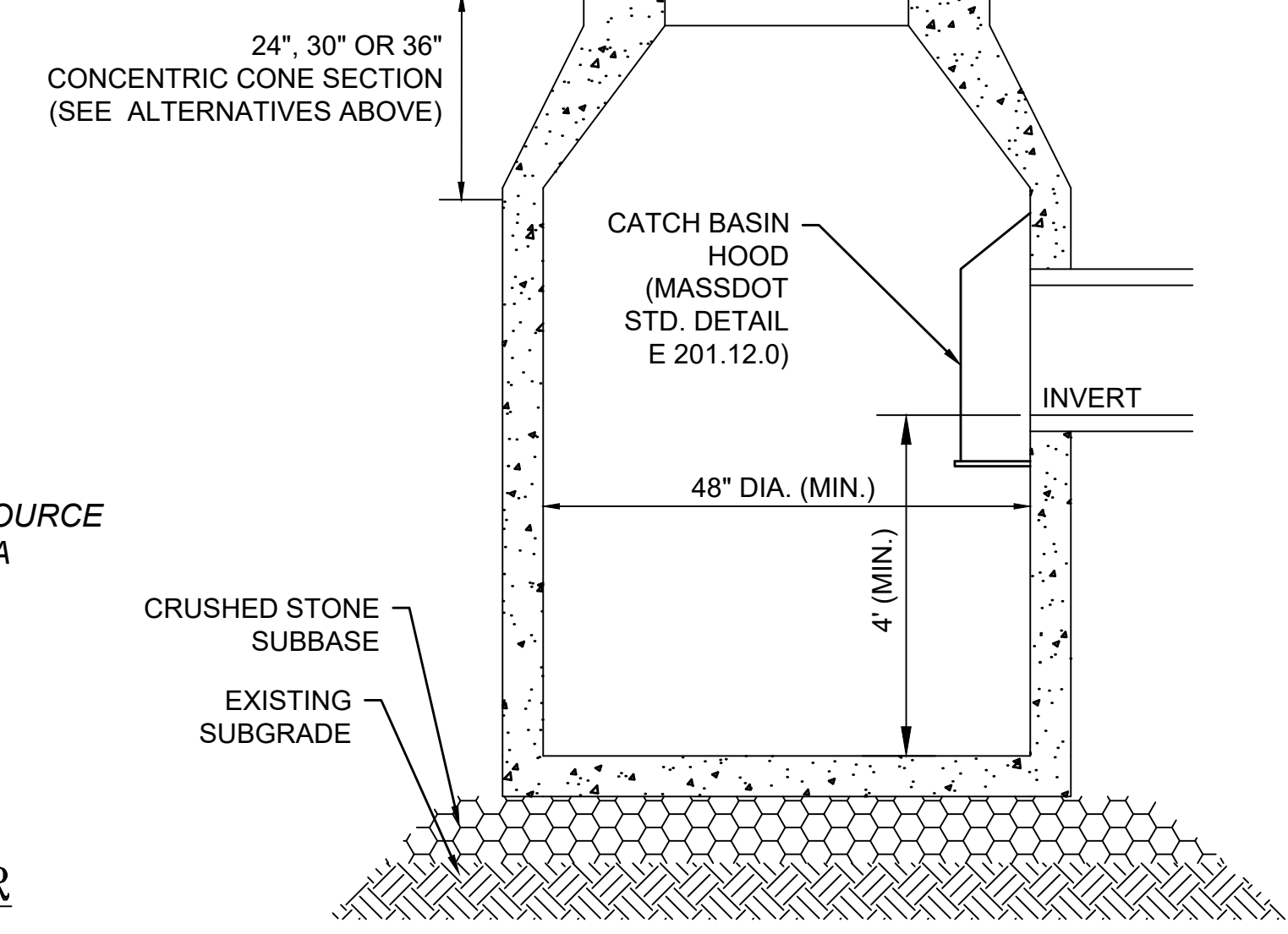
**SEDIMENT CONTROL BARRIER
COMPOST FILTER TUBE**

NOT TO SCALE



**SEDIMENT CONTROL BARRIER
SILT FENCE**

NOT TO SCALE



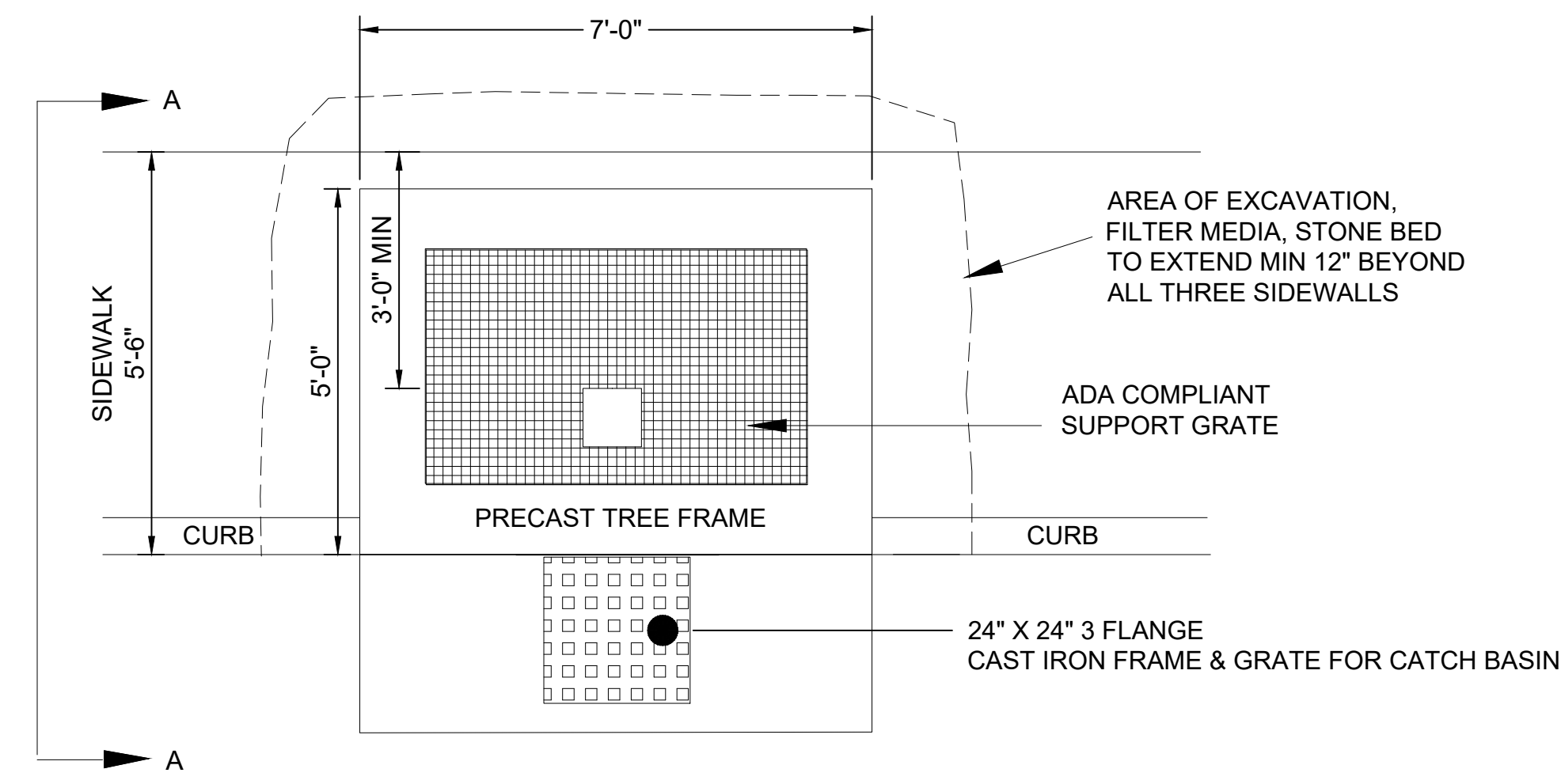
CATCH BASIN DETAIL

NOT TO SCALE

HULL
ATLANTIC AVENUE RECONSTRUCTION

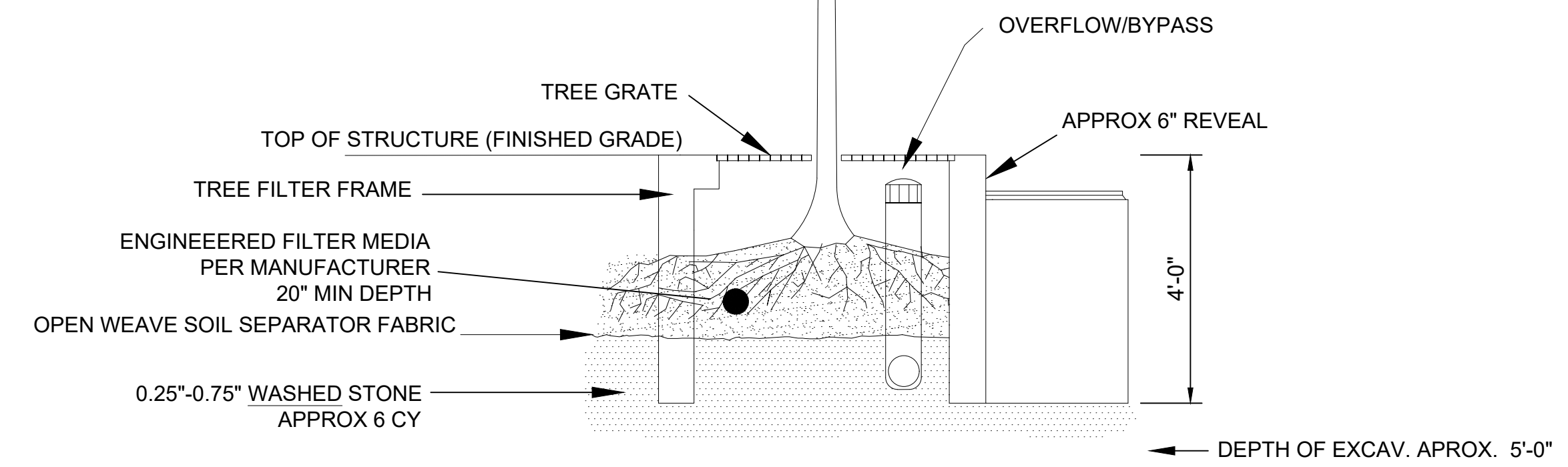
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	42	43
PROJECT FILE NO.		601607	

CONSTRUCTION DETAILS - 2

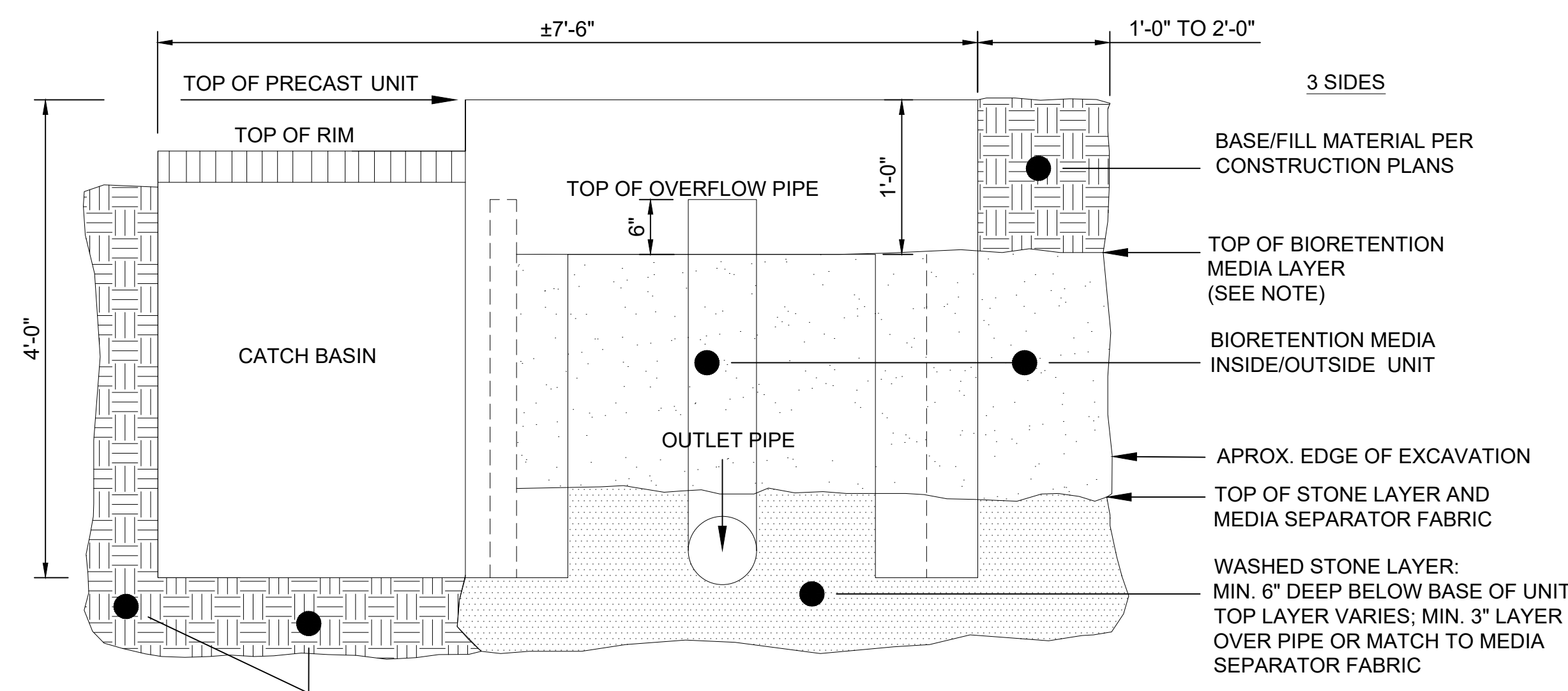


PLAN VIEW
NOT TO SCALE

DECIDUOUS TREE
CONTAINER ONLY NOT BALL &
BURLAP



SECTION A-A
NOT TO SCALE



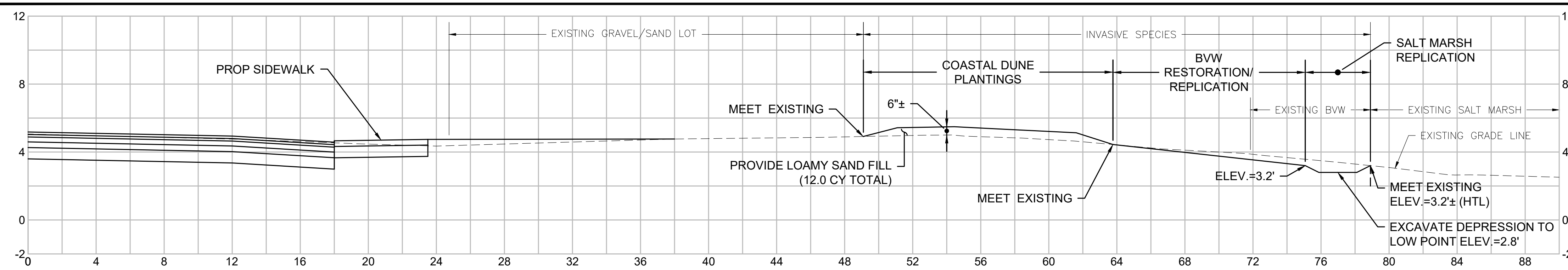
NOTE: LAYER WITHIN UNIT TO BE "WALKED IN" COMPACTED. LAYER EXTERIOR OF UNIT SHOULD BE COMPACTED VIA VIBRATORY EQUIPMENT OR OTHER MEANS

BIORETENTION AND MEDIA BACKFILL PLAN
NOT TO SCALE

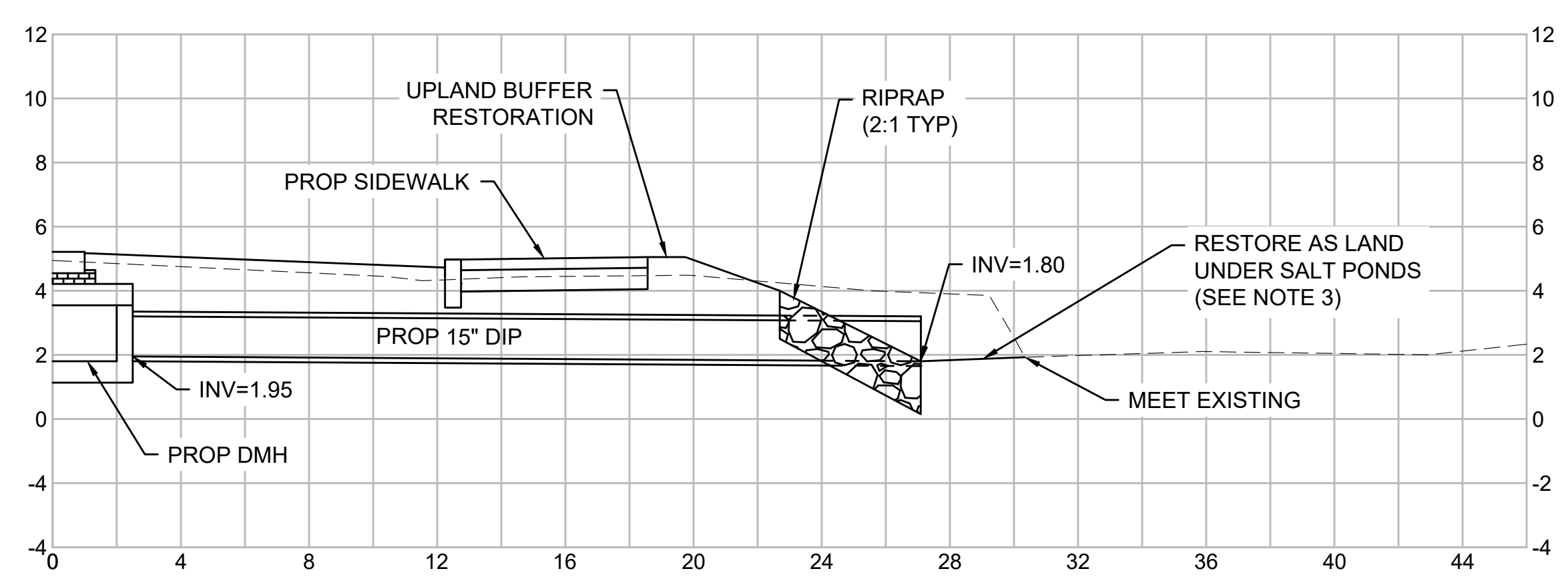
NOTES:

1. DIMENSIONS SHOWN ARE APPROXIMATE. ACTUAL DIMENSIONS SHALL BE PER THE MANUFACTURER AND APPROVED BY THE ENGINEER.
2. AN OPEN BOTTOM TREE FILTER STRUCTURE IS SHOWN. THE STRUCTURE MAY BE ENCLOSED COMPLETELY.
2. MINOR MODIFICATIONS TO STRUCTURE LOCATIONS WILL BE ALLOWED, AS APPROVED BY THE ENGINEER, TO ALLOW FOR SUBDRAIN/ OUTLET CONNECTION TO THE PROPOSED STORMWATER DRAINAGE SYSTEM.
3. SEE SPECIAL PROVISIONS FOR APPROVED MANUFACTURERS.

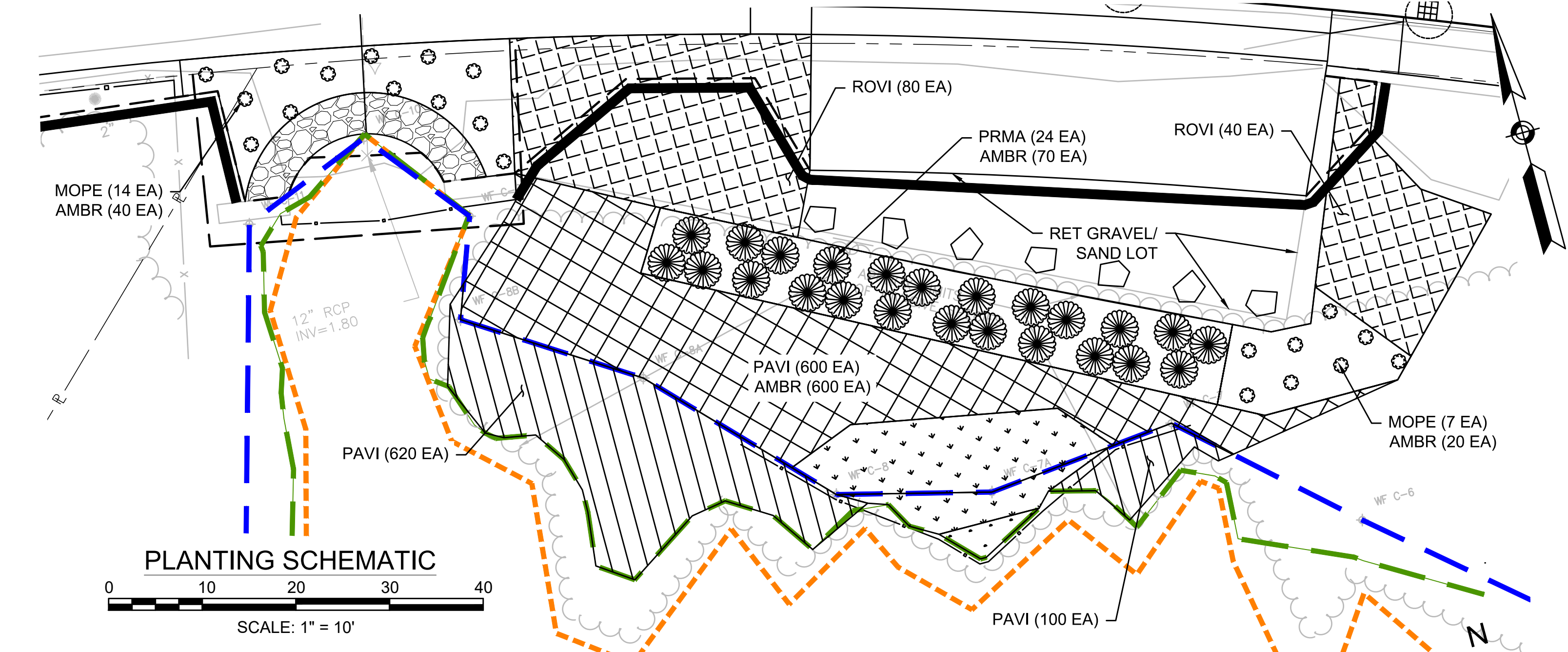
COMBINED CATCH BASIN/ TREE BOX FILTER DETAILS
NOT TO SCALE



SECTION A-A
 SCALE 1" = 4'



SECTION B-B
 SCALE 1" = 4'



PLANTING SCHEMATIC
 SCALE: 1" = 10'

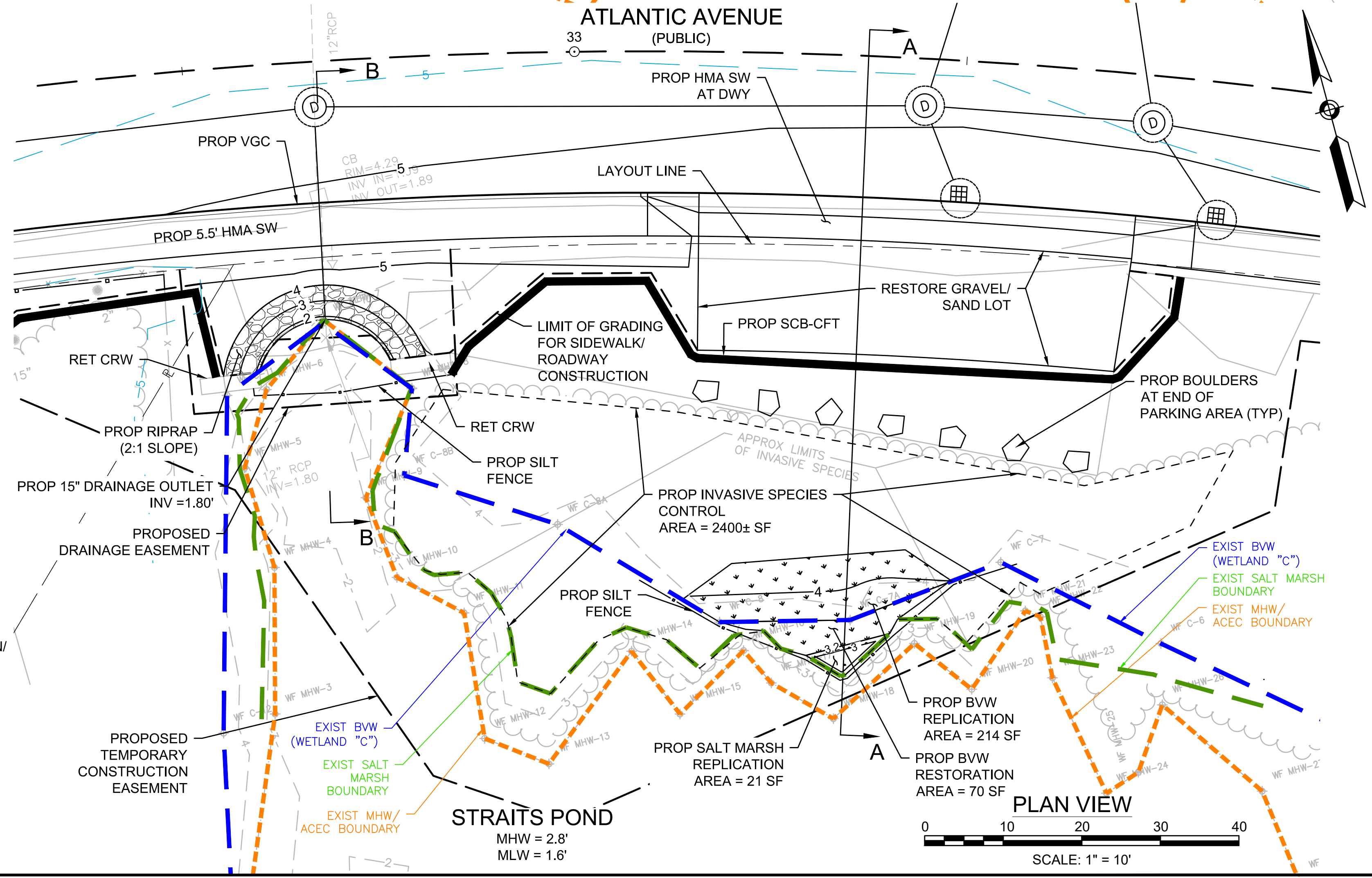
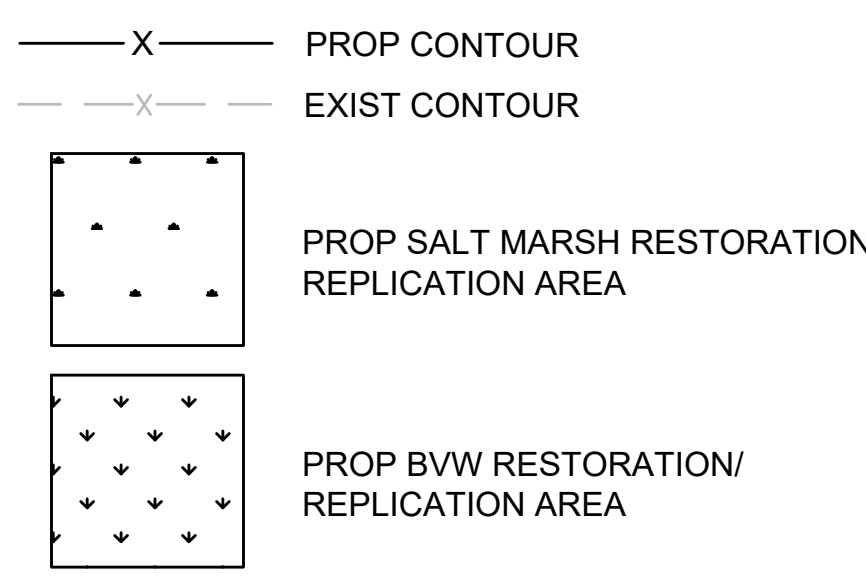
PLANT LIST TABLE							
SYMBOL	QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE	SPACING	TARGET ELEV.	PLANTING AREA
SALT MARSH REPLICATION PLANTS							
SPPA	7 EA	SALTMEADOW CORDGRASS	<i>Spartina patens</i>	2" PEAT POT	12" O.C.	2.8' - 3.2'	21 SF
DISP	7 EA	SEASHORE SALTGRASS	<i>Distichlis spicata</i>	2" PEAT POT	12" O.C.	2.8' - 3.2'	21 SF
JUGE	7 EA	SALTMEADOW RUSH	<i>Juncus gerardii</i>	2" PEAT POT	12" O.C.	2.8' - 3.2'	21 SF
BORDERING VEGETATED WETLAND RESTORATION/ REPLICATION PLANTS							
PAVI	15 EA	SWITCHGRASS	<i>Panicum virgatum</i>	#1 C.G.	3' O.C.	3.2' - 3.6'	284 SF
SOSE	15 EA	SEASIDE GOLDENROD	<i>Solidago sempervirens</i>	#1 C.G.	3' O.C.	3.2' - 3.6'	284 SF
COASTAL DUNE PLANTS							
MOPE	21 EA	NORTHERN BAYBERRY	<i>Morella pensylvanica</i>	12-18"; #1 C.G.	5' O.C.	3.6'+	440 SF
ROVI	120 EA	VIRGINIA ROSE	<i>Rosa virginia</i>	12-18"; #1 C.G.	3' O.C.	3.6'+	860 SF
PRMA*	24 EA	BEACH PLUM	<i>Prunus maritima</i>	3-6"; #3 C.G.	5' O.C.	3.6'+	490 SF
PAVI	1320 EA	SWITCHGRASS	<i>Panicum virgatum</i>	#1 C.G.	12" O.C.	2.8'+	1520 SF
AMBR	730 EA	AMERICAN BEACH GRASS	<i>Ammophila breviligulata</i>	#1 C.G.	1' - 3' O.C.**	2.8'+	1880 SF
Seed	5.5 LBS	COASTAL SALT TOLERANT GRASS MIX	VARIOUS SPECIES	1 lb / 1,250 SF	-	3.6'+	> 5000 SF

* BEACH PLUM (PRMA) SHALL NOT BE SURROUNDED BY SWITCHGRASS
 ** AMERICAN BEACH GRASS (AMBR) SHALL BE PLANTED AT 1' O.C. WHEN COMBINED WITH SWITCHGRASS (PAVI) AND AT 3' O.C. WHEN COMBINED WITH NORTHERN BAYBERRY (MOPE), VIRGINIA ROSE (ROVI), OR BEACH PLUM (PRMA)

GENERAL NOTES:

- CONTRACTOR SHALL PROVIDE INVASIVE PLANT CONTROL WITHIN AREA OF RESTORATION/ REPLICATION.
- SEE PLANTING SCHEMATIC FOR LOCATION OF UPLAND & BVW INDIVIDUAL PLANTS. LOCATION OF SALT MARSH INDIVIDUAL PLANTS SHALL BE DETERMINED IN THE FIELD BY THE WETLAND SPECIALIST AND MASSDOT. ALL POT/ CONTAINER PLANTS SHALL BE PLANTED IN STAGGERED ROWS/ GRID PATTERN.
- LAND UNDER SALT POND RESTORATION SHALL CONSIST OF TYPE A SAND BORROW (M1.04.0) UP TO THE PROPOSED FINISHED GRADE. SALT MARSH, BVW, AND COASTAL DUNE SHALL HAVE 12 INCHES COARSE SAND/ BORROW MATERIAL INSTALLED BELOW THE PROPOSED FINISHED GRADE.
- SILT FENCE SHALL ONLY BE IN PLACE DURING EXCAVATION AND SHALL BE REMOVED AFTER PLANTING
- CRITICAL ELEVATIONS ARE AS FOLLOWS:
 - BVW BOUNDARY = 3.6±
 - SALT MARSH BOUNDARY/ HIGH TIDE LINE (TYP) = 3.2'
 - ACEC BOUNDARY/ MEAN HIGH WATER (TYP) = 2.8'
 - MID-TIDE = 2.2'
 - MEAN LOW WATER = 1.6'

LEGEND



PLAN VIEW
 SCALE: 1" = 10'