

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN AND PROFILE OF
INTERSECTION IMPROVEMENTS AT
MONTGOMERY STREET, GRANBY ROAD, AND MCKINSTRY AVENUE
IN THE CITY OF
CHICOPEE
HAMPDEN COUNTY

FEDERAL AID PROJECT NO. STP/HPP-0032(051)X

CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	1	135
PROJECT FILE NO.		609061	

TITLE SHEET & INDEX

THESE PLANS ARE SUPPLEMENTED BY THE LATEST EDITIONS OF THE FOLLOWING PUBLICATIONS, AS IDENTIFIED IN THE CONTRACT SPECIAL PROVISIONS: THE MASSDOT CONSTRUCTION STANDARD DETAILS, THE MASSDOT STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE MASSDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, THE MASSDOT OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, THE MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, AND THE ANSI AMERICAN STANDARD FOR NURSERY STOCK.

DESIGN DESIGNATION (MONTGOMERY STREET)

DESIGN SPEED	35 MPH
ADT (2017)	18,202
ADT (2030)	19,421
K	8.0%
D	50.4% SB
T (PEAK HOUR)	0.8%
T (AVERAGE DAY)	2.7%
DHV	1,554
DDHV	783
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL

DESIGN DESIGNATION (GRANBY ROAD)

DESIGN SPEED	35 MPH
ADT (2017)	17,470
ADT (2030)	18,640
K	8.0%
D	57.7% NB
T (PEAK HOUR)	1.9%
T (AVERAGE DAY)	6.5%
DHV	1,491
DDHV	860
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL

DESIGN DESIGNATION (MCKINSTRY AVENUE)

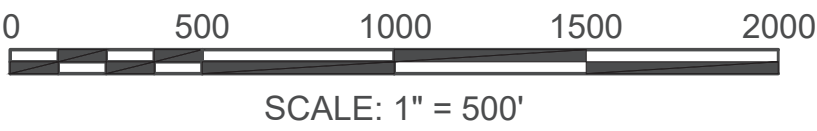
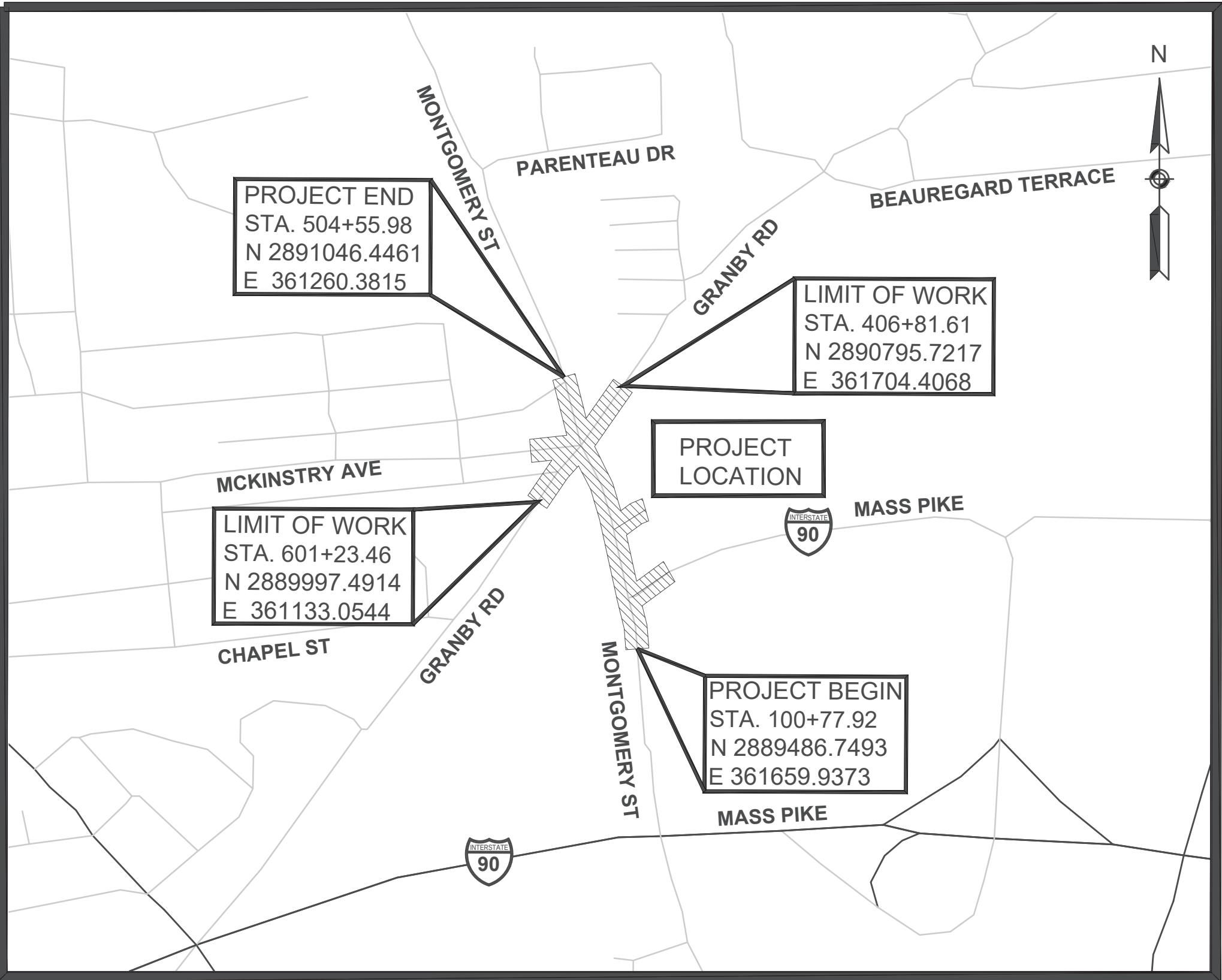
DESIGN SPEED	30 MPH
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DESIGN DESIGNATION (ROUNDBABOUTS)

DESIGN SPEED	25 MPH
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LENGTH OF PROJECT = 2,709.09 FEET = 0.513 MILES

Kacoyannakis,
Van

120 Front Street
Suite 500
Worcester, MA 01604
508.752.1001

DATE	DESCRIPTION	REV #
APPROVED		
Carrie Lavallee, P.E.	Digitally signed by Carrie Lavallee, P.E. Date: 2026.04.30 13:16:31 -04'00'	04/30/2026
CHIEF ENGINEER	DATE	

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		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 (ON-THE-GROUND SURVEY DATA)
		CONTOURS (PHOTOGRAMMETRIC DATA)
		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)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		EROSION CONTROL BARRIER
		TREE LINE
		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
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		QUADRUPOLE WIRE LOOP DETECTOR
		BICYCLE WIRE LOOP DETECTOR, TYPE B-2
		VIDEO DETECTION CAMERA
		PEDESTRIAN PUSH BUTTON, SIGN AND SADDLE
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD, WITH/WITHOUT BACKPLATE
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED, WITH/WITHOUT BACKPLATE
		FLASHING BEACON, WITH/WITHOUT BACKPLATE
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
		SIGNAL POST AND BASE
		MAST ARM, SHAFT AND BASE
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		OVERHEAD SIGN
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE - SD2.022 (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT
		RECTANGULAR RAPID FLASHING BEACON (RRFB) ASSEMBLY

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE, VARIOUS COMBINATIONS
		ROUNDBOUT "FISH HOOK" PAVEMENT ARROW - WHITE, VARIOUS COMBINATIONS
		BICYCLE LANE WORD, SYMBOL AND/OR ARROW - WHITE
		STOP LINE -WHITE, 12" WIDTH UNLESS OTHERWISE NOTED
		CROSSWALK-WHITE, 12" WIDTH UNLESS OTHERWISE NOTED
		SOLID WHITE LINE, 6" WIDTH
		SOLID YELLOW LINE, 6" WIDTH
		BROKEN WHITE LINE, 10' LINE W/30' SPACING, 6" WIDTH
		BROKEN YELLOW LINE, 10' LINE W/30' SPACING, 6" WIDTH
		DOTTED WHITE LINE, 2' LINE W/6' SPACING, 6" WIDTH
		DOTTED WHITE ROADWAY ENTRY LINE, 2' LINE W/2' SPACING, 12" WIDTH
		DOTTED YELLOW LINE, 2' LINE W/6' SPACING, 6" WIDTH
		DOUBLE YELLOW LINE, 6" WIDTH
		SOLID WHITE CHANNELIZATION LINE, 12" WIDTH UNLESS OTHERWISE NOTED
		SOLID YELLOW CHANNELIZATION LINE, 12" WIDTH UNLESS OTHERWISE NOTED
		RAISED CROSSWALK/SPEED HUMP - WHITE
		YIELD TRIANGLE - WHITE

ABBREVIATIONS

GENERAL	
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
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
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
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
LSA	LANDSCAPED AREA
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
MW	MONITORING WELL
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PCR	PEDESTRIAN CURB RAMP
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION

ABBREVIATIONS (cont.)

GENERAL	
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
RRFB	RECTANGULAR RAPID FLASHING BEACON
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TCB	TRAFFIC CONTROL BOX
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WRF	WOOD RAIL FENCE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION
TRAFFIC SIGNAL	
CAB.	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY DON'T WALK
FDW	FLASHING DON'T WALK
FR	FLASHING CIRCULAR RED
← FR —	FLASHING RED LEFT ARROW
— FR →	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
← FY —	FLASHING YELLOW LEFT ARROW
— FY →	FLASHING YELLOW RIGHT ARROW
G	STEADY CIRCULAR GREEN
← G —	STEADY GREEN LEFT ARROW
— G →	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
↑ G	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY CIRCULAR RED
← R —	STEADY RED LEFT ARROW
— R →	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALK
Y	STEADY CIRCULAR YELLOW
← Y —	STEADY YELLOW LEFT ARROW
— Y →	STEADY YELLOW RIGHT ARROW

CHICOPEE MONTGOMERY GRANBY MCKINSTRY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	3	135
PROJECT FILE NO.		609061	

LEGEND & ABBREVIATIONS

GENERAL NOTES:

- EXISTING CONDITIONS AND TOPOGRAPHICAL INFORMATION FROM AN ACTUAL FIELD SURVEY CONDUCTED BY VANASSE HANGEN BRUSTLIN, INC. IN MAY, 2019.
- THE HORIZONTAL CONTROL IS BASED ON THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM AND THE NATIONAL GEODETIC SURVEY (NAD83). ALL ELEVATION IS US FEET, REFERENCED TO THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD88).
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND GRADES IN THE FIELD BEFORE COMMENCING WORK AND PROMPTLY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS 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 CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE & GRADE UP TO A DEPTH OF 5' SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5' WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.
- THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH PROPOSED CONDUIT AND SIGNAL EQUIPMENT. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SEWER STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
- EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS IF REQUIRED.
- TREES AND SHRUBS WITHIN THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
- THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
- JOINTS BETWEEN NEW ASPHALT CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH HMA JOINT ADHESIVE.
- AFTER MILLING OPERATIONS AND PRIOR TO PAVING THE SUPERPAVE INTERMEDIATE OR SURFACES COURSES THE ENGINEER SHALL EVALUATE THE MILLED SURFACE AND SHALL APPLY THE APPROPRIATE REPAIR METHOD IF REQUIRED.
- EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND STACKED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- IF SUITABLE, EXISTING GRANITE CURB & EDGING SHALL BE RE-USED IN THE PROPOSED WORK, EXCEPT CURVED STONES OF A DIFFERENT RADIUS THAN PROPOSED CURB.
- EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
- THE CONTRACTOR SHALL EXERCISE DUE CARE WHEN WORKING AROUND ALL PROPERTY BOUNDS WHICH ARE TO REMAIN. SHOULD ANY DAMAGE TO A BOUND RESULT FROM THE ACTIONS OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE THE BOUND REPLACED AND/OR REALIGNED BY A LICENSED PROFESSIONAL SURVEYOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.
- DISPOSAL OF ALL SURPLUS MATERIAL SHALL BE AS APPROVED BY THE ENGINEER AND OWNER.
- LATERAL DRAIN PIPES SHALL BE INSTALLED WITH A PITCH OF 0.01 FOOT PER FOOT (MINIMUM) UNLESS NOTED OTHERWISE ON THE PLANS.
- BICYCLE PAVEMENT MARKINGS SHALL BE REFLECTORIZED PREFOMED THERMOPLASTIC. OTHER PAVEMENT MARKING ARROWS AND LEGENDS SHALL BE REFLECTORIZED THERMOPLASTIC. ALL LINEAR PAVEMENT MARKINGS SHALL BE REFLECTORIZED RECESSED POLYUREA.
- IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.

LEGEND

CONSTRUCTION PLANS

ALIGNMENT PLANS

GRADING PLANS

SIGNING AND MARKING PLANS

TRAFFIC SIGNAL PLANS

UTILITY PLANS

XX

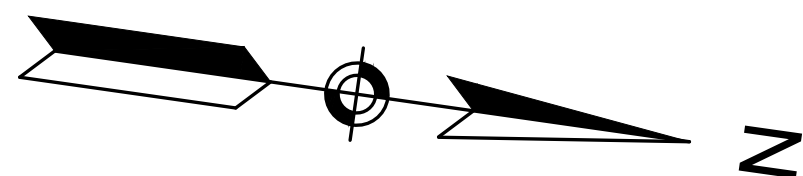
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MONTGOMERY STREET

9

21

27

32

59

BEGIN PROJECT
STA 100+77.92
N: 2889486.7493
E: 361659.9373

LIMIT OF WORK
STA 202+08.52
N: 2889922.7224
E: 361840.5819

MASS PIKE

SHOPPING PLAZA

LIMIT OF WORK
STA 301+40.00
N: 2890191.8092
E: 361705.2327

10

22

28

33

60

12

24

30

35

44

62

LIMIT OF WORK
STA 601+23.48
N: 2889907.4914
E: 361133.0544

BAY STATE ROAD

LIMIT OF WORK
STA 700+96.92
N: 2890323.1305
E: 360921.8748

McKINSTRY AVENUE

MONTGOMERY STREET

11

23

29

34

61

END PROJECT
STA 504+55.98
N: 2891046.4461
E: 361260.3815

LIMIT OF WORK
STA 406+81.67
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E: 361704.4068

GRANBY ROAD

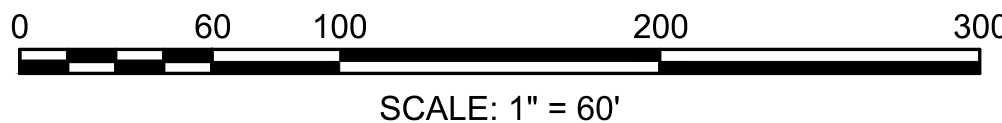
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CHICOPEE

MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	4	135
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KEY PLAN

PAVEMENT NOTES

PROPOSED FULL DEPTH RECONSTRUCTION

(MASS PIKE ROUNDABOUT)
(MONTGOMERY STREET) STA 101+03± TO 110+13±
(MASSPIKE ROUNDABOUT) STA 200+00 TO 201+88±
(SHOPPING PLAZA) STA 300+00 TO 300+23±
(MONTGOMERY STREET NB) STA 30+00 TO 30+52±
(MONTGOMERY STREET NORTH) STA 500+00 TO 504+36±

CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

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TYPICAL SECTIONS

SURFACE: 4 1/4" HOT MIX ASPHALT
2" SUPERPAVE SURFACE COURSE - 12.5 - P (SSC-12.5-P) LEVEL 2 OVER
2 1/4" SUPERPAVE INTERMEDIATE COURSE - 19.0 - (SIC-19.0) LEVEL 2 OVER

BASE: 4 1/2" SUPERPAVE BASE COURSE - 37.5 (SBC-37.5) LEVEL 2 OVER

SUBBASE: 4" DENSE GRADED CRUSHED STONE (M2.01.7) OVER
8" GRAVEL BORROW "B" (M1.03.0)

PROPOSED FULL DEPTH RECONSTRUCTION (PEANUT AND GRANBY ROUNDABOUTS)
(MONTGOMERY STREET NB) STA 30+52± TO 33+37± (GRANBY ROAD EAST) STA 400+00 TO 406+61±
(GRANBY ROAD WEST) STA 601+43 TO 605+00 (MCKINSTRY AVENUE) STA 701+53 TO 705+00

SURFACE: 4 1/4" HOT MIX ASPHALT
(2" SUPERPAVE SURFACE COURSE - 12.5 - P (SSC-12.5-P) LEVEL 2 OVER
2 1/4" SUPERPAVE INTERMEDIATE COURSE - 19.0 - (SIC-19.0) LEVEL 2 OVER

BASE: 4 1/2" SUPERPAVE BASE COURSE - 37.5 (SBC-37.5) LEVEL 2 OVER

SUBBASE: 4" DENSE GRADED CRUSHED STONE (M2.01.7) OVER
8" GRAVEL BORROW "B" (M1.03.0)

PROPOSED FULL DEPTH RECONSTRUCTION (McKINSTRY AVENUE)

SURFACE: 3 1/2" HOT MIX ASPHALT
(2" SUPERPAVE SURFACE COURSE - 12.5 - P (SSC-12.5-P) LEVEL 2 OVER
1 1/2" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) LEVEL 2 OVER

BASE: 3 1/2" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SBC-19.0) LEVEL 2 OVER

SUBBASE: 4" DENSE GRADED CRUSHED STONE (M2.01.7) OVER
8" GRAVEL BORROW "B" (M1.03.0)

PROPOSED CEMENT CONCRETE WALK/PCR

SURFACE: 4" CEMENT CONCRETE
AIR ENTRAINED 4000 PSI, 3/4", 610

SUBBASE: 8" GRAVEL BORROW "B" (M1.03.0)

PROPOSED RESIDENTIAL CEMENT CONCRETE DRIVEWAY

SURFACE: 6" CEMENT CONCRETE
AIR ENTRAINED 4000 PSI, 3/4", 610

SUBBASE: 8" GRAVEL BORROW "B" (M1.03.0)

PROPOSED COMMERCIAL CEMENT CONCRETE DRIVEWAY

SURFACE: 9" CEMENT CONCRETE
AIR ENTRAINED 4000 PSI, 3/4", 610

SUBBASE: 8" GRAVEL BORROW "B" (M1.03.0)

PROPOSED HMA DRIVEWAY

SURFACE: 4" HOT MIX ASPHALT
(1 1/2" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5) OVER
2 1/2" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5))

SUBBASE: 8" GRAVEL BORROW "B" (M1.03.0)

PROPOSED HMA SIDEWALK

SURFACE: 3" HOT MIX ASPHALT
(1 1/4" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5) OVER
1 3/4" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5))

SUBBASE: 8" GRAVEL BORROW "B" (M1.03.0)

PROPOSED HMA SHARED USE PATH

SURFACE: 4" HOT MIX ASPHALT
(1 1/2" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5) OVER
2 1/2" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5))

SUBBASE: 8" GRAVEL BORROW "B" (M1.03.0)

PROPOSED STAMPED CEMENT CONCRETE PVM'T

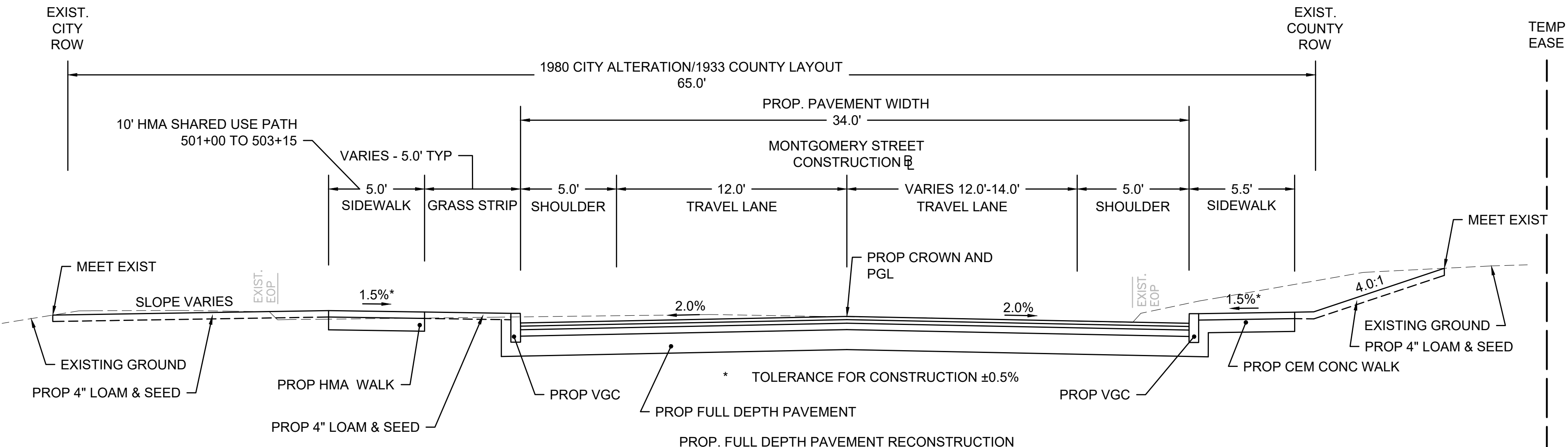
SURFACE: 8" CEMENT CONCRETE
AIR ENTRAINED 4000 PSI, 3/4", 610 (REINFORCED)

SUBBASE: 8" GRAVEL BORROW "B" (M1.03.0)

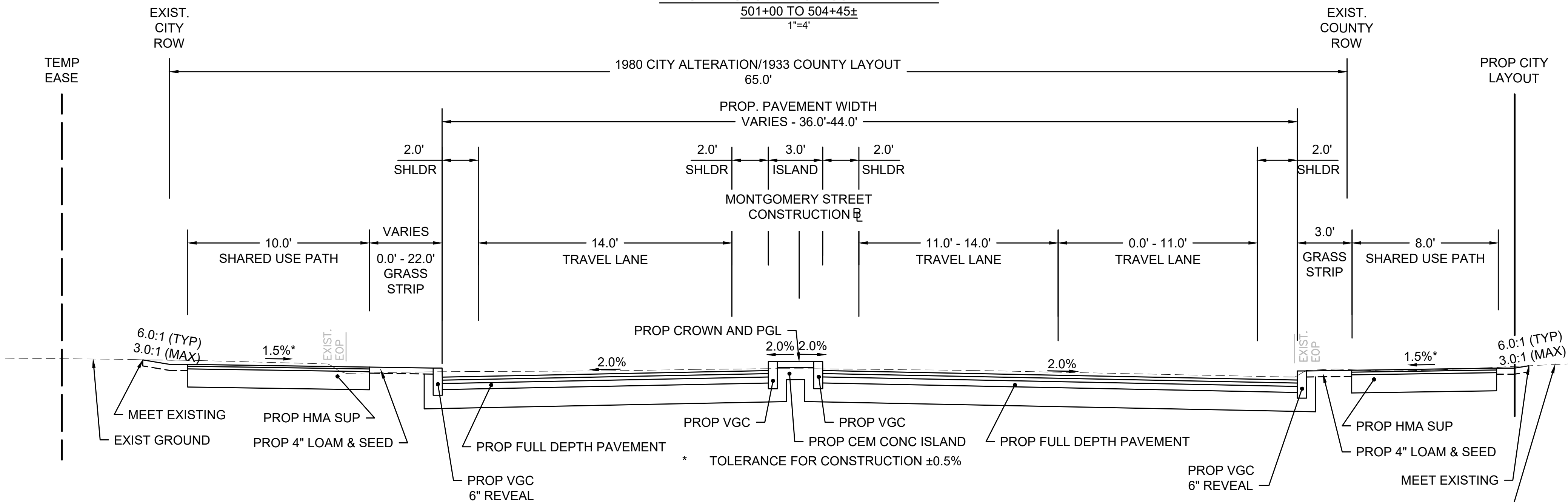
PROPOSED CEMENT CONCRETE ISLAND

SURFACE: 4" CEMENT CONCRETE
AIR ENTRAINED 4000 PSI, 3/4", 610

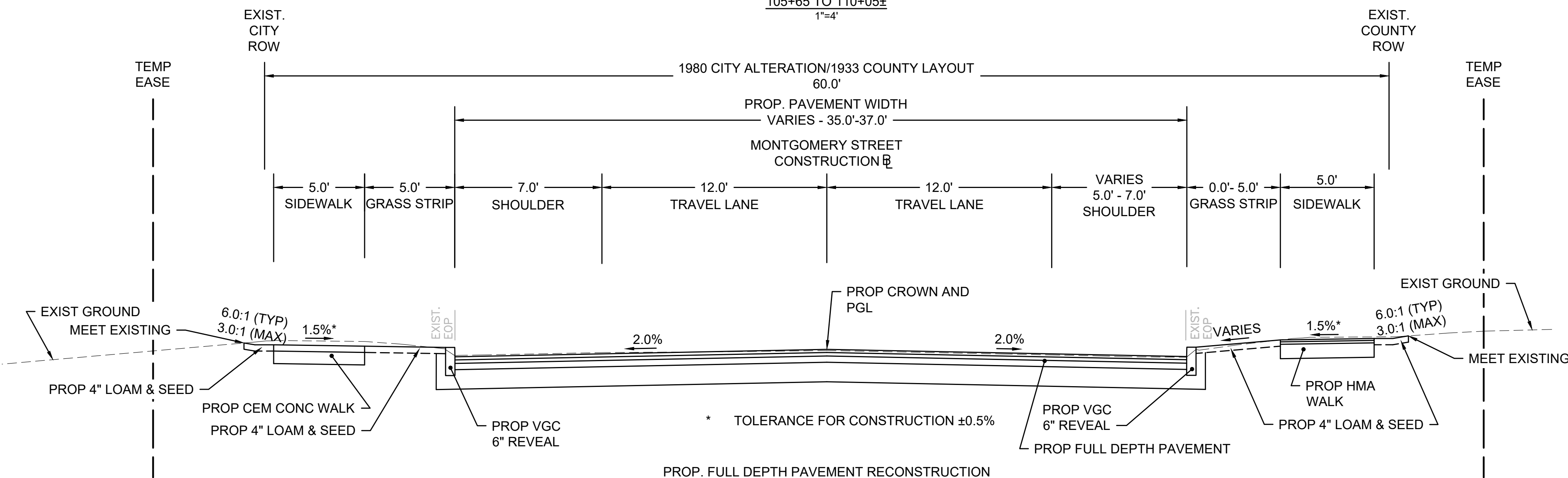
SUBBASE: 8" GRAVEL BORROW "B" (M1.03.0)



PROP. FULL DEPTH PAVEMENT RECONSTRUCTION
TYPICAL SECTIONS - MONTGOMERY STREET
501+00 TO 504+45±
1"=4'

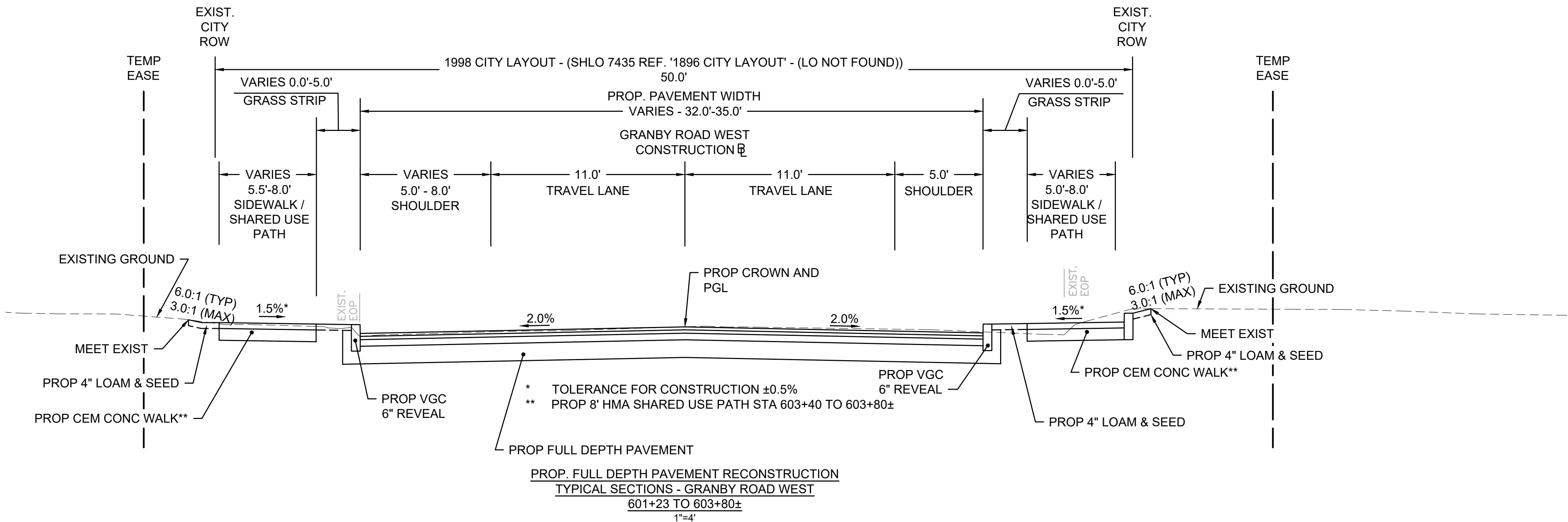
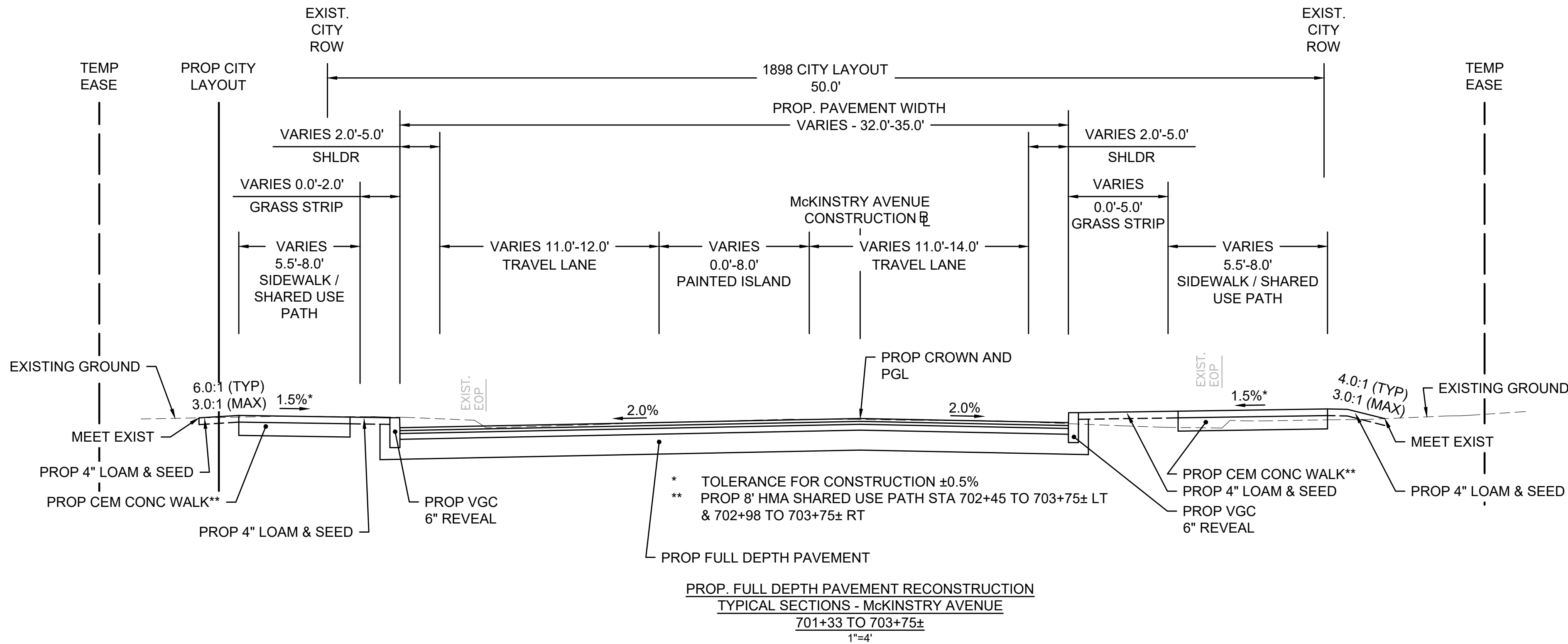


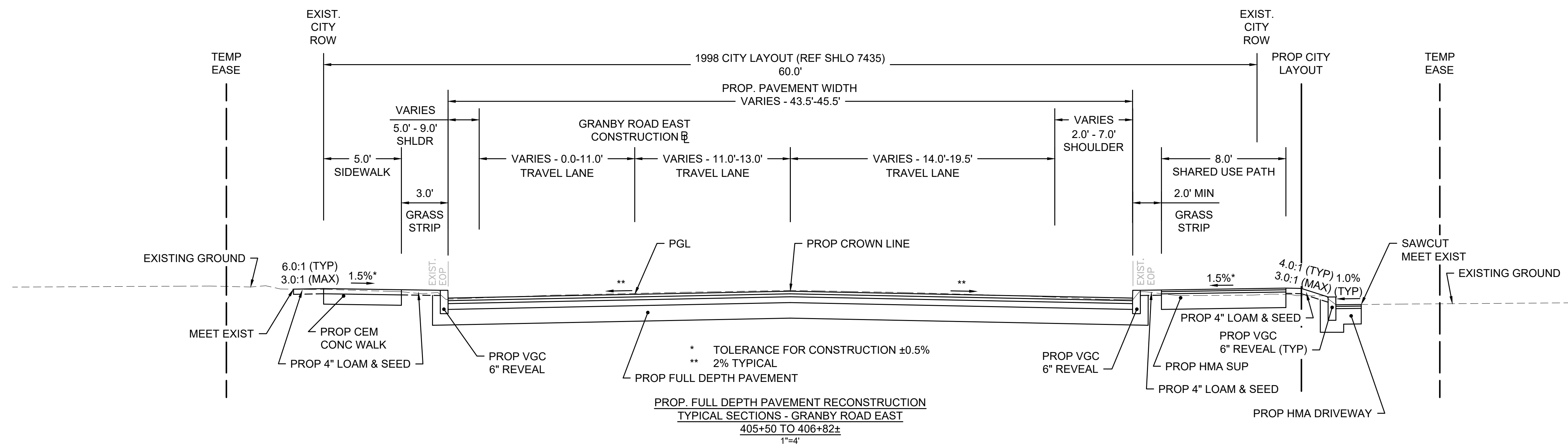
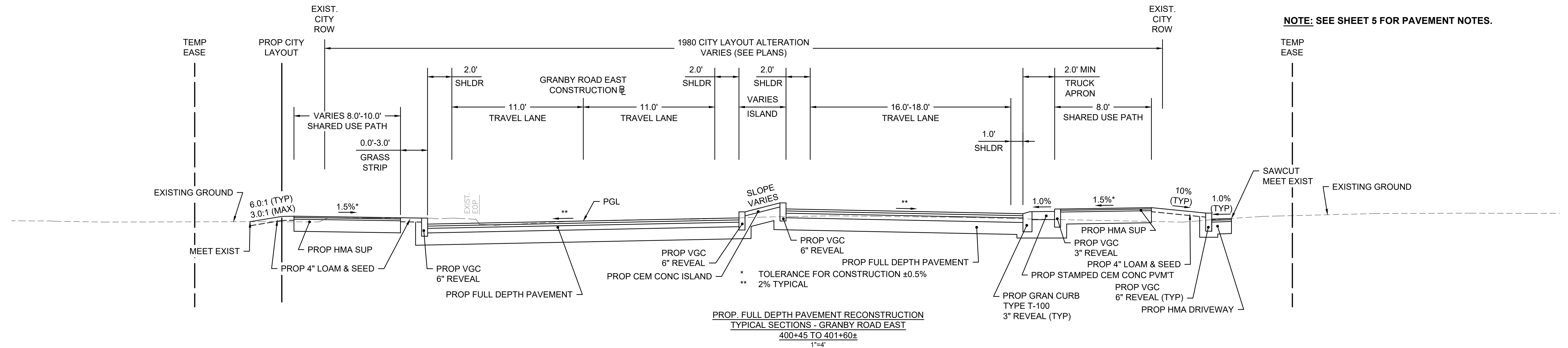
PROP. FULL DEPTH PAVEMENT RECONSTRUCTION
TYPICAL SECTIONS - MONTGOMERY STREET
105+65 TO 110+05±
1"=4'

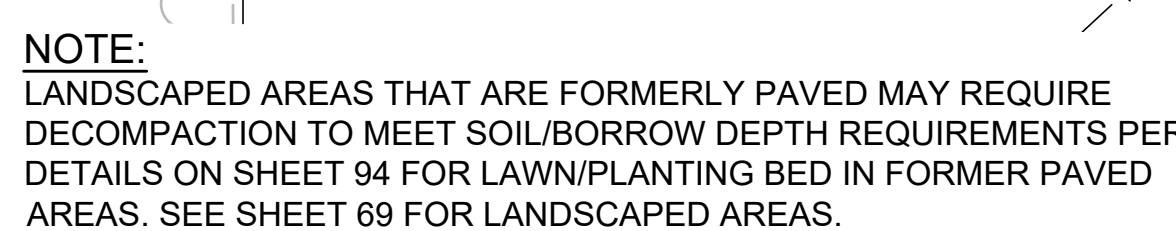


PROP. FULL DEPTH PAVEMENT RECONSTRUCTION
TYPICAL SECTIONS - MONTGOMERY STREET
100+93 TO 103+21±
1"=4'

NOTE: SEE SHEET 5 FOR PAVEMENT NOTES.







HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

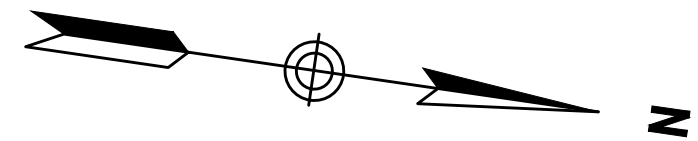
CHICOPEE

MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	10	135
PROJECT FILE NO.		609061	

CONSTRUCTION PLANS

SEE NOTE 23 ON SHEET 3 FOR INSTALLATION OF
MANHOLE, HANDHOLE OR OTHER STRUCTURE IN
PEDESTRIAN ACCESSIBLE ROUTE.



CONTINUED ON
SHEET NO. 9

CONTINUED ON
SHEET NO. 11



NOTE:
LANDSCAPED AREAS THAT ARE FORMERLY PAVED MAY REQUIRE
DECOMPACTION TO MEET SOIL/BORROW DEPTH REQUIREMENTS
PER DETAILS ON SHEET 94 FOR LAWN/PLANTING BED IN FORMER
PAVED AREAS. SEE SHEET 70 FOR LANDSCAPED AREAS.

FOR PROFILE PLANS SEE SHEET 14, 15, 16, 18 & 20

CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	11	135

PROJECT FILE NO. 609061

CONSTRUCTION PLANS

NOTE:
LANDSCAPED AREAS THAT ARE FORMERLY PAVED MAY REQUIRE DECOMPACTION TO MEET SOIL/BORROW DEPTH REQUIREMENTS PER DETAILS ON SHEET 94 FOR LAWN/PLANTING BED IN FORMER PAVED AREAS. SEE SHEET 71 FOR LANDSCAPED AREAS.

SEE NOTE 23 ON SHEET 3 FOR INSTALLATION OF MANHOLE, HANDHOLE OR OTHER STRUCTURE IN PEDESTRIAN ACCESSIBLE ROUTE.

CONTINUED ON
SHEET NO. 10

CONTINUED ON
SHEET NO. 13

CHICOPEE

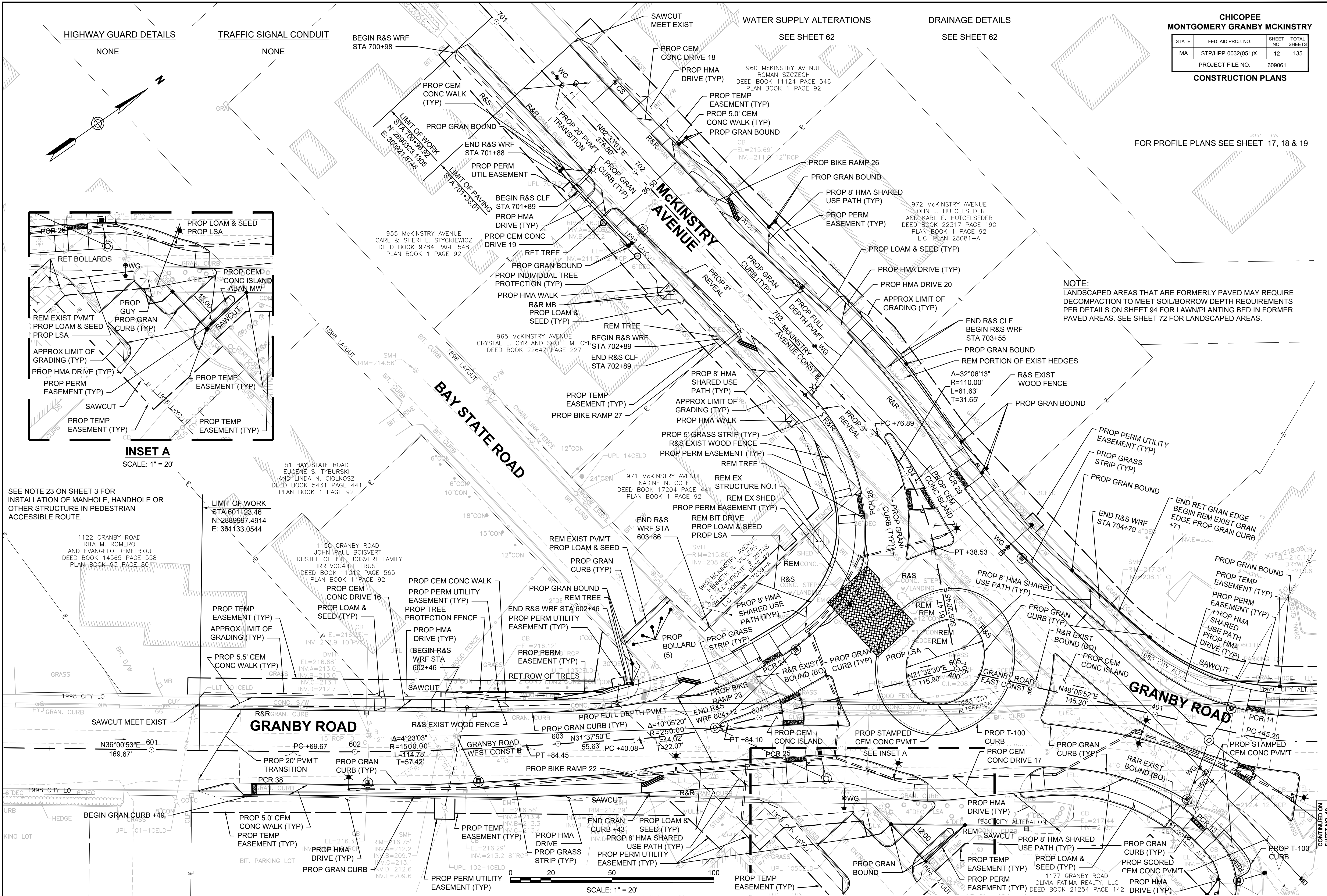
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	12	135
PROJECT FILE NO.		609061	

CONSTRUCTION PLANS

FOR PROFILE PLANS SEE SHEET 17, 18 & 19

NOTE:
LANDSCAPED AREAS THAT ARE FORMERLY PAVED MAY REQUIRE DECOMPACTION TO MEET SOIL/BORROW DEPTH REQUIREMENTS PER DETAILS ON SHEET 94 FOR LAWN/PLANTING BED IN FORMER PAVED AREAS. SEE SHEET 72 FOR LANDSCAPED AREAS.



INSET A
SCALE: 1" = 20'

SEE NOTE 23 ON SHEET 3 FOR INSTALLATION OF MANHOLE, HANDHOLE OR OTHER STRUCTURE IN PEDESTRIAN ACCESSIBLE ROUTE.

LIMIT OF WORK
STA 601+23.46
N: 2889997.4914
E: 361133.0544

1122 GRANBY ROAD
RITA M. ROMERO
AND EVANGELO DEMETRIOU
DEED BOOK 14565 PAGE 558
PLAN BOOK 93 PAGE 80

1150 GRANBY ROAD
JOHN PAUL BOISVERT
TRUSTEE OF THE BOISVERT FAMILY
IRREVOCABLE TRUST
DEED BOOK 11012 PAGE 565
PLAN BOOK 1 PAGE 92

955 MCKINSTRY AVENUE
CARL & SHERI L. STYCKIEWICZ
DEED BOOK 9784 PAGE 548
PLAN BOOK 1 PAGE 92

960 MCKINSTRY AVENUE
ROMAN SZCZECZ
DEED BOOK 11124 PAGE 546
PLAN BOOK 1 PAGE 92

972 MCKINSTRY AVENUE
JOHN J. HUTCELSER
AND KARL E. HUTCELSER
DEED BOOK 22317 PAGE 190
PLAN BOOK 1 PAGE 92
L.C. PLAN 28081-A

971 MCKINSTRY AVENUE
NADINE N. COTE
DEED BOOK 17204 PAGE 441
PLAN BOOK 1 PAGE 92

965 MCKINSTRY AVENUE
CRYSTAL CYR AND SCOTT M. CYR
DEED BOOK 22647 PAGE 227

1177 GRANBY ROAD
OLIVIA FATIMA REALTY, LLC
DEED BOOK 21254 PAGE 142

CONTINUED ON
SHEET NO. 10

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

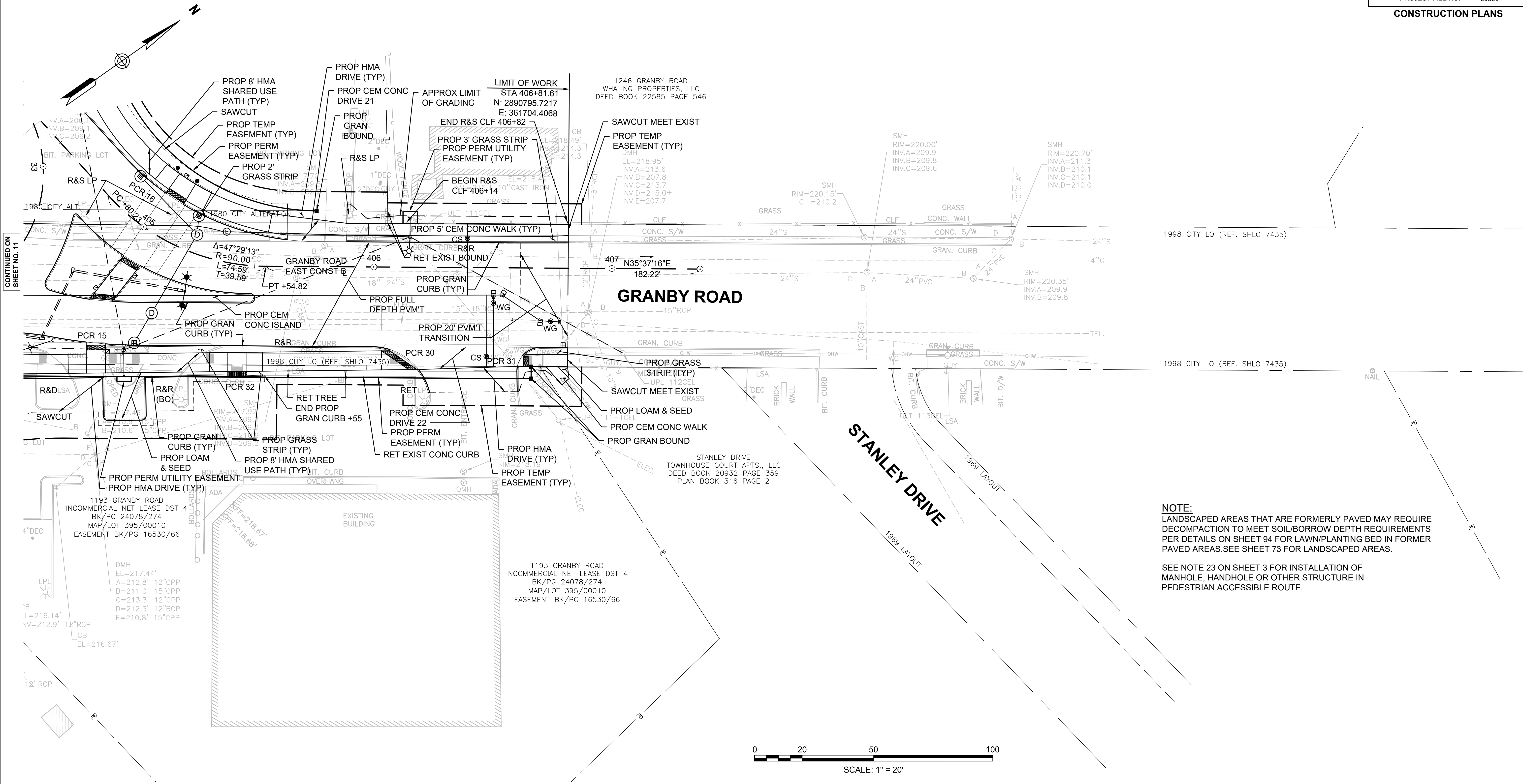
DRAINAGE DETAILS

SEE SHEET 63

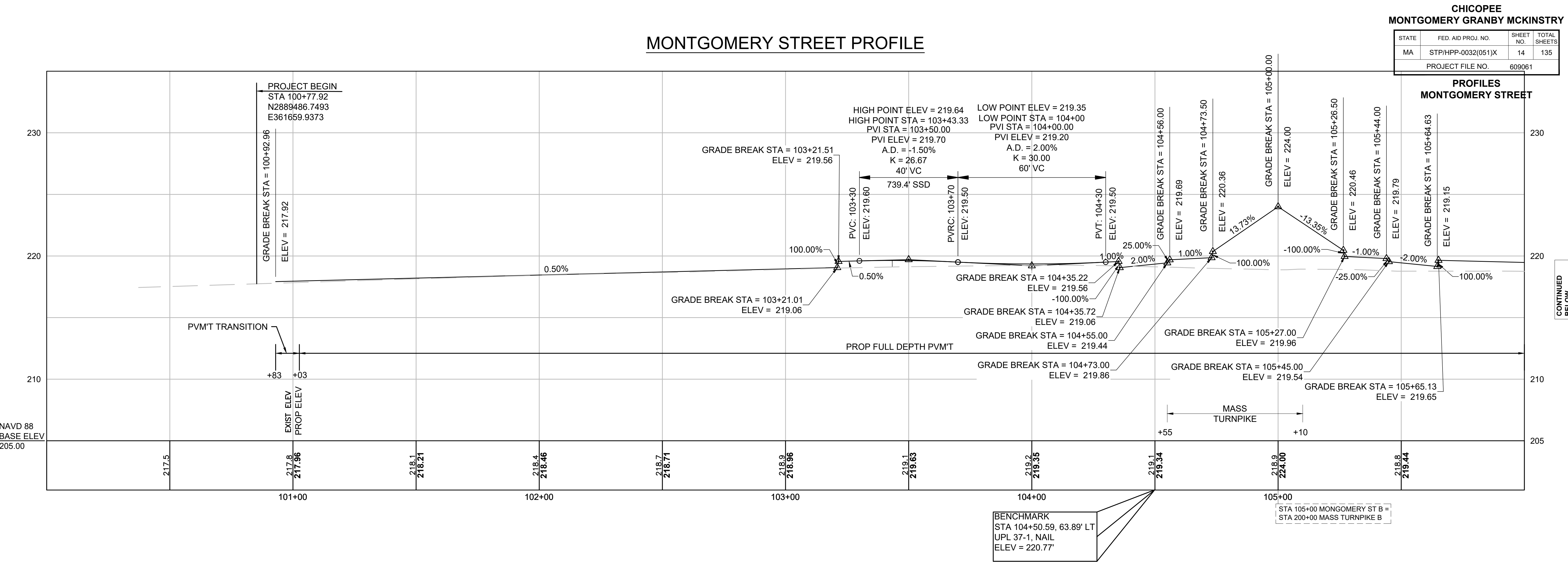
CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	13	135
PROJECT FILE NO. 609061			

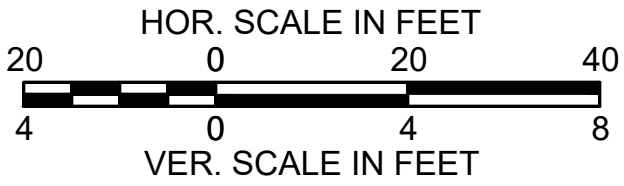
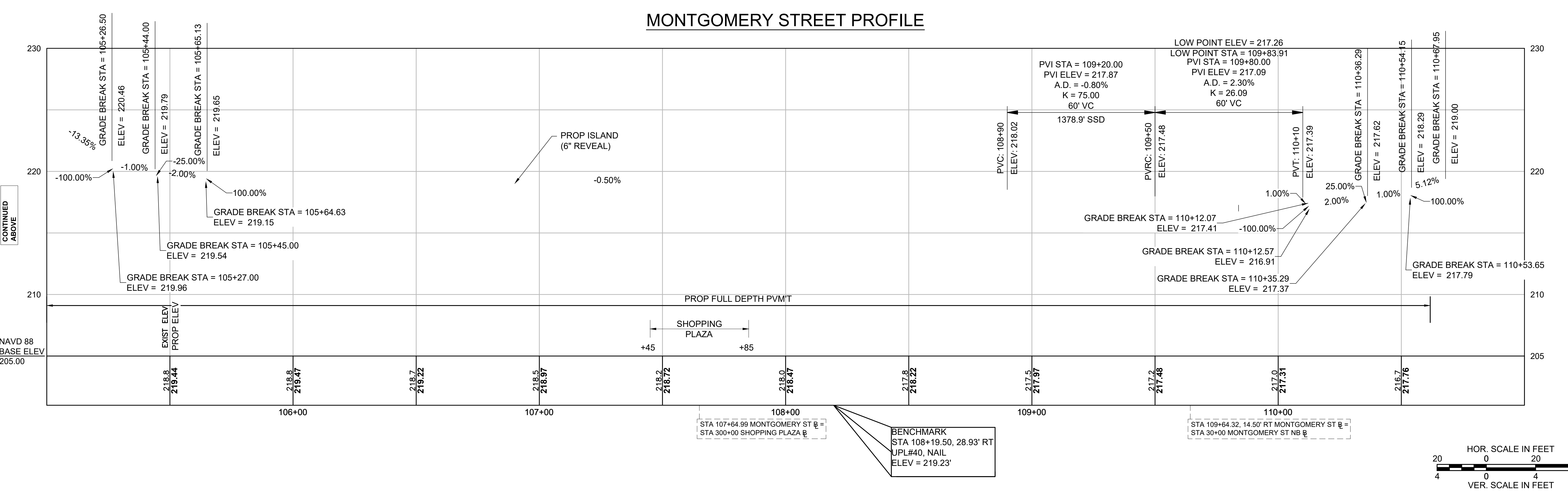
CONSTRUCTION PLANS



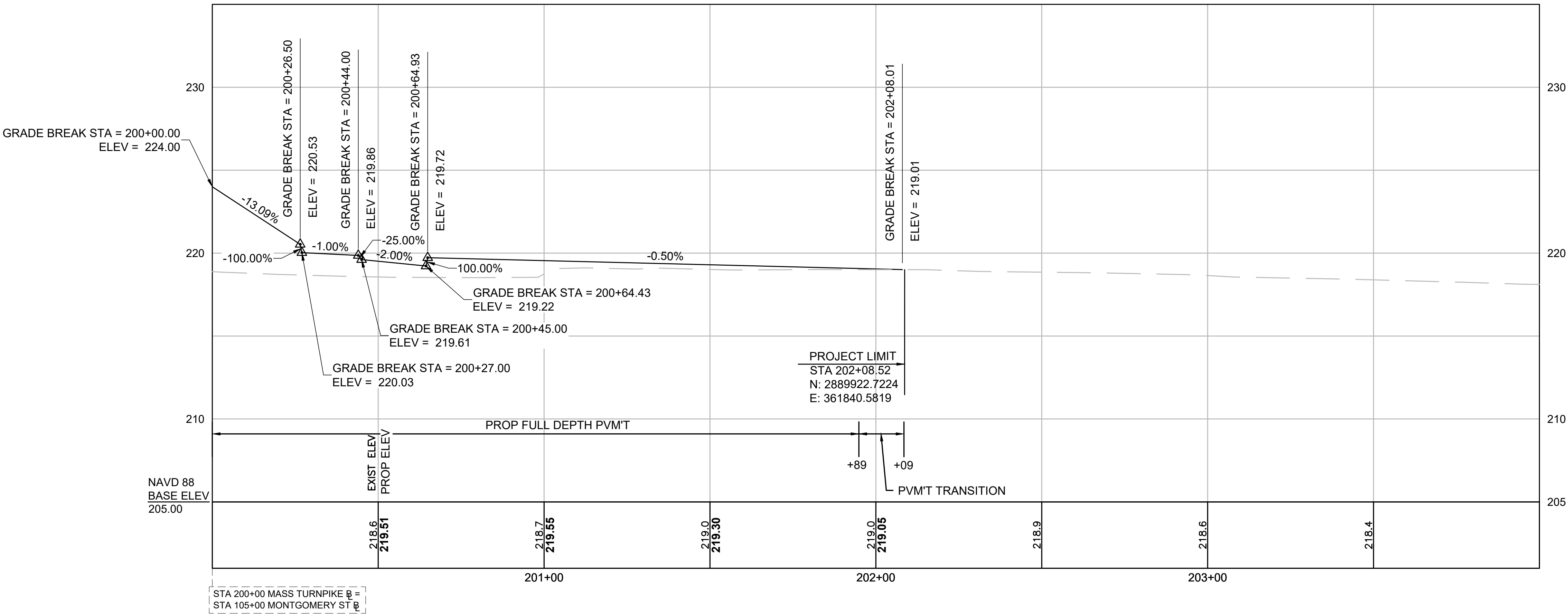
MONTGOMERY STREET PROFILE



MONTGOMERY STREET PROFILE



MASS TURNPIKE PROFILE



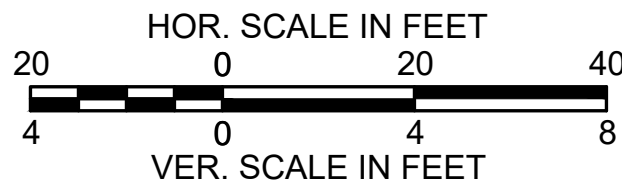
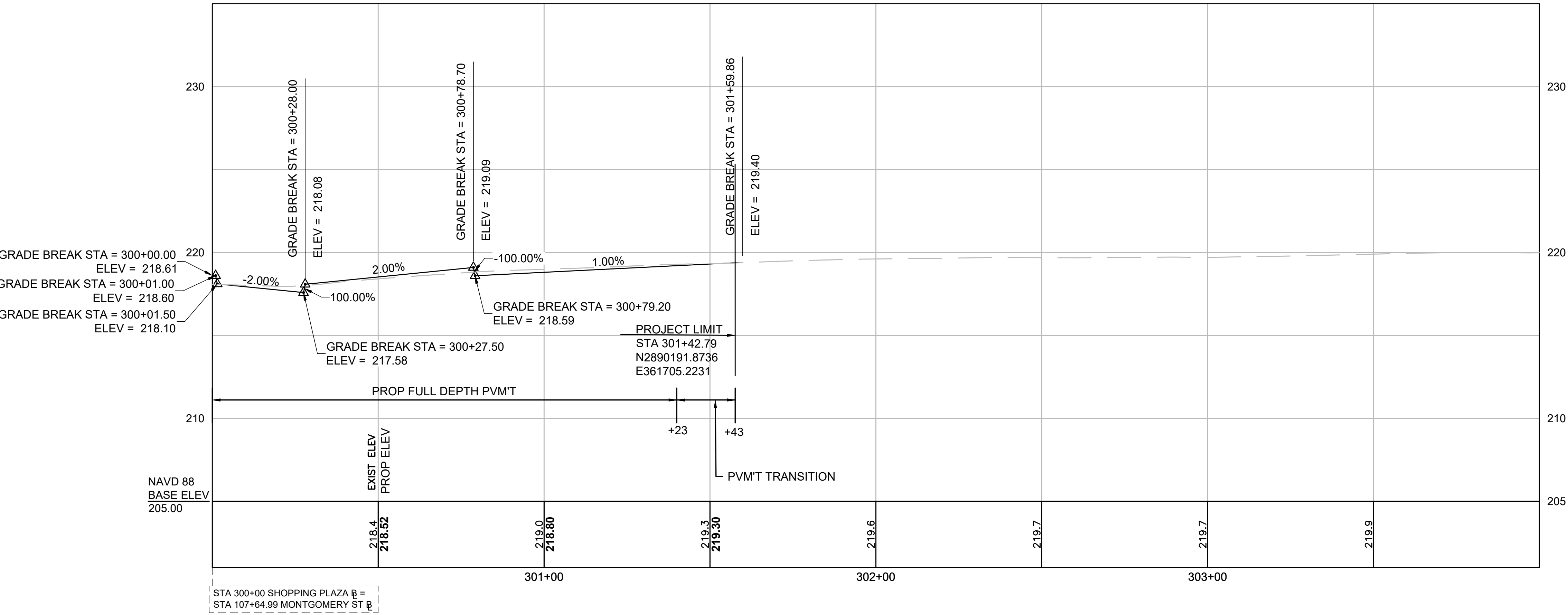
CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

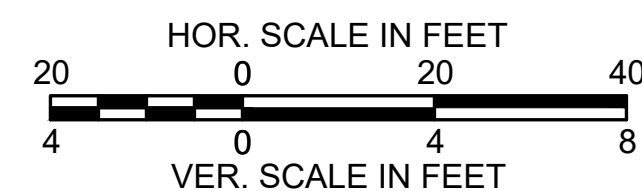
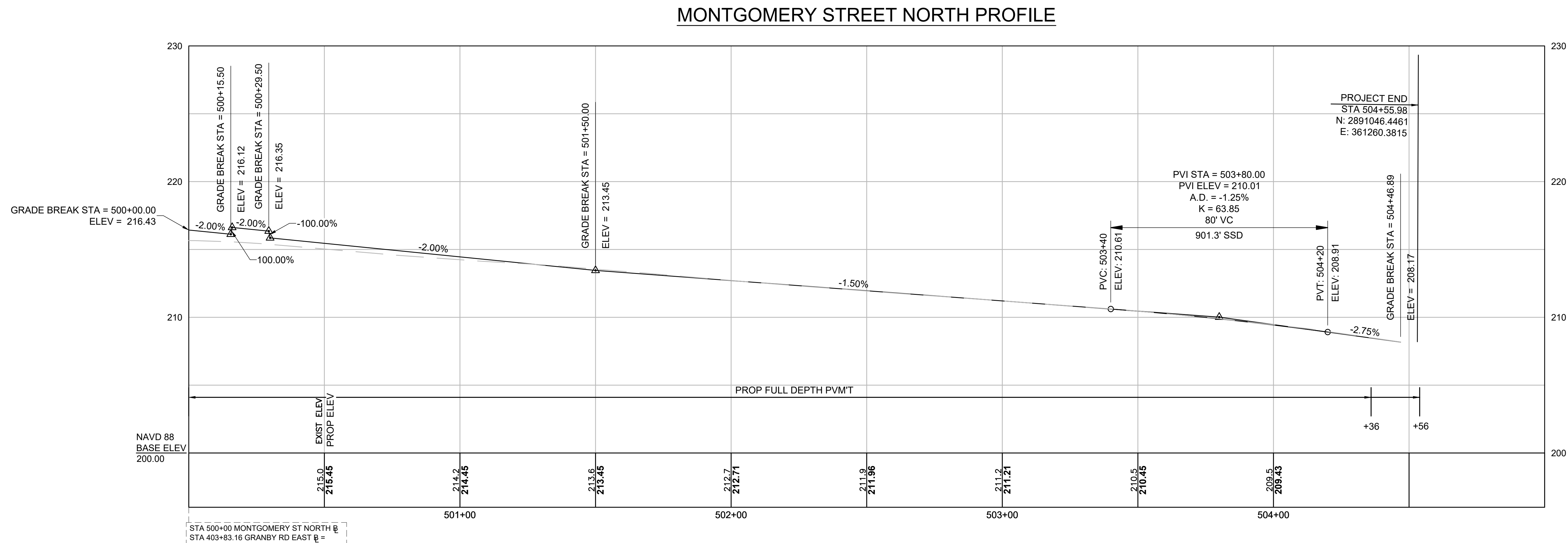
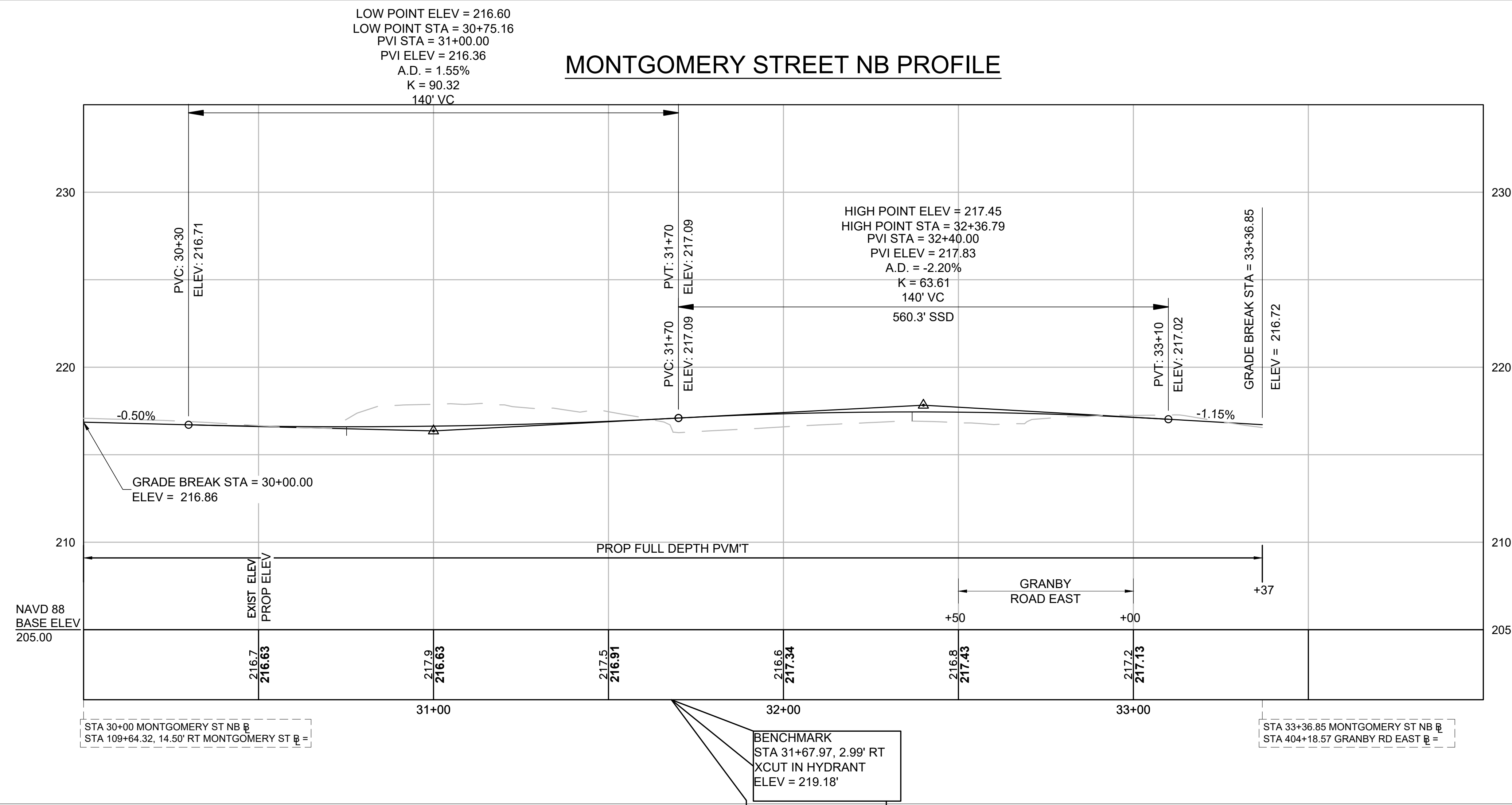
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	15	135

PROJECT FILE NO. 609061

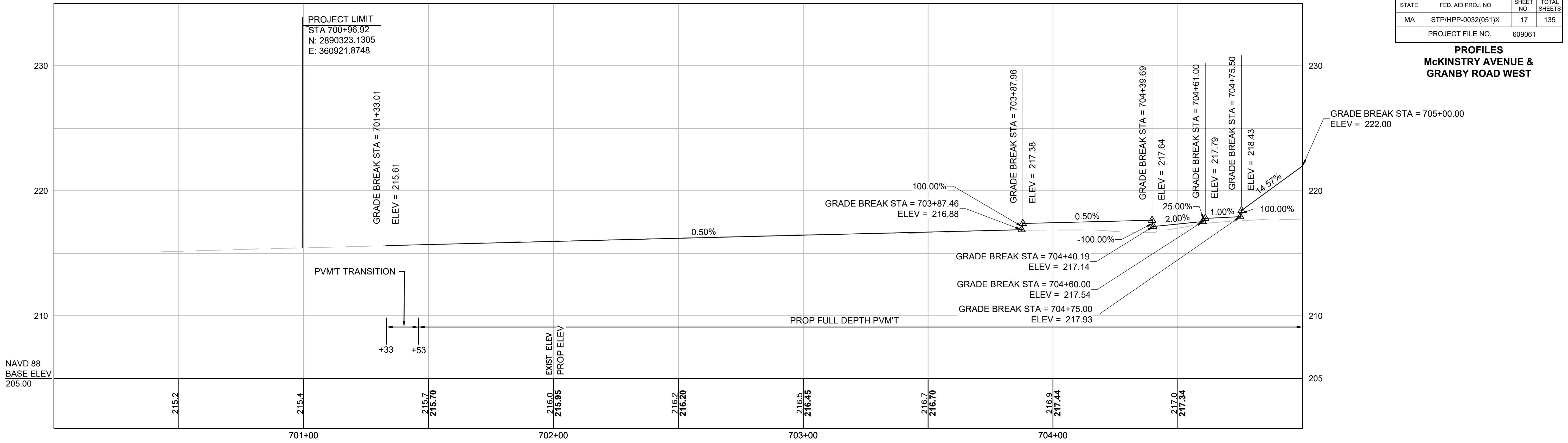
PROFILES
MASS PIKE & SHOPPING PLAZA

SHOPPING PLAZA PROFILE

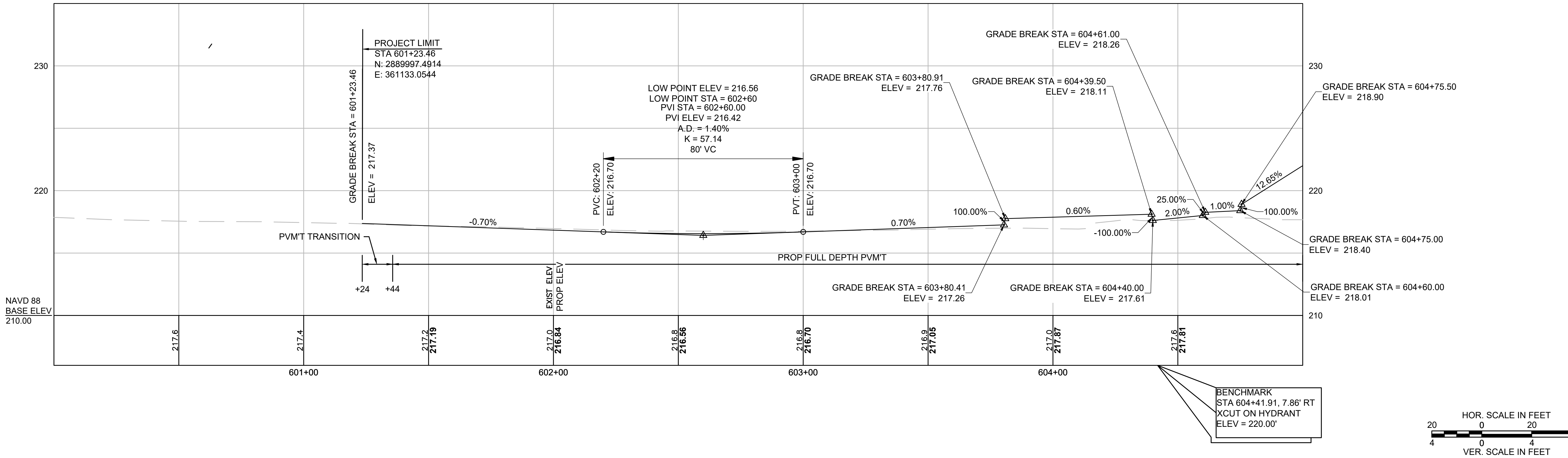


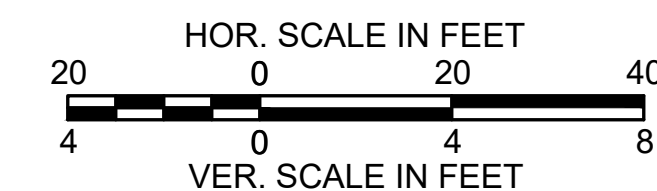
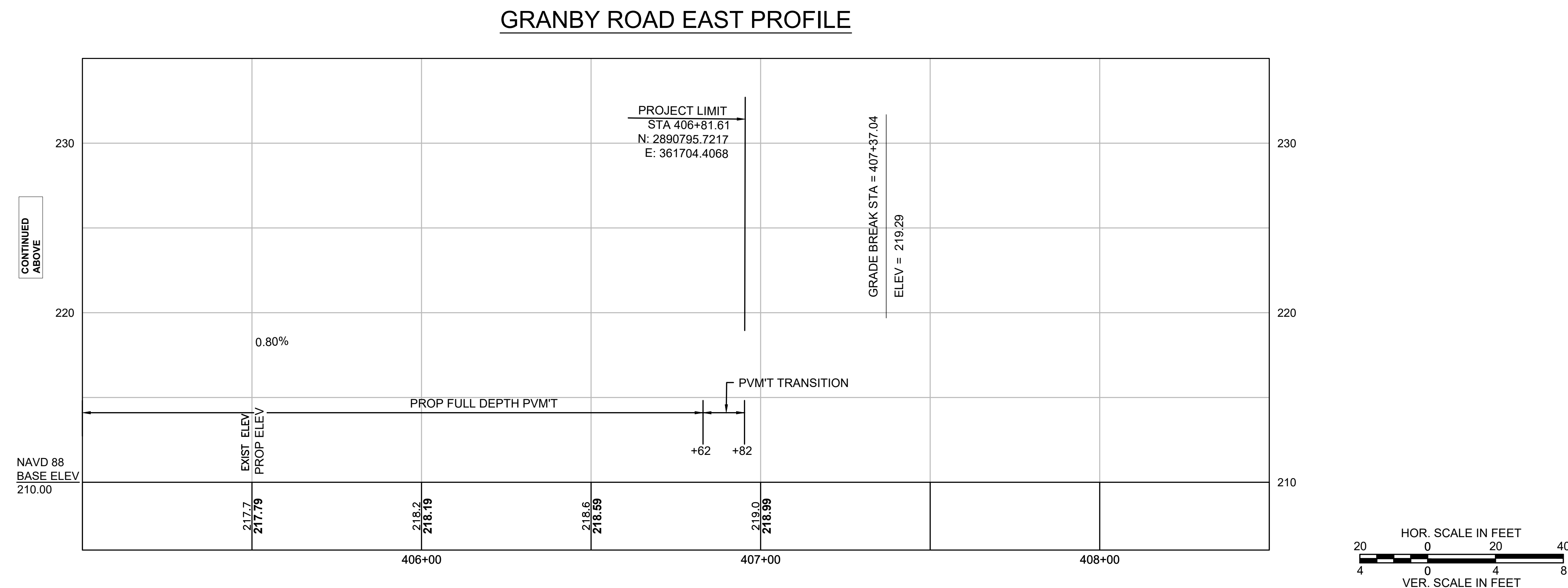
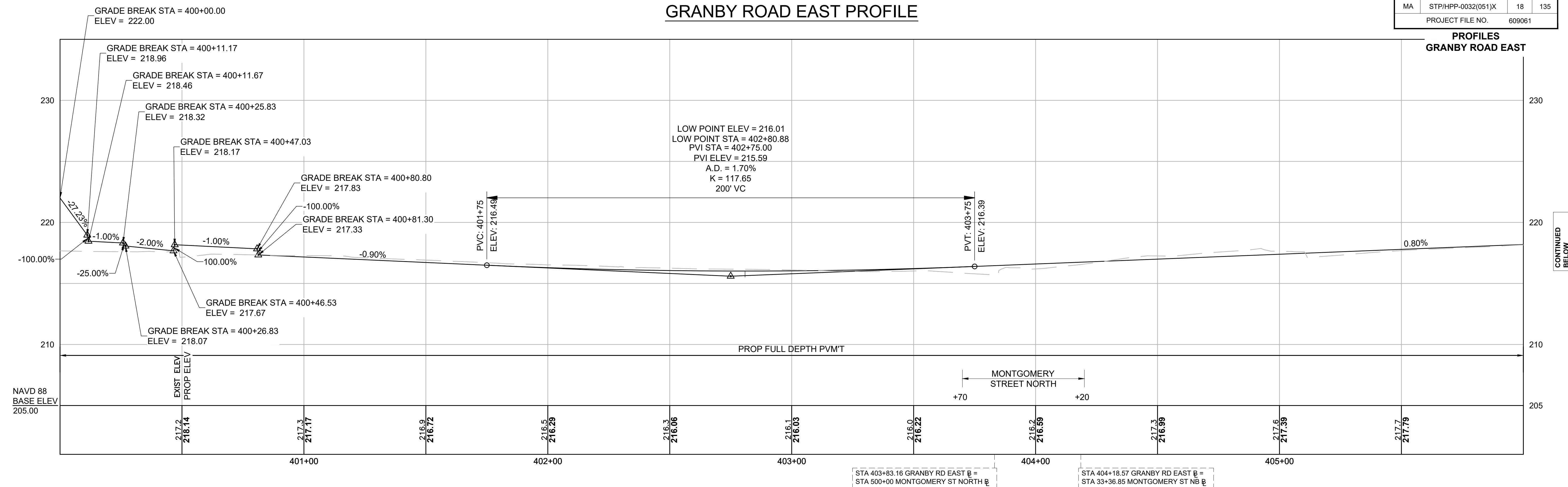


MCKINSTRY AVENUE PROFILE

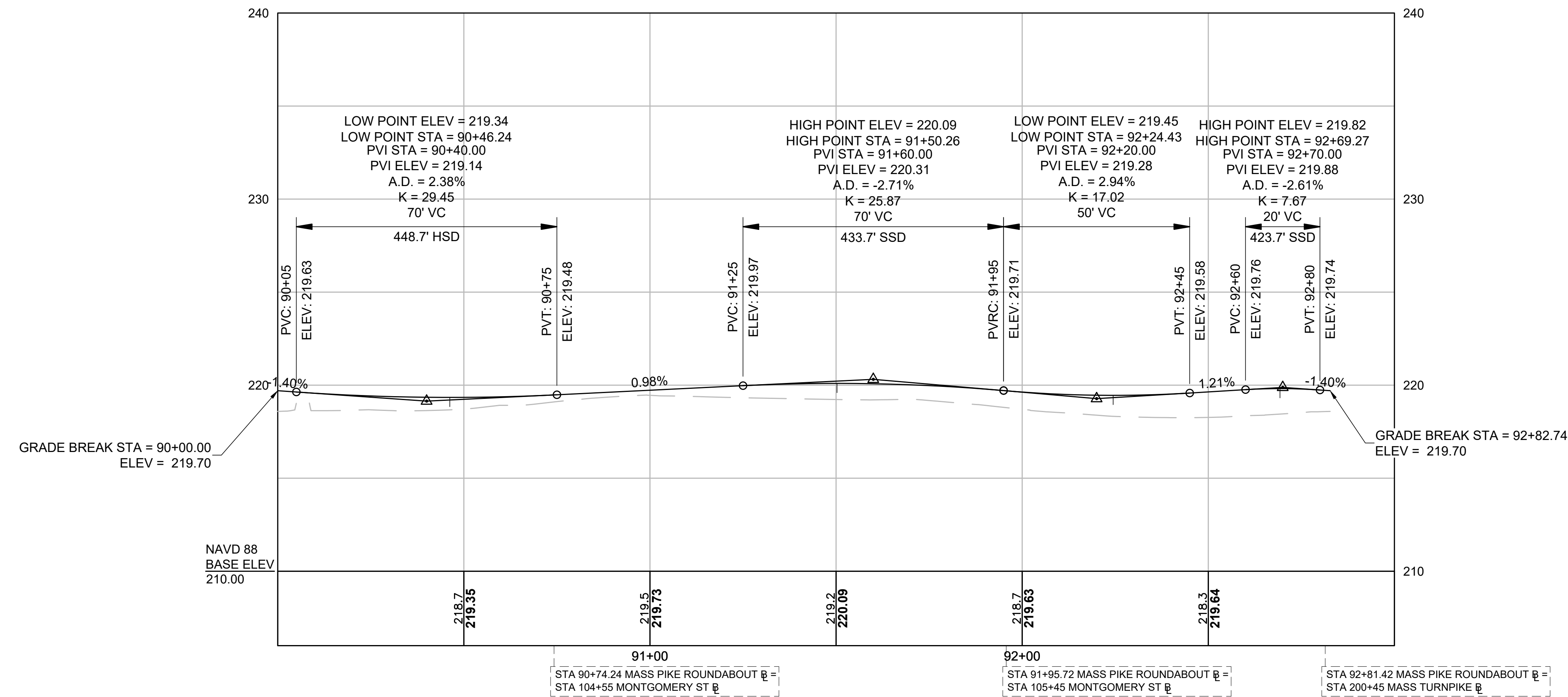


GRANBY ROAD WEST PROFILE

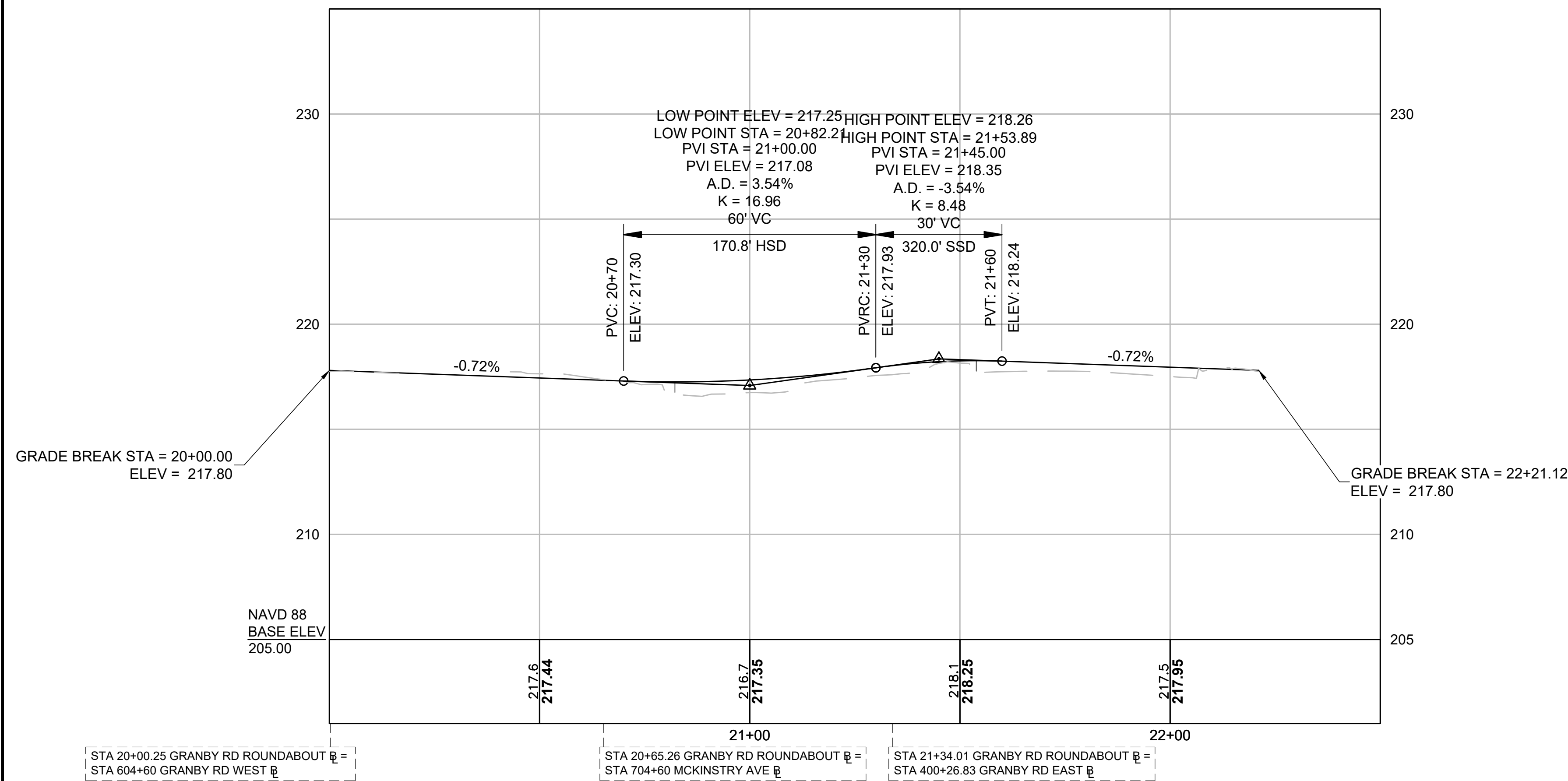




MASS PIKE ROUNDABOUT PROFILE



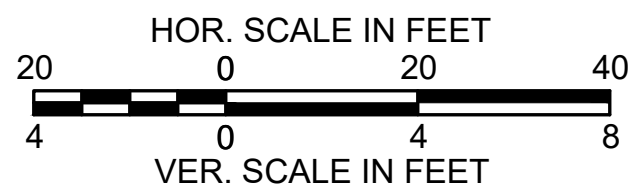
GRANBY ROAD ROUNDABOUT PROFILE



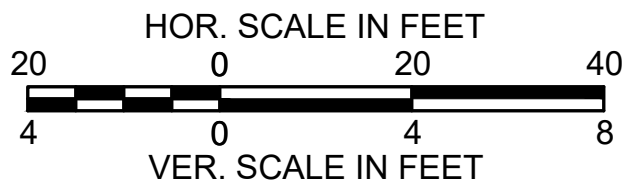
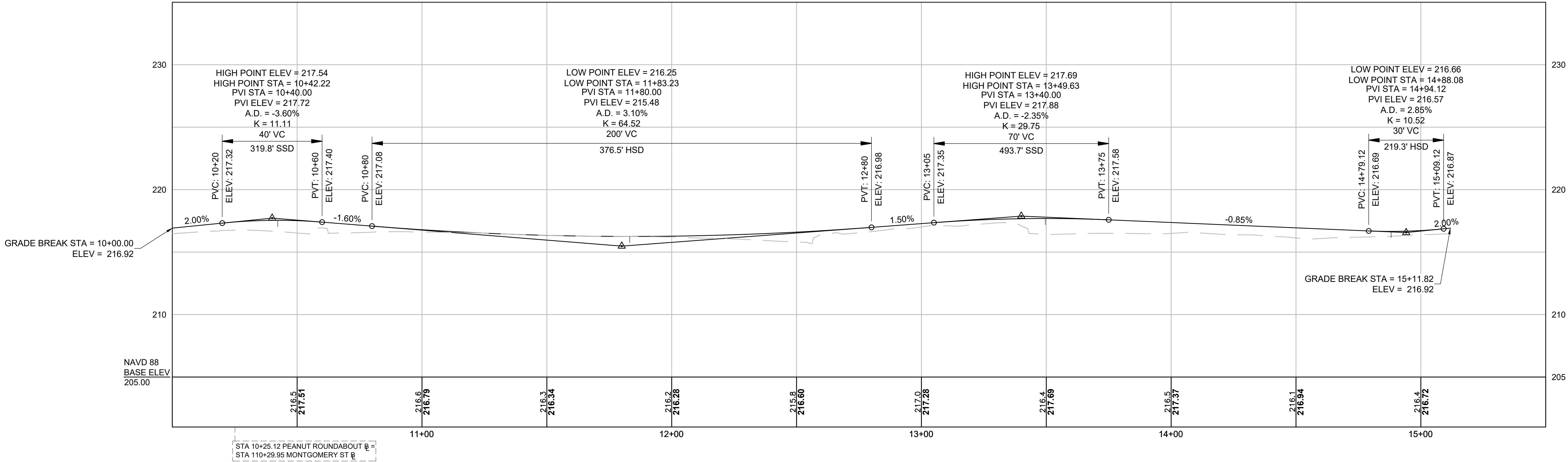
CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	19	135
PROJECT FILE NO.		609061	

PROFILES
ROUNDBABOUTS



PEANUT ROUNDBABOUT - CENTRAL ISLAND PROFILE

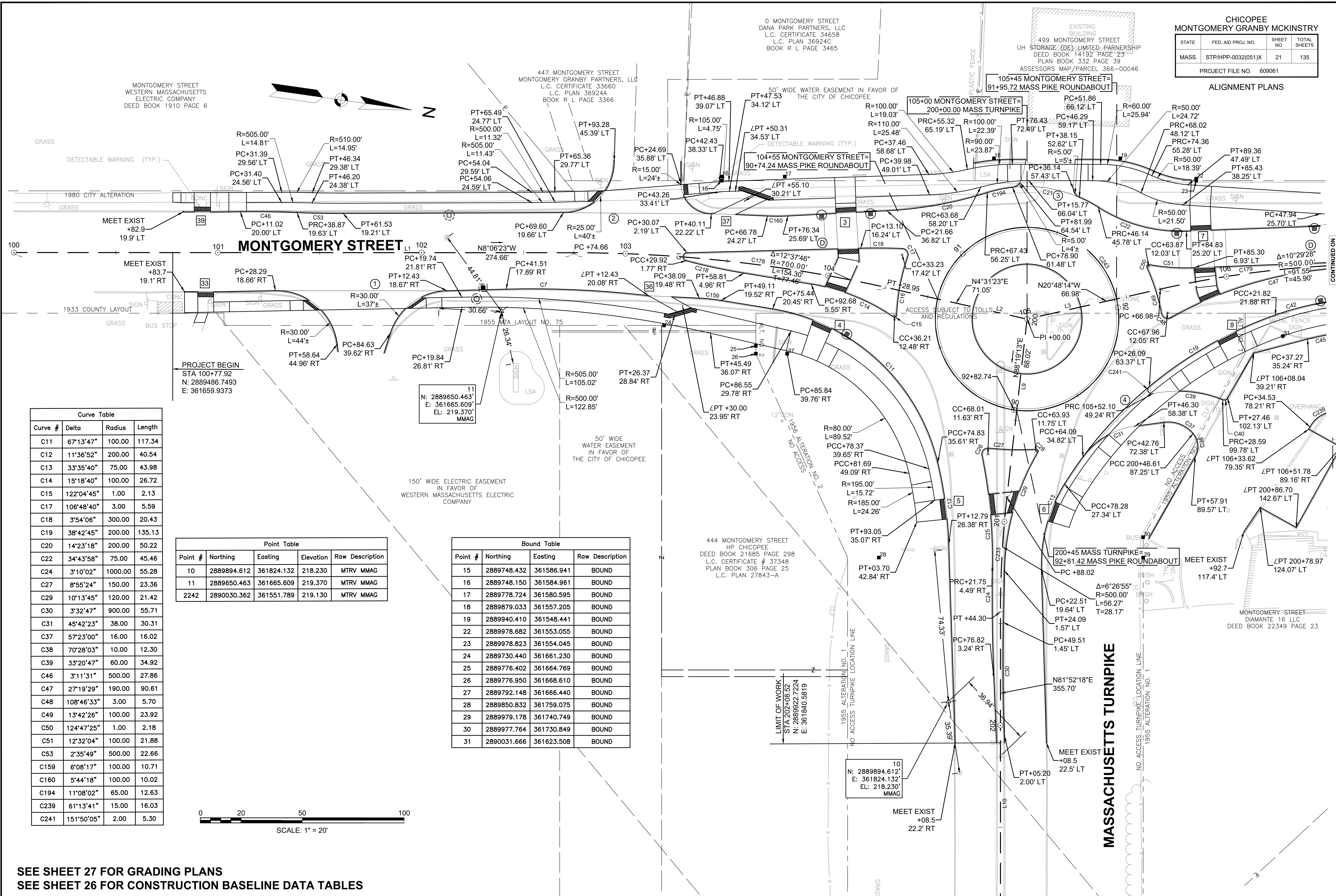


CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(05)1X	21	135

PROJECT FILE NO. 609061

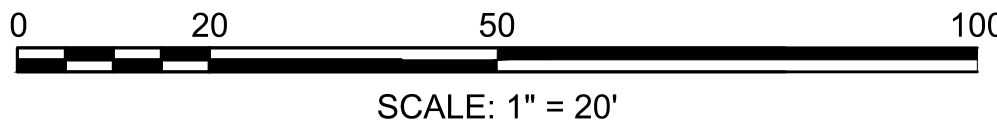
ALIGNMENT PLANS



Curve Table			
Curve #	Delta	Radius	Length
C11	67°13'47"	100.00	117.34
C12	11°36'52"	200.00	40.54
C13	33°35'40"	75.00	43.98
C14	15°18'40"	100.00	26.72
C15	122°04'45"	1.00	2.13
C17	106°48'40"	3.00	5.59
C18	3°54'06"	300.00	20.43
C19	38°42'45"	200.00	135.13
C20	14°23'18"	200.00	50.22
C22	3°43'58"	75.00	45.46
C24	3°10'02"	1000.00	55.28
C27	8°55'24"	150.00	23.36
C29	10°13'45"	120.00	21.42
C30	3°32'47"	900.00	55.71
C31	45°42'23"	38.00	30.31
C37	57°23'00"	16.00	16.02
C38	70°28'03"	10.00	12.30
C39	33°20'47"	60.00	34.92
C46	3°11'31"	500.00	27.86
C47	27°19'29"	190.00	90.61
C48	108°46'33"	3.00	5.70
C49	13°42'26"	100.00	23.92
C50	124°47'25"	1.00	2.18
C51	12°32'04"	100.00	21.88
C53	2°35'49"	500.00	22.66
C159	6°08'17"	100.00	10.71
C160	5°44'18"	100.00	10.02
C194	11°08'02"	65.00	12.63
C239	61°13'41"	15.00	16.03
C241	151°50'05"	2.00	5.30

Point Table				
Point #	Northing	Easting	Elevation	Raw Description
10	2889894.612	361824.132	218.230	MTRV MMAG
11	2889650.463	361665.609	219.370	MTRV MMAG
2242	2890030.362	361551.789	219.130	MTRV MMAG

Bound Table				
Point #	Northing	Easting	Raw Description	
15	2889748.432	361586.941	BOUND	
16	2889748.150	361584.961	BOUND	
17	2889778.724	361580.595	BOUND	
18	2889879.033	361557.205	BOUND	
19	2889940.410	361548.441	BOUND	
22	2889978.682	361553.055	BOUND	
23	2889978.823	361554.045	BOUND	
24	2889730.440	361661.230	BOUND	
25	2889776.402	361664.769	BOUND	
26	2889776.950	361668.610	BOUND	
27	2889792.148	361666.440	BOUND	
28	2889850.832	361759.075	BOUND	
29	2889979.178	361740.749	BOUND	
30	2889977.764	361730.849	BOUND	
31	2890031.666	361623.508	BOUND	



SEE SHEET 27 FOR GRADING PLANS
SEE SHEET 26 FOR CONSTRUCTION BASELINE DATA TABLES

CONTINUED ON
SHEET NO. 22

CHICOPEE MONTGOMERY GRANBY MCKINSTRY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	22	135
PROJECT FILE NO. 609061			

ALIGNMENT PLANS

3
N: 2890404.190'
E: 361372.787'
EL: 217.570'
MMAG

Point Table				
Point #	Northing	Easting	Elevation	Raw Description
3	2890404.190	361372.787	217.570	MTRV MMAG
9	2890230.795	361710.029	218.790	MTRV MMAG
20	2890220.191	361654.192	218.560	MTRV MMAG
2242	2890030.362	361551.789	219.130	MTRV MMAG

499 MONTGOMERY STREET
UH STORAGE (DE) LIMITED PARTNERSHIP
DEED BOOK 14192 PAGE 23
PLAN BOOK 332 PAGE 39

2242
N: 2890030.362'
E: 361551.789'
EL: 219.130'
MMAG

MONTGOMERY STREET

SHOPPING PLAZA

Curve Table			
Curve #	Delta	Radius	Length
C19	38°42'45"	200.00	135.13
C21	40°19'34"	15.00	10.56
C32	42°30'07"	100.00	74.18
C34	18°36'37"	50.00	16.24
C35	91°12'18"	40.00	63.67
C36	49°16'11"	40.00	34.40
C37	57°23'00"	16.00	16.02
C38	70°28'03"	10.00	12.30
C39	33°20'47"	60.00	34.92
C41	26°59'09"	150.00	70.65
C42	16°34'07"	150.00	43.38
C43	24°04'02"	100.00	42.01
C44	87°56'19"	5.00	7.67
C45	9°21'00"	134.00	21.87
C52	64°12'53"	120.00	134.49
C74	105°08'51"	3.00	5.51
C75	98°07'32"	20.00	34.25
C76	70°17'38"	40.00	49.07
C80	17°22'51"	200.00	60.67
C82	118°51'07"	1.00	2.07
C87	5°20'58"	110.00	10.27
C88	7°14'12"	142.00	17.93

Curve Table			
Curve #	Delta	Radius	Length
C89	53°39'31"	22.00	20.60
C90	53°39'31"	30.00	28.10
C91	28°31'21"	10.00	4.98
C92	9°23'35"	50.00	8.20
C93	110°04'37"	5.00	9.61
C104	32°16'12"	156.00	87.86
C106	27°59'03"	156.00	76.19
C109	90°00'00"	5.00	7.85
C110	38°26'41"	60.00	40.26
C111	68°42'08"	10.00	11.99
C112	3°55'39"	50.00	3.43
C113	4°14'34"	50.00	3.70
C119	46°36'07"	110.00	89.47
C143	26°49'47"	33.00	15.45
C156	89°27'42"	5.00	7.81
C182	19°32'15"	101.00	34.44
C183	3°09'31"	101.00	5.57
C184	13°39'59"	34.00	8.11
C185	129°50'11"	1.00	2.27
C187	18°17'02"	215.00	68.61
C191	25°46'10"	150.00	67.46
C193	94°21'48"	3.00	4.94

Curve Table			
Curve #	Delta	Radius	Length
C220	90°00'00"	3.00	4.71
C221	40°59'43"	87.00	62.25
C222	90°00'00"	3.00	4.71
C240	4°12'34"	100.00	7.35
C249	42°46'02"	152.00	113.46

Bound Table			
Point #	Northing	Easting	Raw Description
22	2889978.682	361553.055	BOUND
31	2890031.666	361623.508	BOUND
32	2890102.670	361608.011	BOUND
33	2890134.094	361625.818	BOUND
34	2890213.524	361614.476	BOUND
35	2890244.051	361591.935	BOUND
36	2890346.257	361577.341	BOUND
37	2890525.846	361577.544	BOUND
38	2890583.865	361596.177	BOUND
39	2890331.470	361500.759	BOUND
40	2890354.888	361487.320	BOUND
41	2890361.750	361480.750	BOUND
42	2890361.224	361477.137	BOUND
43	2890370.166	361473.928	BOUND
65	2890449.558	361413.977	BOUND
66	2890465.001	361425.159	BOUND
67	2890543.395	361436.375	BOUND

SEE SHEET 28 FOR GRADING PLANS
SEE SHEET 26 FOR CONSTRUCTION BASELINE DATA TABLES

CONTINUED ON
SHEET NO. 23

CONTINUED ON
SHEET NO. 24

CONTINUED ON
SHEET NO. 21



514 MONTGOMERY STREET
CROWN ATLANTIC COMPANY, LLC
DEED BOOK 10711 PAGE 789
PLAN BOOK 287 PAGE 80
PLAN BOOK 326 PAGE 13

MONTGOMERY STREET
OUT PARCELS ACQUISITIONS, INC.
DEED BOOK 15252 PAGE 508
PLAN BOOK 287 PAGE 80
PLAN BOOK 326 PAGE 13

9
N: 2890230.795'
E: 361710.029'
EL: 218.790'
MMAG

20
N: 2890220.191'
E: 361654.192'
EL: 218.560'
MMAG

21 BAY STATE ROAD
DHANYA REAL ESTATE
DEED BOOK 22170 PAGE 597

BAY STATE ROAD
DHANYA REAL ESTATE
DEED BOOK 22170 PAGE 597

515 MONTGOMERY STREET
DHANYA REAL ESTATE
DEED BOOK 22170 PAGE 597

499 MONTGOMERY STREET
UH STORAGE (DE) LIMITED PARTNERSHIP
DEED BOOK 14192 PAGE 23
PLAN BOOK 332 PAGE 39

2242
N: 2890030.362'
E: 361551.789'
EL: 219.130'
MMAG

PT+89.36
47.49' LT
PT+85.43
38.25' LT

PC+47.94
25.70' LT

PT+84.83
25.20' LT

PT+85.30
6.93' LT

PCC+21.82
21.88' RT

PC+37.27
35.24' RT

PT+27.46
102.13' LT

PT+28.59
99.78' LT

LPT 106+33.62
79.35' RT

LPT 106+51.78
89.16' RT

LPT 200+86.70
142.67' LT

LPT 200+78.97
124.07' LT

PT+57.91
89.57' LT

MEET EXIST
+92.7
117.4' LT

MONTGOMERY STREET
DIAMANTE 16 LLC
DEED BOOK 22349 PAGE 23

PT+50.63
71.43' RT

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CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	23	135
PROJECT FILE NO. 609061			

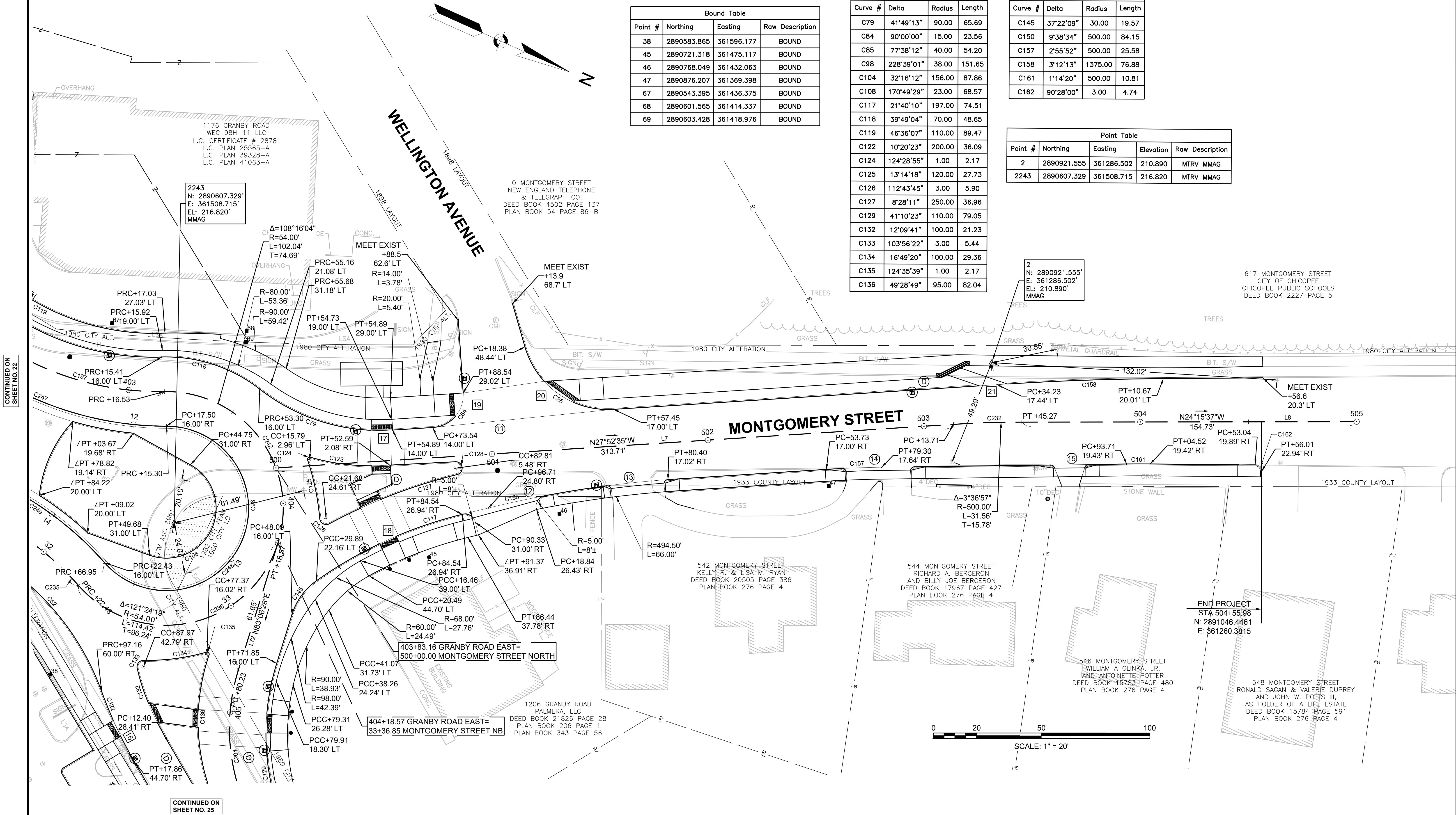
ALIGNMENT PLANS

Bound Table			
Point #	Northing	Easting	Raw Description
38	2890583.865	361596.177	BOUND
45	2890721.318	361475.117	BOUND
46	2890768.049	361432.063	BOUND
47	2890876.207	361369.398	BOUND
67	2890543.395	361436.375	BOUND
68	2890601.565	361414.337	BOUND
69	2890603.428	361418.976	BOUND

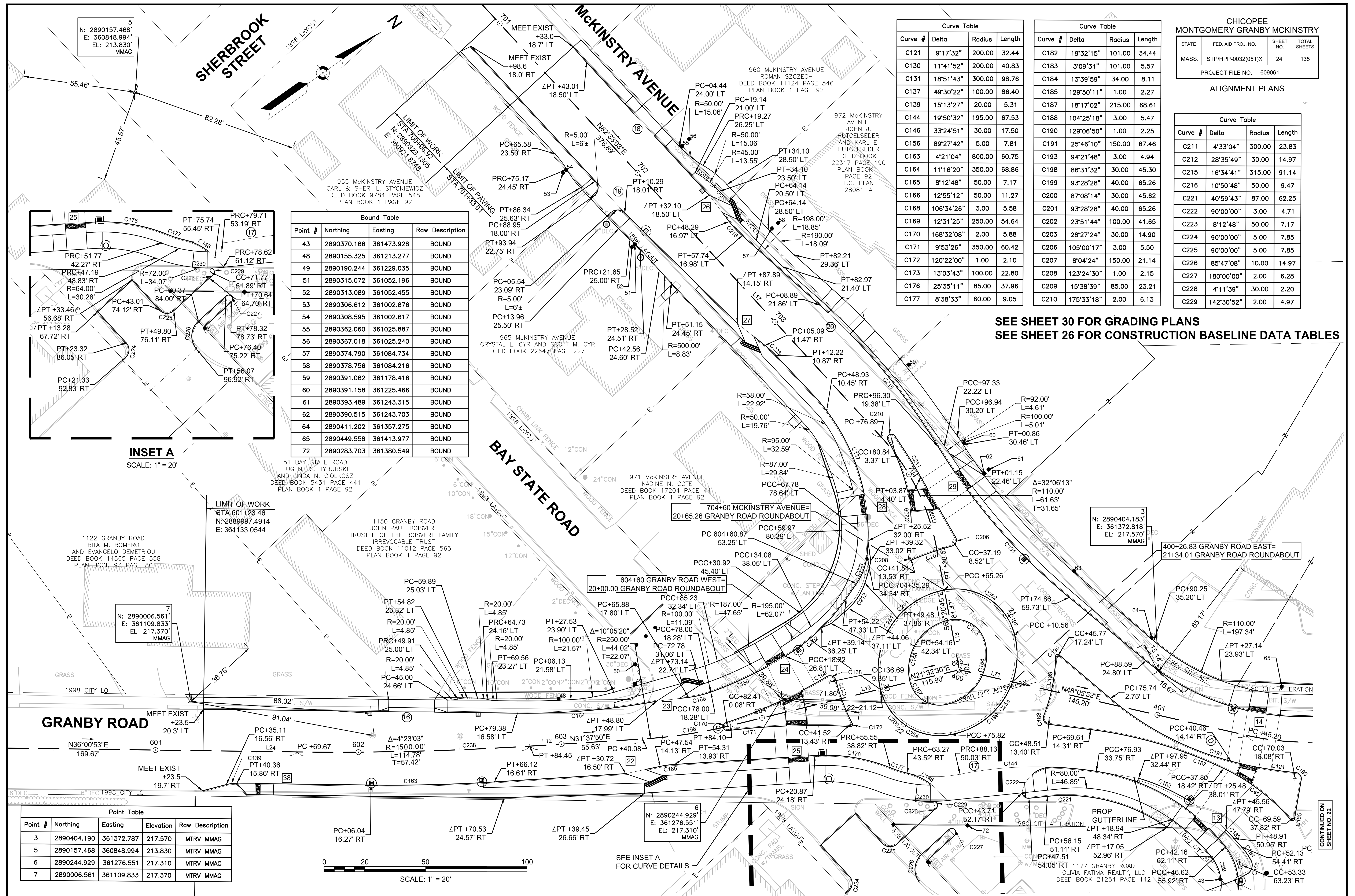
Curve Table			
Curve #	Delta	Radius	Length
C79	41°49'13"	90.00	65.69
C84	90°00'00"	15.00	23.56
C85	77°38'12"	40.00	54.20
C98	228°39'01"	38.00	151.65
C104	32°16'12"	156.00	87.86
C108	170°49'29"	23.00	68.57
C117	21°40'10"	197.00	74.51
C118	39°49'04"	70.00	48.65
C119	46°36'07"	110.00	89.47
C122	10°20'23"	200.00	36.09
C124	124°28'55"	1.00	2.17
C125	13°14'18"	120.00	27.73
C126	112°43'45"	3.00	5.90
C127	8°28'11"	250.00	36.96
C129	41°10'23"	110.00	79.05
C132	12°09'41"	100.00	21.23
C133	103°56'22"	3.00	5.44
C134	16°49'20"	100.00	29.36
C135	124°35'39"	1.00	2.17
C136	49°28'49"	95.00	82.04

Curve Table			
Curve #	Delta	Radius	Length
C145	37°22'09"	30.00	19.57
C150	9°38'34"	500.00	84.15
C157	2°55'52"	500.00	25.58
C158	3°12'13"	1375.00	76.88
C161	1°14'20"	500.00	10.81
C162	90°28'00"	3.00	4.74

Point Table				
Point #	Northing	Easting	Elevation	Raw Description
2	2890921.555	361286.502	210.890	MTRV MMAG
2243	2890607.329	361508.715	216.820	MTRV MMAG

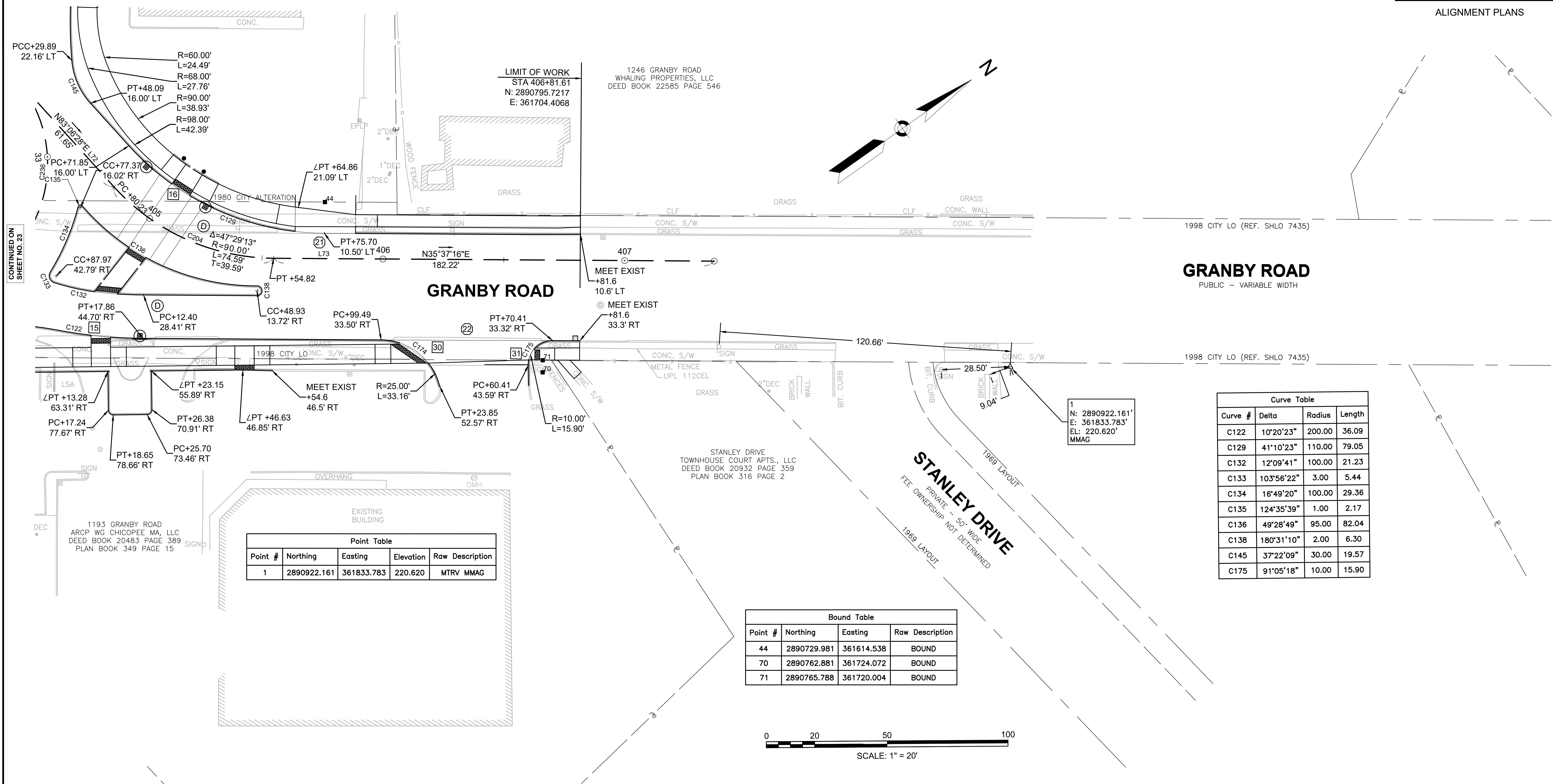


SEE SHEET 29 FOR GRADING PLANS
SEE SHEET 26 FOR CONSTRUCTION BASELINE DATA TABLES



CHICOPEE MONTGOMERY GRANBY MCKINSTRY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	25	135
PROJECT FILE NO. 609061			

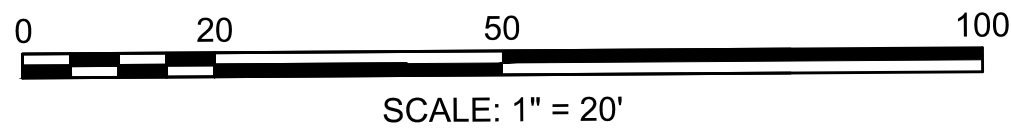
ALIGNMENT PLANS



Point Table				
Point #	Northing	Easting	Elevation	Raw Description
1	2890922.161	361833.783	220.620	MTRV MMAG

Curve Table			
Curve #	Delta	Radius	Length
C122	10°20'23"	200.00	36.09
C129	41°10'23"	110.00	79.05
C132	12°09'41"	100.00	21.23
C133	103°56'22"	3.00	5.44
C134	16°49'20"	100.00	29.36
C135	124°35'39"	1.00	2.17
C136	49°28'49"	95.00	82.04
C138	180°31'10"	2.00	6.30
C145	37°22'09"	30.00	19.57
C175	91°05'18"	10.00	15.90

Bound Table			
Point #	Northing	Easting	Raw Description
44	2890729.981	361614.538	BOUND
70	2890762.881	361724.072	BOUND
71	2890765.788	361720.004	BOUND



SEE SHEET 31 FOR GRADING PLANS
SEE SHEET 26 FOR CONSTRUCTION BASELINE DATA TABLES

MONTGOMERY STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	100+00.00	2889409.6125	361670.9241		N8°06'23"W 274.66'	102+74.66	2889681.523	361632.195
C178	102+74.66	2889681.5235	361632.1950	R = 700.00' Δ= 12°37'46" L=154.30' T=77.46'		104+28.95	2889835.433	361627.381
L2	104+28.95	2889835.4327	361627.3808		N4°31'23"E 71.05'	105+00.00	2889906.257	361632.983
L3	105+00.00	2889906.2569	361632.9834		N20°48'14"W 66.98'	105+66.98	2889968.872	361609.193
C179	105+66.98	2889968.8721	361609.1933	R = 500.00' Δ= 10°29'28" L=91.55' T=45.90'		106+58.53	2890056.946	361584.672
L4	106+58.53	2890056.9464	361584.6717		N10°18'46"W 152.79'	108+11.33	2890207.272	361557.318
C180	108+11.33	2890207.2723	361557.3183	R = 3000.00' Δ= 1°49'49" L=95.83' T=47.92'		109+07.16	2890301.265	361538.660
L5	109+07.16	2890301.2647	361538.6598		N12°08'35"W 75.48'	109+82.64	2890375.060	361522.782
C181	109+82.64	2890375.0597	361522.7816	R = 600.00' Δ= 2°42'20" L=28.33' T=14.17'		110+10.97	2890402.890	361517.478
L6	110+10.97	2890402.8898	361517.4777		N9°26'14"W 56.98'	110+67.95	2890459.095	361508.135

GRANBY ROAD WEST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L24	600+00.00	2889897.6300	361060.4616		N36°00'53"E 169.67'	601+69.67	2890034.868	361160.225
C238	601+69.67	2890034.8683	361160.2249	R = 1500.00' Δ= 4°23'03" L=114.78' T=57.42'		602+84.45	2890130.200	361224.098
C196	603+40.08	2890177.5667	361253.2734	R = 250.00' Δ= 10°05'20" L=44.02' T=22.07'		603+84.10	2890216.882	361272.949
L13	603+84.10	2890216.8818	361272.9490		N21°32'30"E 115.90'	605+00.00	2890324.688	361315.506
L12	602+84.45	2890130.1996	361224.0982		N31°37'50"E 55.63'	603+40.08	2890177.567	361253.273

MONTGOMERY STREET NB CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C214	30+00.00	2890360.2017	361540.8104	R = 85.00' Δ= 20°43'08" L=30.74' T=15.54'		30+30.74	2890390.757	361539.859
L23	30+30.74	2890390.7568	361539.8589		N8°34'33"E 67.23'	30+97.97	2890457.239	361549.885
C231	30+97.97	2890457.2393	361549.8847	R = 49.00' Δ= 26°49'47" L=22.95' T=11.69'		31+20.92	2890479.894	361547.967
C234	31+20.92	2890479.8942	361547.9668	R = 136.00' Δ= 42°46'02" L=101.51' T=53.25'		32+22.43	2890578.920	361553.381
C235	31+20.92	2890479.8942	361547.9668	R = 136.00' Δ= 42°46'02" L=101.51' T=53.25'		32+22.43	2890578.920	361553.381
C236	32+22.43	2890578.9204	361553.3814	R = 54.00' Δ= 121°24'19" L=114.42' T=96.24'		33+36.85	2890654.935	361497.769

PEANUT ROUNDABOUT - CENTRAL ISLAND CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C244	10+00.00	2890443.8453	361531.6839	R = 20.00' Δ= 76°25'37" L=26.68' T=15.75'		10+26.68	2890426.904	361513.650
C245	10+26.68	2890426.9037	361513.6497	R = 40.00' Δ= 78°06'18" L=54.53' T=32.45'		10+81.21	2890455.129	361471.891
C149	10+81.21	2890455.1288	361471.8912	R = 20.00' Δ= 38°16'05" L=13.36' T=6.94'		10+94.56	2890468.230	361472.404
C247	10+94.56	2890468.2298	361472.4041	R = 152.00' Δ= 45°30'45" L=120.74' T=63.76'		12+15.30	2890585.786	361469.571
C248	12+15.30	2890585.7864	361469.5710	R = 38.00' Δ= 228°39'01" L=151.65' T=84.06'		13+66.95	2890585.559	361538.824
L74	14+95.86	2890459.6252	361534.0636		S8°34'33"W 15.96'	15+11.82	2890443.845	361531.684

SHOPPING PLAZA CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L11	300+00.00	2890168.6322	361564.3492		N79°41'14"E 55.47'	300+55.47	2890178.562	361618.920
C237	300+55.47	2890178.5619	361618.9197	R = 750.00' Δ= 1°46'57" L=23.33' T=11.67'		300+78.80	2890182.381	361641.936
L70	300+78.80	2890182.3812	361641.9364		N81°28'11"E 321.20'	304+00.00	2890230.026	361959.584

MASS TURNPIKE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L9	200+00.00	2889906.2569	361632.9834		N88°19'13"E 88.02'	200+88.02	2889908.837	361720.969
C233	200+88.02	2889908.8369	361720.9687	R = 500.00' Δ= 6°26'55" L=56.27' T=28.17'		201+44.30	2889913.645	361777.008
L10	201+44.30	2889913.6450	361777.0079		N81°52'18"E 355.70'	205+00.00	2889963.937	362129.137

MONTGOMERY STREET NORTH CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L7	500+00.00	2890639.8589	361466.4181		N27°52'35"W 313.71'	503+13.71	2890917.169	361319.737
C232	503+13.71	2890917.1690	361319.7366	R = 500.00' Δ= 3°36'57" L=31.56' T=15.78'		503+45.27	2890945.509	361305.872
L8	503+45.27	2890945.5092	361305.8723		N24°15'37"W 154.73'	505+00.00	2891086.576	361242.296

GRANBY ROAD EAST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L71	400+00.00	2890324.6876	361315.5055		N48°05'52"E 145.20'	401+45.20	2890421.664	361423.579
C197	401+45.20	2890421.6638	361423.5786	R = 134.00' Δ= 73°15'27" L=171.33' T=99.62'		403+16.53	2890578.367	361455.372
C242	403+16.53	2890578.3674	361455.3719	R = 54.00' Δ= 108°16'04" L=102.04' T=74.69'		404+18.57	2890654.935	361497.769
L72	404+18.57	2890654.9350	361497.7686		N83°06'28"E 61.65'	404+80.23	2890662.334	361558.977
C204	404+80.23	2890662.3336	361558.9772	R = 90.00' Δ= 47°29'13" L=74.59' T=39.59'		405+54.82	2890699.265	361621.337
L73	405+54.82	2890699.2653	361621.3370		N35°37'16"E 182.22'	407+37.04	2890847.386	361727.463

MCKINSTRY AVENUE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L17	700+00.00	2890310.5657	360825.7776		N82°33'03"E 376.89'	703+76.89	2890359.429	361199.491
C205	703+76.89	2890359.4291	361199.4905	R = 110.00' Δ= 32°06'13" L=61.63' T=31.65'		704+38.53	2890350.330	361259.637
L18	704+38.53	2890350.3300	361259.6373		S65°20'45"E 61.47'	705+00.00	2890324.688	361315.506

GRANBY ROAD ROUNDABOUT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C251	20+00.00	2890287.3895	361301.0537	R = 40.00' Δ= 93°28'28" L=65.26' T=42.50'		20+65.26	2890341.373	361279.152
C252	20+65.26	2890341.3732	361279.1518	R = 30.00' Δ= 86°31'32" L=45.30' T=28.23'		21+10.56	2890356.833	361317.256
C253	21+10.56	2890356.8325	361317.2560	R = 40.00' Δ= 93°28'28" L=65.26' T=42.50'		21+75.82	2890302.849	361339.158
C254	21+75.82	2890302.8488	361339.1578	R = 30.00' Δ= 86°31'32" L=45.30' T=28.23'		22+21.12	2890287.390	361301.054

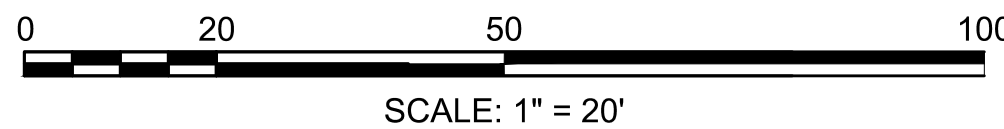
MASS PIKE ROUNDABOUT CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C243	90+00.00	2889906.2569	361677.9834	R = 45.00' Δ= 360°00'00" L=282.74' T=0.00'		92+82.74	2889906.257	361677.983

CHICOPEE MONTGOMERY GRANBY MCKINSTRY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	26	135
PROJECT FILE NO. 609061			

ALIGNMENT DATA TABLES

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	27	135

GRADING PLANS



CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	29	135

PROJECT FILE NO. 609061

GRADING PLANS

Point Table

Point #	Northing	Easting	Elevation	Raw Description
2	2890921.555	361286.502	210.890	MTRV MMAG
2243	2890607.329	361508.715	216.820	MTRV MMAG

CONTINUED ON
SHEET NO. 28

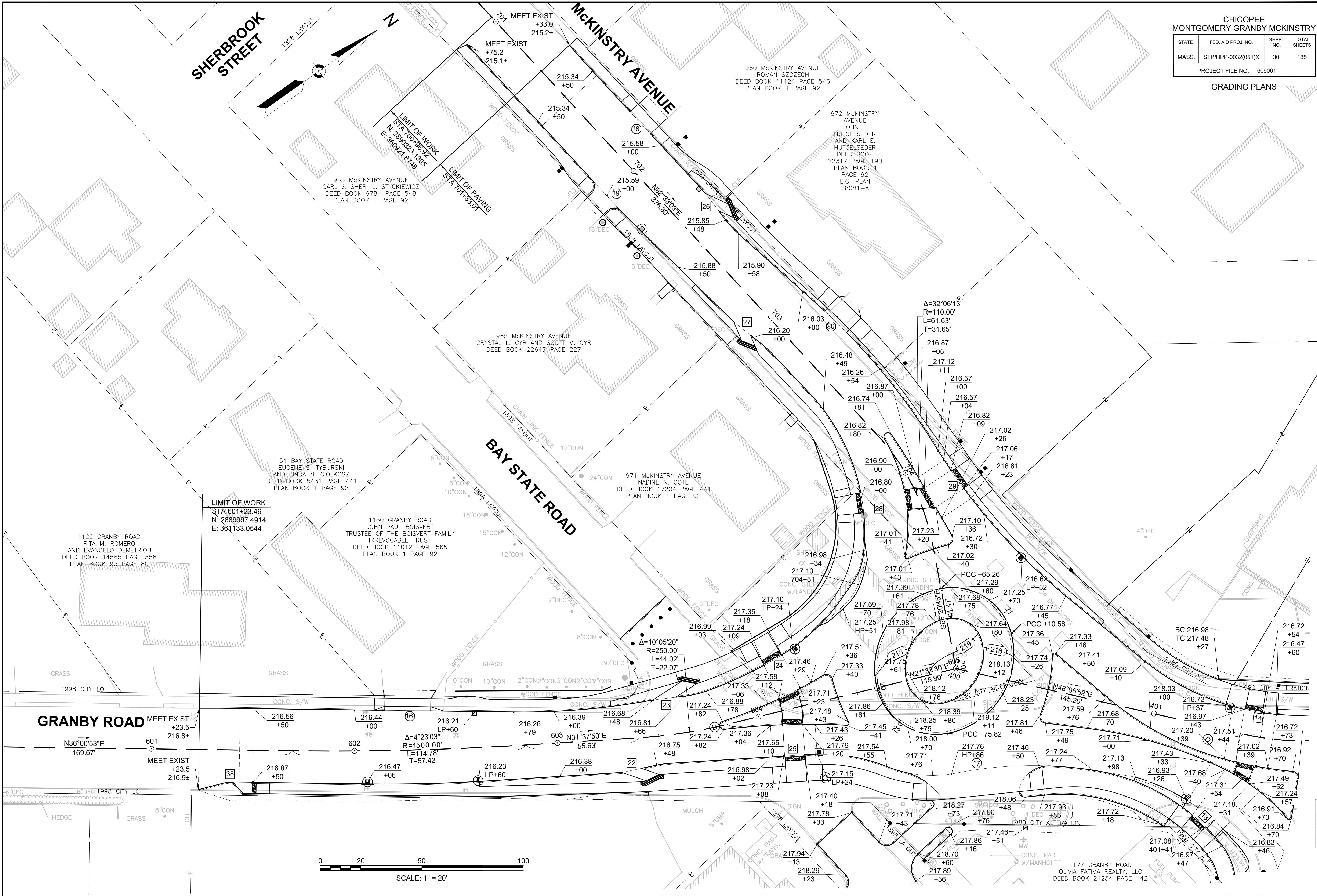
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CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	30	135

PROJECT FILE NO. 609061

GRADING PLANS



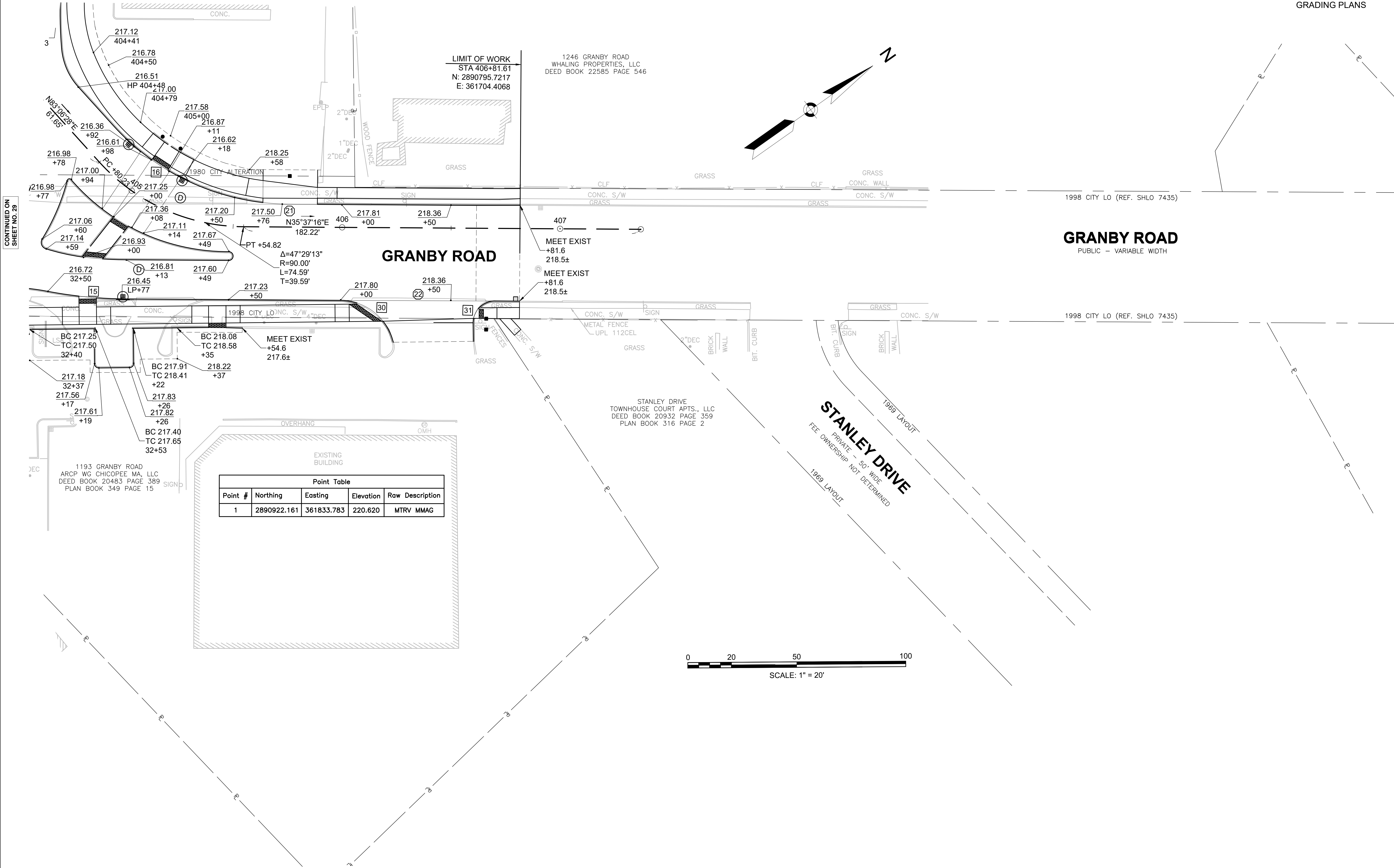
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CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	31	135

PROJECT FILE NO. 609061

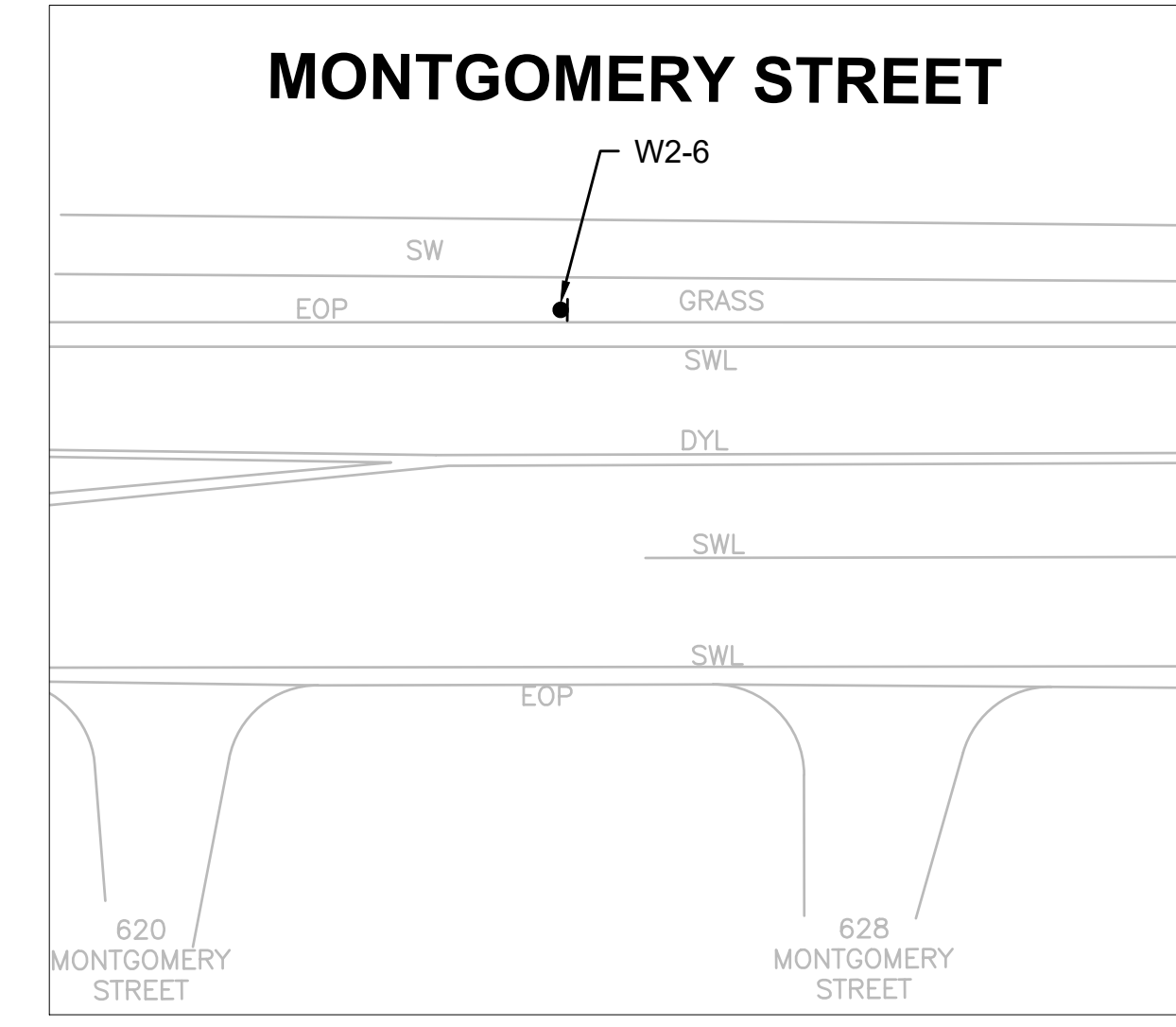
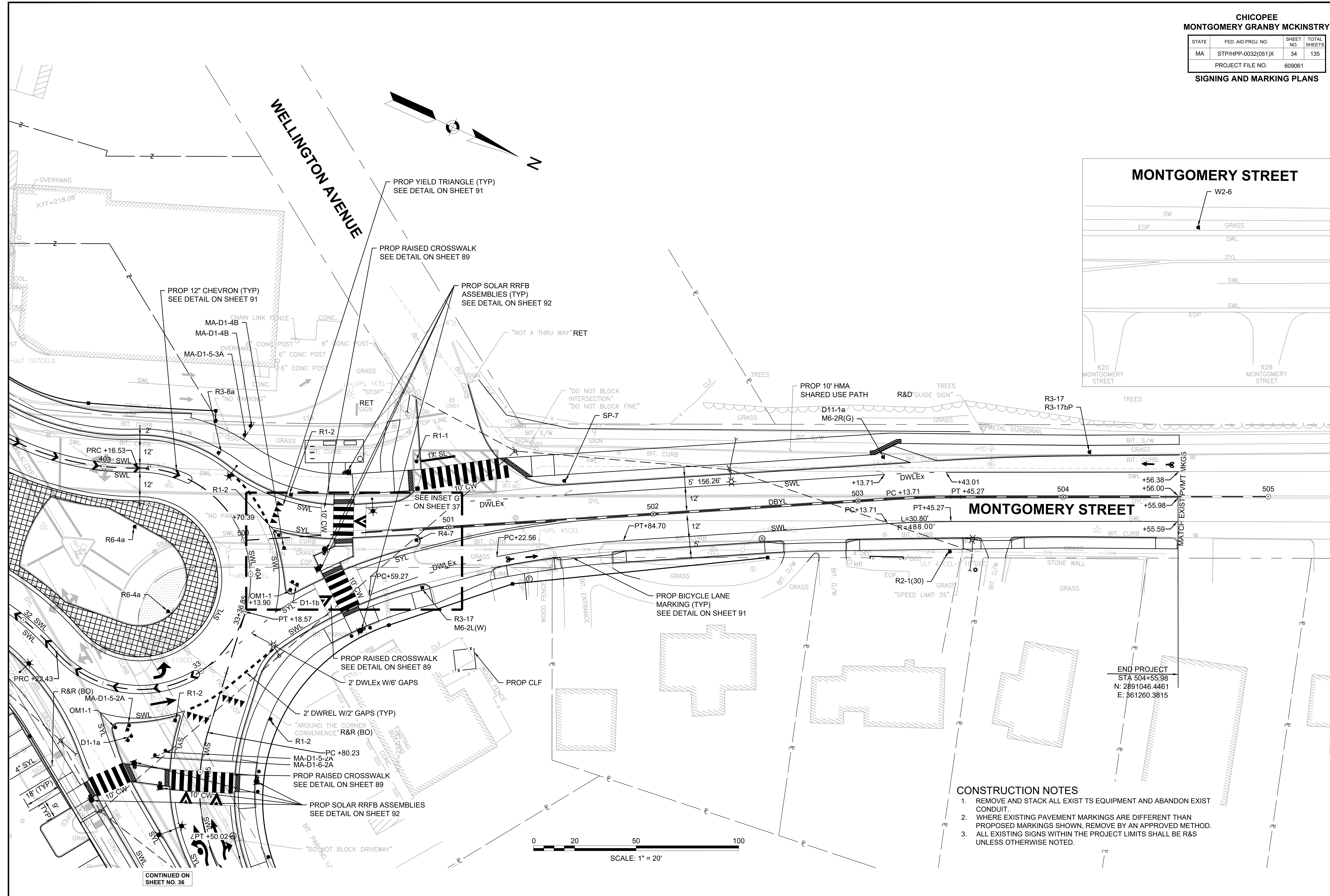
GRADING PLANS



Point Table				
Point #	Northing	Easting	Elevation	Raw Description
1	2890922.161	361833.783	220.620	MTRV MMAG

CONTINUED ON
SHEET NO. 33

CONTINUED ON
SHEET NO. 36

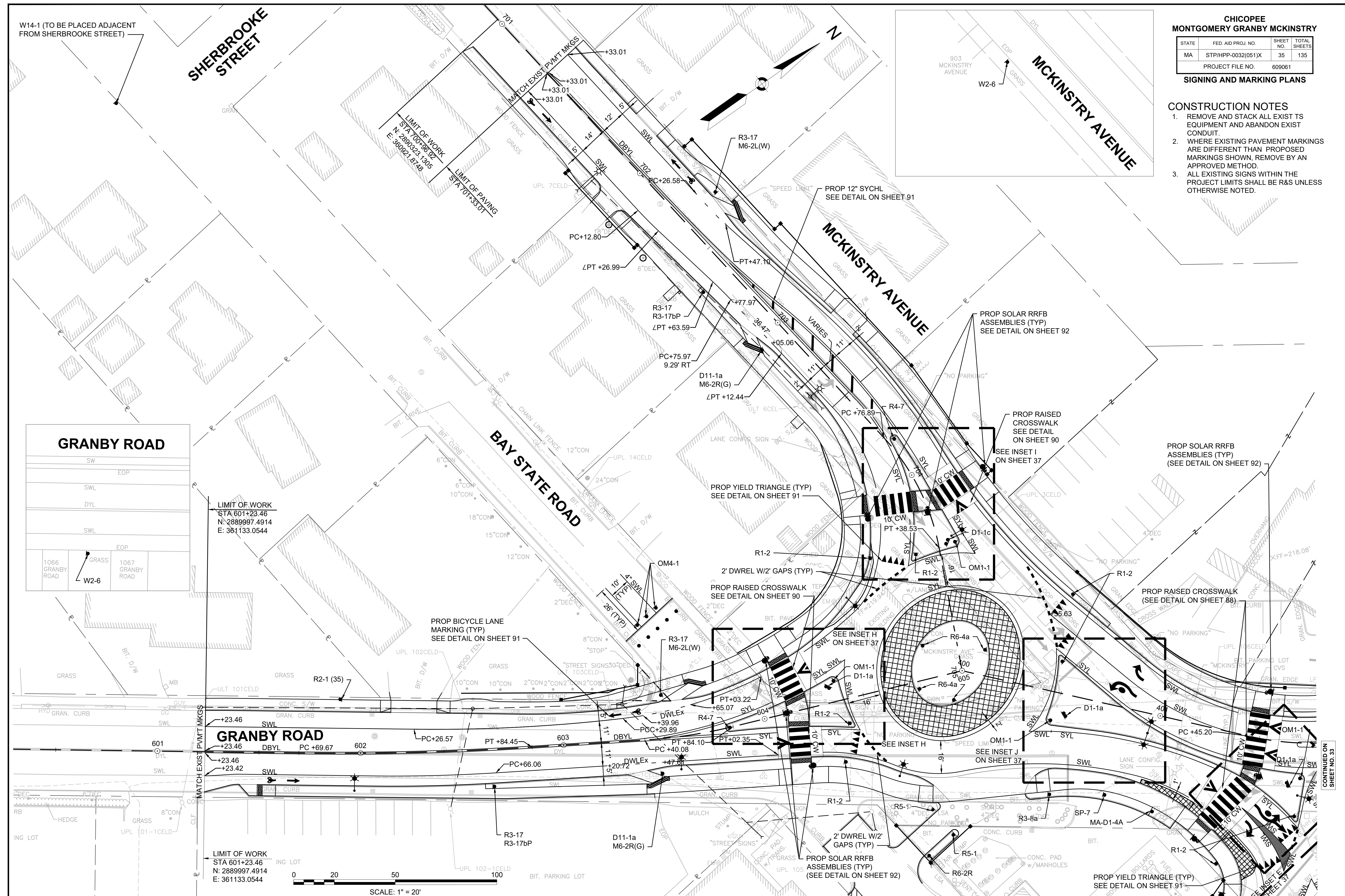


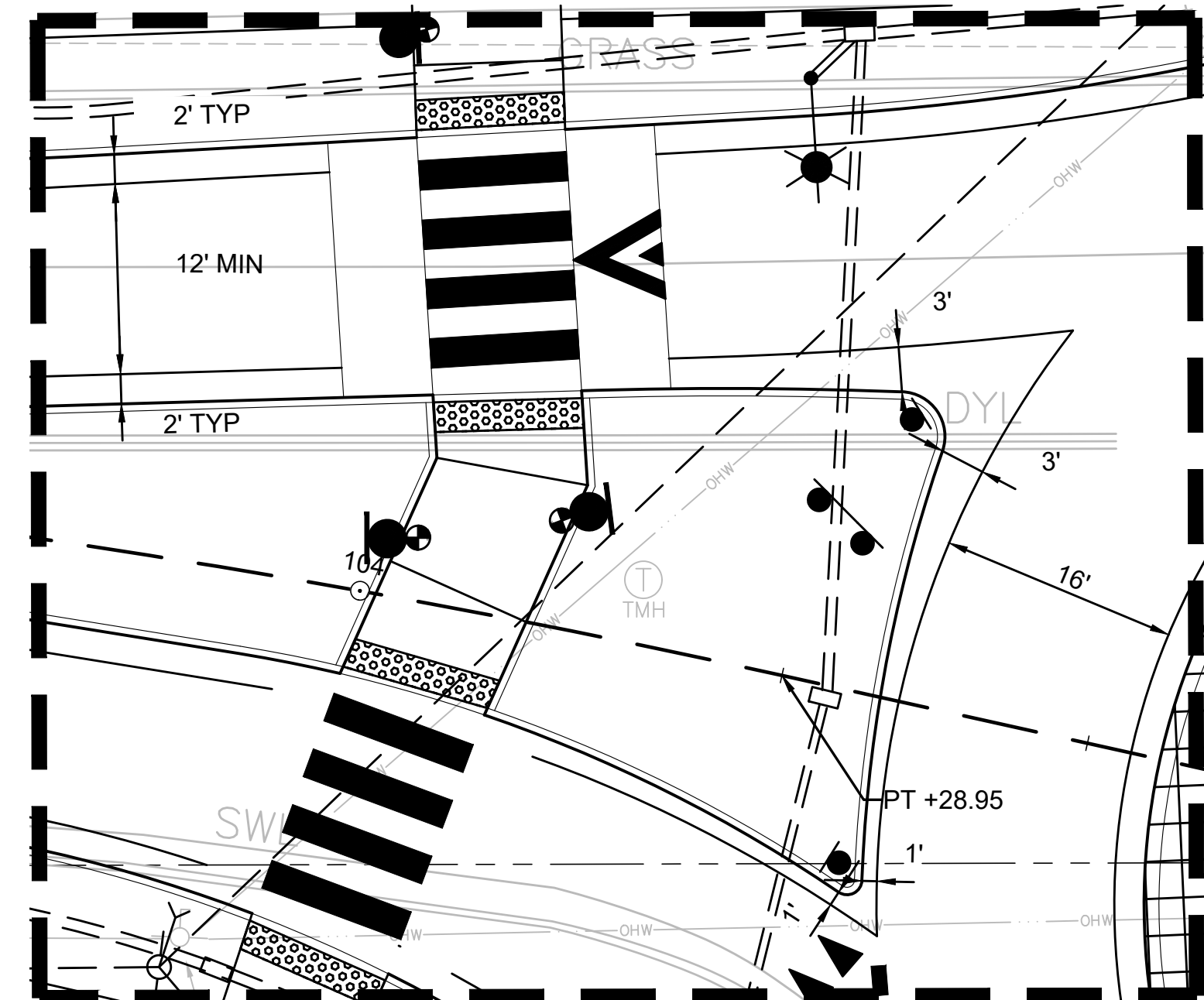
- CONSTRUCTION NOTES**
1. REMOVE AND STACK ALL EXIST TS EQUIPMENT AND ABANDON EXIST CONDUIT.
 2. WHERE EXISTING PAVEMENT MARKINGS ARE DIFFERENT THAN PROPOSED MARKINGS SHOWN, REMOVE BY AN APPROVED METHOD.
 3. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE R&S UNLESS OTHERWISE NOTED.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	35	135
PROJECT FILE NO.		609061	

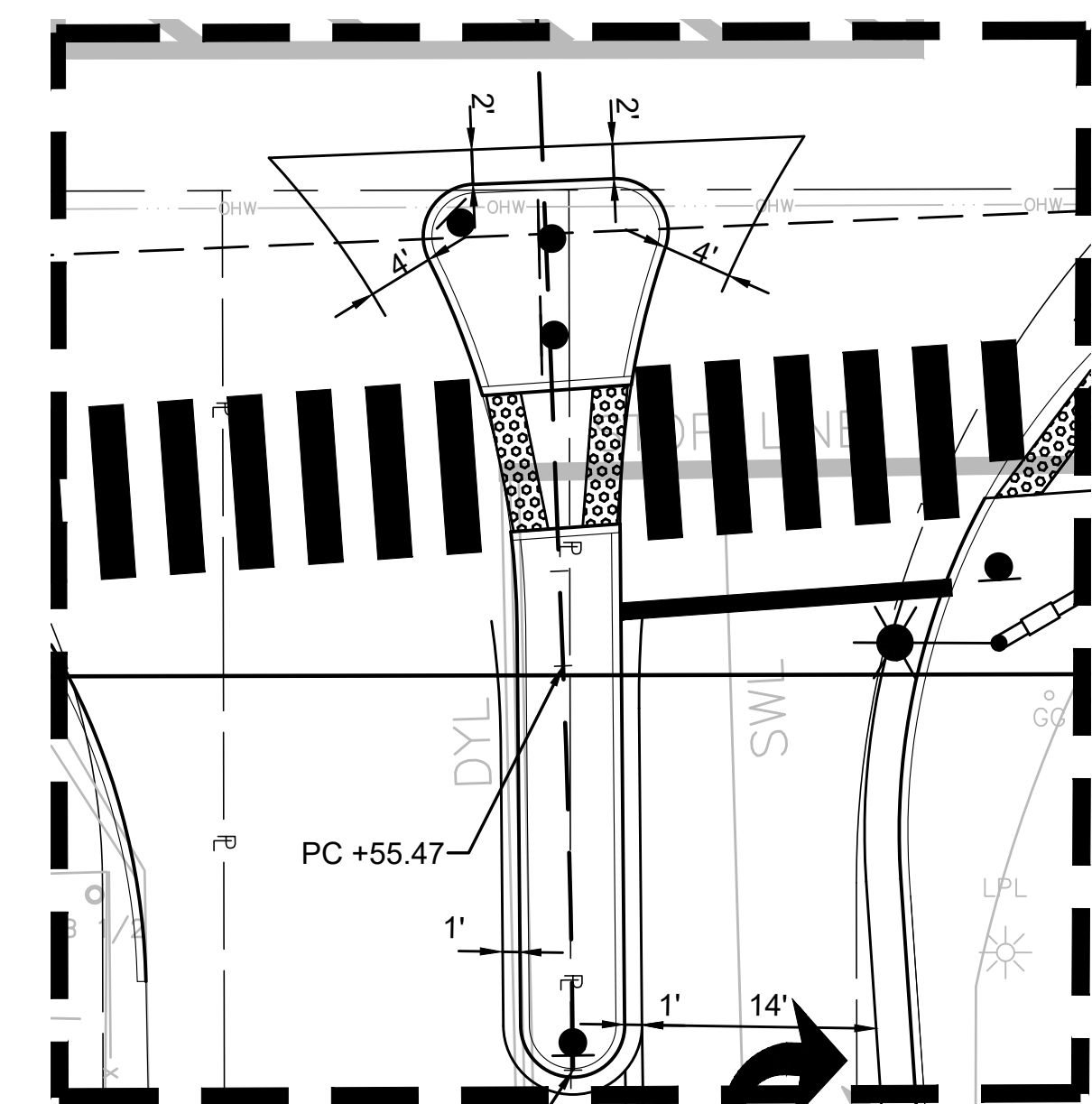
1. REMOVE AND STACK ALL EXISTING

2. WHERE EXISTING PAVEMENT MARKINGS ARE DIFFERENT THAN PROPOSED MARKINGS SHOWN, REMOVE BY AN APPROVED METHOD.
3. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE R&S UNLESS OTHERWISE NOTED.

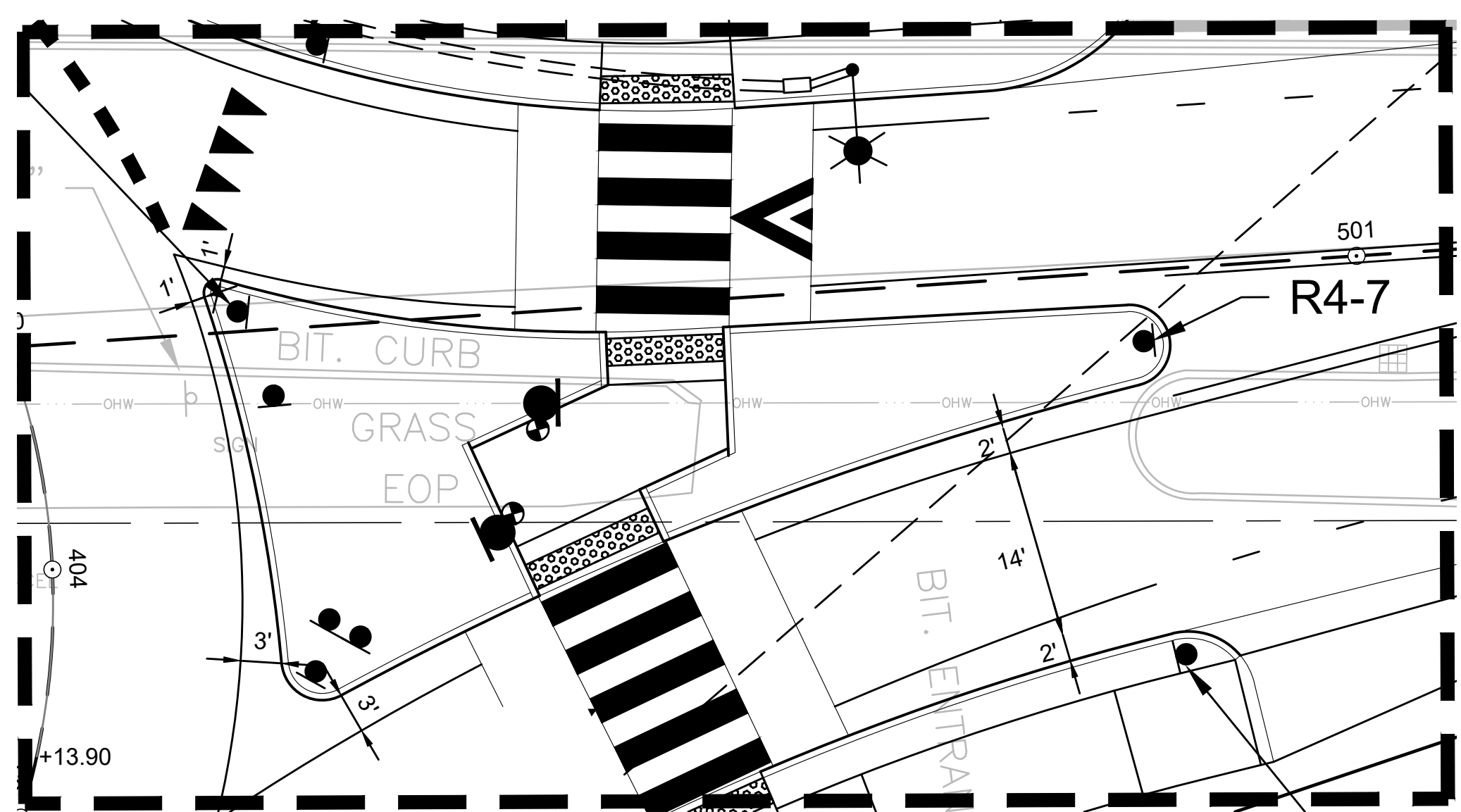




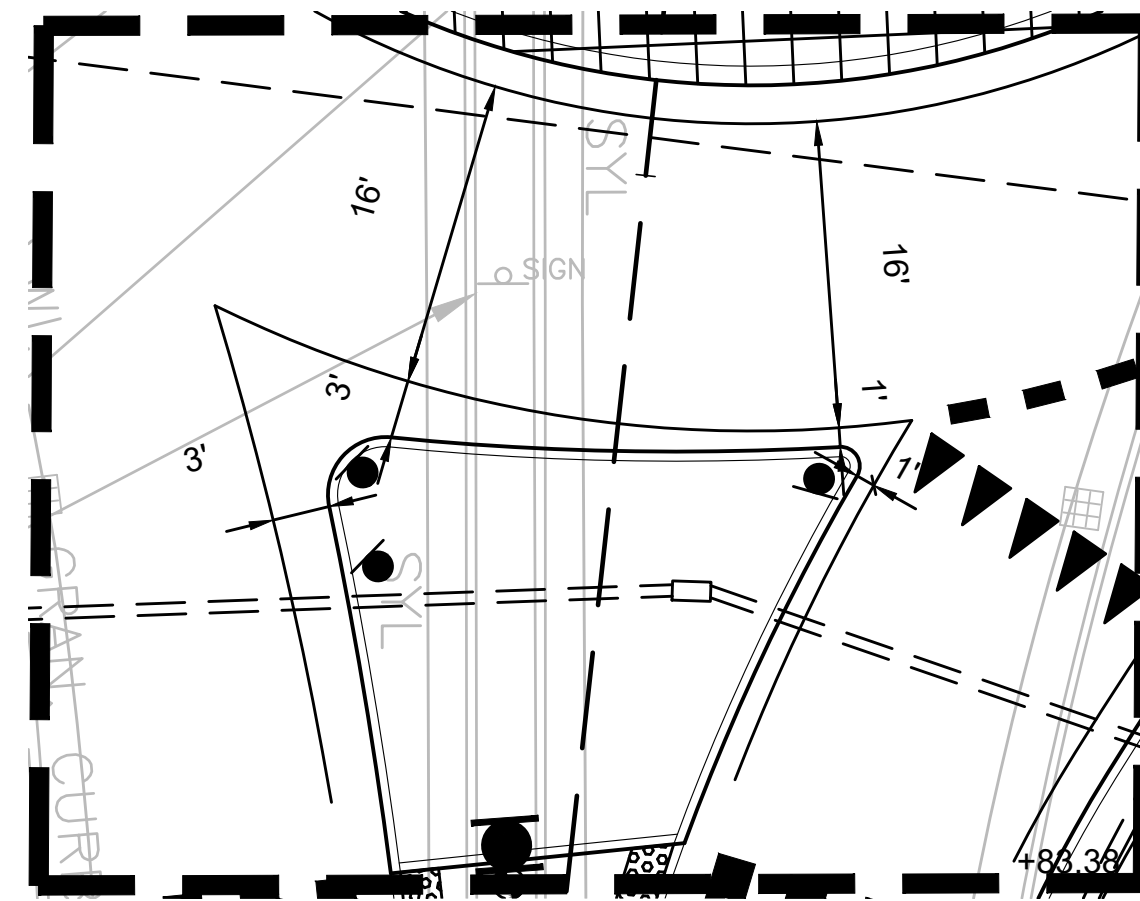
INSET A
SCALE: 1" = 10'



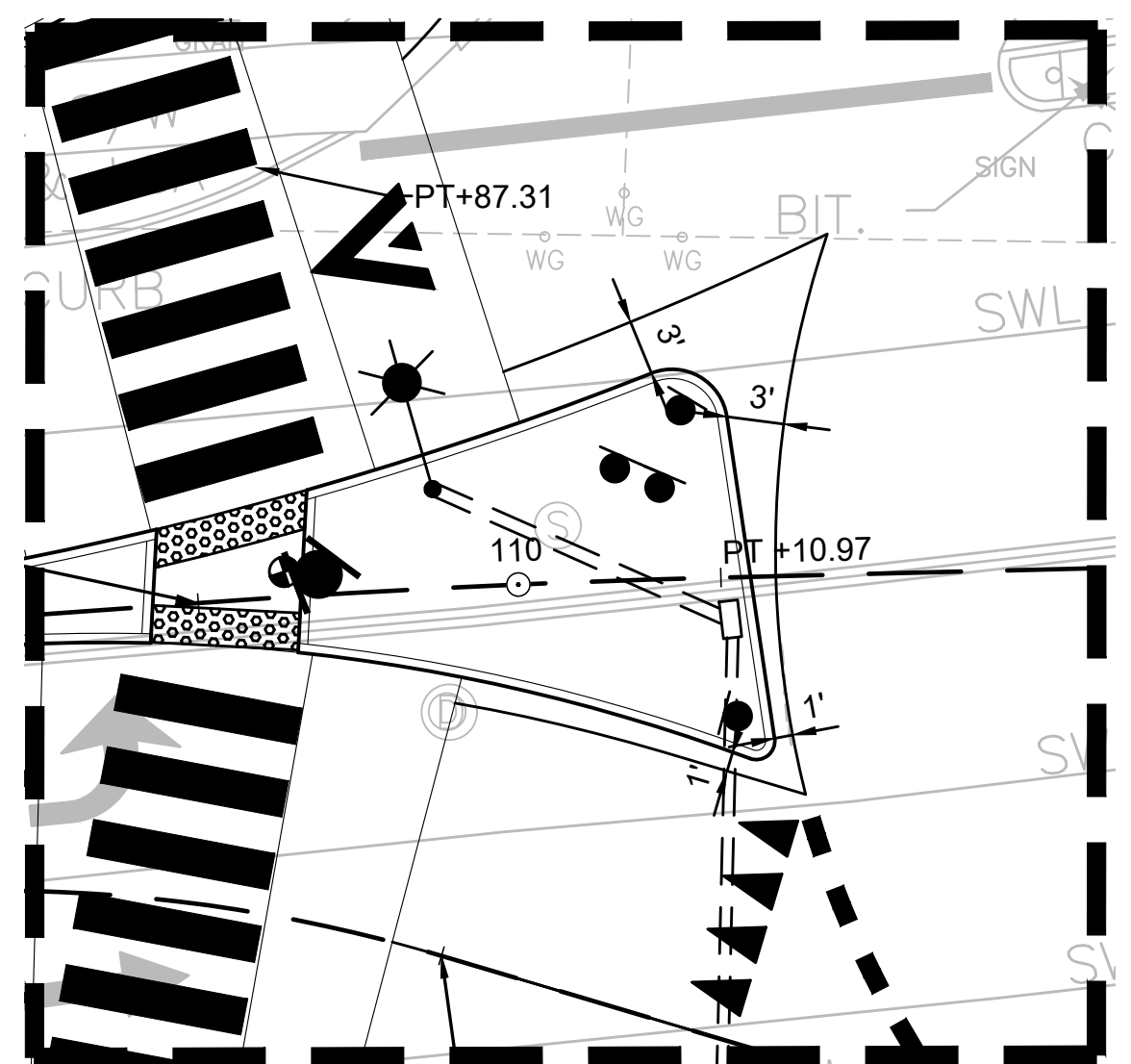
INSET D
SCALE: 1" = 10'



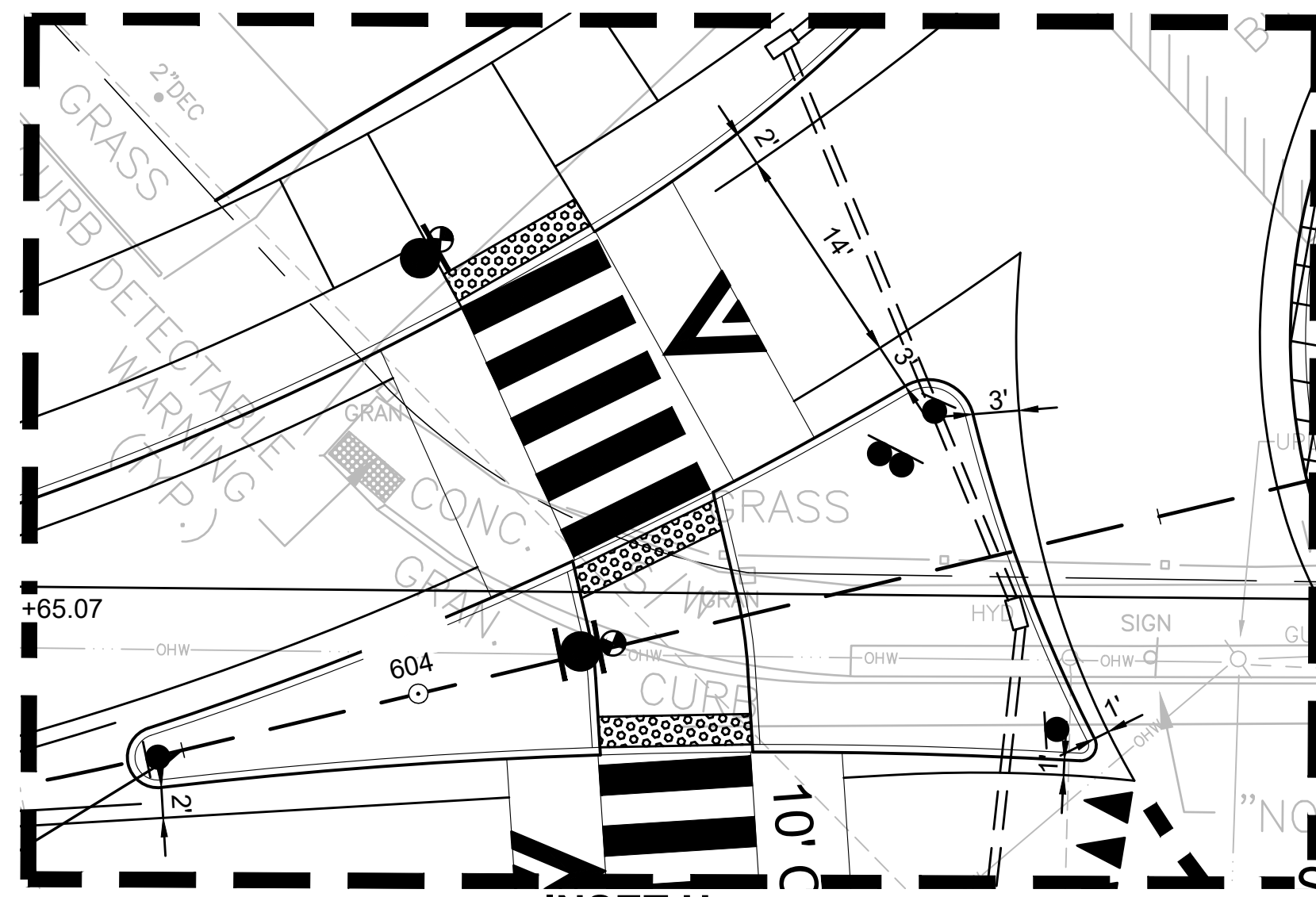
INSET G
SCALE: 1" = 10'



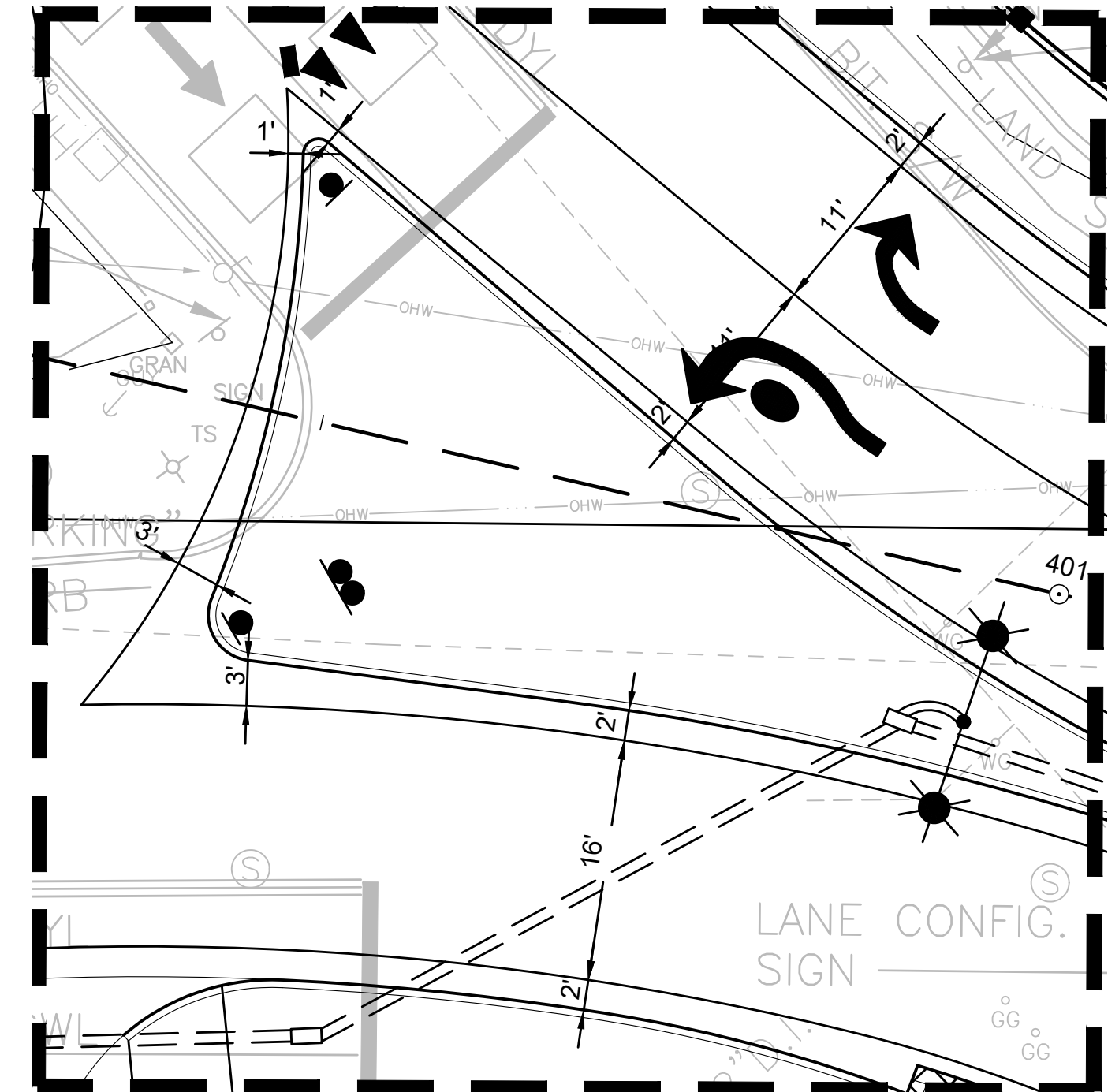
INSET B
SCALE: 1" = 10'



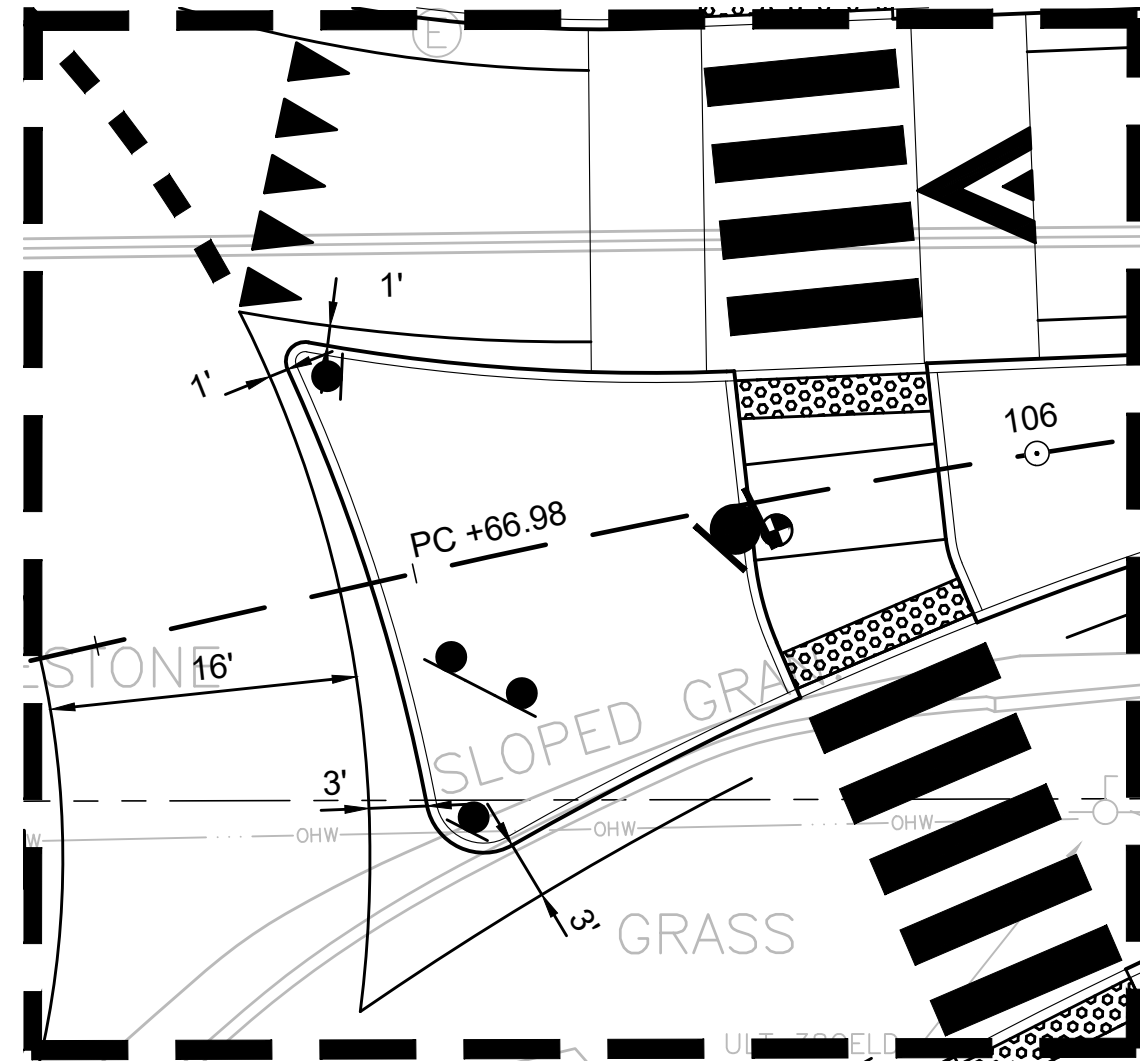
INSET E
SCALE: 1" = 10'



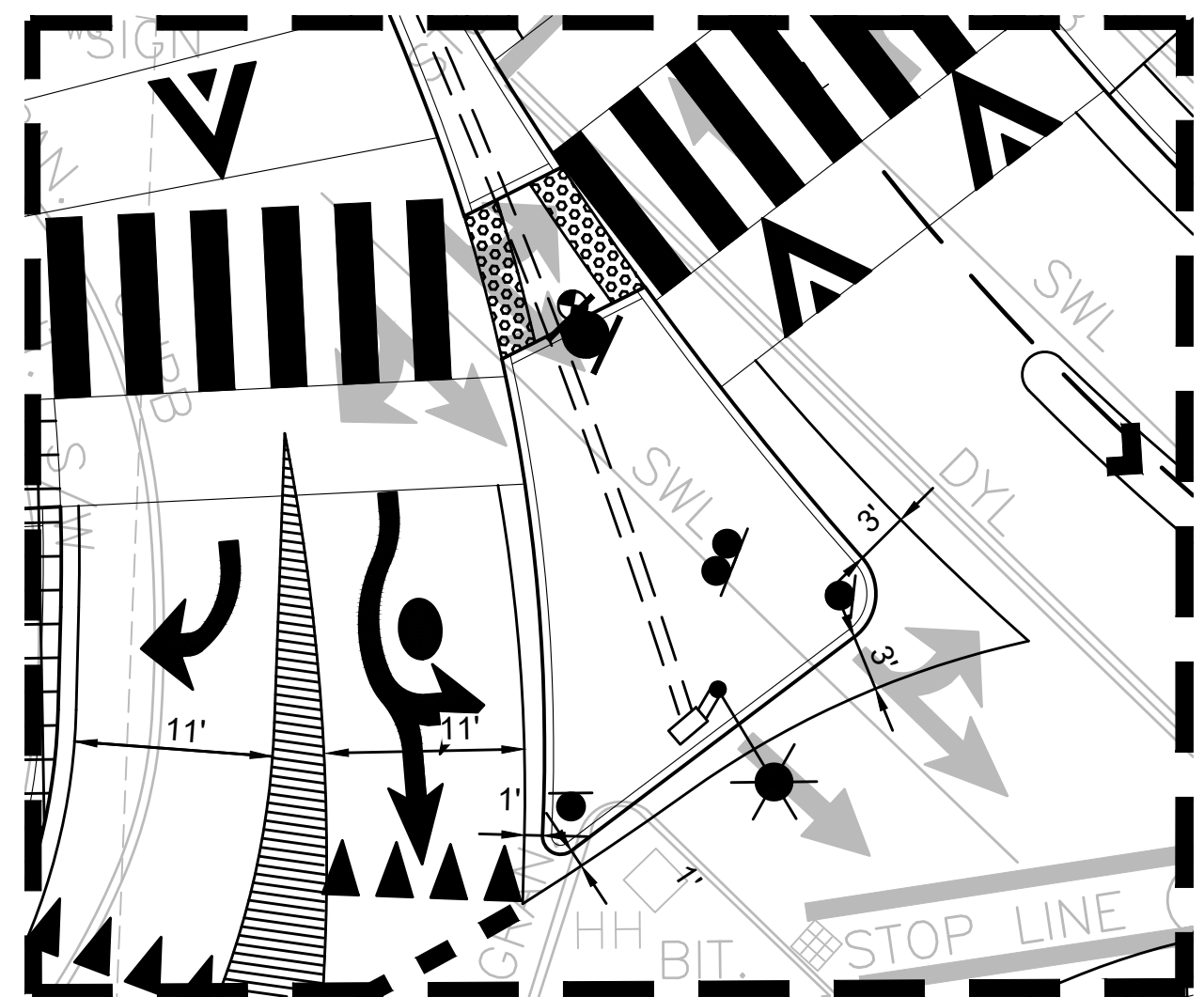
INSET H
SCALE: 1" = 10'



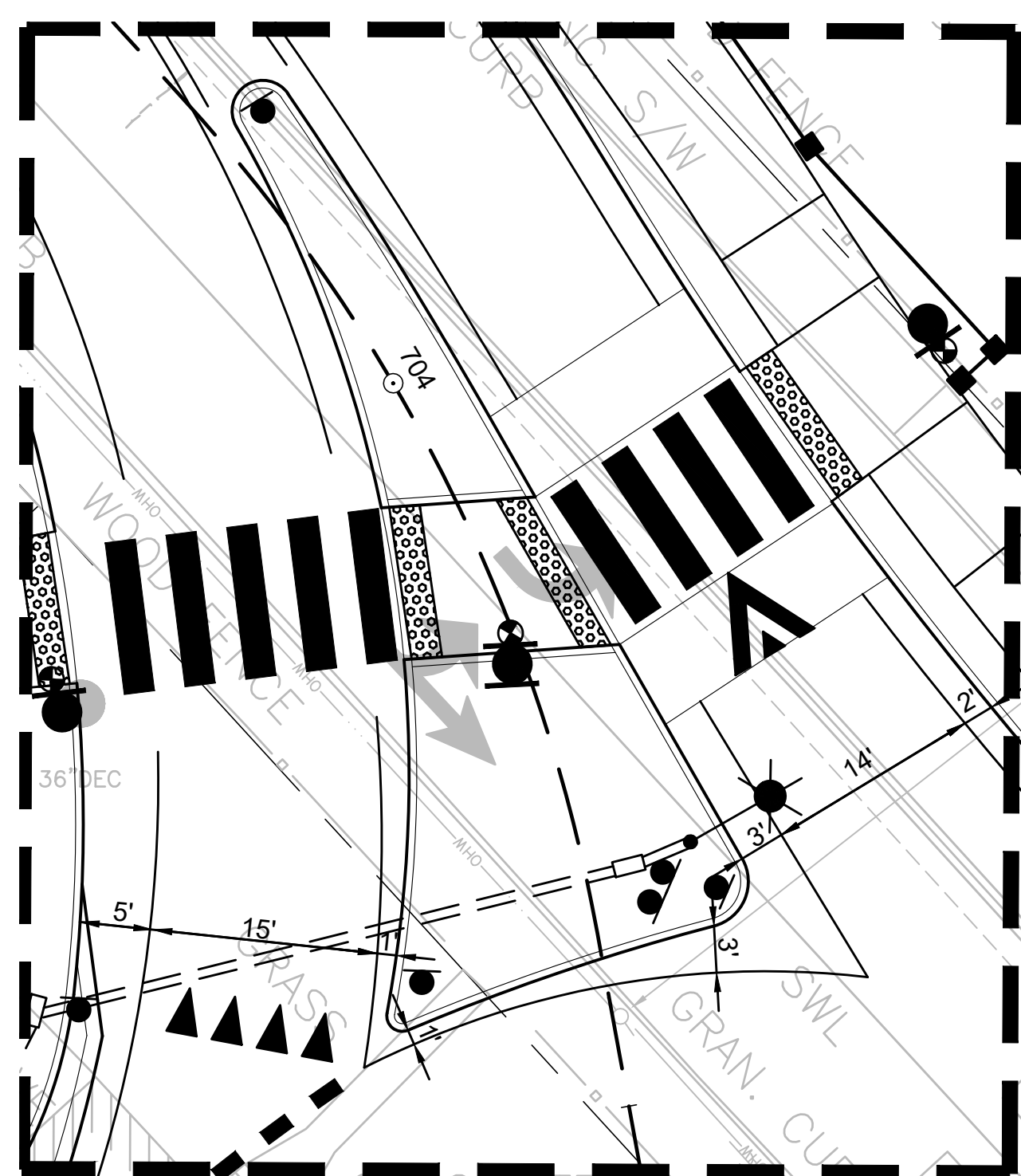
INSET J
SCALE: 1" = 10'



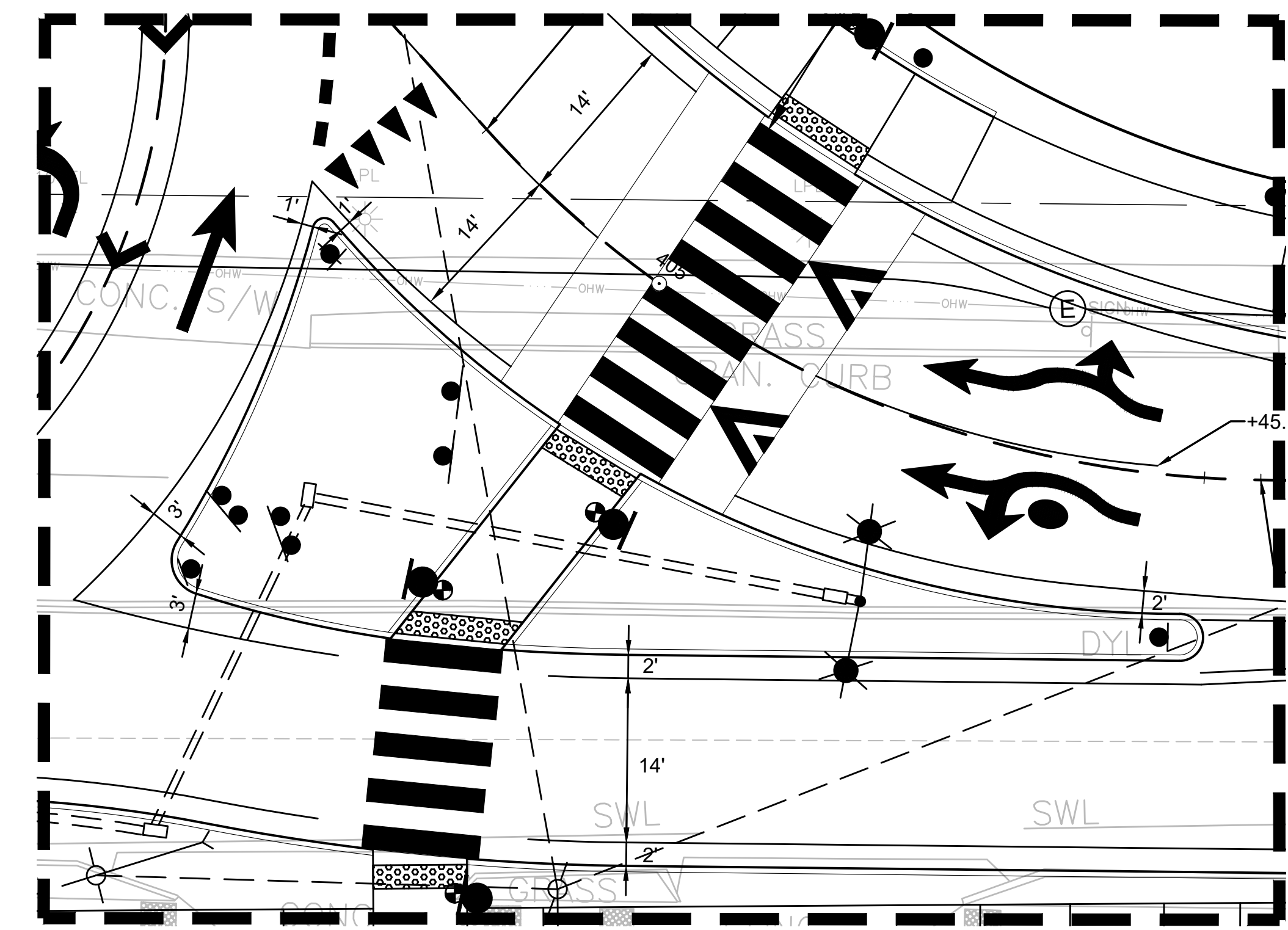
INSET C
SCALE: 1" = 10'



INSET F
SCALE: 1" = 10'



INSET I
SCALE: 1" = 10'



INSET K
SCALE: 1" = 10'

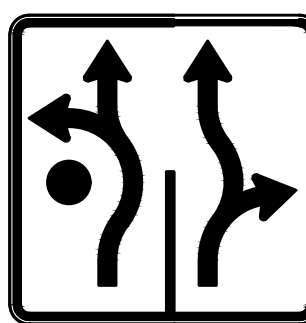
- NOTES:
1. RETROREFLECTIVE SHEETING CONFORMING TO SECTION M9.30.0 OF THE 2024 MASSDOT STANDARD SPECIFICATIONS SHALL BE USED FOR ALL SIGNS.
 2. SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION" AND 2012 SUPPLEMENT; THE 1990 MASSDPW STANDARD DRAWINGS FOR SIGNS AND SUPPORTS; THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR MOUNTING REQUIREMENTS; AND THE MASSDOT STANDARD SIGNS, LATEST EDITION.
 3. ALL SIGNS SHOWN GRAPHICALLY FOR INFORMATION ONLY. SIGN VENDOR SHALL FABRICATE ALL SIGNS IN ACCORDANCE WITH THE APPLICABLE STANDARDS.
 4. POS = PAINTED ONE SIDE

CHICOPEE

MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	38	135
PROJECT FILE NO.		609061	

TRAFFIC SIGN SUMMARY

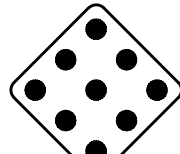
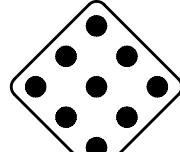
TRAFFIC SIGN SUMMARY													
IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER			
R1-1	30"	30"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			4	RED	WHITE	WHITE	P5-4	6.25	25.0
R1-2	36"X36"X36"						20	WHITE	RED	RED	P5-20	3.88	77.6
R2-1(30)	24"	30"					1	WHITE	BLACK	BLACK	P5-1	5.00	5.00
R2-1(35)	24"	30"					2	WHITE	BLACK	BLACK	P5-2	5.00	10.0
R3-2	24"	24"					6	WHITE	RED/ BLACK	BLACK	P5-3 3 MTD W/ OTHERS	4.00	24.0
R3-5R	30"	36"					1	WHITE	BLACK	BLACK	P5-1	7.50	7.50
R3-8a	36"	36"		SEE LAYOUT ON SHEET 40			3	WHITE	BLACK	BLACK	P5-3	9.00	27.0
R3-8b	36"	36"		SEE LAYOUT ON SHEET 40			2	WHITE	BLACK	BLACK	P5-2	9.00	18.0
R3-8c	36"	36"		SEE LAYOUT ON SHEET 40			1	WHITE	BLACK	BLACK	P5-1	9.00	9.00
R3-8d	36"	36"		SEE LAYOUT ON SHEET 40			1	WHITE	BLACK	BLACK	P5-1	9.00	9.00
R3-17	24"	18"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			11	BLACK WHITE	WHITE BLACK	WHITE BLACK	P5-11	3.00	33.0
R3-17bP	24"	8"					5	WHITE	BLACK	BLACK	5 MTD W/ R3-17	1.34	6.70
R4-7	24"	30"					6	WHITE	BLACK	BLACK	P5-6	5.00	30.0

TRAFFIC SIGN SUMMARY (CONTINUED)													
IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER			
R5-1	30"	30"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			6	WHITE	RED/ WHITE	-	P5-6	6.25	37.5
R6-1R (POS)	36"	12"					6	WHITE	BLACK	BLACK	P5-3	3.00	18.0
R6-2R	24"	30"					1	WHITE	BLACK	BLACK	P5-1	5.00	5.00
R6-4a	48"	24"					12	WHITE	BLACK	-	P5-24 (2 PER SIGN)	8.00	96.0
R7-1D	12"	18"					2	WHITE	RED	RED	P5-2	1.50	3.00
R10-25	9"	12"					31	WHITE	BLACK	BLACK	31 MTD ON TS POST	PAID FOR UNDER ITEMS 825.2-825.3	
M1-1(90)	24"	24"					2	RED/ BLUE	WHITE	WHITE	P5-2	4.00	8.00
M4-5	24"	12"					2	BLUE	WHITE	WHITE	2 MTD W/ MA-M1-1(90)	2.00	4.00
M4-15	24"	12"					2	YELLOW	BLACK	BLACK	2 MTD W/ MA-M1-1(90)	2.00	4.00
M6-2R(G)	12"	9"					5	GREEN	WHITE	WHITE	5 MTD W/ D11-1a	0.75	3.75
M6-2L(B)	12"	9"					1	BLUE	WHITE	WHITE	1 MTD W/ M1-1(90)	0.75	0.75
M6-2L(W)	12"	9"					5	WHITE	BLACK	BLACK	5 MTD W/ R3-17	0.75	3.75
M6-2R(B)	12"	9"					1	BLUE	WHITE	WHITE	1 MTD W/ M1-1(90)	0.75	0.75
W2-6	30"	30"					6	YELLOW	BLACK	BLACK	P5-6	6.25	37.5
W11-2L	30"	30"					2	FLUOR- ESCENT YELLOW GREEN	BLACK	BLACK	2 MTD ON TS POST	PAID FOR UNDER ITEMS 825.2-825.3	
W11-2R	30"	30"					2	FLUOR- ESCENT YELLOW GREEN	BLACK	BLACK	2 MTD ON TS POST	PAID FOR UNDER ITEMS 825.2-825.3	
W11-15a(L)	30"	30"					18	FLUOR- ESCENT YELLOW GREEN	BLACK	BLACK	18 MTD ON TS POST	PAID FOR UNDER ITEMS 825.2-825.3	

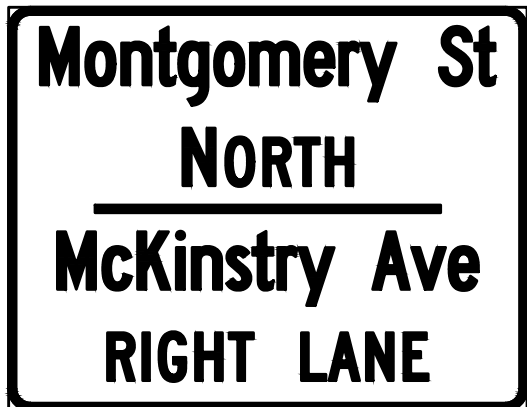
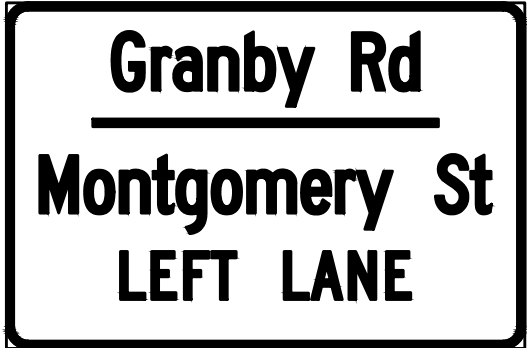
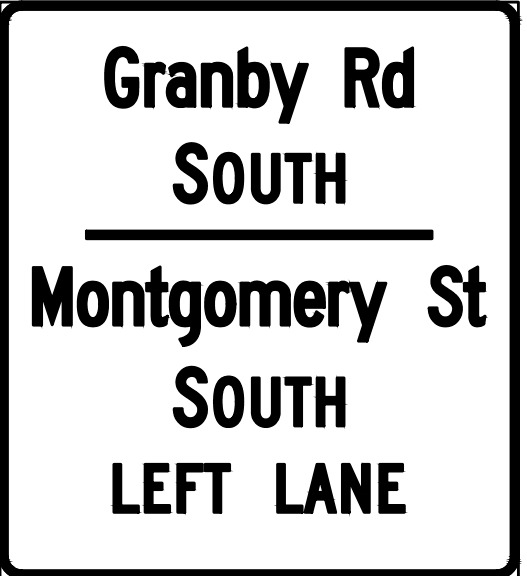
TRAFFIC SIGN SUMMARY (CONTINUED ON NEXT SHEET)

TRAFFIC SIGN SUMMARY

TRAFFIC SIGN SUMMARY (CONTINUED)

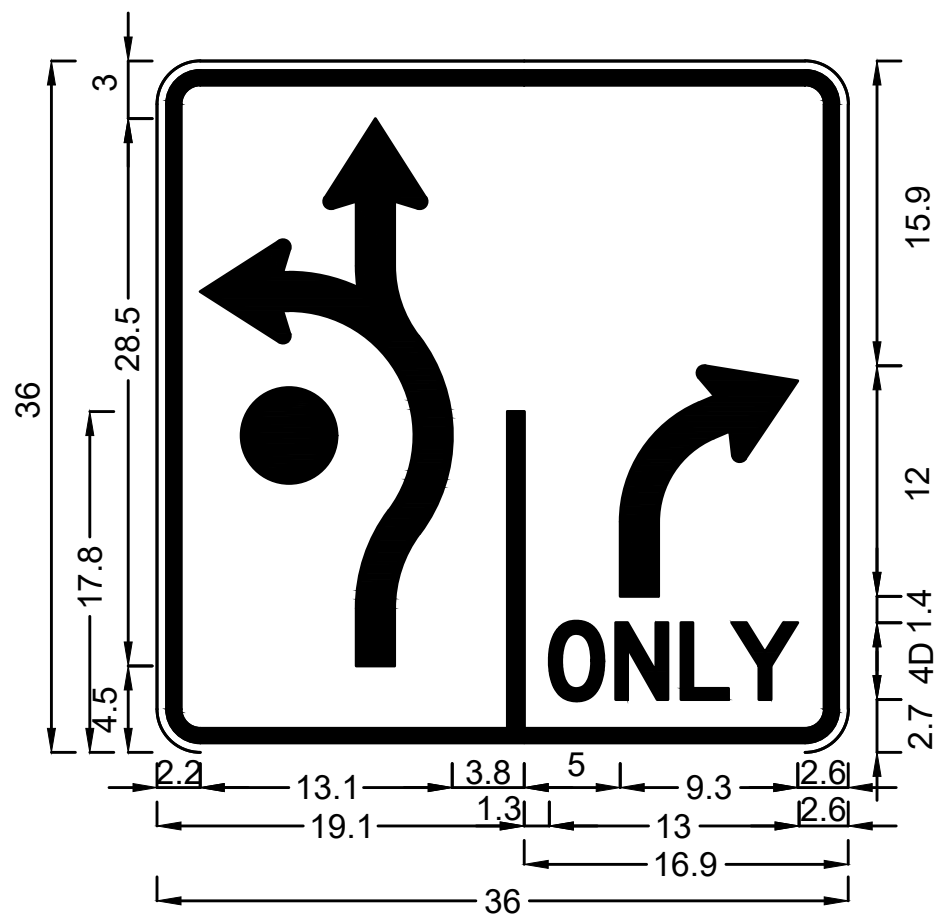
IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER			
W11-15a(R)	30"	30"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			16	FLUOR- ESCENT YELLOW GREEN	BLACK	BLACK	16 MTD ON TS POST	6.25	100.0
W14-1	30"	30"					1	YELLOW	BLACK	BLACK	P5-1	6.25	6.25
W16-7p(L)	24"	12"					20	FLUOR- ESCENT YELLOW GREEN	BLACK	BLACK	20 MTD ON TS POST	2.00	40.00
W16-7p(R)	24"	12"					18	FLUOR- ESCENT YELLOW GREEN	BLACK	BLACK	18 MTD ON TS POST	2.00	36.00
OM1-1	24"	24"					11	YELLOW	YELLOW CLUSTER	---	P5-11	4.00	44.0
OM4-1	24"	24"					3	RED	RED CLUSTER	---	P5-3	4.00	12.0
SP-7	36"	36"		SEE LAYOUT ON SHEET 39			4	YELLOW	BLACK	BLACK	P5-4	9.00	36.00
D1-1a	48"	24"		6"D	6" 6"	12.3"x7.1" @60°	4	GREEN	WHITE	WHITE	P5-8 (2 PER SIGN)	8.00	32.00
D1-1b	60"	24"		6"D	6" 6"	12.3"x7.1" @60°	4	GREEN	WHITE	WHITE	P5-8 (2 PER SIGN)	10.00	40.00
D1-1c	54"	24"		6"D	6" 6"	12.3"x7.1" @60°	1	GREEN	WHITE	WHITE	P5-2 (2 PER SIGN)	9.00	9.00
D11-1a	18"	18"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			5	GREEN	WHITE	WHITE	P5-5	2.25	11.25
MA-D1-4A	54"	36"					1	GREEN	WHITE	WHITE	1- 2 BRKWAY POST ASSEMBLIES ITEM 848.1	13.50	13.50
MA-D1-4B	48"	24"		SEE LAYOUT ON SHEET 40			2	GREEN	WHITE	WHITE	2- 2 BRKWAY POST ASSEMBLIES ITEM 848.1	8.00	16.00

TRAFFIC SIGN SUMMARY (CONTINUED)

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER			
MA-D1-5-1	60"	30"		SEE LAYOUT ON SHEET 41			1	GREEN	WHITE	WHITE	MOUNT W/ MA-D1-6-1	12.50	12.50
MA-D1-5-1A	54"	48"					1	GREEN	WHITE	WHITE	1- 5" O.D. STEEL PIPE POST ITEM 841.2	18.00	18.00
MA-D1-5-2A	54"	48"		SEE LAYOUT ON SHEET 41			2	GREEN	WHITE	WHITE	2- 5" O.D. STEEL PIPE POST ITEM 841.2	18.00	36.00
MA-D1-5-3A	54"	42"					1	GREEN	WHITE	WHITE	1- 5" O.D. STEEL PIPE POST ITEM 841.2	15.75	15.75
MA-D1-6-1	66"	42"		SEE LAYOUT ON SHEET 41			1	GREEN	WHITE	WHITE	1- 5" O.D. STEEL PIPE POST ITEM 841.1	19.25	19.25
MA-D1-6-1A	54"	48"					1	GREEN	WHITE	WHITE	1- 5" O.D. STEEL PIPE POST ITEM 841.2	18.00	18.00
MA-D1-6-2A	54"	60"		SEE LAYOUT ON SHEET 41			1	GREEN	WHITE	WHITE	1- 5" O.D. STEEL PIPE POST ITEM 841.2	22.50	22.50

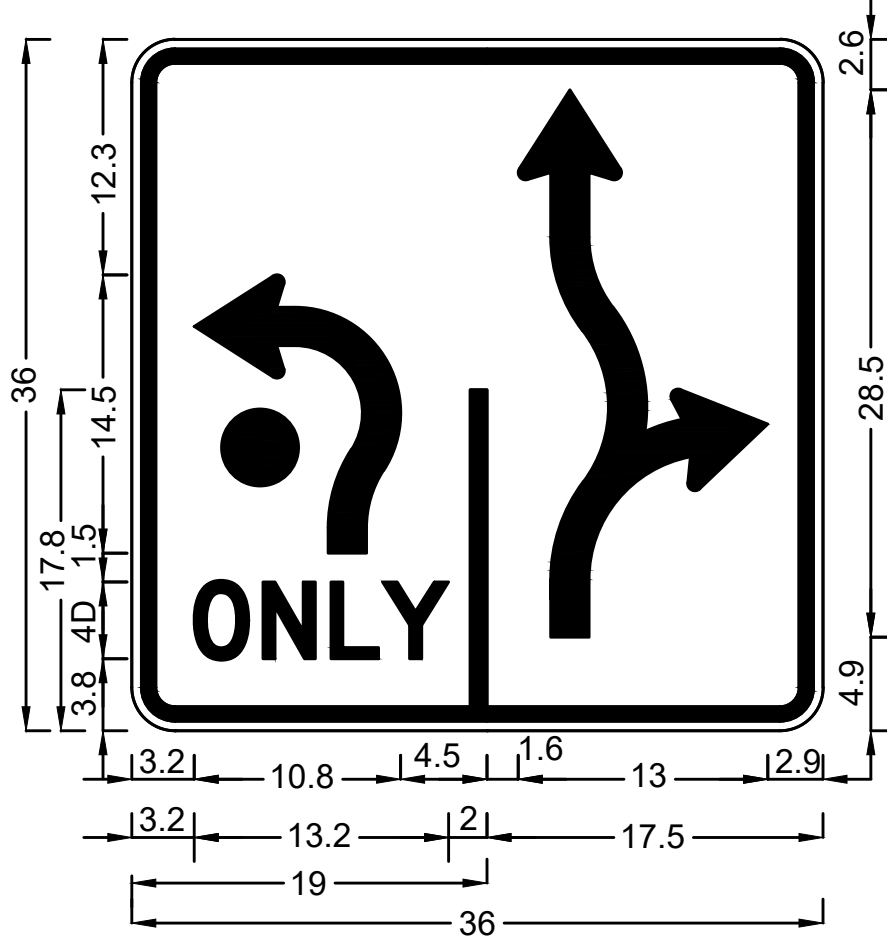
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	40	135
PROJECT FILE NO.		609061	

TRAFFIC SIGN SUMMARY



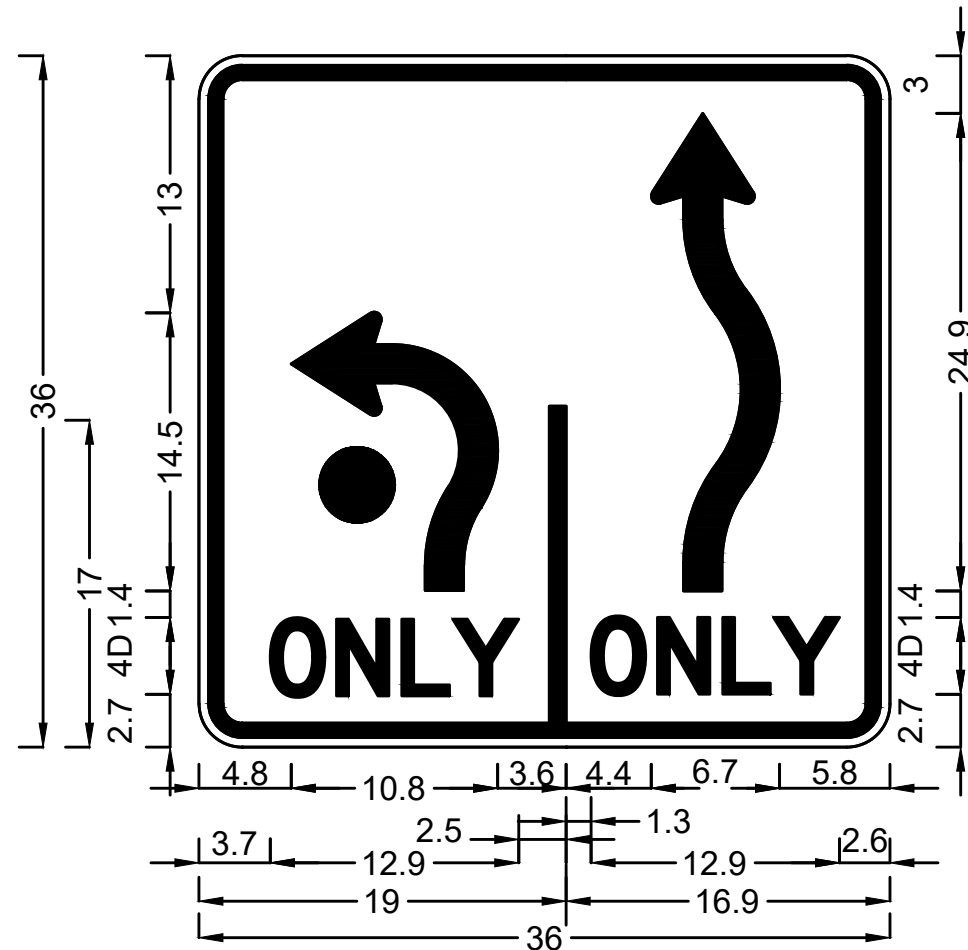
R3-8a	
BORDER	
OFFSET	0.50
THICKNESS	1.0
RADIUS	3.0

MATERIAL: FLAT SHEET ALUMINUM



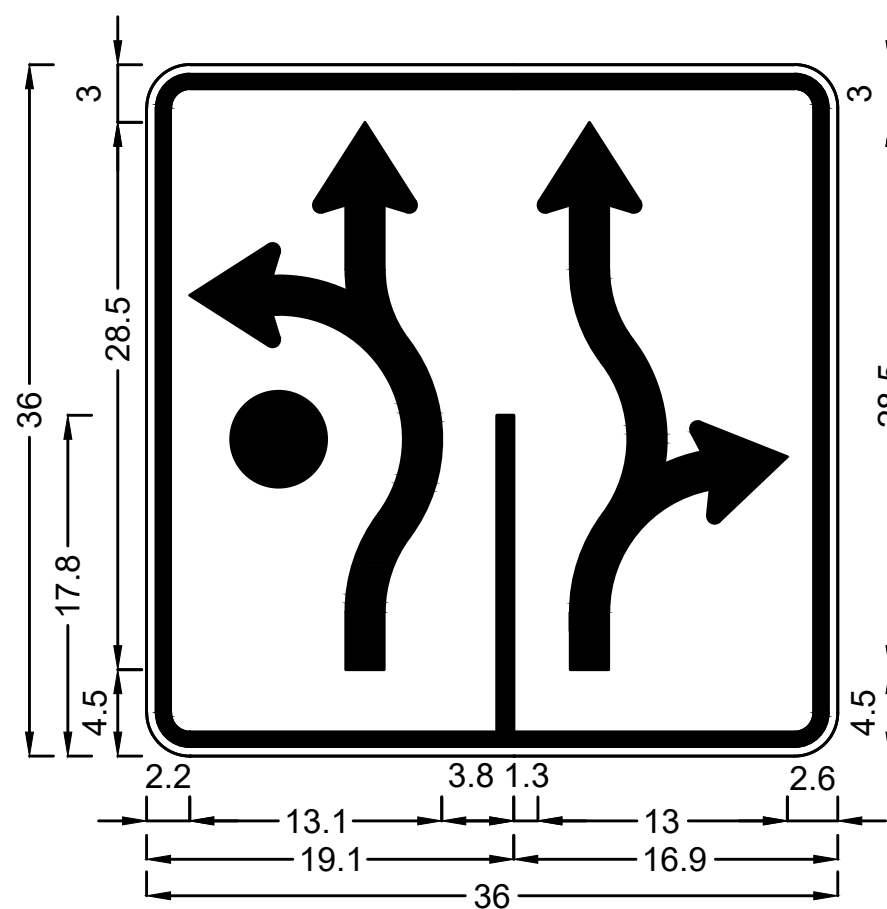
R3-8b	
BORDER	
OFFSET	0.50
THICKNESS	1.0
RADIUS	3.0

*85% SPACING
MATERIAL: FLAT SHEET ALUMINUM



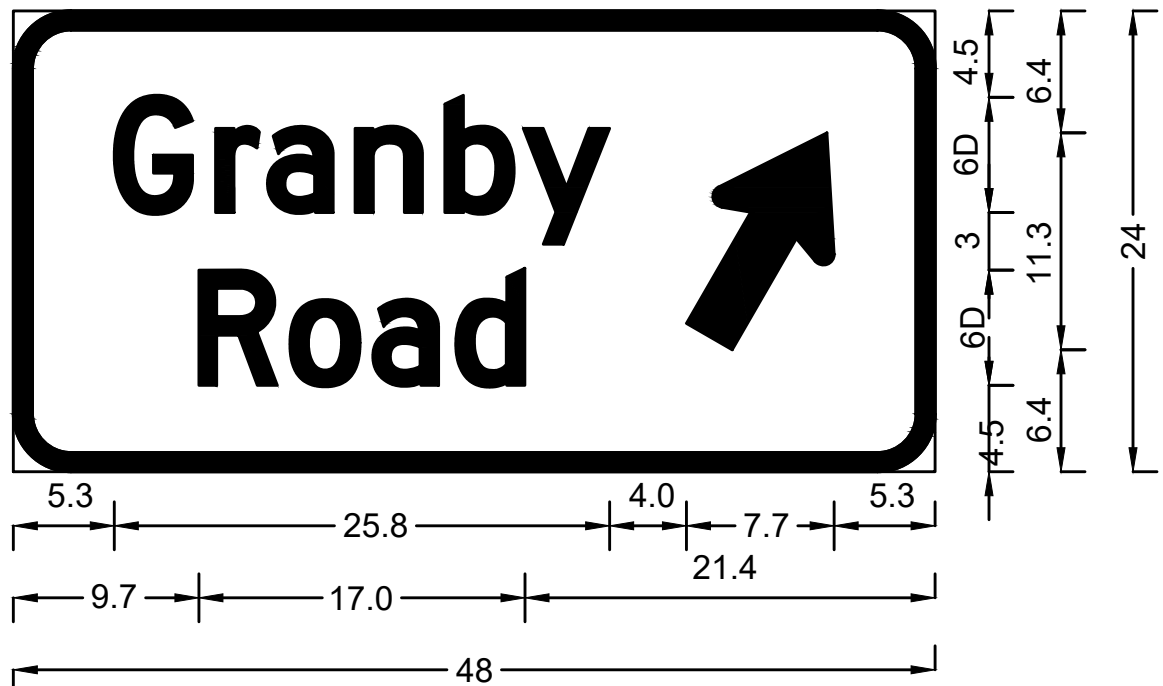
R3-8c	
BORDER	
OFFSET	0.50
THICKNESS	1.0
RADIUS	3.0

MATERIAL: FLAT SHEET ALUMINUM



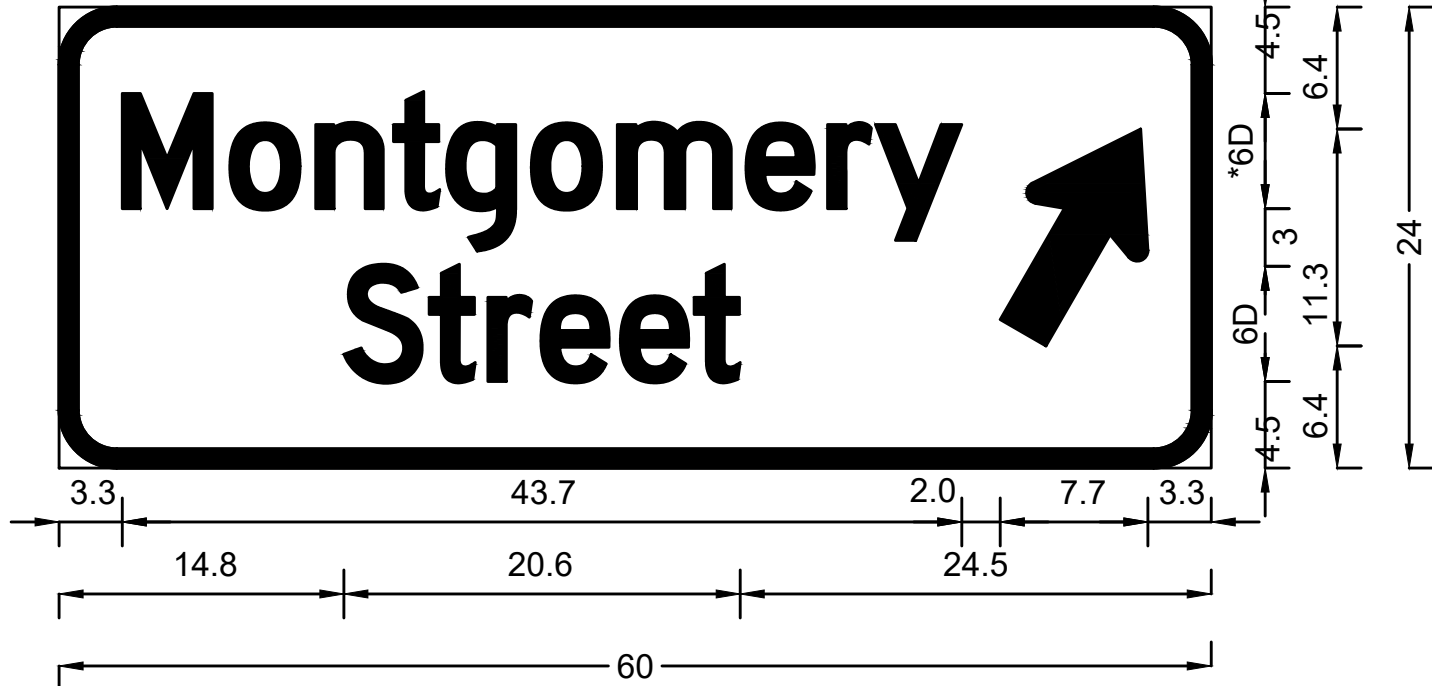
R3-8d	
BORDER	
OFFSET	0.50
THICKNESS	1.0
RADIUS	3.0

MATERIAL: FLAT SHEET ALUMINUM



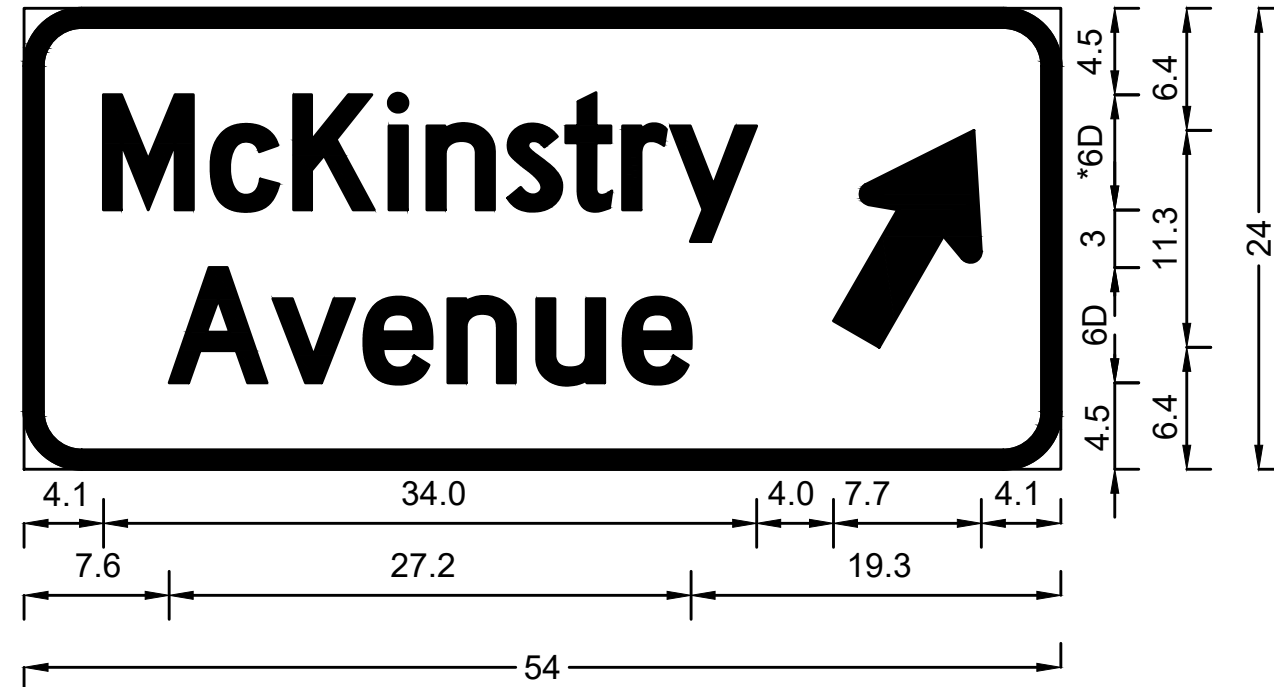
D1-1a	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

MATERIAL: FLAT SHEET ALUMINUM



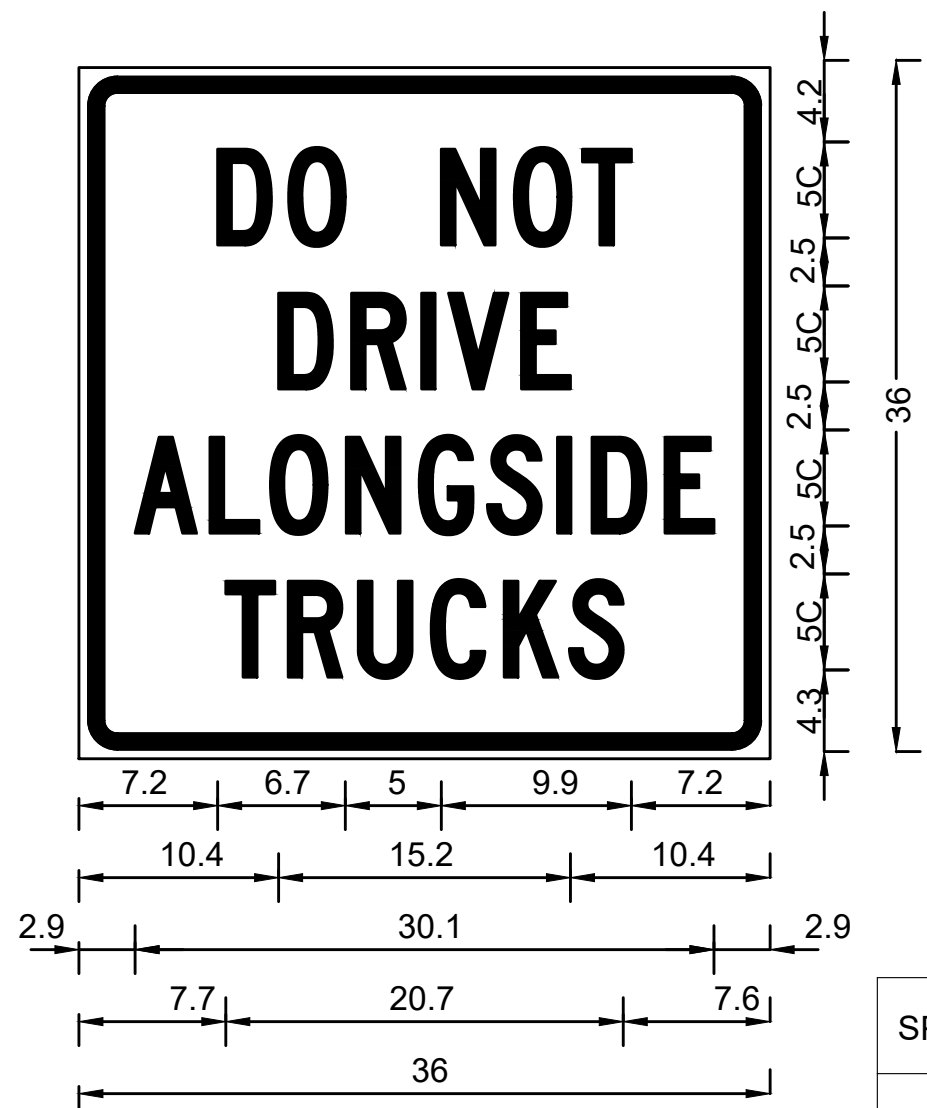
D1-1b	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

*85% SPACING
MATERIAL: FLAT SHEET ALUMINUM



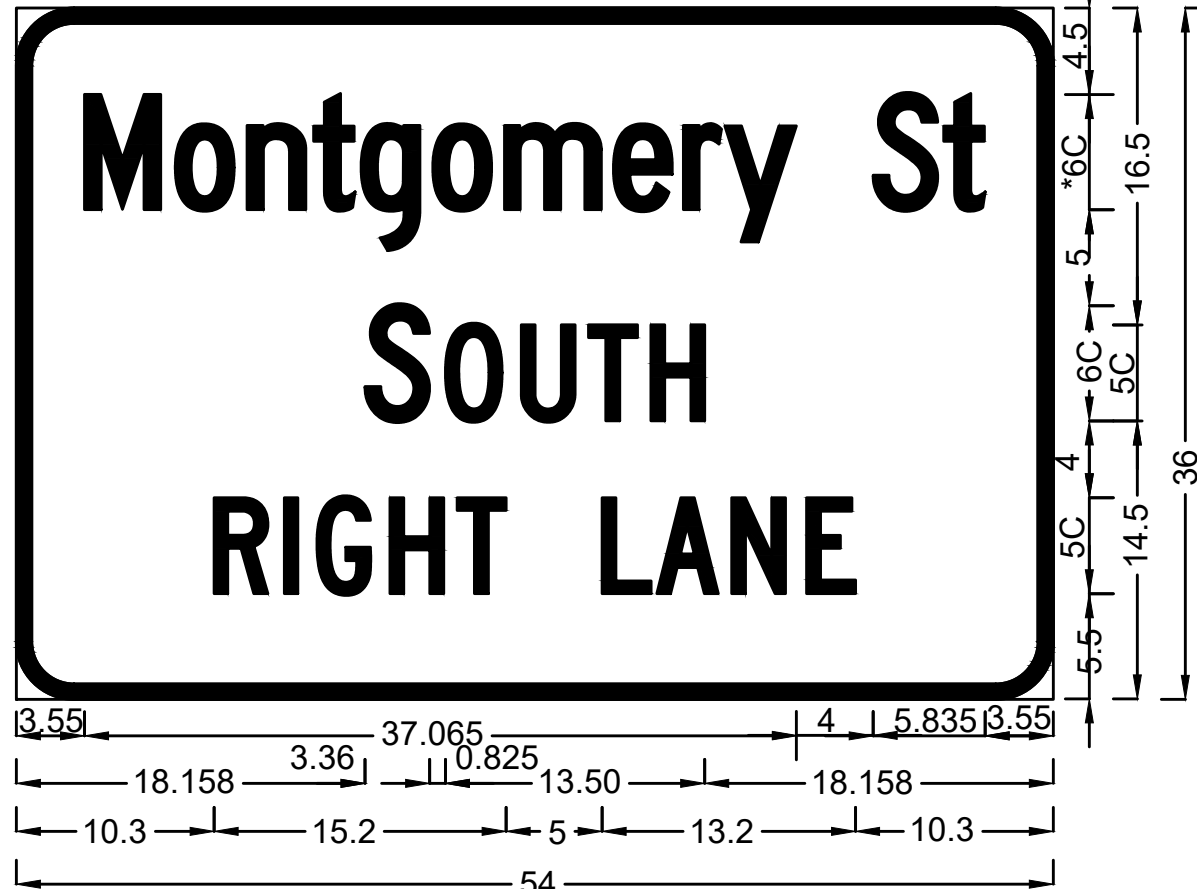
D1-1c	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

MATERIAL: FLAT SHEET ALUMINUM



SP-7	
BORDER	
OFFSET	0
THICKNESS	0.8
RADIUS	2.0

*75% SPACING



MA-D1-4A	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

*75% SPACING

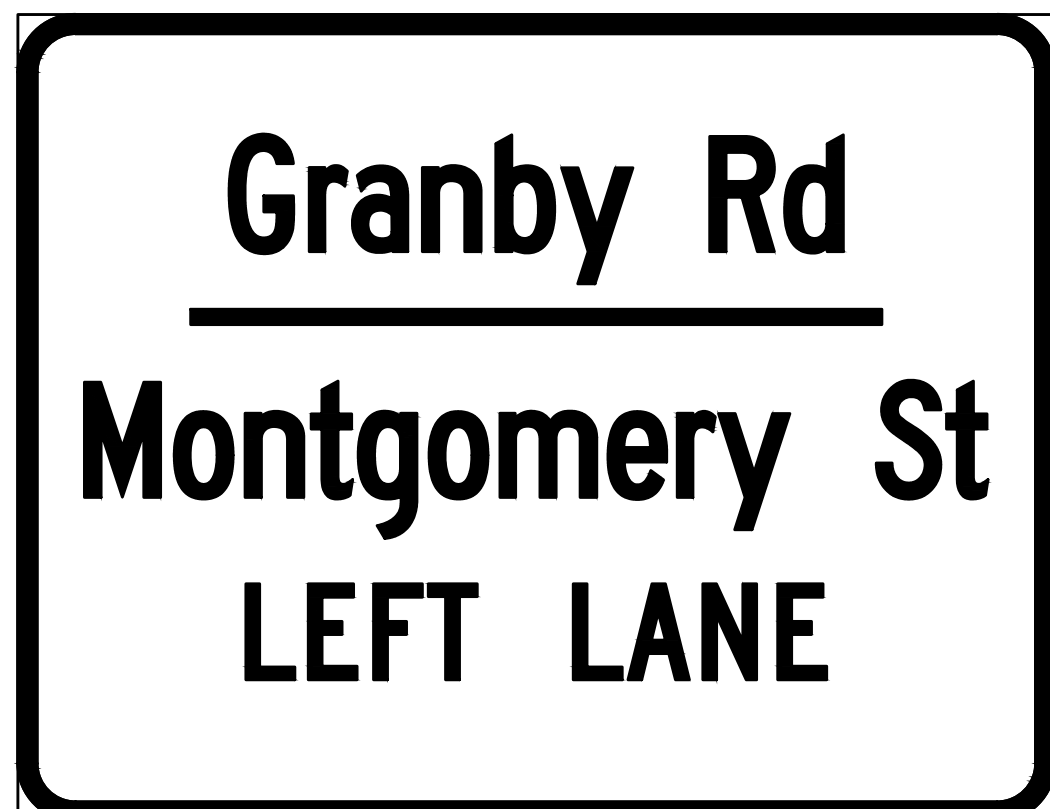
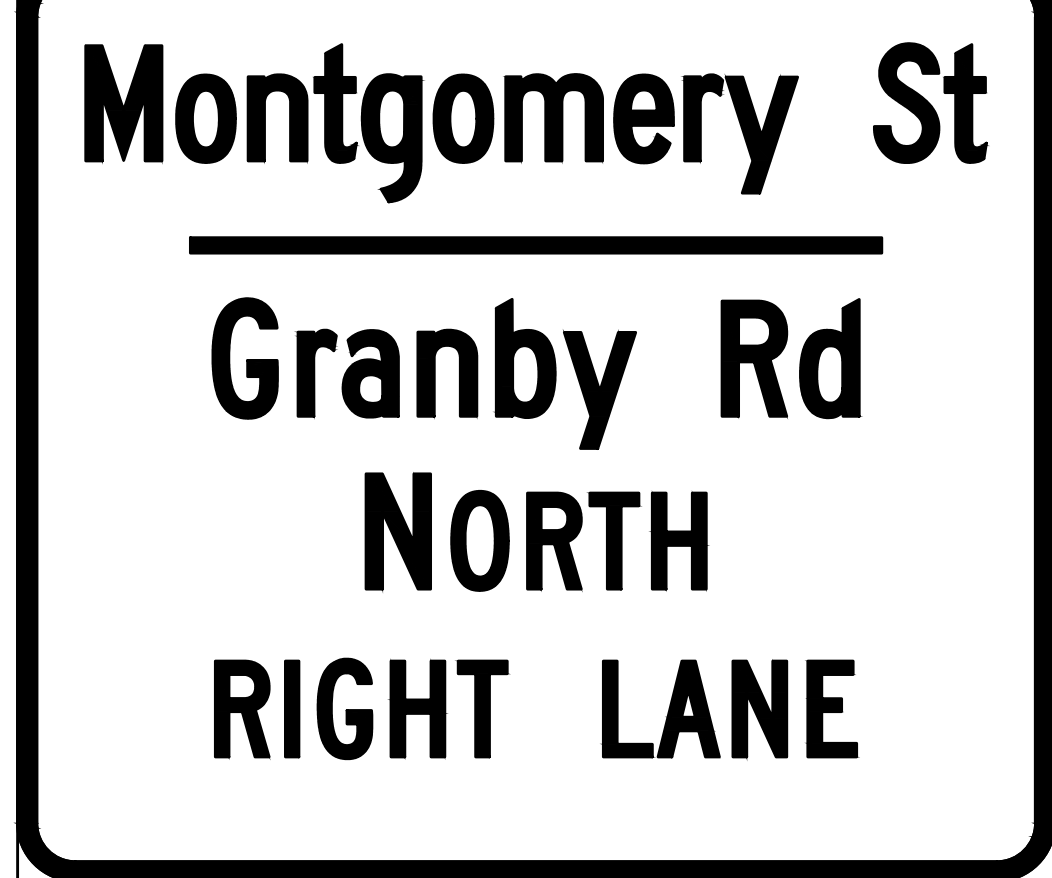
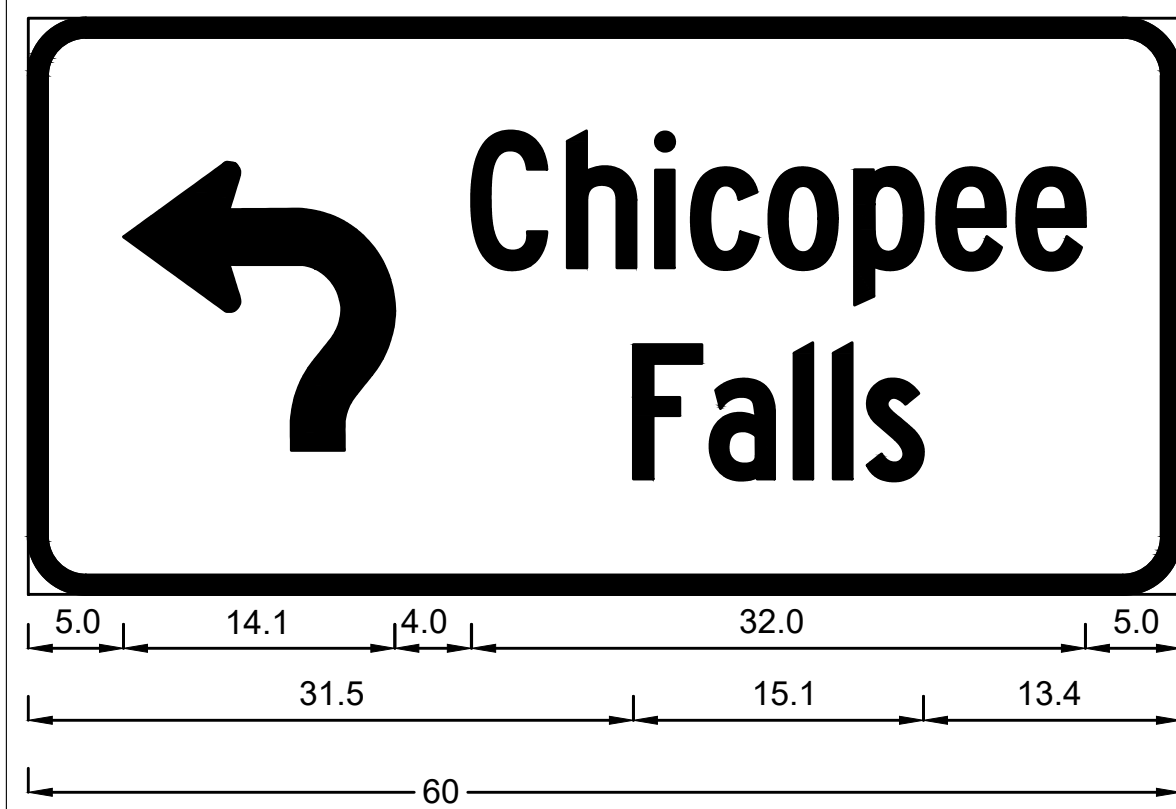


MA-D1-4B	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

NOTES:
1. ALL MEASUREMENTS ARE IN INCHES.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	41	135
PROJECT FILE NO.		609061	

TRAFFIC SIGN SUMMARY



MA-D1-5-1	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

*85% SPACING
MATERIAL: FLAT SHEET ALUMINUM

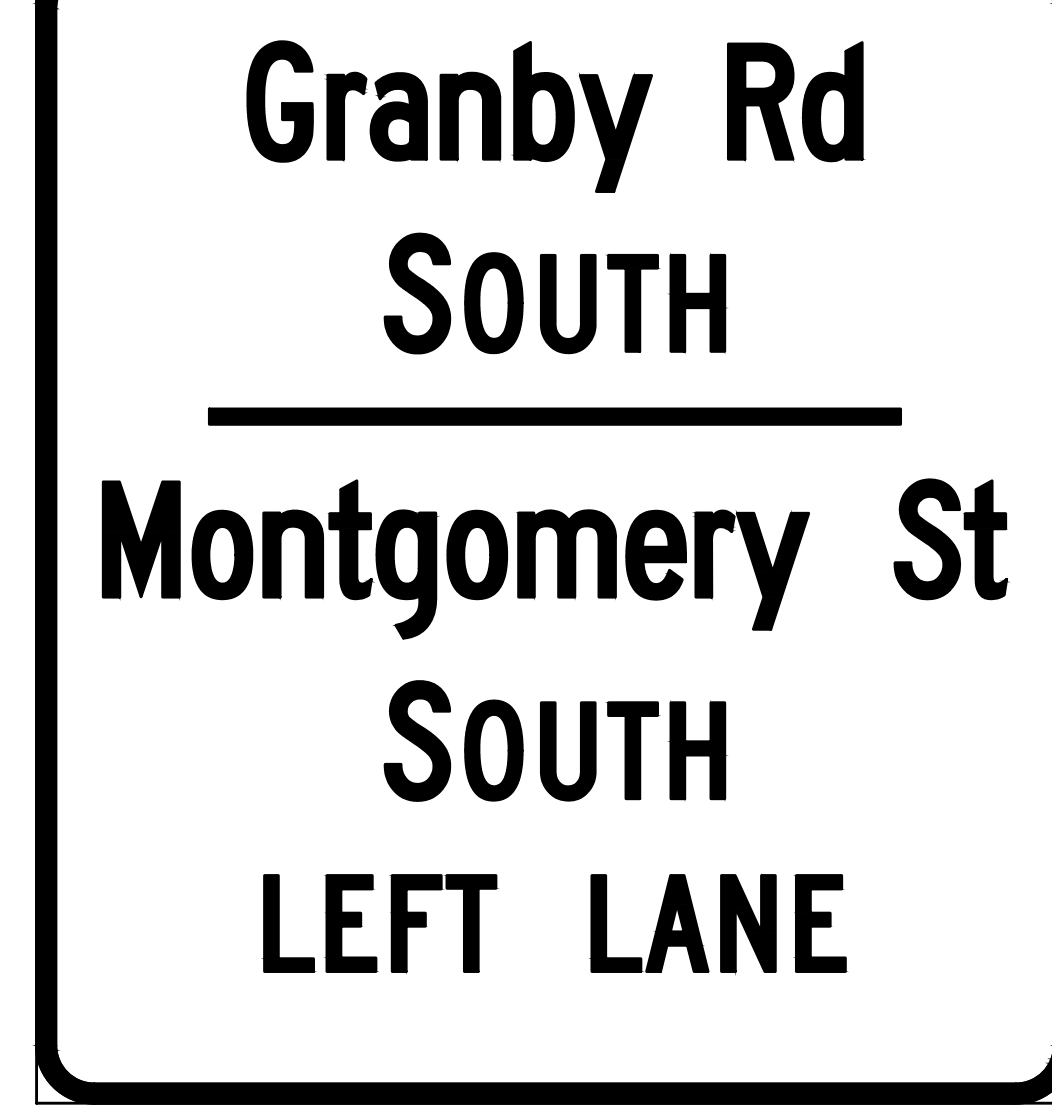
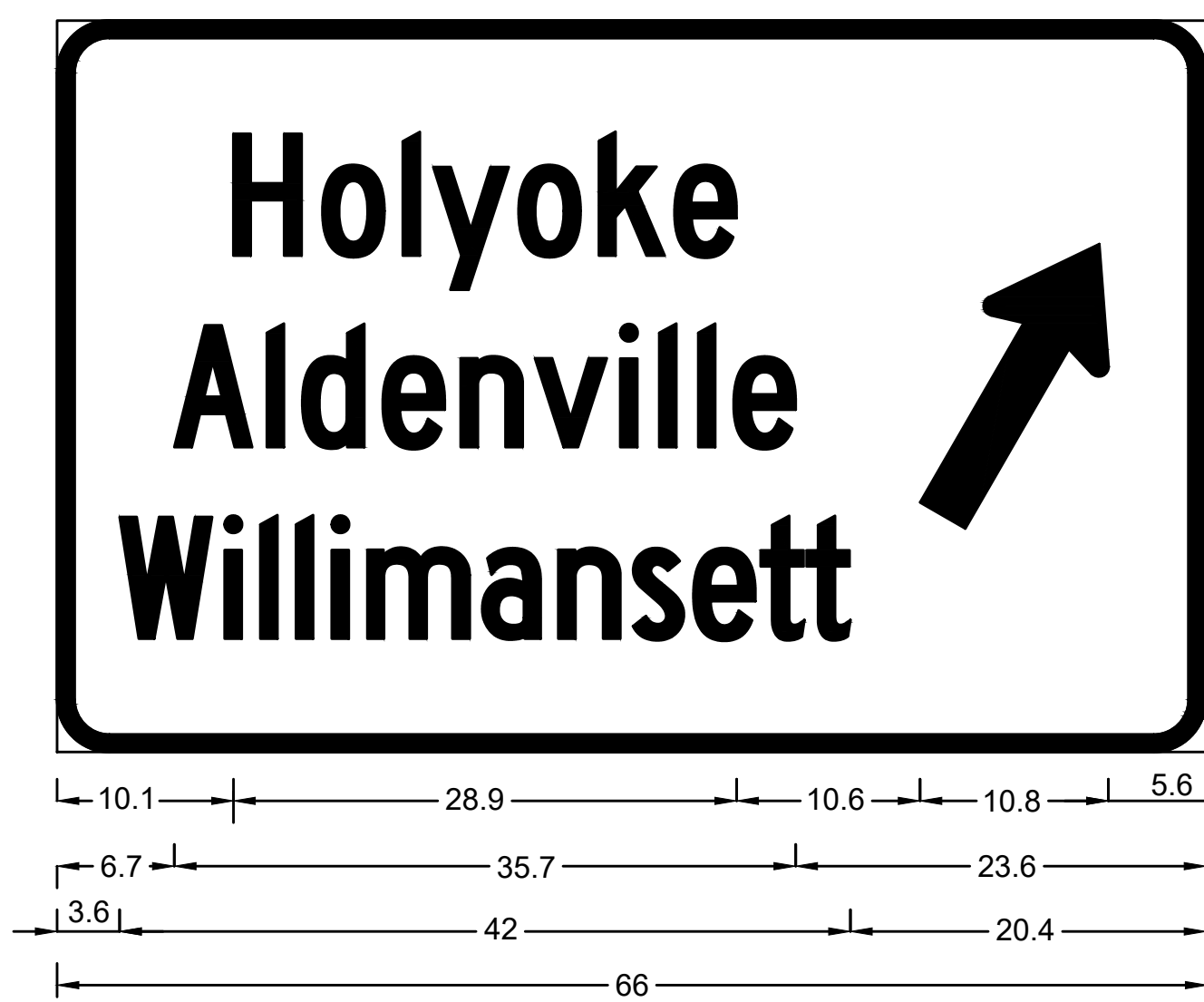
MA-D1-5-1A	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

*75% SPACING

MA-D1-5-2A	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

MA-D1-5-3A	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

*75% SPACING
**70% SPACING



MA-D1-6-1	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

MATERIAL: FLAT SHEET ALUMINUM

*75% SPACING

MA-D1-6-1A	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

*75% SPACING
**70% SPACING

MA-D1-6-2A	
BORDER	
OFFSET	0
THICKNESS	1.0
RADIUS	3.0

NOTES:
1. ALL MEASUREMENTS ARE IN INCHES.

CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	42	135
PROJECT FILE NO. 609061			

TRAFFIC SIGNAL PLANS

RRFB SYSTEM LOCATION 2
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 103+96.3, 37.1' LT
TS POST AND FOUNDATION STA 104+01.2, 3.8' LT
PROP (2) SIDE-OF-POST NEMA CONTROL CABINET
PROP (2) RADIO ANTENNA
PROP (2) SOLAR PANEL & BATTERY
PROP (2) RRFB (TWO-SIDED)
PROP (1) W11-15a(L)
PROP (1) W16-7p(L)
PROP (1) W11-15a(R)
PROP (1) W16-7p(R)
PROP (2) APS PEDESTRIAN PUSHBUTTONS W/
PROP (2) R10-25

RRFB SYSTEM LOCATION 1
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 100+87.6, 23.6' LT
TS POST AND FOUNDATION STA 100+98.8, 23.4' RT
PROP (2) SIDE-OF-POST NEMA CONTROL CABINET
PROP (2) RADIO ANTENNA
PROP (2) SOLAR PANEL & BATTERY
PROP (2) RRFB (TWO-SIDED)
PROP (2) W11-2L
PROP (2) W11-2R
PROP (2) W16-7p(L)
PROP (2) W16-7p(R)
PROP (2) APS PEDESTRIAN PUSHBUTTONS W/
PROP (2) R10-25

RRFB SYSTEM LOCATION 3
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 103+97.4, 42.1' RT
TS POST AND FOUNDATION STA 104+14.1, 8.1' LT
PROP (2) SIDE-OF-POST NEMA CONTROL CABINET
PROP (2) RADIO ANTENNA
PROP (2) SOLAR PANEL & BATTERY
PROP (2) RRFB (TWO-SIDED)
PROP (1) W11-15a(L)
PROP (1) W16-7p(L)
PROP (1) W11-15a(R)
PROP (1) W16-7p(R)
PROP (2) APS PEDESTRIAN PUSHBUTTONS W/
PROP (2) R10-25

RRFB SYSTEM LOCATION 4
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 200+85.5, 3.4' RT
TS POST AND FOUNDATION STA 200+95.1, 33.8' LT
TS POST AND FOUNDATION STA 201+02.5, 31.5' RT
PROP SIDE-OF-POST NEMA CONTROL CABINET
PROP (3) RADIO ANTENNA
PROP (3) SOLAR PANEL & BATTERY
PROP (4) RRFB (TWO-SIDED)
PROP (2) W11-15a(L)
PROP (2) W16-7p(L)
PROP (2) W11-15a(R)
PROP (2) W16-7p(R)
PROP (3) APS PEDESTRIAN PUSHBUTTONS W/
PROP (3) R10-25

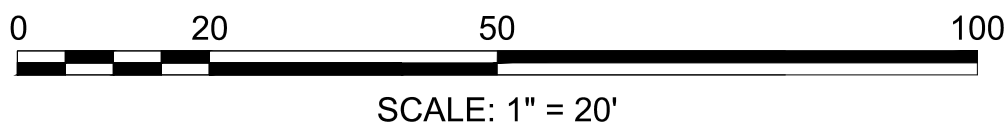
RRFB SYSTEM LOCATION 5
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 105+83.3, 1.1' RT
TS POST AND FOUNDATION STA 105+87.2, 36.9' LT
TS POST AND FOUNDATION STA 105+99.4, 40.1' RT
PROP (3) SIDE-OF-POST NEMA CONTROL CABINET
PROP (3) RADIO ANTENNA
PROP (4) SOLAR PANEL & BATTERY
PROP (3) RRFB (TWO-SIDED)
PROP (2) W11-15a(L)
PROP (2) W16-7p(L)
PROP (2) W11-15a(R)
PROP (2) W16-7p(R)
PROP (3) APS PEDESTRIAN PUSHBUTTONS W/
PROP (3) R10-25

CONSTRUCTION NOTES

1. TRAFFIC SIGNAL FOUNDATIONS TO BE LOCATED BY STATION AND OFFSET.
2. TS POST, WITH PEDESTRIAN PUSH BUTTON, NOT LOCATED WITHIN A PAVED SURFACE SHALL BE POSITIONED SO AS TO PROVIDE A 10" MAX CLEAR REACH ZONE BETWEEN THE PEDESTRIAN PUSH BUTTON AND THE PAVED SURFACE PER 521 CMR AND AS SHOWN IN THE CONSTRUCTION DETAILS.
3. SEE SHEET 32 FOR SIGNAGE AND PAVEMENT MARKINGS.

LIST OF MAJOR ITEMS REQUIRED					
RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEMS (SOLAR POWER)					
DESCRIPTION/PAY ITEM	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY
TS POST 15' STANDARD INCL. FOUNDATION	2	2	2	3	3
APS PEDESTRIAN PUSHBUTTON (L)	2	1	1	2	2
APS PEDESTRIAN PUSHBUTTON (R)		1	1		
APS PEDESTRIAN PUSHBUTTON (D)				1	1
L.E.D. RECTANGULAR DUAL YELLOW BEACON (RRFB)	2	2	2	4	4
R10-25 SIGN	2	2	2	3	3
SOLAR PANEL & BATTERY SYSTEM	2	2	2	3	3
SIDE-OF-POST MOUNTED NEMA CONTROL CABINET AND ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISION	2	2	2	3	3
RADIO ANTENNA	2	2	2	3	3
WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A)					
W11-2L SIGN	2				
W11-2R SIGN	2				
W11-15a(L) SIGN		1	1	2	2
W11-15a(R) SIGN		1	1	2	2
W16-7p(L) SIGN	2	1	1	2	2
W16-7p(R) SIGN	2	1	1	2	2

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING RECTANGULAR RAPID FLASHING BEACON SYSTEMS.



CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	43	135
PROJECT FILE NO.		609061	

TRAFFIC SIGNAL PLANS

CONSTRUCTION NOTES

- R&S ALL TRAFFIC SIGNAL EQUIPMENT AND ABANDON ALL TRAFFIC SIGNAL CONDUIT UNLESS OTHERWISE NOTED.
- TRAFFIC SIGNAL FOUNDATIONS TO BE LOCATED BY STATION AND OFFSET.
- TS POST, WITH PEDESTRIAN PUSH BUTTON, NOT LOCATED WITHIN A PAVED SURFACE SHALL BE POSITIONED SO AS TO PROVIDE A 10" MAX CLEAR REACH ZONE BETWEEN THE PEDESTRIAN PUSH BUTTON AND THE PAVED SURFACE PER 521 CMR AND AS SHOWN IN THE CONSTRUCTION DETAILS.
- SEE SHEETS 33 & 34 FOR SIGNAGE AND PAVEMENT MARKINGS.

RRFB SYSTEM LOCATION 10
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 500+35.3, 16.1' RT
TS POST AND FOUNDATION STA 500+53.9, 47.5' RT
PROP (2) SIDE-OF-POST NEMA CONTROL CABINET
PROP (2) RADIO ANTENNA
PROP (2) SOLAR PANEL & BATTERY
PROP (2) RRFB (TWO-SIDED)
PROP (1) W11-15a(L)
PROP (1) W16-7p(L)
PROP (1) W11-15a(R)
PROP (1) W16-7p(R)
PROP (2) APS PEDESTRIAN PUSHBUTTONS W/
PROP (2) R10-25

RRFB SYSTEM LOCATION 8
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 405+03.2, 27.7' LT
TS POST AND FOUNDATION STA 405+07.2, 19.4' RT
PROP (2) SIDE-OF-POST NEMA CONTROL CABINET
PROP (2) RADIO ANTENNA
PROP (2) SOLAR PANEL & BATTERY
PROP (2) RRFB (TWO-SIDED)
PROP (1) W11-15a(L)
PROP (1) W16-7p(L)
PROP (1) W11-15a(R)
PROP (1) W16-7p(R)
PROP (2) APS PEDESTRIAN PUSHBUTTONS W/
PROP (2) R10-25

LIMIT OF WORK
STA 406+81.61
N: 2890795.7217
E: 361704.4068

RRFB SYSTEM LOCATION 9
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 500+39.1, 6.8' RT
TS POST AND FOUNDATION STA 500+52.9, 29.9' LT
PROP (2) SIDE-OF-POST NEMA CONTROL CABINET
PROP (2) RADIO ANTENNA
PROP (2) SOLAR PANEL & BATTERY
PROP (2) RRFB (TWO-SIDED)
PROP (1) W11-15a(L)
PROP (1) W16-7p(L)
PROP (1) W11-15a(R)
PROP (1) W16-7p(R)
PROP (2) APS PEDESTRIAN PUSHBUTTONS W/
PROP (2) R10-25

RRFB SYSTEM LOCATION 6
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 109+79.2, 41.9' RT
TS POST AND FOUNDATION STA 109+89.2, 1.1' LT
TS POST AND FOUNDATION STA 109+82.0, 44.6' LT
PROP (3) SIDE-OF-POST NEMA CONTROL CABINET
PROP (3) RADIO ANTENNA
PROP (3) SOLAR PANEL & BATTERY
PROP (4) RRFB (TWO-SIDED)
PROP (2) W11-15a(L)
PROP (2) W16-7p(L)
PROP (2) W11-15a(R)
PROP (2) W16-7p(R)
PROP (3) APS PEDESTRIAN PUSHBUTTONS
PROP (3) R10-25

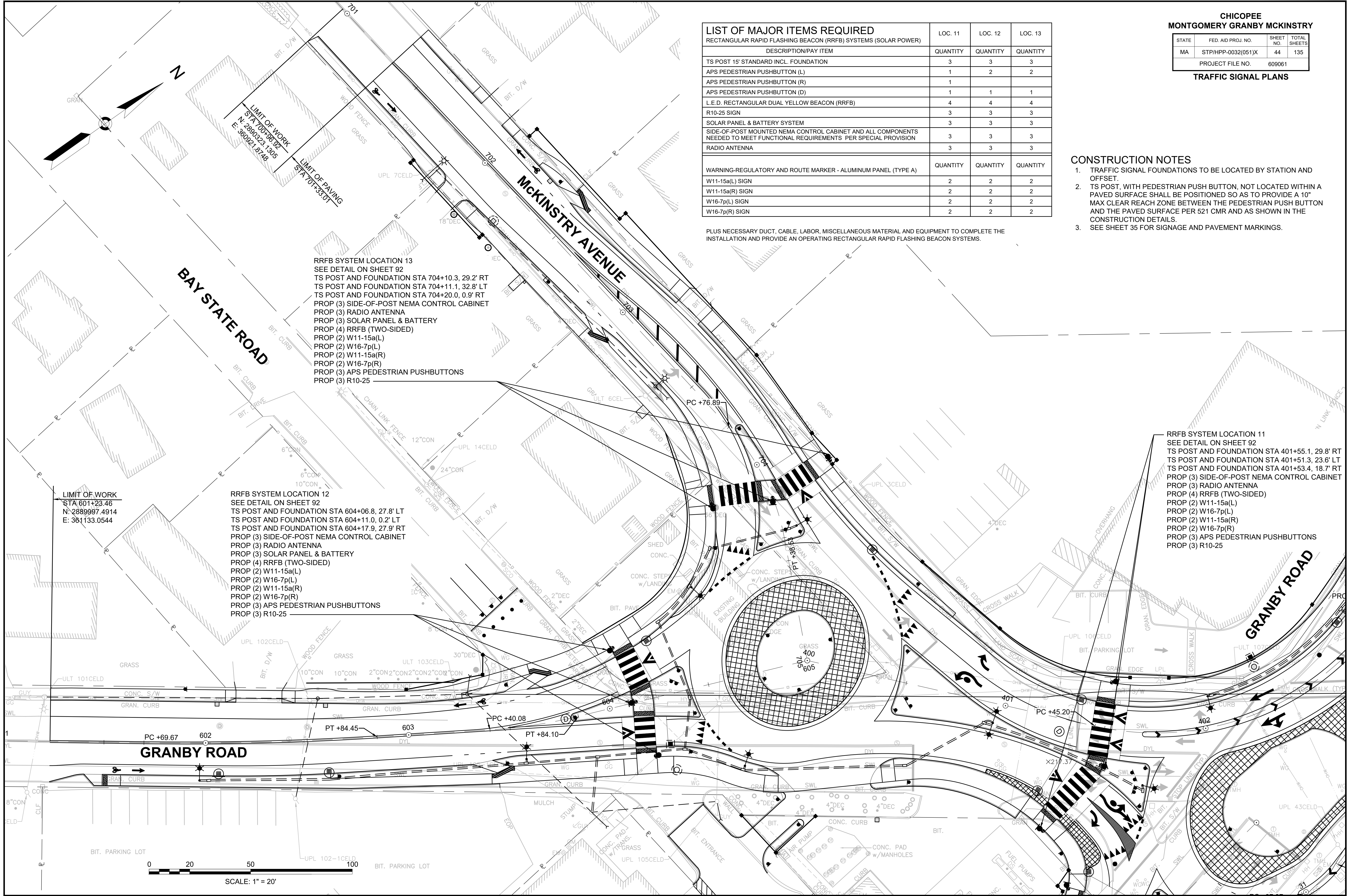
RRFB SYSTEM LOCATION 7
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 404+98.8, 32.4' RT
TS POST AND FOUNDATION STA 405+11.3, 52.8' RT
PROP (2) SIDE-OF-POST NEMA CONTROL CABINET
PROP (2) RADIO ANTENNA
PROP (2) SOLAR PANEL & BATTERY
PROP (2) RRFB (TWO-SIDED)
PROP (1) W11-15a(L)
PROP (1) W16-7p(L)
PROP (1) W11-15a(R)
PROP (1) W16-7p(R)
PROP (2) APS PEDESTRIAN PUSHBUTTONS W/
PROP (2) R10-25

LIST OF MAJOR ITEMS REQUIRED

RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEMS (SOLAR POWER)

DESCRIPTION/PAY ITEM	LOC. 6	LOC. 7	LOC. 8	LOC. 9	LOC. 10
QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY
TS POST 15' STANDARD INCL. FOUNDATION	3	2	2	2	2
APS PEDESTRIAN PUSHBUTTON (L)	1	2	2	2	2
APS PEDESTRIAN PUSHBUTTON (R)	1				
APS PEDESTRIAN PUSHBUTTON (D)	1				
L.E.D. RECTANGULAR DUAL YELLOW BEACON (RRFB)	4	2	2	2	2
R10-25 SIGN	3	2	2	2	2
SOLAR PANEL & BATTERY SYSTEM	3	2	2	2	2
SIDE-OF-POST MOUNTED NEMA CONTROL CABINET AND ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISION	3	2	2	2	2
RADIO ANTENNA	3	2	2	2	2
WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A)	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY
W11-15a(L) SIGN	2	1	1	2	2
W11-15a(R) SIGN	2	1	1	2	2
W16-7p(L) SIGN	2	1	1	2	2
W16-7p(R) SIGN	2	1	1	2	2

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING RECTANGULAR RAPID FLASHING BEACON SYSTEMS.



LIST OF MAJOR ITEMS REQUIRED			
RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEMS (SOLAR POWER)			
DESCRIPTION/PAY ITEM	LOC. 11	LOC. 12	LOC. 13
TS POST 15' STANDARD INCL. FOUNDATION	3	3	3
APS PEDESTRIAN PUSHBUTTON (L)	1	2	2
APS PEDESTRIAN PUSHBUTTON (R)	1		
APS PEDESTRIAN PUSHBUTTON (D)	1	1	1
L.E.D. RECTANGULAR DUAL YELLOW BEACON (RRFB)	4	4	4
R10-25 SIGN	3	3	3
SOLAR PANEL & BATTERY SYSTEM	3	3	3
SIDE-OF-POST MOUNTED NEMA CONTROL CABINET AND ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISION	3	3	3
RADIO ANTENNA	3	3	3
WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A)	QUANTITY	QUANTITY	QUANTITY
W11-15a(L) SIGN	2	2	2
W11-15a(R) SIGN	2	2	2
W16-7p(L) SIGN	2	2	2
W16-7p(R) SIGN	2	2	2

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING RECTANGULAR RAPID FLASHING BEACON SYSTEMS.

CHICOPEE

MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	44	135
PROJECT FILE NO.		609061	

TRAFFIC SIGNAL PLANS

- CONSTRUCTION NOTES
1. TRAFFIC SIGNAL FOUNDATIONS TO BE LOCATED BY STATION AND OFFSET.
 2. TS POST, WITH PEDESTRIAN PUSH BUTTON, NOT LOCATED WITHIN A PAVED SURFACE SHALL BE POSITIONED SO AS TO PROVIDE A 10" MAX CLEAR REACH ZONE BETWEEN THE PEDESTRIAN PUSH BUTTON AND THE PAVED SURFACE PER 521 CMR AND AS SHOWN IN THE CONSTRUCTION DETAILS.
 3. SEE SHEET 35 FOR SIGNAGE AND PAVEMENT MARKINGS.

RRFB SYSTEM LOCATION 13
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 704+10.3, 29.2' RT
TS POST AND FOUNDATION STA 704+11.1, 32.8' LT
TS POST AND FOUNDATION STA 704+20.0, 0.9' RT
PROP (3) SIDE-OF-POST NEMA CONTROL CABINET
PROP (3) RADIO ANTENNA
PROP (3) SOLAR PANEL & BATTERY
PROP (4) RRFB (TWO-SIDED)
PROP (2) W11-15a(L)
PROP (2) W16-7p(L)
PROP (2) W11-15a(R)
PROP (2) W16-7p(R)
PROP (3) APS PEDESTRIAN PUSHBUTTONS
PROP (3) R10-25

RRFB SYSTEM LOCATION 12
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 604+06.8, 27.8' LT
TS POST AND FOUNDATION STA 604+11.0, 0.2' LT
TS POST AND FOUNDATION STA 604+17.9, 27.9' RT
PROP (3) SIDE-OF-POST NEMA CONTROL CABINET
PROP (3) RADIO ANTENNA
PROP (3) SOLAR PANEL & BATTERY
PROP (4) RRFB (TWO-SIDED)
PROP (2) W11-15a(L)
PROP (2) W16-7p(L)
PROP (2) W11-15a(R)
PROP (2) W16-7p(R)
PROP (3) APS PEDESTRIAN PUSHBUTTONS
PROP (3) R10-25

LIMIT OF WORK
STA 601+23.46
N: 2889997.4914
E: 381133.0544

RRFB SYSTEM LOCATION 11
SEE DETAIL ON SHEET 92
TS POST AND FOUNDATION STA 401+55.1, 29.8' RT
TS POST AND FOUNDATION STA 401+51.3, 23.6' LT
TS POST AND FOUNDATION STA 401+53.4, 18.7' RT
PROP (3) SIDE-OF-POST NEMA CONTROL CABINET
PROP (3) RADIO ANTENNA
PROP (4) RRFB (TWO-SIDED)
PROP (2) W11-15a(L)
PROP (2) W16-7p(L)
PROP (2) W11-15a(R)
PROP (2) W16-7p(R)
PROP (3) APS PEDESTRIAN PUSHBUTTONS
PROP (3) R10-25

GENERAL NOTES

1. ALL CONSTRUCTION SIGNING, TEMPORARY TRAFFIC CONTROL DEVICES, AND ROADSIDE ELEMENTS SHALL CONFORM WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS AMENDED, THE MASSDOT STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TEMPORARY TRAFFIC CONTROL PLANS, THE LATEST REVISIONS OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, (AASHTO) ROADSIDE DESIGN GUIDE, AASHTO POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, AND NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 OR THE AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

2. WORK HOURS SHALL BE 7:00AM TO 3:00PM MONDAY THRU FRIDAY UNLESS OTHERWISE APPROVED BY MASSDOT AND THE CITY. NO WORK IMPACTING THE TRAVEL WAY WILL BE ALLOWED DURING PEAK TRAFFIC PERIODS. PEAK PERIODS ARE DEFINED AS MONDAY THRU FRIDAY, 6:00AM TO 9:00AM AND 3:00PM TO 7:00PM.

3. NO WORK SHALL OCCUR WITHIN THE PUBLIC WAY THE DAY BEFORE, AFTER OR ON A STATE RECOGNIZED HOLIDAY UNLESS OTHERWISE APPROVED BY THE ENGINEER.

4. ALL TEMPORARY PEDESTRIAN PATHWAYS SHALL COMPLY FULLY WITH ALL REQUIREMENTS OF THE MUTCD AND ALL APPLICABLE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) AND AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) REQUIREMENTS AND PUBLIC RIGHTS-OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

5. ALL DRUMS OUTSIDE TAPERS SHALL BE SET AT 20' ON CENTER MAX. UNLESS OTHERWISE NOTED OR ADJUSTED BY THE ENGINEER.

6. ALL DRUMS SHALL BE APPROXIMATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN SAFE AND REASONABLE ABUTTER ACCESS. WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS AND OTHER TRAFFIC CONTROL DEVICES, GRADING AND TEMPORARY PAVEMENT FOR PASSAGE OF PEDESTRIAN, VEHICULAR AND EMERGENCY TRAFFIC THROUGH THE WORK AREAS, BOTH DURING AND AFTER WORKING HOURS, TO MAINTAIN SUCH ACCESS.

7. THE FIRST 10 DRUMS ON TAPERS SHALL BE REFLECTORIZED DRUMS WITH SEQUENTIAL FLASHING WARNING LIGHTS AND SHALL BE OPERATING, AT A MINIMUM, BETWEEN DUSK AND DAWN, WHEN TAPER IS DEPLOYED.

8. REFLECTORIZED CONES SHALL BE A MINIMUM OF 36 INCHES IN HEIGHT.

9. CONES MAY BE USED IN LIEU OF DRUMS OUTSIDE OF TAPER AREAS AND TEMPORARY ROUNDABOUT PATTERNS. CONES IN STRINGS OF LESS THAN 50 WILL BE CONSIDERED INCIDENTAL.

10. THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 48 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OR RESTRICTION OF ACCESS.

11. FOR DROP-OFFS 3" OR LESS WITHIN THE CLEAR ZONE, CONDITION MAY BE MITIGATED WITH W8-9 (LOW SHOULDER) SIGN OR TEMPORARY CHANNELIZATION DEVICES. FOR DROP-OFFS GREATER THAN 3" BUT NO MORE THAN 36", DETERMINE WHETHER IT IS MORE COST EFFECTIVE TO INSTALL BOTH W8-9 SIGN AND TEMPORARY CHANNELIZATION DEVICES IN ACCORDANCE WITH MASSDOT WORK ZONE SAFETY GUIDE OR W8-9 SIGN WITH A 2H:1V (MIN) WEDGE OR TO REMOVE THE HAZARD.

12. CONTRACTOR SHALL STAGE WORK SUCH THAT A DROP-OFF OF NO MORE THAN 3" AT THE END OF EACH WORK DAY EXISTS WITHIN THE CLEAR ZONE AT ANY TIME AND ENSURE DROP-OFF IS MITIGATED WITHOUT BARRIER PER NOTE 11.

13. CONSTRUCTION CLEAR ZONE SHALL BE IN ACCORDANCE WITH MASSDOT BOSTON TRAFFIC GUIDELINES AS FOLLOWS:
4' IF POSTED SPEED IS LESS THAN 35 MPH
8' IF POSTED SPEED IS 35 MPH
15' IF POSTED SPEED IS 40 MPH
20' IF POSTED SPEED IS 45 MPH

14. 11' MINIMUM LANE WIDTHS SHALL BE MAINTAINED UNLESS OTHERWISE NOTED.

15. TEMPORARY TRAFFIC CONTROL DEVICES AND SIGNS SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS WHEN NOT IN USE.

16. SIGNS INSTALLED ON PORTABLE STANDS REQUIRE 12 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN.

17. SIGNS INSTALLED ON PORTABLE STANDS PLACED AMONG CHANNELIZATION DEVICES REQUIRE A 36 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN.
18. SIGNS MOUNTED ON POSTS REQUIRE A MINIMUM 84 INCH MOUNTING HEIGHT FROM THE ROADWAY OR SIDEWALK SURFACE TO THE BOTTOM OF THE SIGN. CONTRACTOR SHALL MAINTAIN A MINIMUM SIDEWALK HORIZONTAL CLEAR WIDTH OF 36" AT ALL TIMES.

19. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN NCHRP 350 AND/OR MASH CRASH TESTED SIGN SUPPORTS AND INSTALLED IN ACCORDANCE WITH THE MUTCD. SIGNS SHALL NOT BE MOUNTED TO OR LEANED AGAINST DRUMS OR CONES.

20. ADVISORY SPEED PLAQUES (W13-1p(XX)) SHALL BE USED AS SHOWN AND AS REQUESTED BY THE ENGINEER. POSTED ADVISORY SPEED SHALL BE AS APPROVED BY THE APPROPRIATE AGENCY WITH JURISDICTION OVER THE ROADWAY ON WHICH THE SIGN WILL BE MOUNTED.

21. MA-W20-7b SIGNS SHALL BE REPLACED BY W20-7 SIGNS WHEN FLAGGERS ARE USED IN LIEU OF POLICE OFFICER DETAILS.

22. ARROW BOARD FLASHING CAUTION SHALL FLASH IN FOUR-POINT CAUTION MODE ONLY.

23. W21-7 SIGNS SHALL BE INSTALLED IN ADVANCE (100' MIN) OF AREAS WHERE UTILITY CASTINGS HAVE BEEN RAISED IN ADVANCE OF PAVING OPERATIONS OR AS REQUESTED BY THE ENGINEER.

24. W8-15 SIGNS SHALL BE INSTALLED IN ADVANCE (100' MIN) OF PAVEMENT MILLING AREAS OR AS REQUESTED BY THE ENGINEER.

25. TEMPORARY MARKINGS SHALL BE WATER-BORNE PAINT OR SURFACE-APPLIED REMOVEBLE TAPE, AS APPROVED BY THE ENGINEER.

26. ALL TEMPORARY CROSSWALKS AND STOP LINES SHALL BE 12 INCHES WIDE.

27. ALL TEMPORARY DOUBLE YELLOW LINES (DBYL) SHALL BE 6 INCHES WIDE.

28. W20-1c, MA-R2-10a OR MA-R2-10e SIGNS SHOWN ON ADVANCE SIGN SCHEMATIC MAY BE USED IN LIEU OF THOSE SIGNS SHOWN ON TYPICAL DETAILS ON THE TEMPORARY TRAFFIC CONTROL PLANS IF MINIMUM SIGN SPACING IS MET.

29. CONTRACTOR SHALL SECURE WORK AREAS BY APPROPRIATE MEANS, TO PREVENT UNAUTHORIZED ACCESS AT ALL TIMES.

30. THERE IS NO DESIGNATED BICYCLE LANE ON THE ROADWAY WITHIN THE PROJECT LIMITS. BICYCLES ARE EXPECTED TO SHARE THE ROAD WITH GENERAL VEHICULAR TRAFFIC.

31. NIGHTTIME WORK SHALL REQUIRE PRIOR APPROVAL FROM MASSDOT.

32. ILLUMINATION REQUIRED FOR NIGHTTIME WORK APPROVED BY THE ENGINEER SHALL BE DIFFUSED OR ANTI-GLARE LIGHTING AND IN ACCORDANCE WITH MASSDOT STANDARDS.

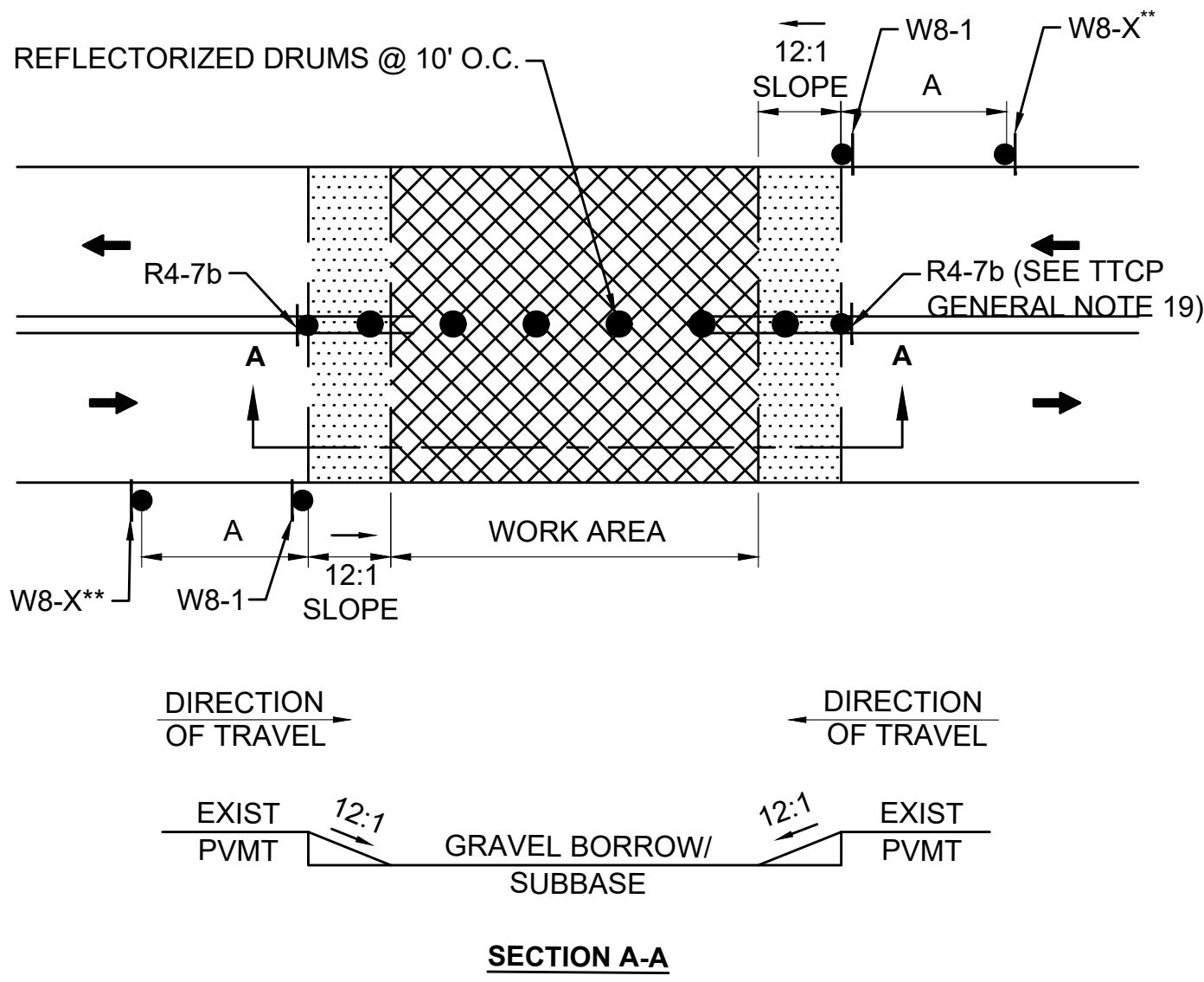
33. CONTRACTOR SHALL PROVIDE 9 PORTABLE CHANGE MESSAGE SIGN (PCMS) A MINIMUM OF 14 DAYS PRIOR TO AND POST START OF CONSTRUCTION AND 7 DAYS PRIOR TO AND POST CHANGE OF EACH MAJOR CONSTRUCTION STAGE OR AS DIRECTED BY MASSDOT.

34. TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE TRANSVERSELY PLACED RUMBLE STRIPS EVENLY SPACED. SPACING SHALL BE 10 FT ON CENTER OR AS DIRECTED BY THE ENGINEER.

35. WHEN UTILIZING TYPICAL TRAFFIC CONTROL DETAILS OR STAGING SETUPS, COVER EXISTING CONFLICTING ADVANCE WARNING SIGNS AS REQUIRED TO COMPLETE THE WORK.

36. CONTRACTOR SHALL NOT ALLOW PUBLIC ACCESS ON PORTIONS OF NEWLY BUILT SIDEWALK UNTIL ALL SIDEWALKS WITHIN THE PROJECT LIMITS ARE FULLY CONSTRUCTED AND ADAAG COMPLIANT OR AS DIRECTED BY THE ENGINEER.

37. CONTRACTOR TO COORDINATE WITH PVTA (PIONEER VALLEY TRANSIT AUTHORITY) REGARDING BUS OPERATIONS AND BUS STOP RELOCATION A MINIMUM OF 7 DAYS PRIOR TO START OF CONSTRUCTION. DAILY SET-UPS SHALL TAKE INTO CONSIDERATION IMPACTS TO BUS HEADWAYS TO MINIMIZE DISRUPTION TO BUS SERVICES.



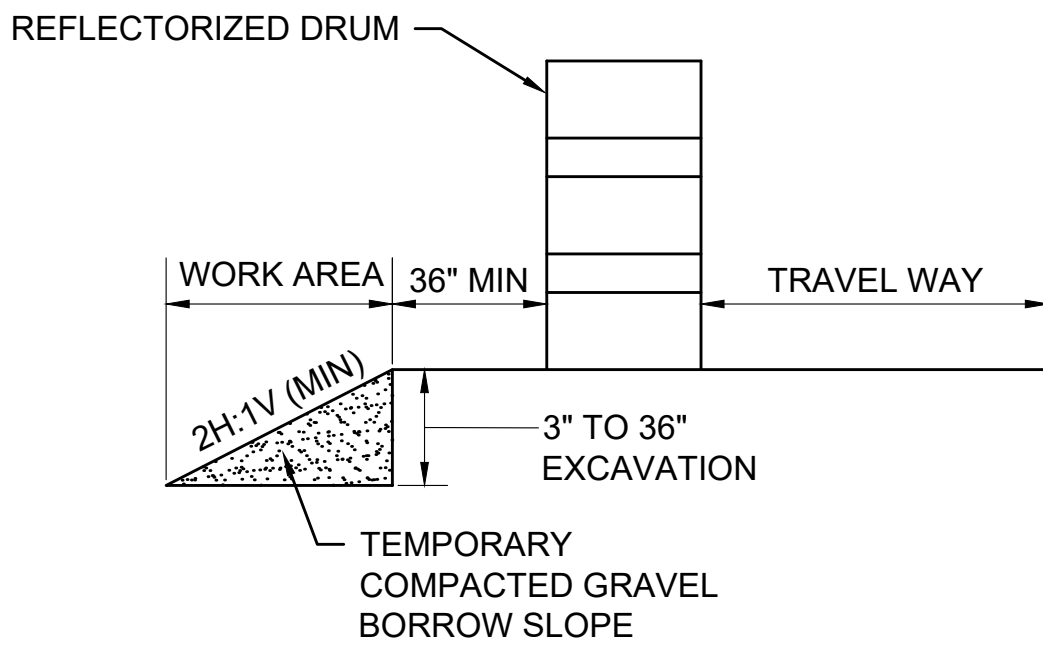
- NOTES:
1. SQUARE OFF THE FULL WIDTH OF THE ROADWAY AT THE END OF WORK DAY.

2. ** CONTRACTOR SHALL INSTALL W8-1 AT LIMIT OF EXCAVATION AND A W8-3, W8-8, W8-15, OR W8-24 SIGN, AS APPROPRIATE, ON ALL ROADWAYS IN ADVANCE OF THE TRANSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

3. R4-7b SIGNS AND DRUMS MAY BE OMITTED AT THE DISCRETION OF THE ENGINEER.

TEMPORARY PAVEMENT TRANSITION

SCALE: NTS DWG: TTCP1g DATE: FEB 2022



- NOTE:
1. CONTRACTOR SHALL INSTALL W8-9 SIGN ON ALL ROADWAYS 350 FEET IN ADVANCE OF THE START OF DROP-OFF CONDITION.

TYPICAL ROADWAY DROP-OFF PROTECTION

SCALE: NTS DWG: TTCP1f DATE: FEB 2022

CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	45	135
PROJECT FILE NO.		609061	

TEMPORARY TRAFFIC CONTROL PLANS
GENERAL NOTES & LEGEND

LEGEND

	FLAGGER
	POLICE OFFICER
	TRAFFIC SIGNAL
	REFLECTORIZED DRUM
	REFLECTORIZED DRUMS WITH SEQUENTIAL FLASHING WARNING LIGHTS (SEE NOTE 7)
	TEMPORARY CONSTRUCTION SIGN
	TRAFFIC CONE
	TYPE III BARRICADE
	ARROW BOARD (AB) (RIGHT OR LEFT)
	ARROW BOARD (AB) (DOUBLE)
	ARROW BOARD (AB) (CAUTION)
	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
	TEMPORARY PORTABLE RUMBLE STRIPS
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	TRANSITION/BUFFER AREAS
	TRAFFIC FLOW
	PEDESTRIAN ROUTE
	CONSTRUCTION FENCE
	TEMPORARY PEDESTRIAN BARRICADE
NTS	NOT TO SCALE
TTCP	TEMPORARY TRAFFIC CONTROL PLANS

ADVANCE SIGN SPACING

ROADWAY	DISTANCE BETWEEN SIGNS (FEET)		
	A	B	C
MASS PIKE RAMP, MONTGOMERY ST, GRANBY RD, MCKINSTRY AVE, SHOPPING PLAZA	350	350	350
ALL OTHER	100	100	100

LANE TAPER LENGTH FORMULAS

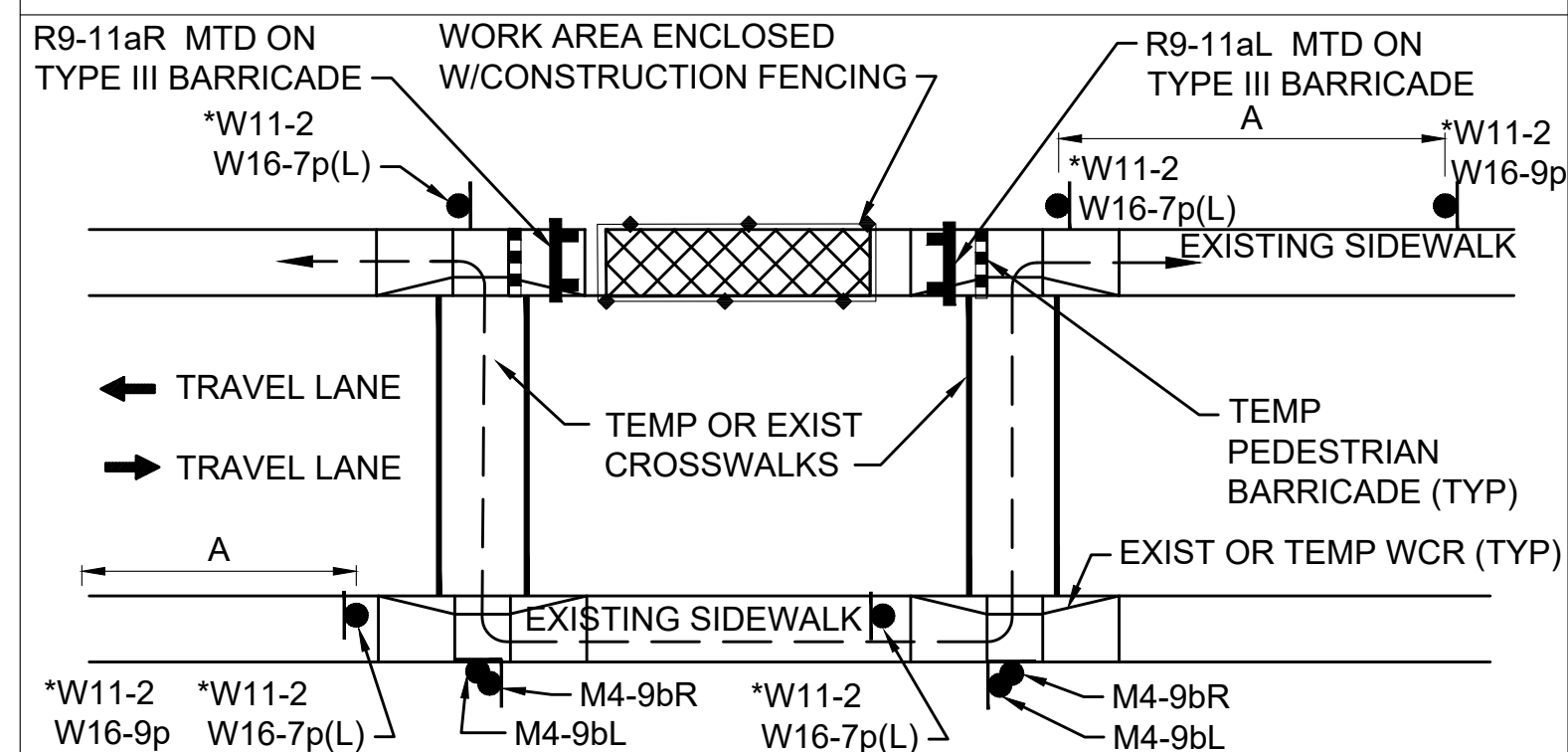
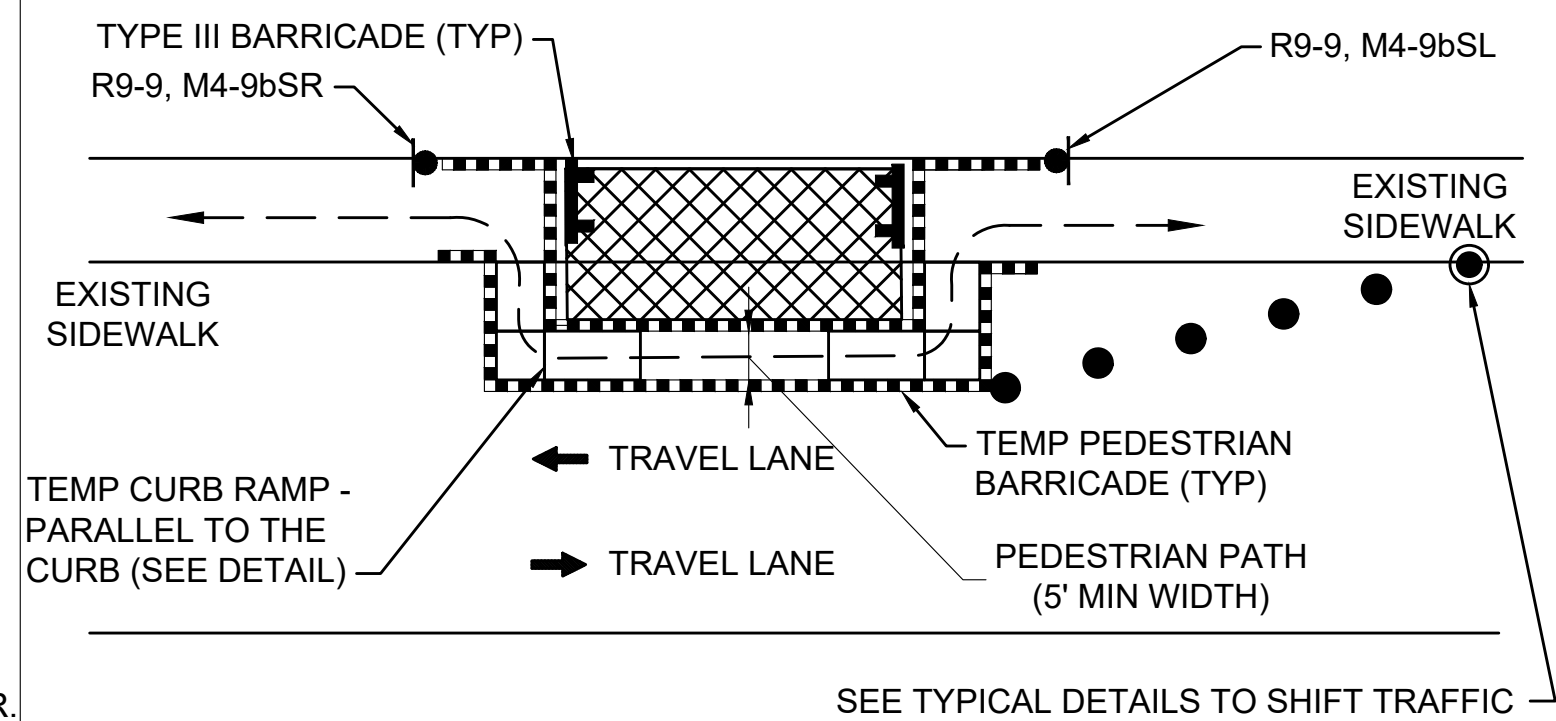
L= TAPER LENGTH IN FEET	
W= WIDTH OF ROADWAY TO BE SHIFTED OR REDIRECTED IN FEET	
S= POSTED SPEED LIMIT IN MPH	
POSTED SPEED	
40 MPH OR LESS	GREATER THAN 40 MPH
$L = \frac{WS^2}{60}$	L= WS



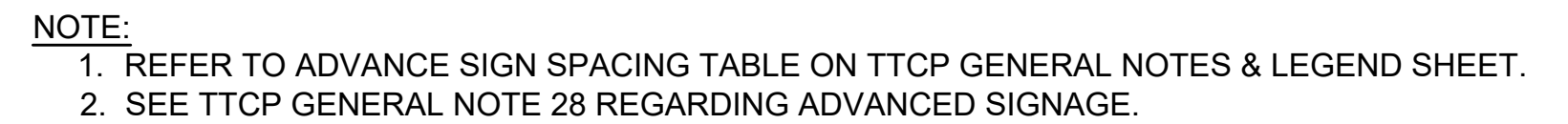
1. CURB RAMPS SHALL BE 60" MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
2. PROTECTIVE EDGING WITH A 2" MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
3. DETECTABLE EDGING WITH 6" MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. THE CURB RAMP WALKWAY AND LANDING AREA SURFACE SHALL BE OF A SOLID CONTINUOUS CONTRASTING COLOR ABUTTING UP TO THE EXISTING SIDEWALK.
5. CURB RAMPS AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
6. CLEAR SPACE OF 48"x48" MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
7. WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5" WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5" LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25" HIGH, AND BEVELED AT 1:2 BETWEEN 0.25" AND 0.5" HEIGHT.
10. IF A TEMPORARY PEDESTRIAN RAMP LEADS TO A CROSSWALK, THEN A DETECTABLE WARNING PAD MUST BE ADHERED TO THE BASE OF THE RAMP. IF IT LEADS TO A PROTECTED PEDESTRIAN BYPASS THAT DOES NOT CONFLICT WITH VEHICULAR TRAFFIC, THEN A PAD SHALL NOT BE INSTALLED ON THE RAMP.

DATE: MAY 2023

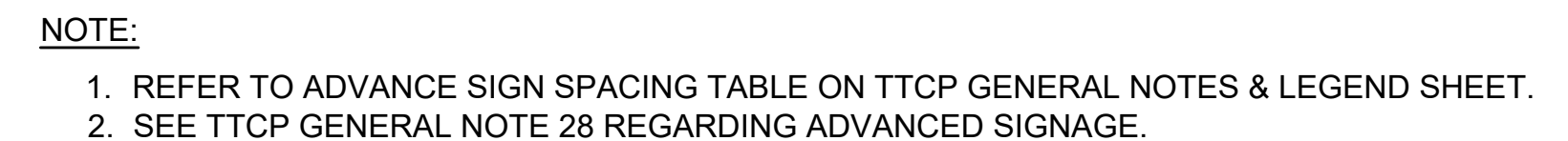
12. * INDICATES SIGNS ARE NOT REQUIRED IF EXISTING CROSSWALKS ARE USED.



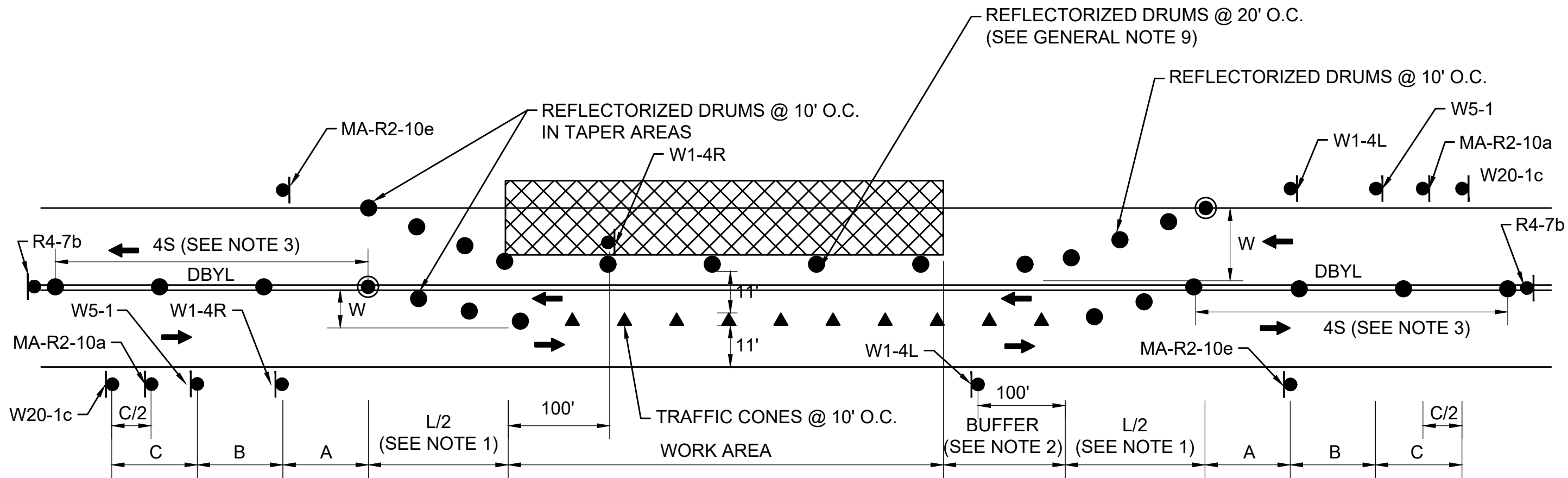
SCALE: NTS



SCALE: NTS



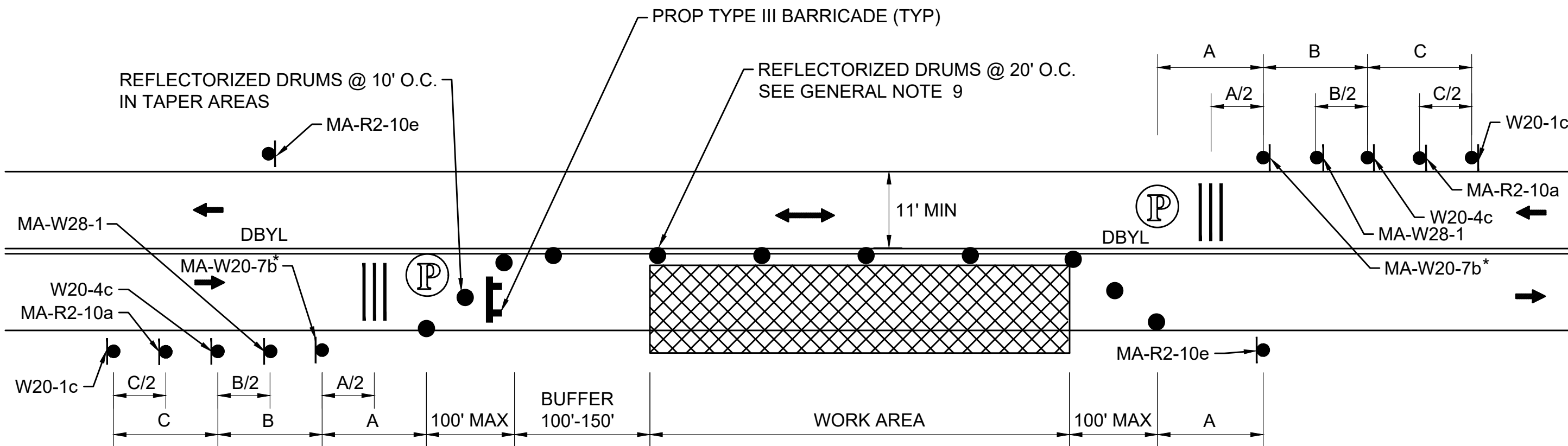
SCALE: NTS



- NOTES:
- SEE TAPER LENGTH FORMULA ON TTCP GENERAL NOTES & LEGEND SHEET.
 - SEE BUFFER SPACING CHART ON TTCP GENERAL NOTES & LEGEND SHEET.
 - S = POSTED SPEED OF ROADWAY IN MPH.
 - REFER TO ADVANCE SIGN SPACING TABLE ON TTCP GENERAL NOTES & LEGEND SHEET.
 - SEE TTCP GENERAL NOTE 28 REGARDING ADVANCED SIGNAGE.

TYPICAL TWO-WAY STREET LANE SHIFT

SCALE: NTS DWG: TTCP2a DATE: NOVEMBER 2020



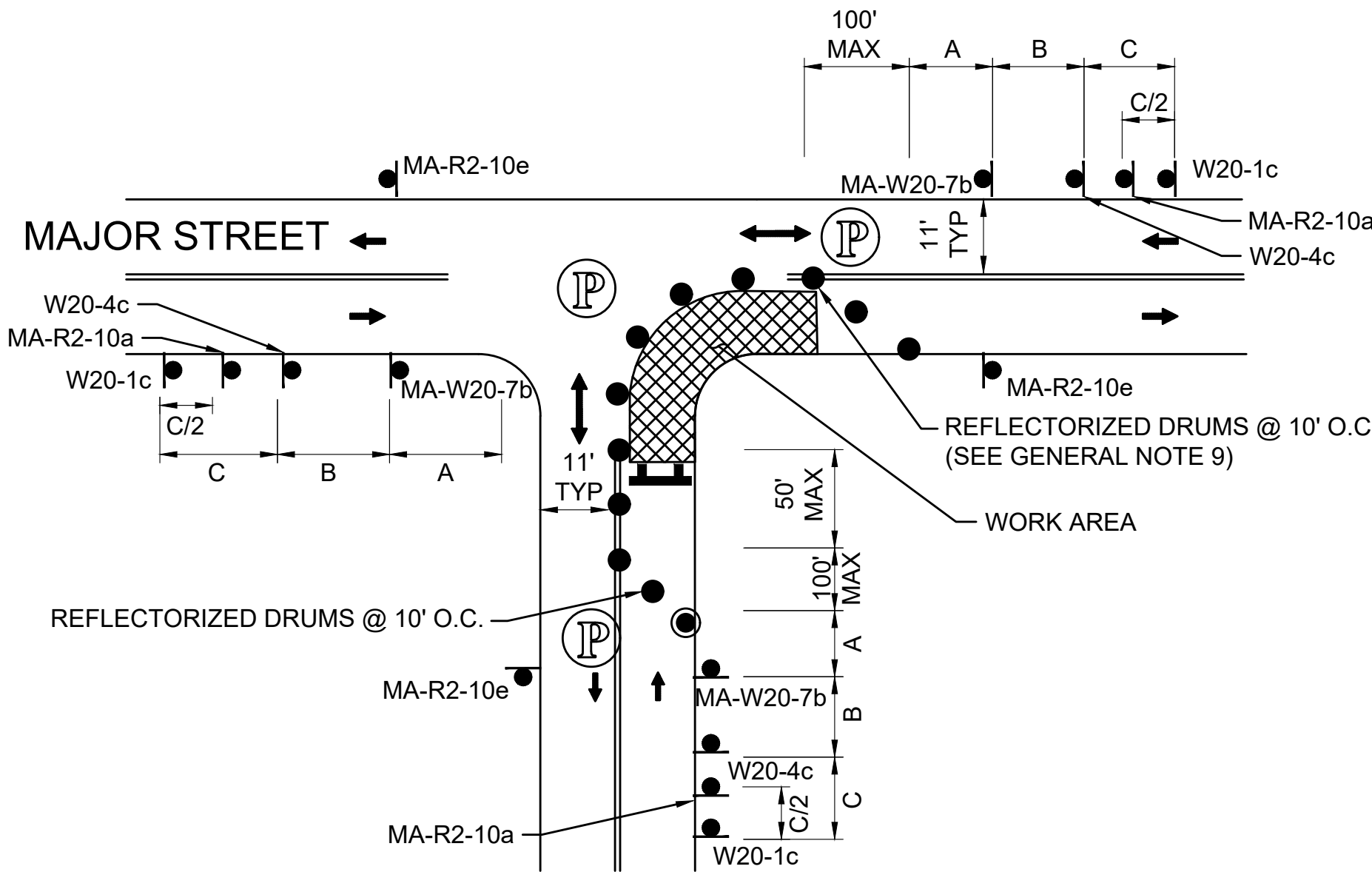
- NOTES:
- REFER TO ADVANCE SIGN SPACING TABLE ON TTCP GENERAL NOTES & LEGEND SHEET.
 - * SEE NOTE 21 ON TTCP GENERAL NOTES & LEGEND SHEET.
 - SEE ADVANCE SIGN SPACING CHART ON TTCP GENERAL NOTES & LEGEND SHEET.
 - SEE TTCP GENERAL NOTE 28 REGARDING ADVANCED SIGNAGE.

TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC

SCALE: NTS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	48	135
PROJECT FILE NO.		609061	

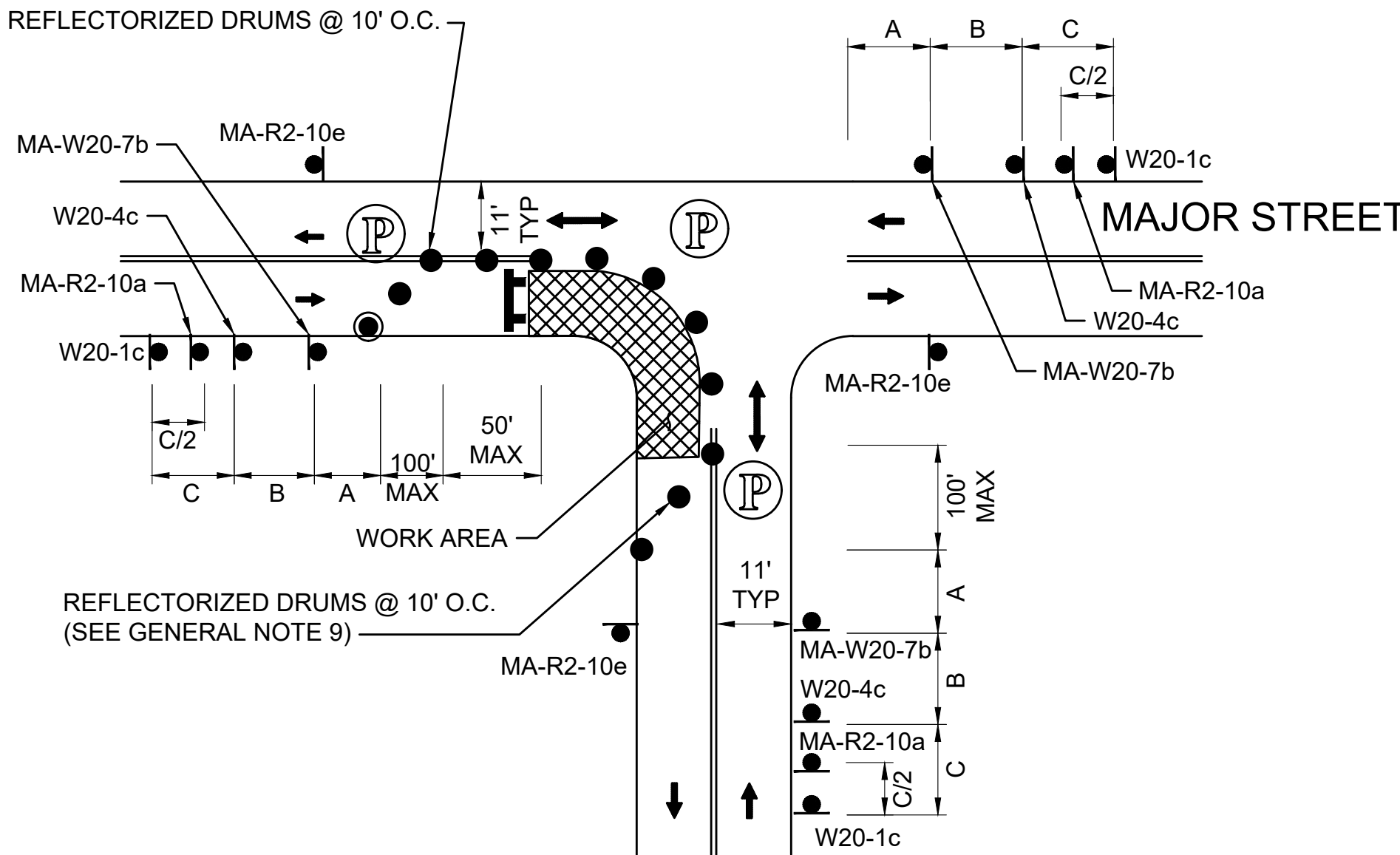
TEMPORARY TRAFFIC CONTROL PLANS
TYPICAL DETAILS



- NOTE:
1. ADVANCE WARNING SIGN PLACEMENT TO BE ADJUSTED AS NECESSARY.
 2. REFER TO ADVANCE SIGN SPACING TABLE ON TTCP GENERAL NOTES & LEGEND SHEET.
 3. SEE TTCP GENERAL NOTE 28 REGARDING ADVANCED SIGNAGE.

ONE LANE BI-DIRECTIONAL TRAFFIC AT INTERSECTIONS - FAR SIDE

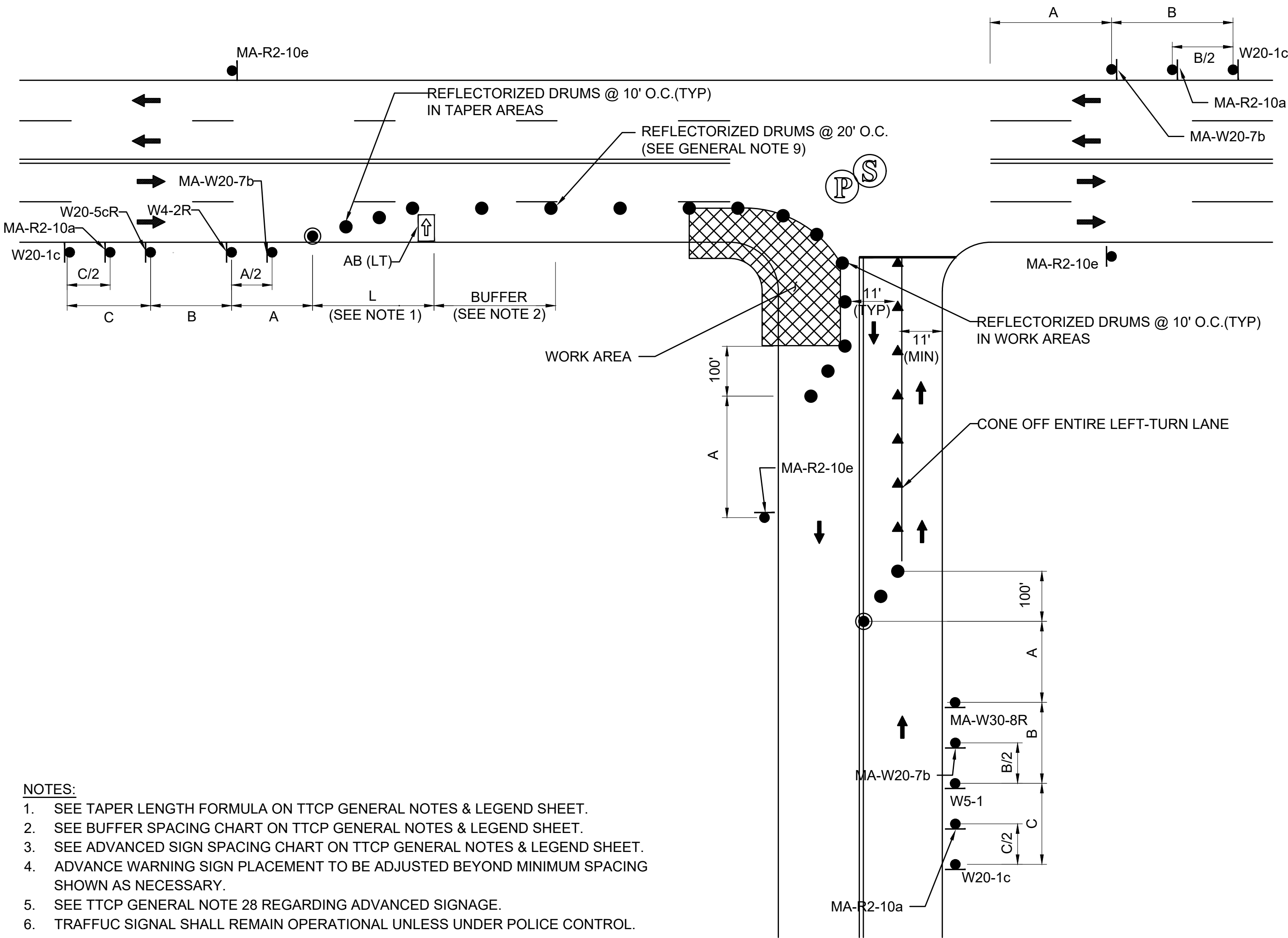
SCALE: NTS DWG: TTCP4c DATE: JULY 2019



- NOTE:
1. ADVANCE WARNING SIGN PLACEMENT TO BE ADJUSTED AS NECESSARY.
 2. REFER TO ADVANCE SIGN SPACING TABLE ON TTCP GENERAL NOTES & LEGEND SHEET.
 3. SEE TTCP GENERAL NOTE 28 REGARDING ADVANCED SIGNAGE.

ONE LANE BI-DIRECTIONAL TRAFFIC AT-INTERSECTIONS - NEAR SIDE

SCALE: NTS DWG: TTCP4d DATE: JULY 2019



- NOTES:
1. SEE TAPER LENGTH FORMULA ON TTCP GENERAL NOTES & LEGEND SHEET.
 2. SEE BUFFER SPACING CHART ON TTCP GENERAL NOTES & LEGEND SHEET.
 3. SEE ADVANCED SIGN SPACING CHART ON TTCP GENERAL NOTES & LEGEND SHEET.
 4. ADVANCE WARNING SIGN PLACEMENT TO BE ADJUSTED BEYOND MINIMUM SPACING SHOWN AS NECESSARY.
 5. SEE TTCP GENERAL NOTE 28 REGARDING ADVANCED SIGNAGE.
 6. TRAFFUC SIGNAL SHALL REMAIN OPERATIONAL UNLESS UNDER POLICE CONTROL.

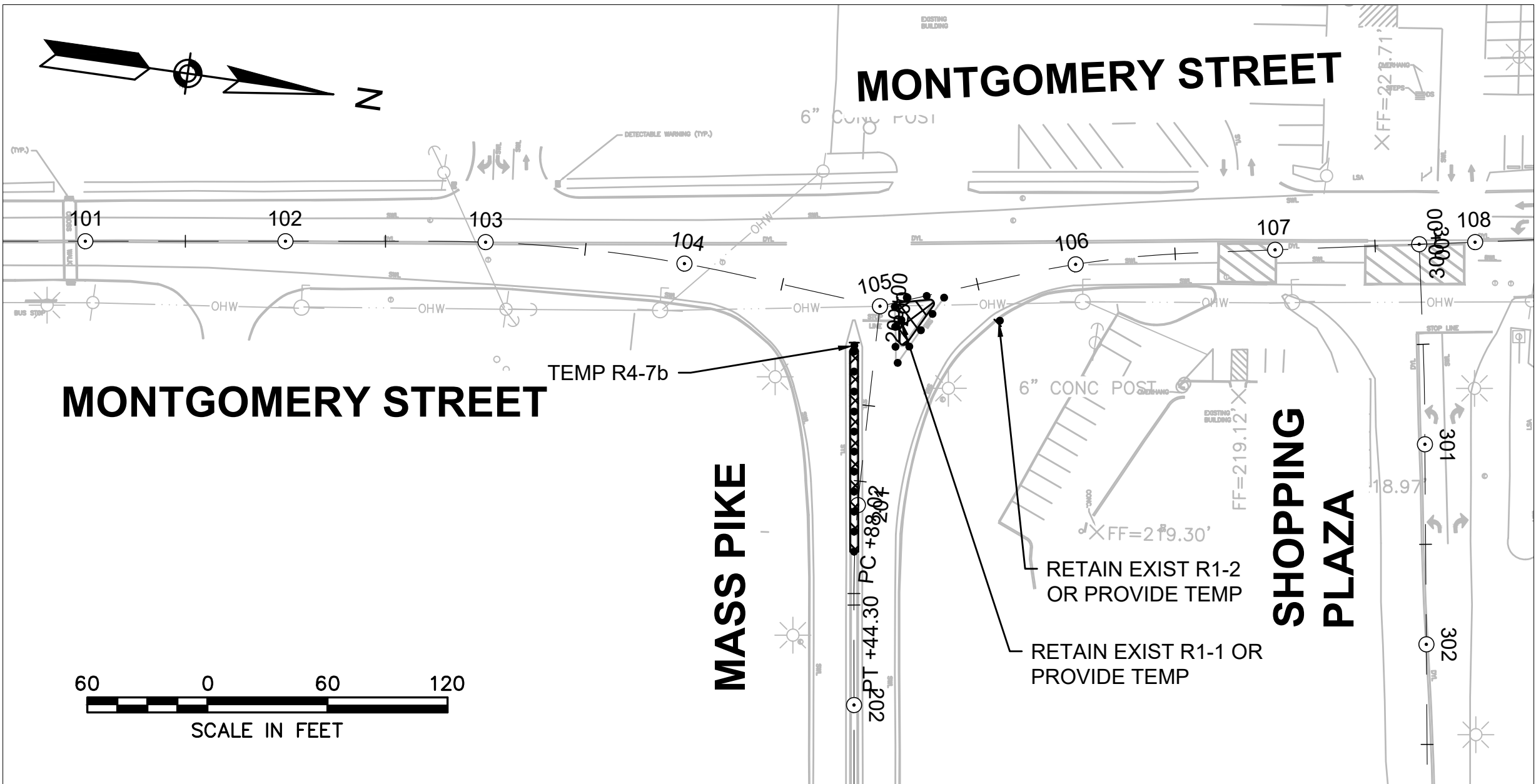
RIGHT-LANE CLOSURE AT T-INTERSECTION W/SIDE STREET LANE SHIFT

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	49	135
PROJECT FILE NO. 609061			

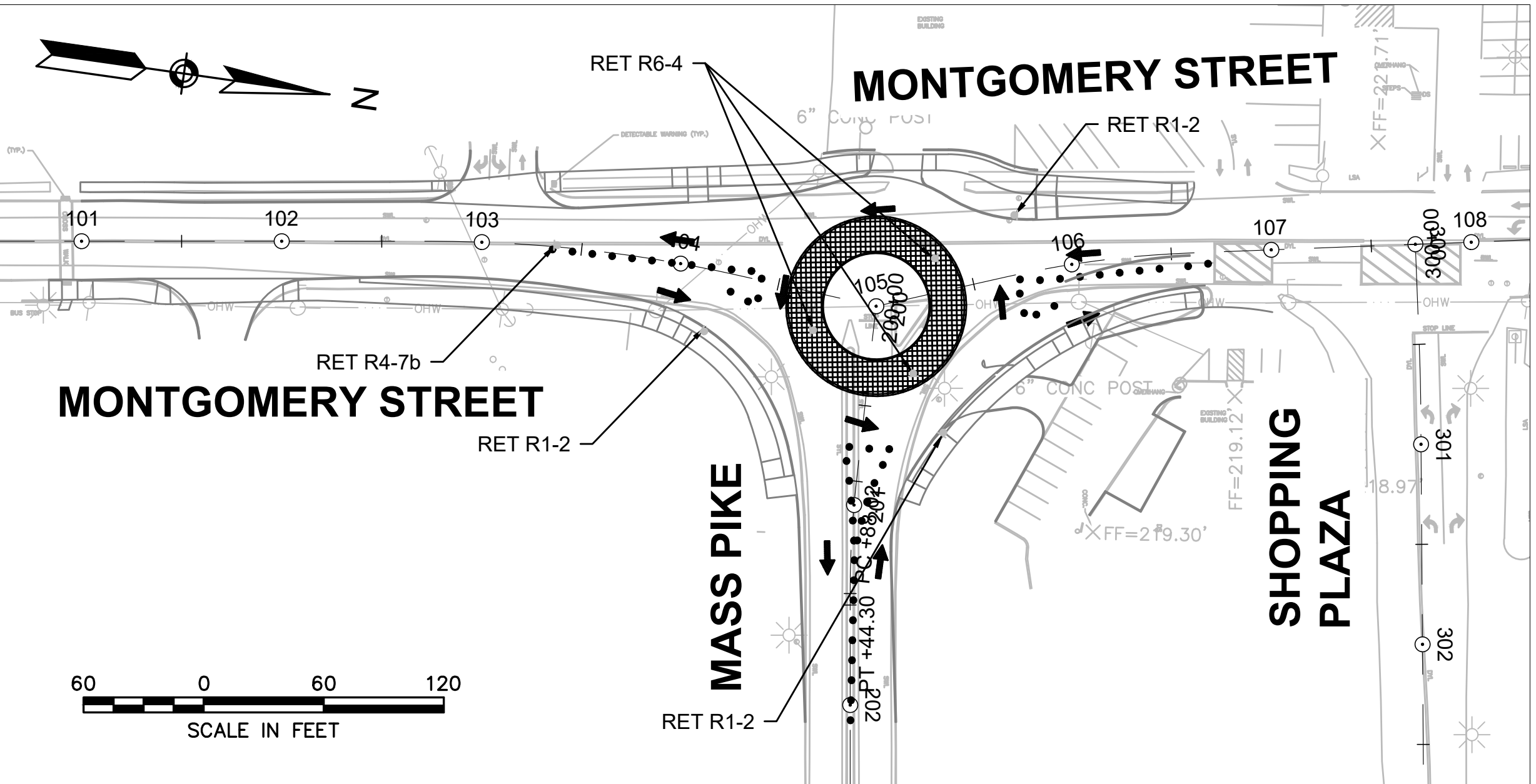
TEMPORARY TRAFFIC CONTROL PLANS
SUGGESTED SEQUENCING - MASSPIKE

SEQUENCING NOTES

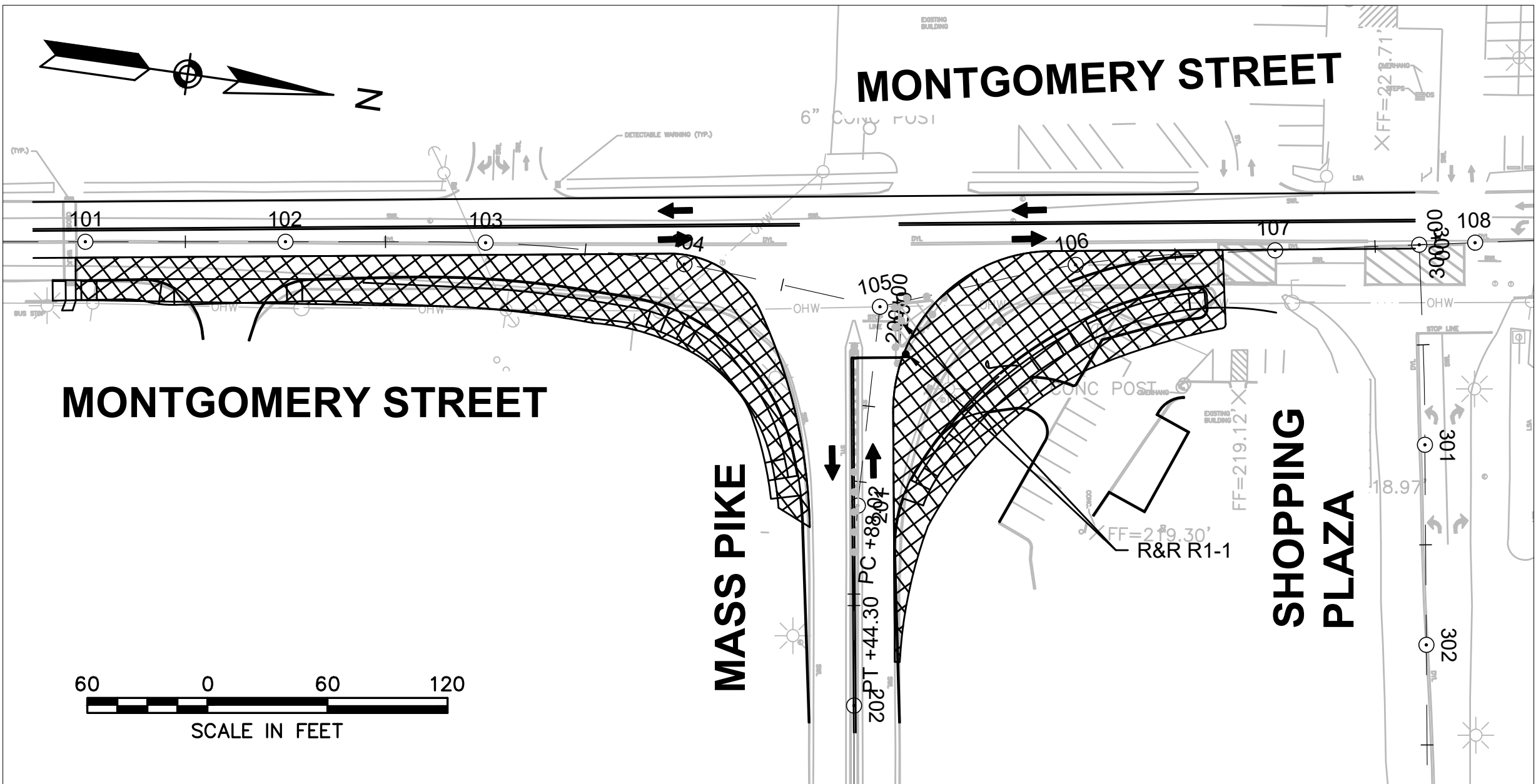
0. MAINTAIN PEDESTRIAN ACCESS ALONG WESTERLY SIDEWALK. CONTRACTOR TO MAINTAIN PEDESTRIAN ACCESS THROUGH WORK AREAS SUBJECT TO THEIR OWN MEANS AND METHODS.
1. REMOVE EXISTING DELTA ISLAND AND APPROXIMATELY 100-FEET OF MEDIAN DIVIDER ON RAMP. REPLACE MEDIAN WITH DRUMS.
2. SHIFT MONTGOMERY TRAFFIC TO THE WEST. WIDEN EASTERN CORNERS OF INTERSECTION. INSTALL CURB AND PAVEMENT TO BINDER AND PORTIONS OF SPLITTER ISLAND CURB
3. IMPLEMENT ROUNDABOUT PATTERN USING DRUMS. SHIFT NORTHBOUND TRAFFIC TO NEW ALIGNMENT. INSTALL WESTERLY CURB. MAINTAIN PEDESTRIAN ACCESS AND/OR DETOUR PEDESTRIANS TO EASTERLY ADA-COMPLIANT SIDEWALK.
4. CONSTRUCT CENTER ISLAND AND TRUCK APRON
5. CONSTRUCT SPLITTER ISLANDS. MAINTAIN ONE PEDESTRIAN CROSSING OF MONTGOMERY STREET AT ALL TIMES.
6. CONSTRUCT RAISED CROSSWALKS USING ALTERNATING TRAFFIC DETAIL.
7. INSTALL FINAL SIGNAGE. PERFORM FINAL PAVING AND PAVEMENT MARKING INSTALLATION. CONSIDER CLOSING RAMP AND PROVIDE DETOUR TO ROUTE 33 FOR MASS PIKE TRAFFIC.



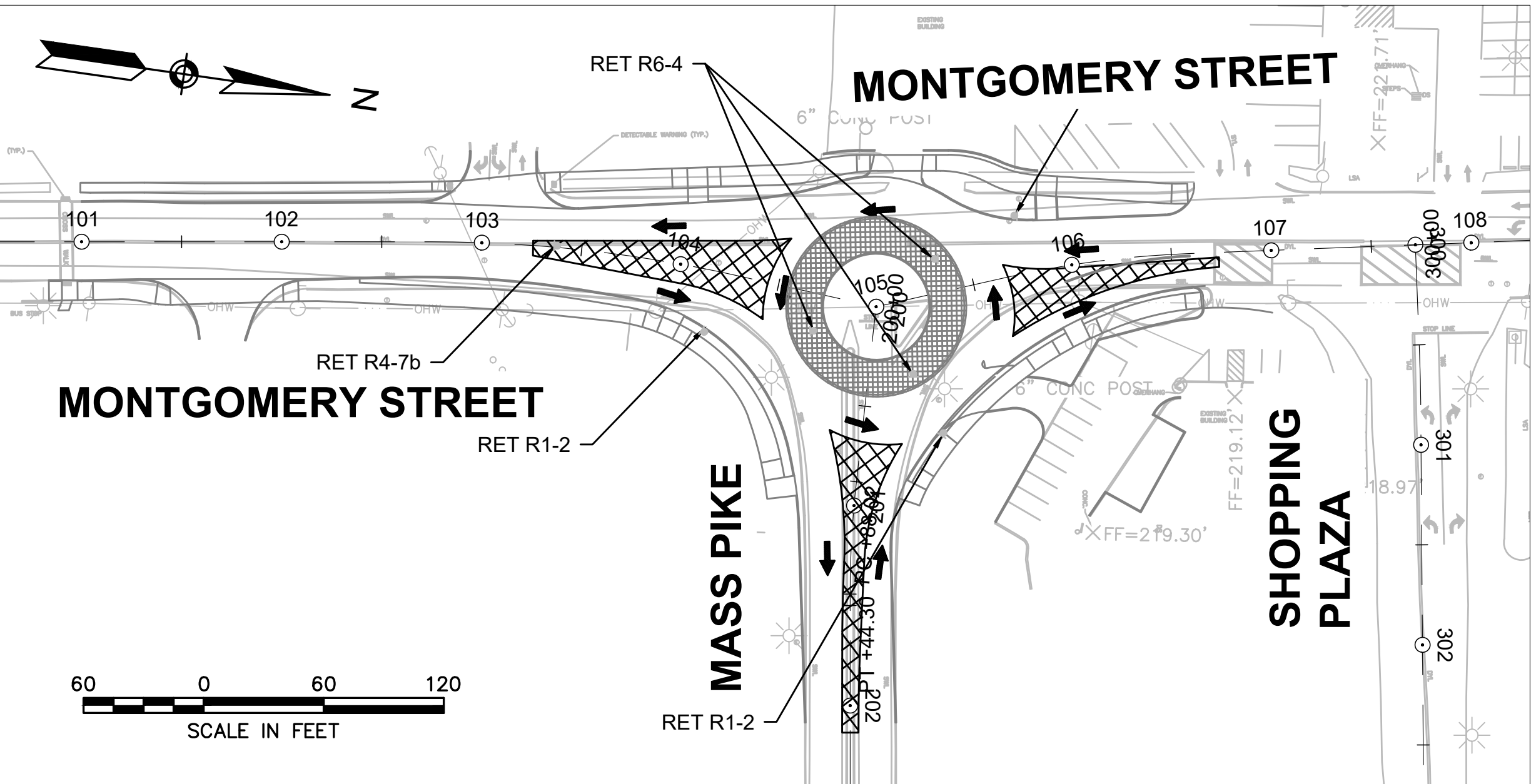
STAGE 1



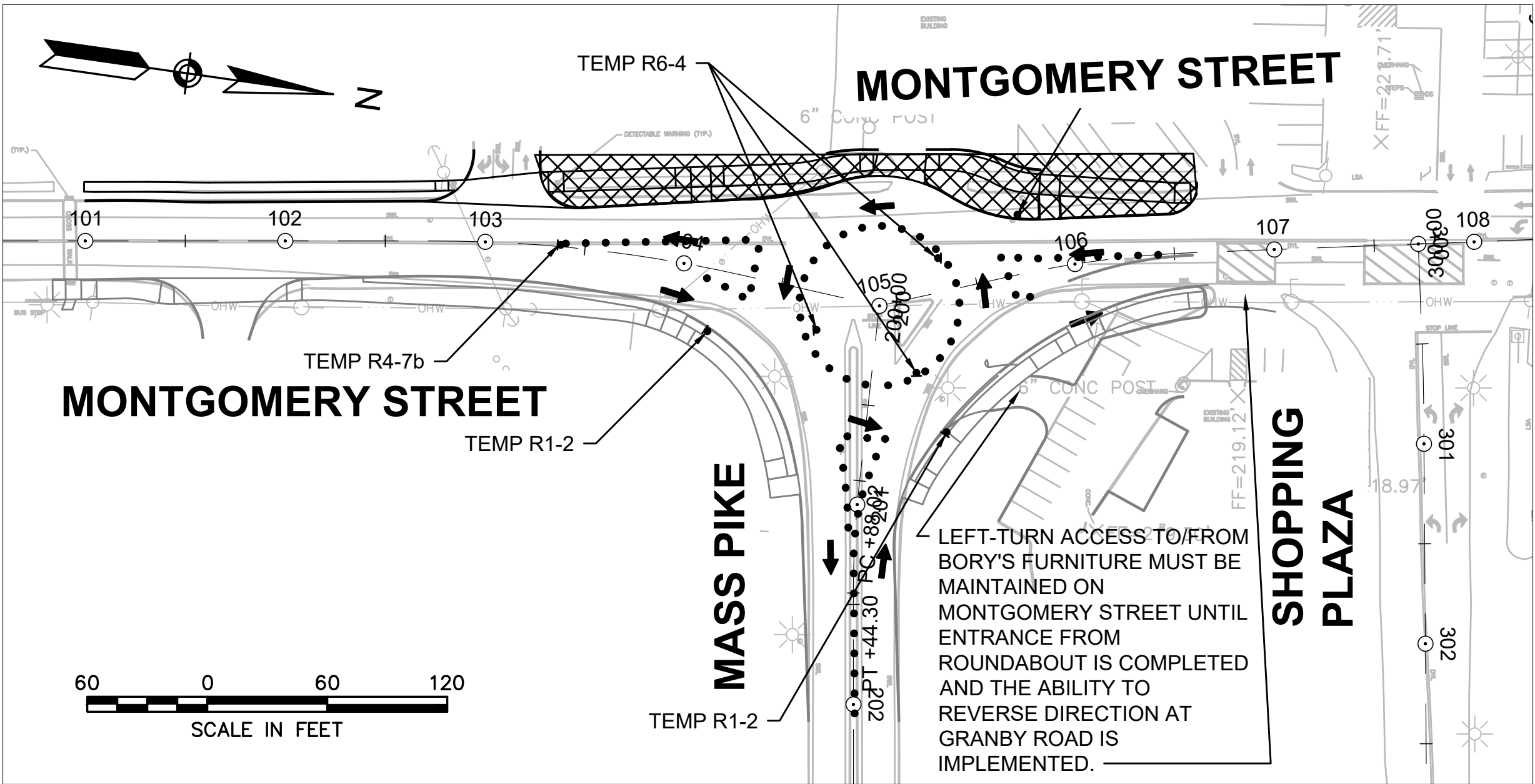
STAGE 4



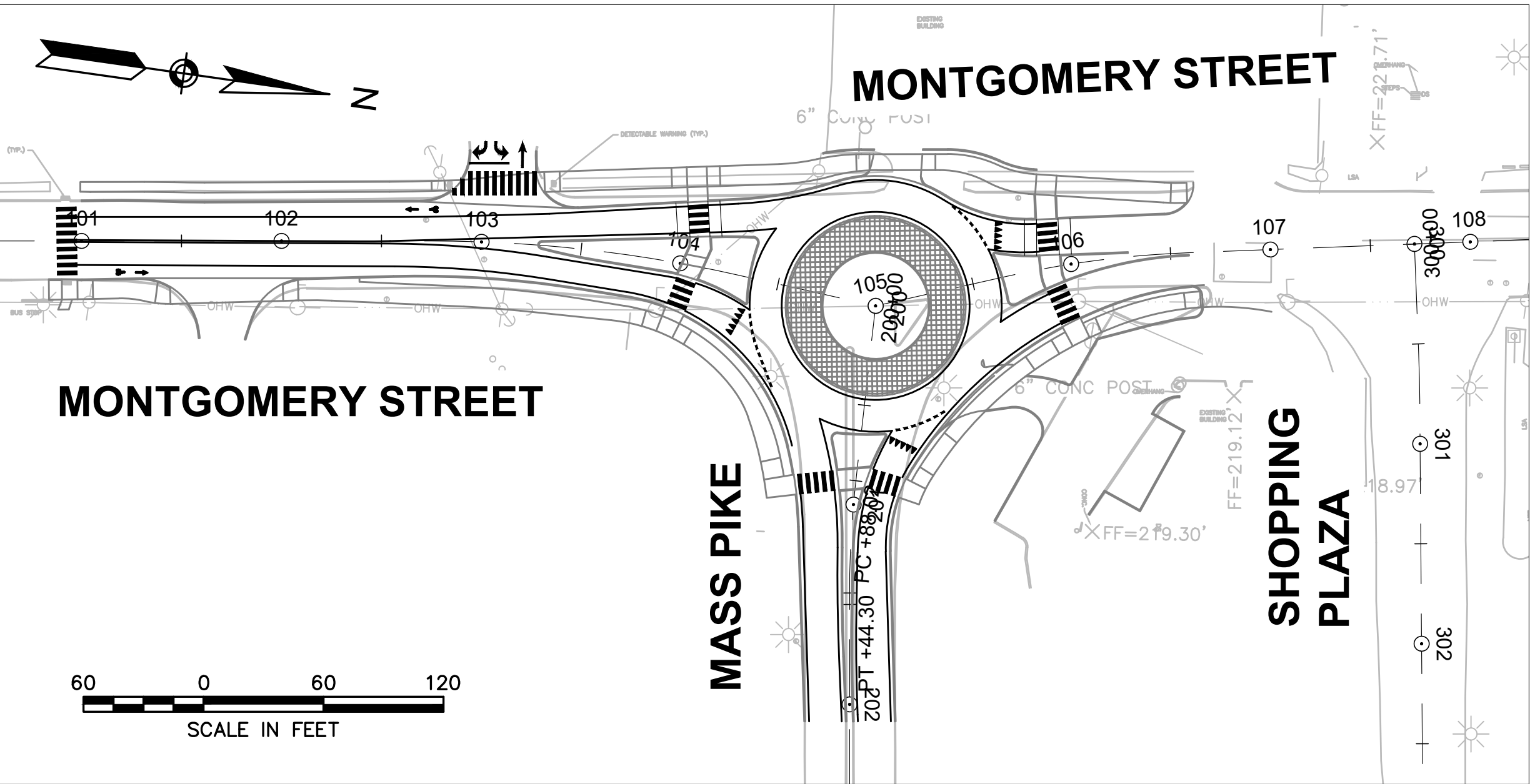
STAGE 2



STAGE 5



STAGE 3



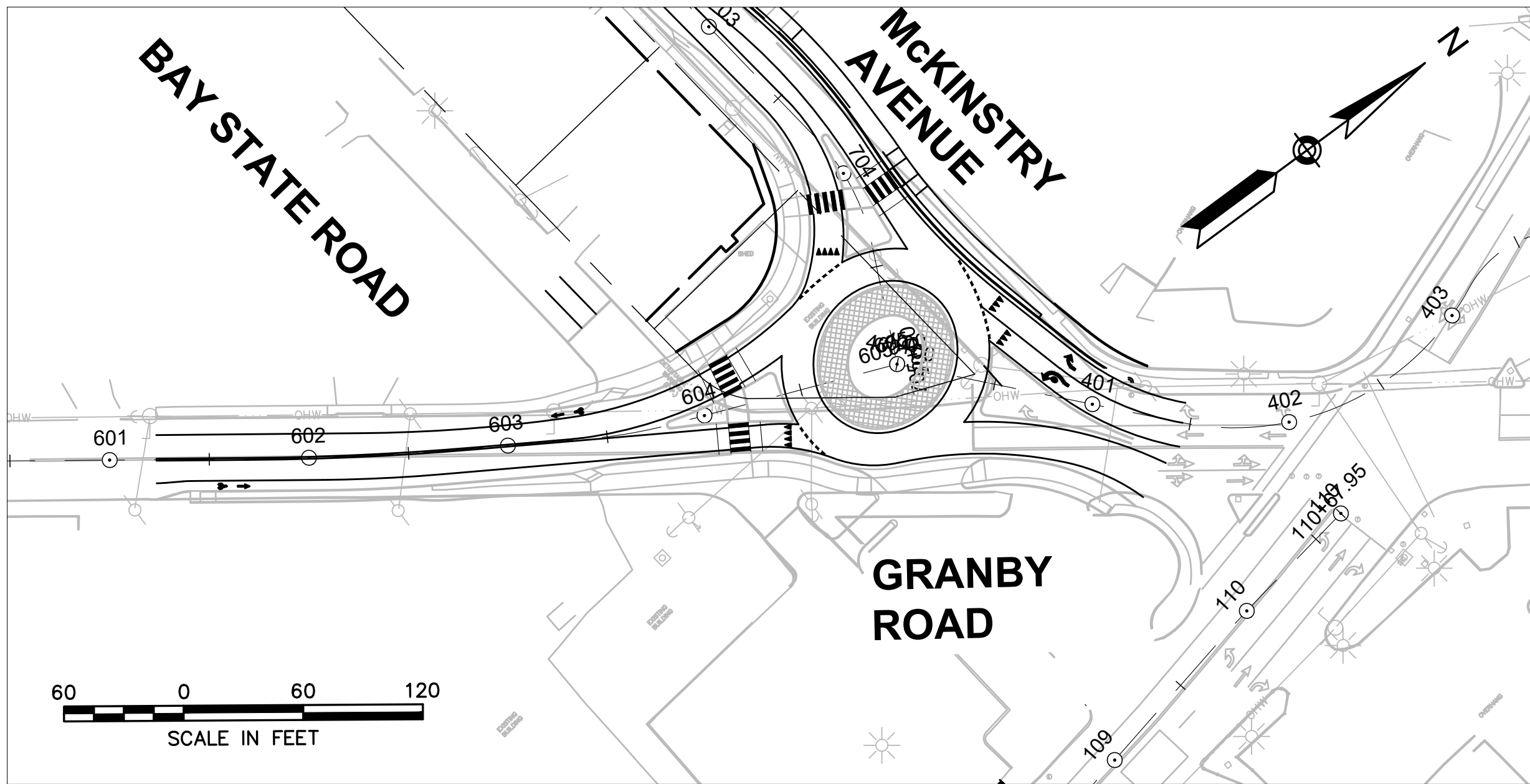
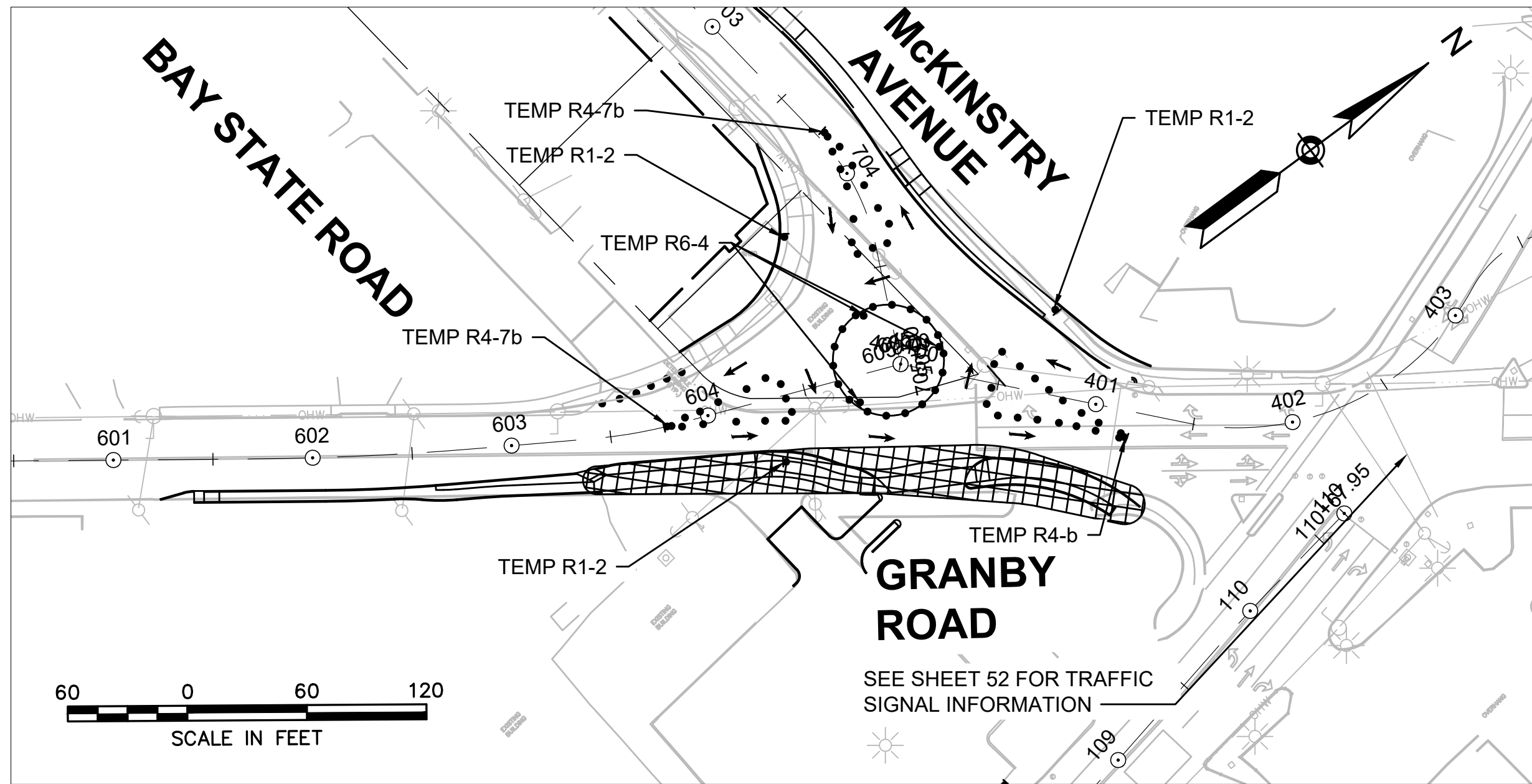
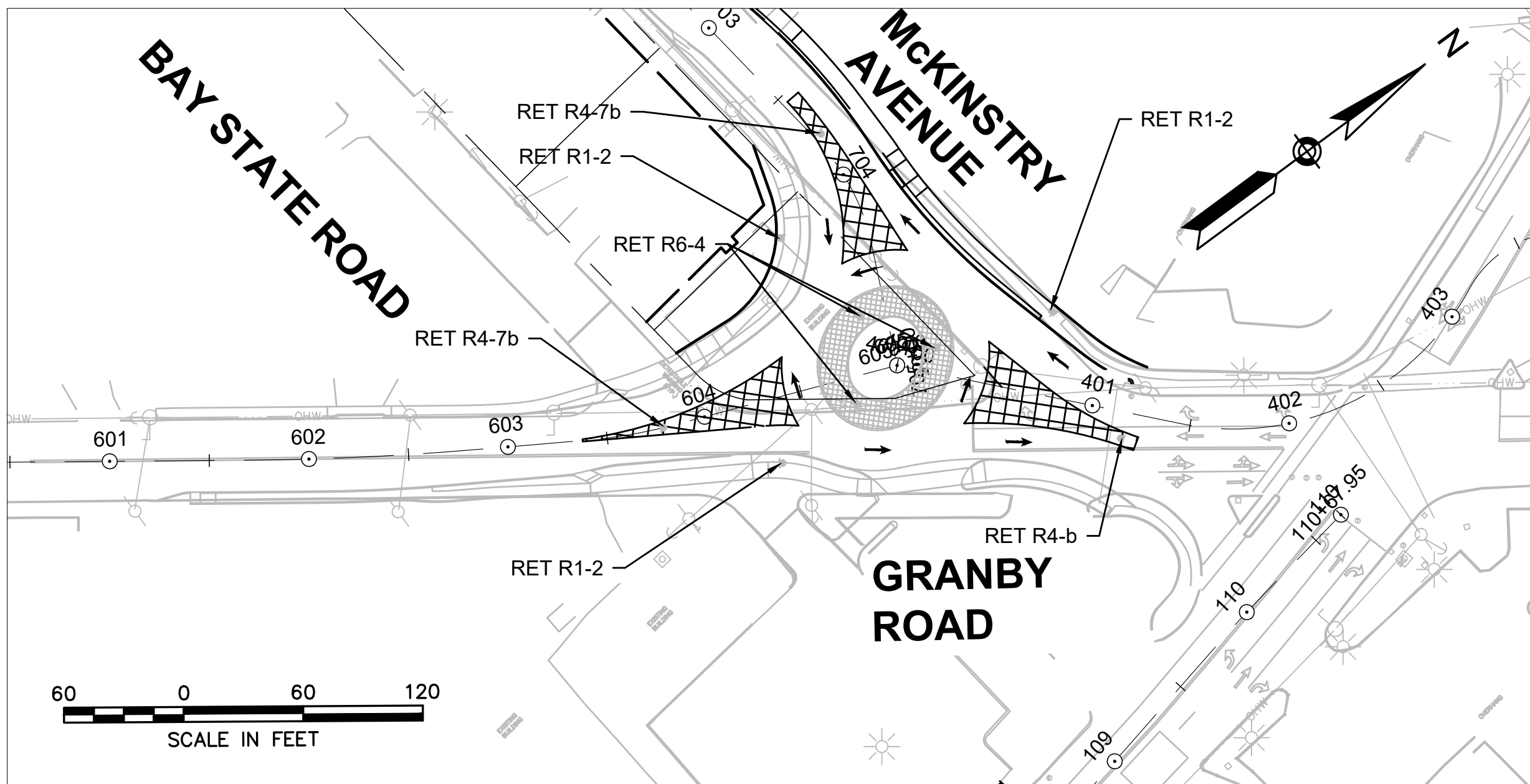
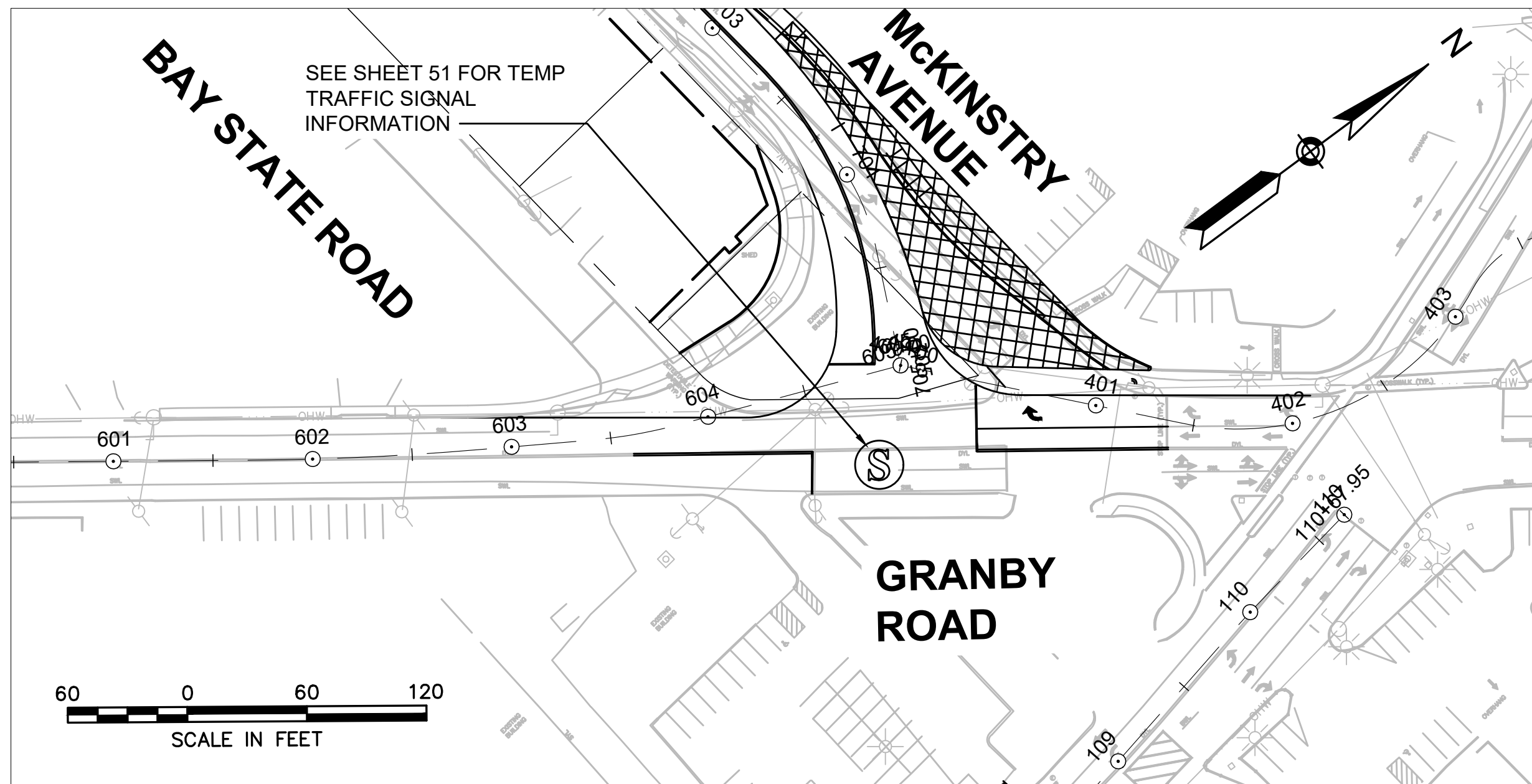
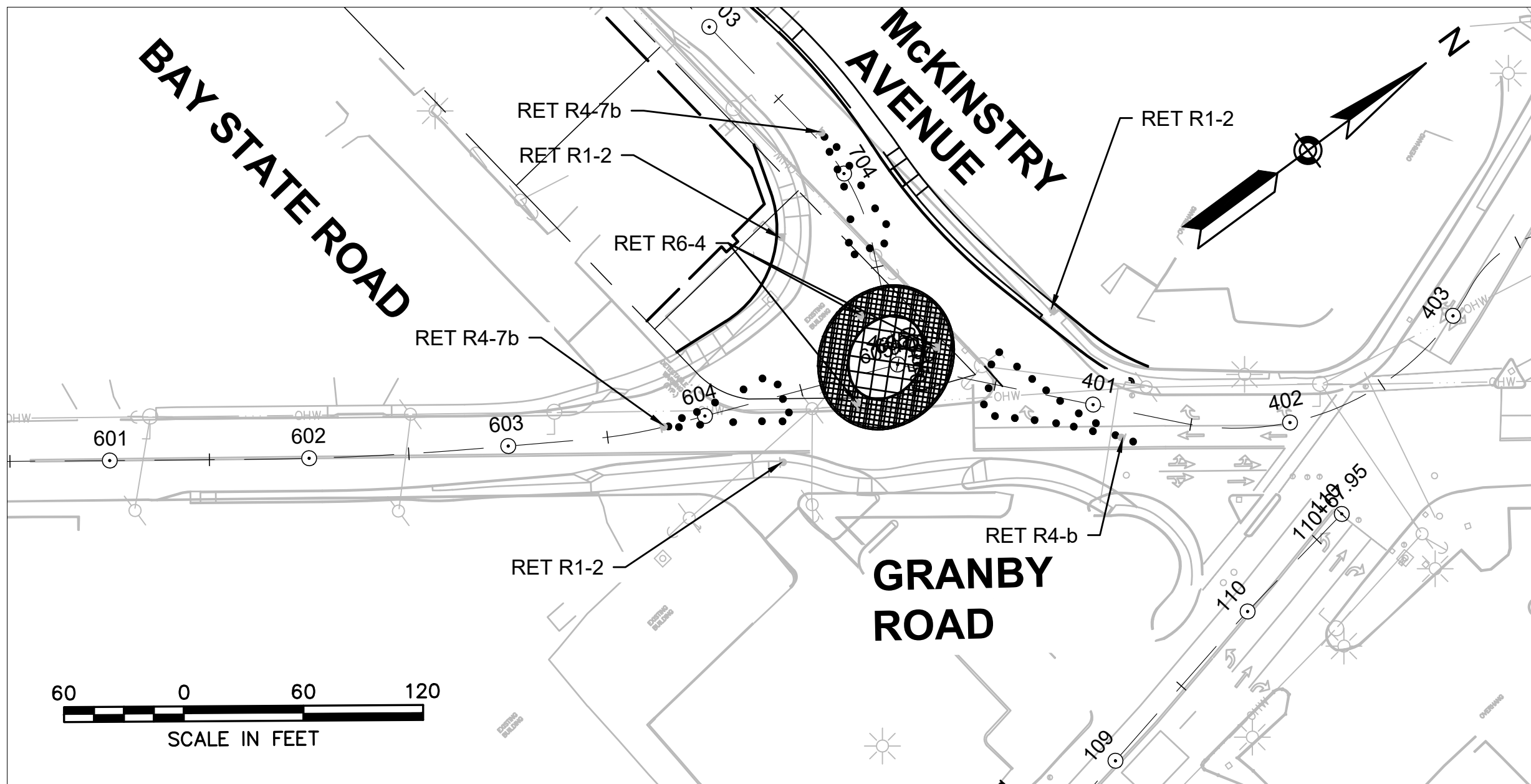
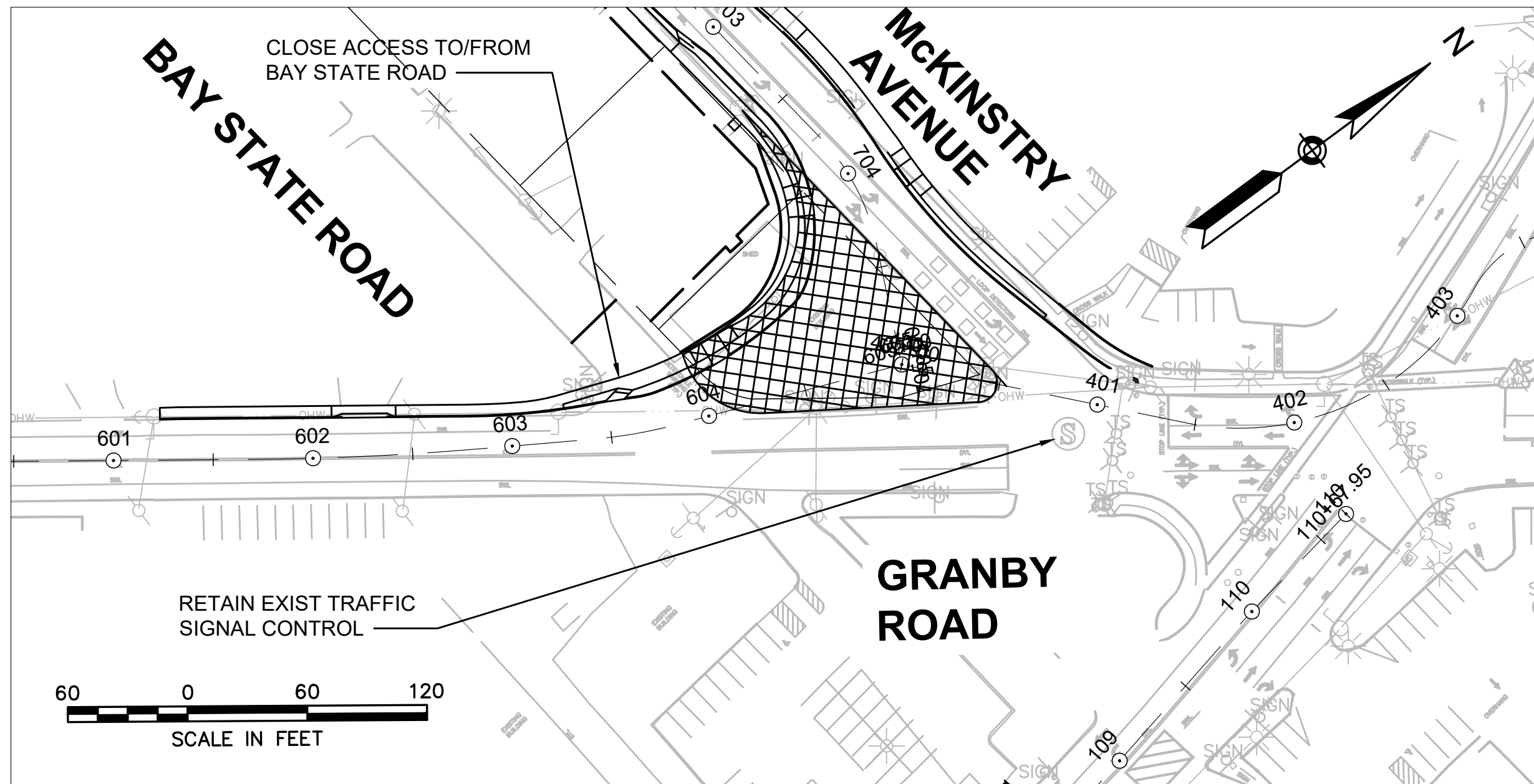
STAGE 6

LEGEND

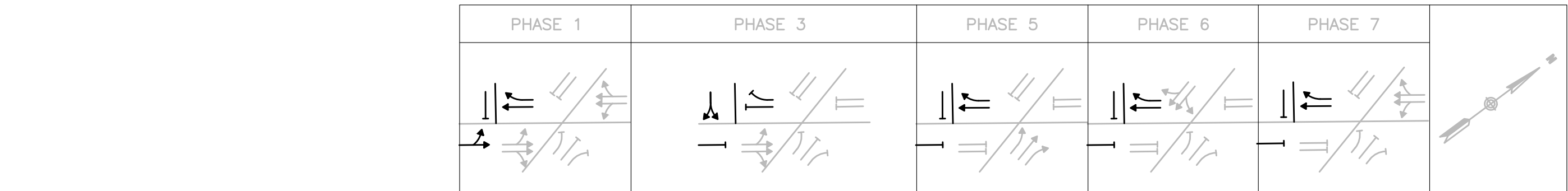
	TRAFFIC SIGNAL
	REFLECTORIZED DRUM
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	TRAFFIC FLOW
	TRAFFIC SIGN

SEQUENCING NOTES

0. MAINTAIN PEDESTRIAN ACCESS ALONG ONE SIDE OF MCKINSTRY AVE AND GRANBY ROAD AT ALL TIMES. CONTRACTOR TO MAINTAIN PEDESTRIAN ACCESS THROUGH WORK AREAS SUBJECT TO THEIR OWN MEANS AND METHODS.
1. CONSTRUCT SOUTHWEST CORNER TO BINDER AND/OR TEMP PAVEMENT. DEAD-END BAY STATE ROAD AND MAINTAIN SIGNAL OPERATION.
2. REALIGN MCKINSTRY TO "T" INTERSECTION. PROVIDE TEMP SIGNAL (SEE SHEET 51 FOR DETAILS). CONSTRUCT CURBLINE ALONG CVS FRONTAGE
3. IMPLEMENT ROUNDABOUT PATTERN USING DRUMS. REMOVE SIGNAL. (SEE SHEET 52 FOR DETAILS). CONSTRUCT CURBLINE AND SIDEWALK ALONG BIG Y GAS STATION FRONTAGE
4. CONSTRUCT CENTER ISLAND AND TRUCK APRON. THEN CONSTRUCT SPLITTER ISLANDS
5. CONSTRUCT RAISED CROSSWALKS USING ALTERNATING TRAFFIC DETAIL.
6. DETOUR PEDESTRIANS AS NEEDED TO ADA-COMPLIANT SIDEWALKS TO CONSTRUCT SIDEWALK ALONG CVS FRONTAGE.
7. INSTALL FINAL SIGNAGE. PERFORM FINAL PAVING AND PAVEMENT MARKING INSTALLATION. CONSIDER DETOURS VIA DALE STREET, ROUTE 141 AND ROUTE 33.



LEGEND	
	TRAFFIC SIGNAL
	REFLECTORIZED DRUM
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	TRAFFIC FLOW
	TRAFFIC SIGN



EXISTING /PROPOSED SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (ISOLATED)

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	FLASH
GRANBY ROAD	NB	A,B,U	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	FY
GRANBY ROAD	SB	C,D	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	FY
GRANBY ROAD	NB	E,F	G	Y	R	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	FY
GRANBY ROAD	SB	G,V	G	Y	R	R	R	R	R	R	G	Y	R	G	Y	R	G	Y	R	FY
MCKINSTRY AVENUE	EB	J,K	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	FR
MONTGOMERY STREET	NB	L	R	R	R	R	R	R	R	R	G	Y	R	G	Y	R	R	R	R	FR
MONTGOMERY STREET	NB	M,N	R	R	R	R	R	R	R	R	G	Y	R	G	Y	R	R	R	R	FR
MONTGOMERY STREET	SB	Q,R	R	R	R	R	R	R	R	R	R	G	Y	R	G	Y	R	R	R	FR
TIMING IN SECONDS																				
MINIMUM GREEN			25			10					10			10			6			
VEHICLE INTERVAL			1			4					5			5			4			
MAXIMUM 1 (ALL TIMES)			25			20					20			30			15			
MAXIMUM 2 (NOT USED)			29			25					30			30			6			
YELLOW CLEARANCE				4			3		4			4			4			4		
RED CLEARANCE					4			1		1			1			1			1	
DETECTR MEMORY				LOCK				LOCK				LOCK				LOCK				
RECALL				MIN				OFF MAX				MAX				MAX				

- SEQUENCE & TIMING NOTES:
- IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
 - IF CALLS EXIST ON ALL PHASES, THE ASSIGNMENT OF RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE PREFERENTIAL PHASE SEQUENCE.
 - IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATION FOR THAT MOVEMENT WILL DISPLAY THE APPROPRIATE CLEARANCE INTERVALS.

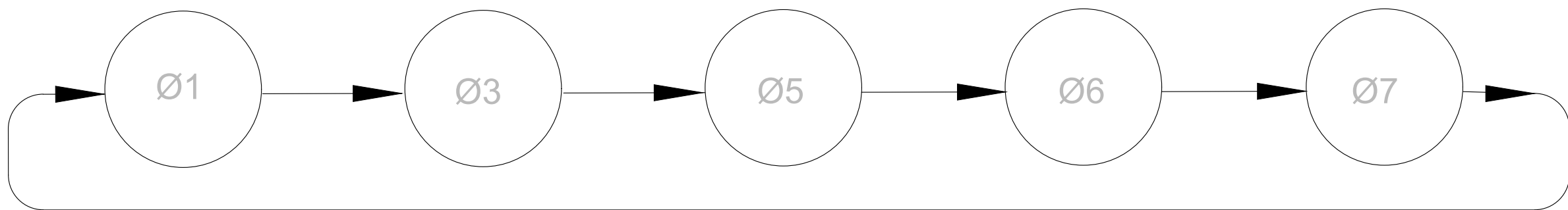
CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	51	135

PROJECT FILE NO. 609061

TEMPORARY TRAFFIC CONTROL PLANS
SUGGESTED SEQUENCING - MCKINSTRY AVENUE
STAGE 2 TRAFFIC SIGNAL

EXISTING PREFERENTIAL PHASE SEQUENCE



EXISTING SIGNAL HEAD DATA

E,F,G	L	A,B,C,D,H,J, K,M,N,P,Q,R
R&R G		R&R A,B,J,K R&S H
OPTICALLY PROGRAMMABLE		
ALL 12" LENS		

- NOTES:
- CONTRACTOR MAY USE EXISTING HEADS FOR ASSEMBLY SHOWN AND PROVIDE NEW MOUNTING HARDWARE WHERE APPLICABLE.

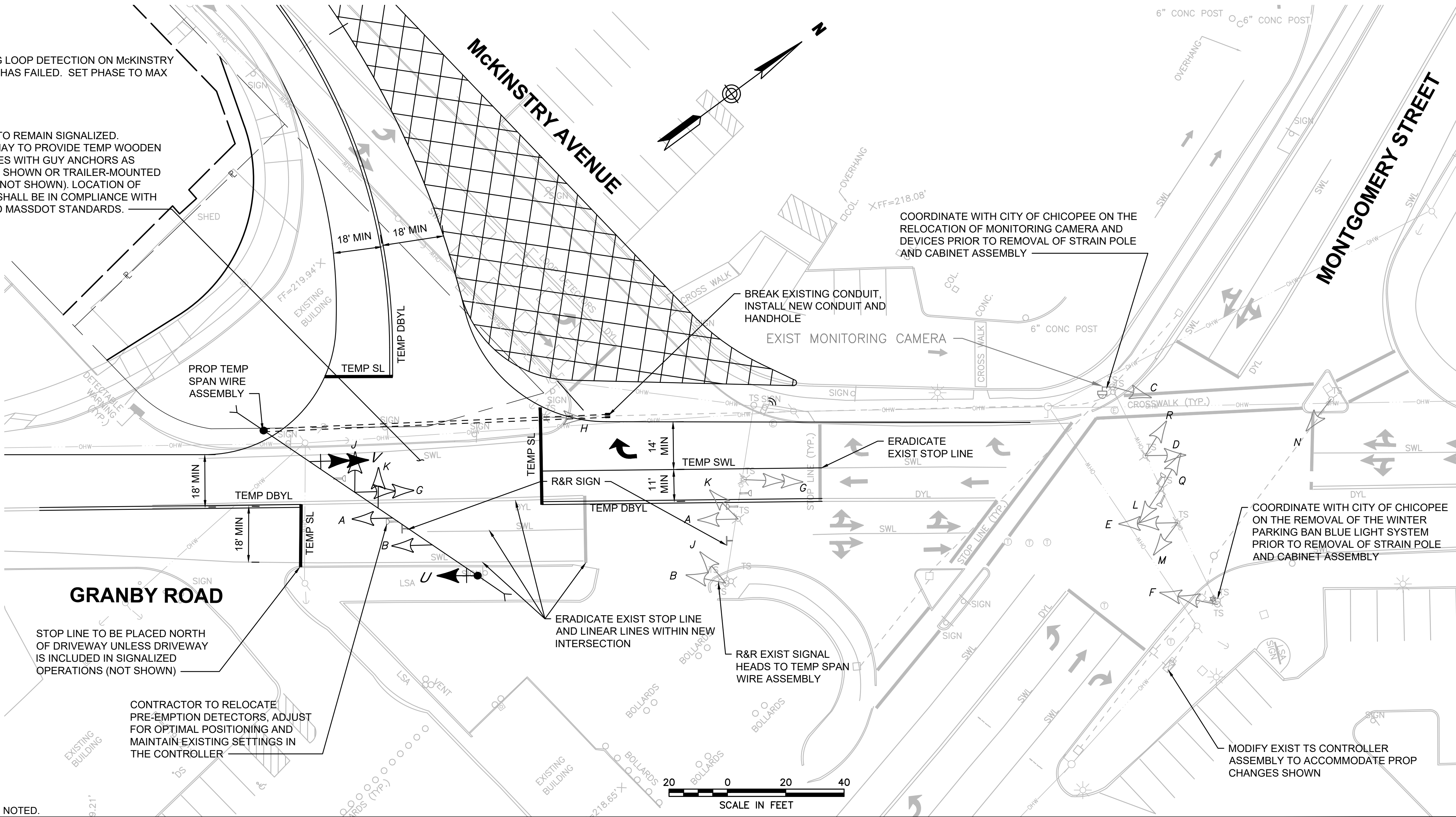
PROPOSED SIGNAL HEAD DATA

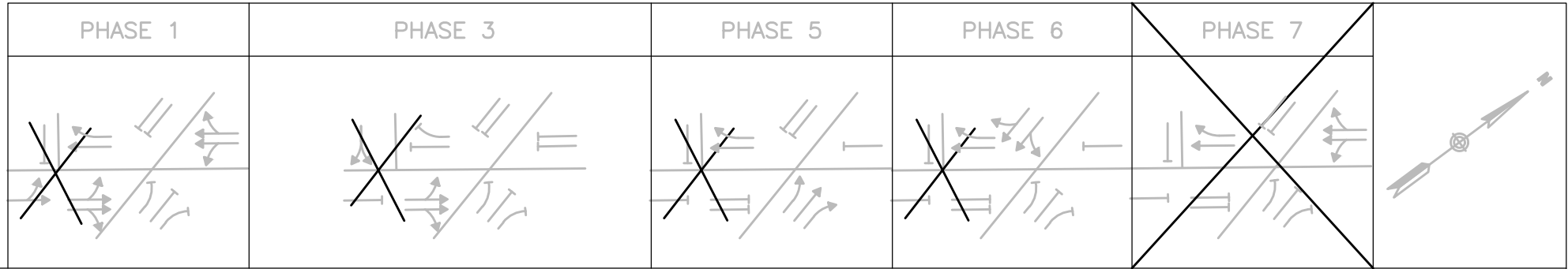
V	U
OPTICALLY PROGRAMMED	
ALL 12" LENS	

- NOTES:
- ALL SIGNAL HEADS SHALL BE RIGID MOUNTED.
 - ALL SIGNAL HEADS SHALL BE EQUIPPED WITH 5"± NON-LOUVERED BACKPLATES. ALL BACKPLATES SHALL CONTAIN A 3" WIDE YELLOW RETROREFLECTIVE BORDER.
 - ALL SIGNAL HEADS SHALL BE EQUIPPED WITH TUNNEL VISORS.
 - ALL SIGNAL DISPLAYS SHALL BE EQUIPPED WITH L.E.D. MODULES, UNLESS OTHERWISE NOTED.

EXISTING LOOP DETECTION ON MCKINSTRY AVENUE HAS FAILED. SET PHASE TO MAX RECALL

INTERSECTION TO REMAIN SIGNALIZED. CONTRACTOR MAY TO PROVIDE TEMP WOODEN SUPPORTS/POLES WITH GUY ANCHORS AS CONCEPTUALLY SHOWN OR TRAILER-MOUNTED SIGNAL HEADS (NOT SHOWN). LOCATION OF SIGNAL HEADS SHALL BE IN COMPLIANCE WITH THE MUTCD AND MASSDOT STANDARDS.





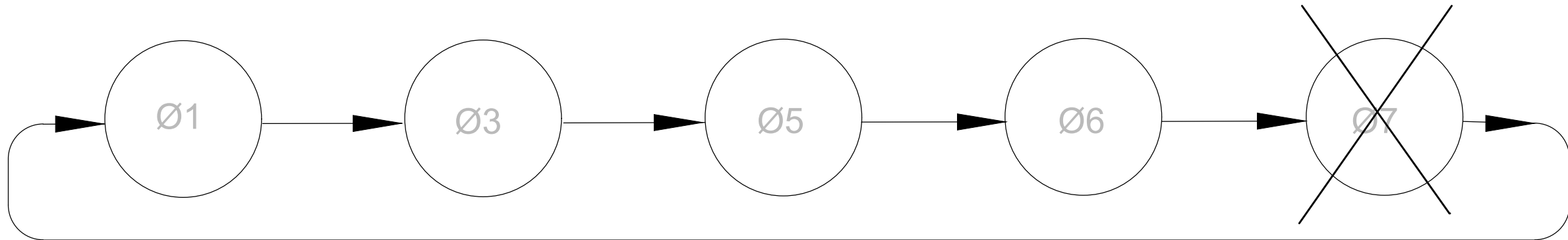
EXISTING /PROPOSED SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (ISOLATED)

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	FLASH
GRANBY ROAD	NB	A,B,U	G	Y	R		R	R	R	R	R	R	R	R	R	R	R	R	R	FY
GRANBY ROAD	SB	C,D	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	F	FY
GRANBY ROAD	NB	E,F	G	Y	R	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	FY
GRANBY ROAD	SB	G,V	G	Y	R	R	R	R	R	R	G	Y	R	G	Y	R	G	Y	R	FY
MCKINSTRY AVENUE	EB	J,K	R	R	R	G		R	R	R	R	R	R	R	R	R	R	R	R	FR
MONTGOMERY STREET	NB	L	R	R	R	R	R	R	R	R	G	Y	R	G	Y	R	R	R	R	FR
MONTGOMERY STREET	NB	M,N	R	R	R	R	R	R	R	R	G	Y	R	G	Y	R	R	R	R	FR
MONTGOMERY STREET	SB	Q,R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	FR
TIMING IN SECONDS																				
MINIMUM GREEN			25			10					10			10			6			
VEHICLE INTERVAL			1			4					5			5			4			
MAXIMUM 1 (ALL TIMES)			25			20					20			15			6			
MAXIMUM 2 (NOT USED)			29			25					30			30			6			
YELLOW CLEARANCE				4			3		4		4		1		4		4			
RED CLEARANCE					4			1		1		1				1				
DETECTR MEMORY				LOCK			LOCK				LOCK			LOCK			LOCK			
RECALL				MIN			MAX				MAX			MAX			MAX			

SEQUENCE & TIMING NOTES:

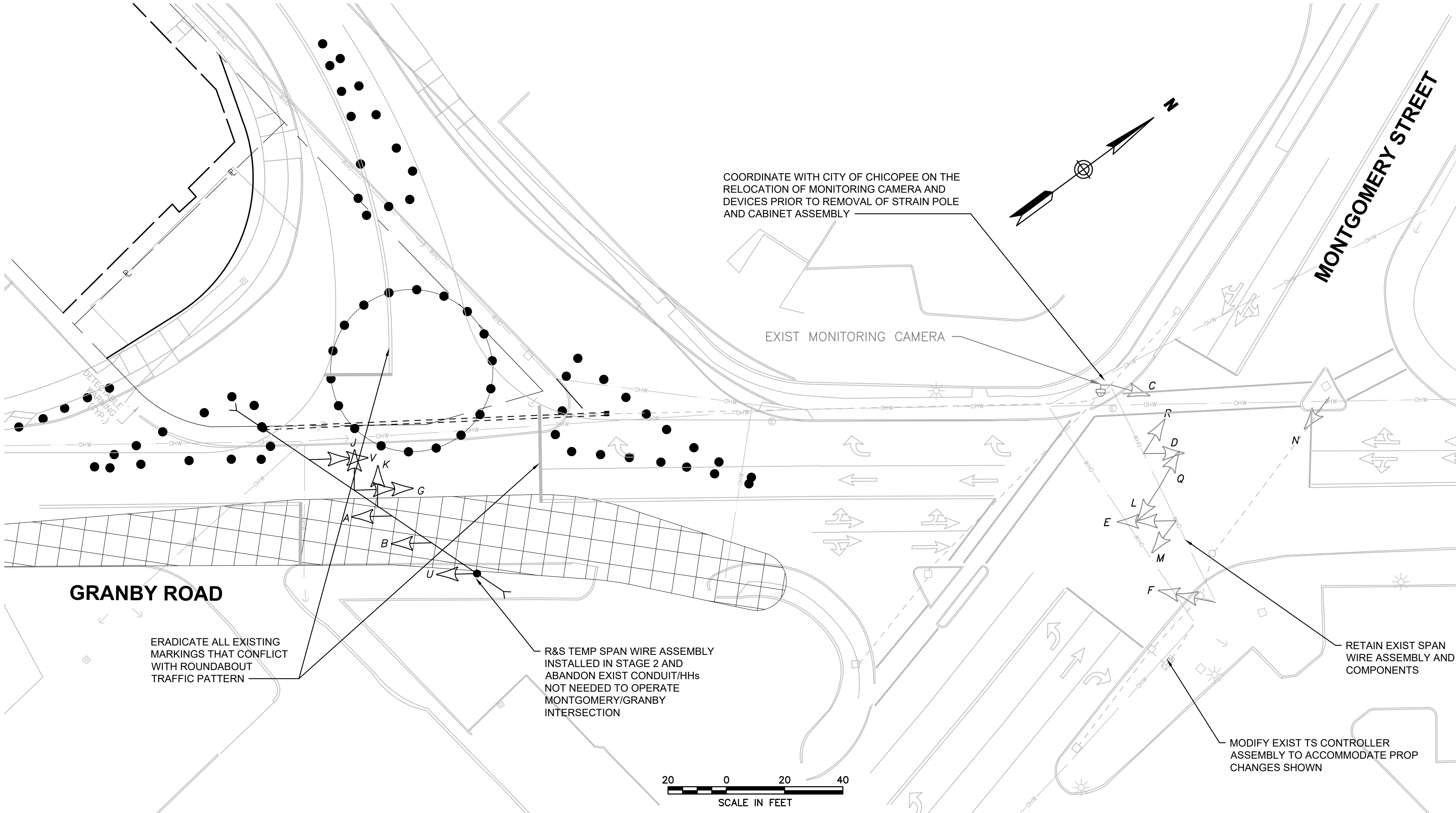
- IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
- IF CALLS EXIST ON ALL PHASES, THE ASSIGNMENT OF RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE PREFERENTIAL PHASE SEQUENCE.
- IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATION FOR THAT MOVEMENT WILL DISPLAY THE APPROPRIATE CLEARANCE INTERVALS.

EXISTING /PROPOSED PREFERENTIAL PHASE SEQUENCE



EXISTING SIGNAL HEAD DATA

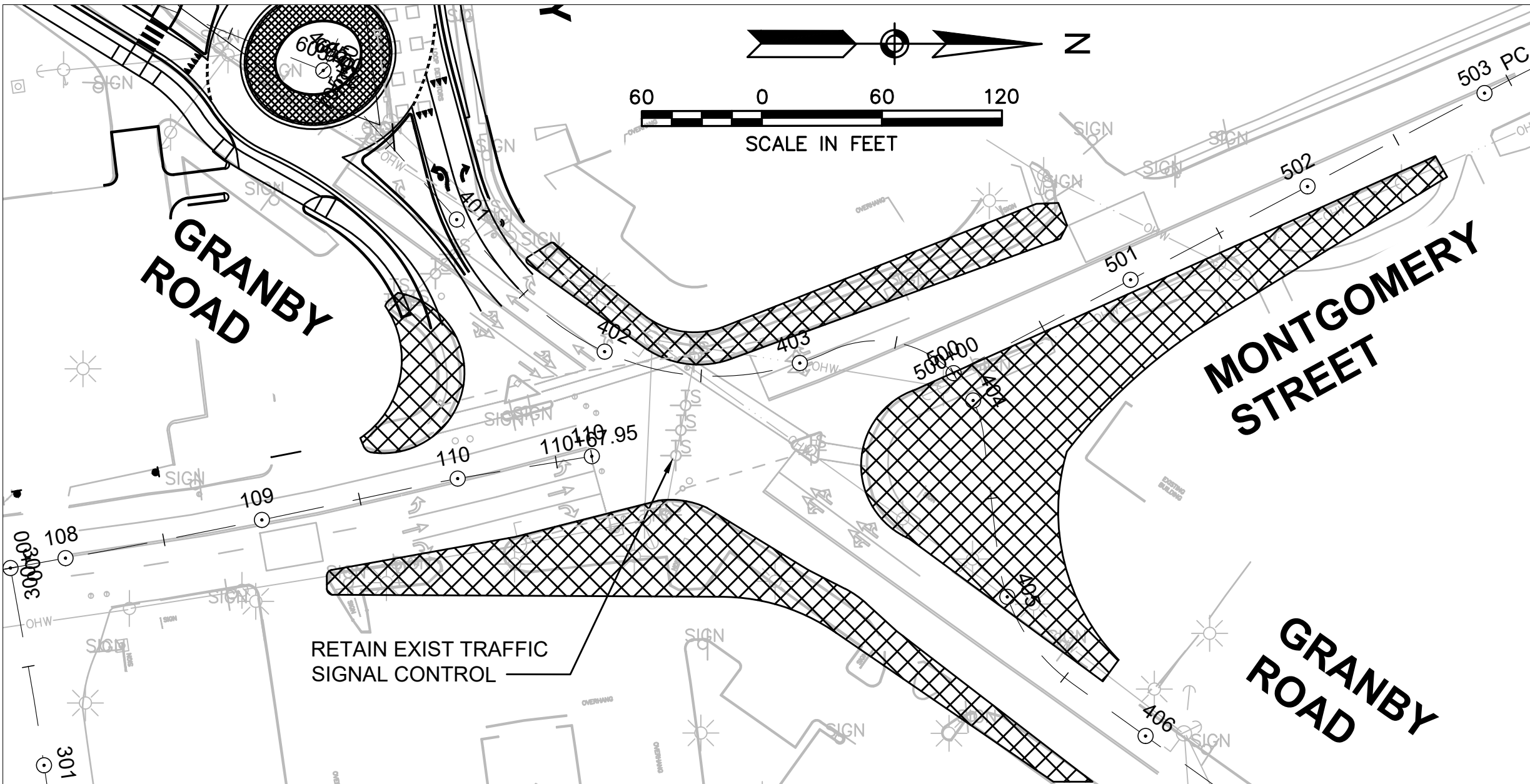
E,F,G,V	L	A,B,C,D,J,K M,N,P,Q,R,U
R&S G, V		R&S A,B,J,K,U
OPTICALLY PROGRAMMABLE		
ALL 12" LENS		



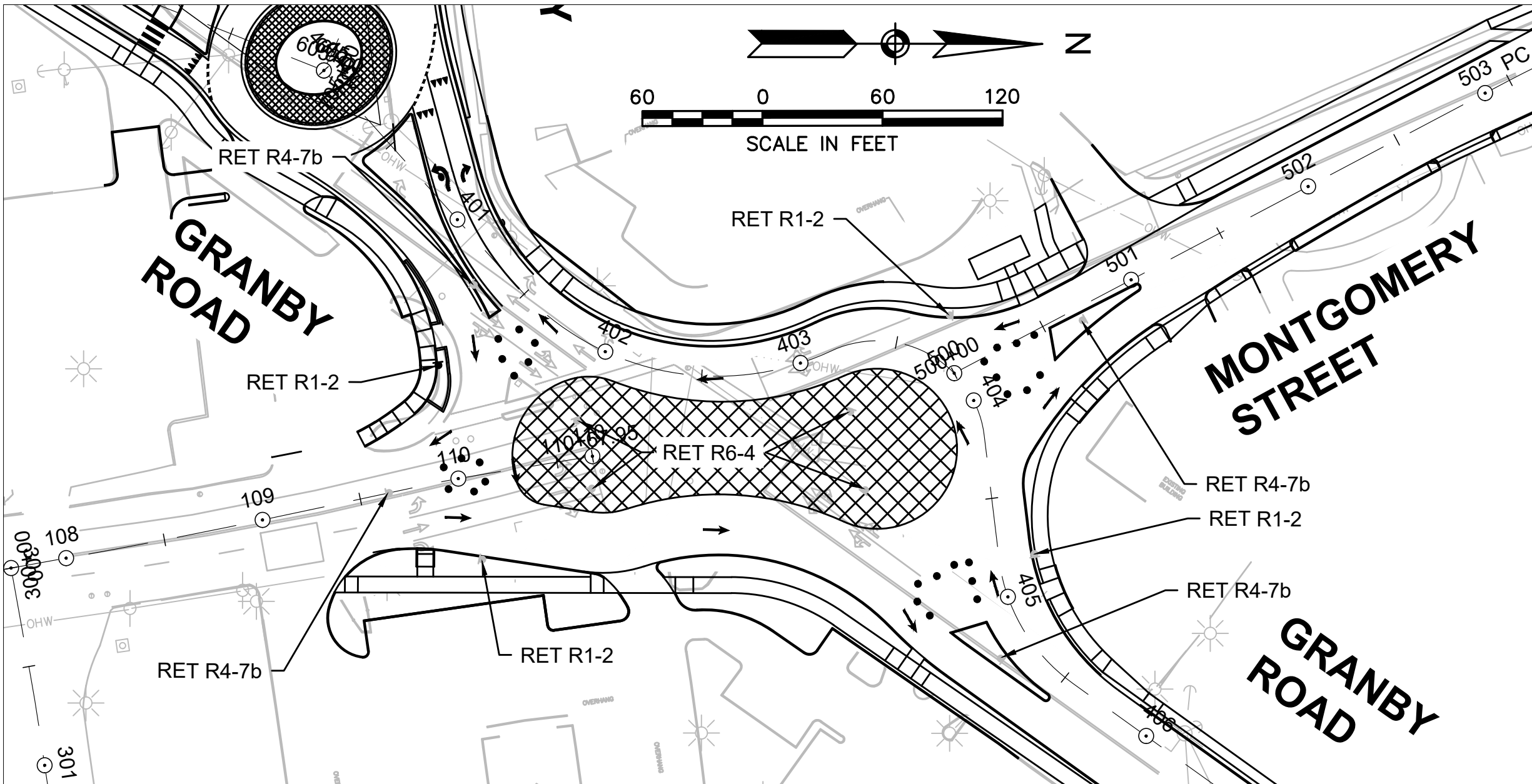
CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	52	135
PROJECT FILE NO.		609061	

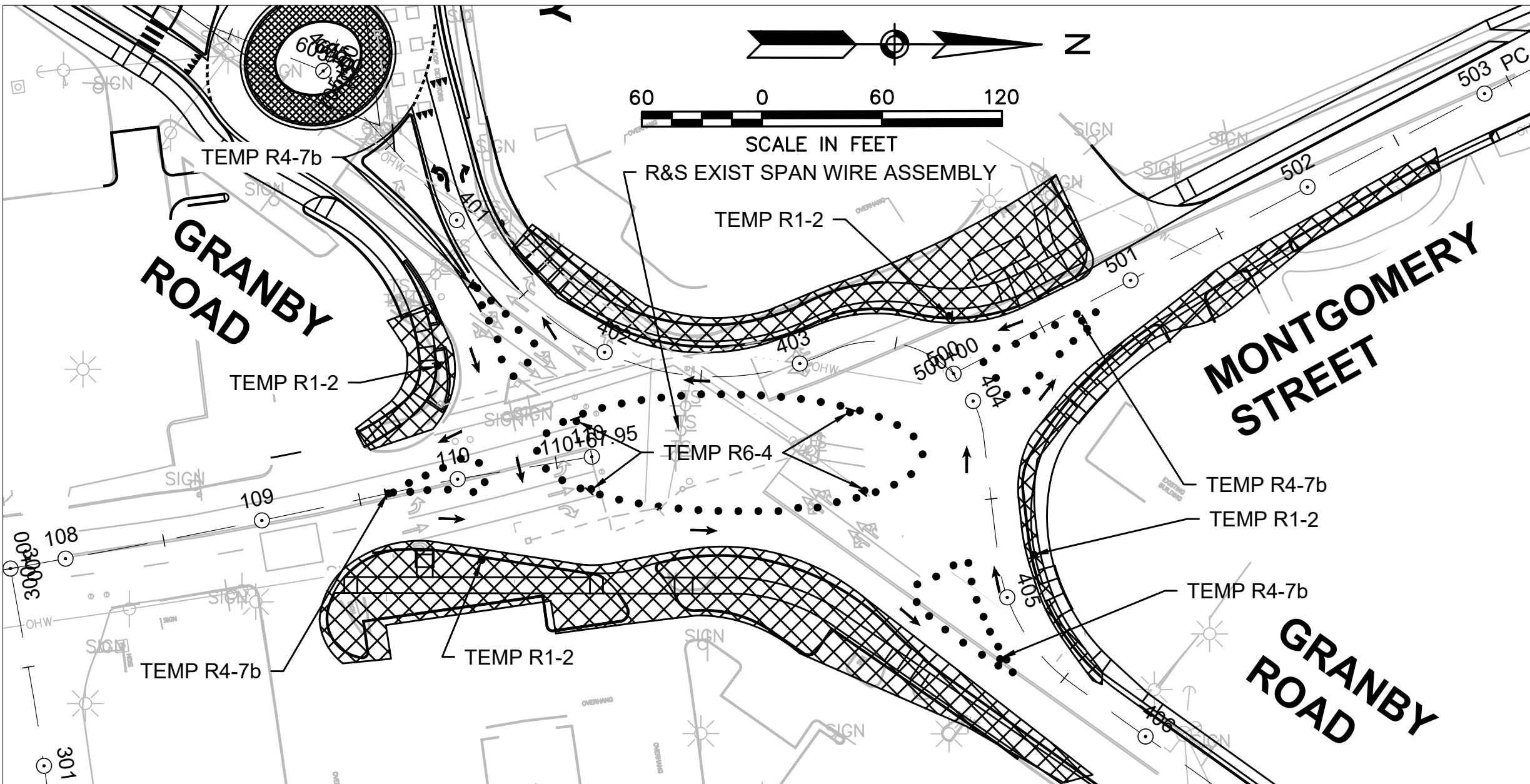
TEMPORARY TRAFFIC CONTROL PLANS
SUGGESTED SEQUENCING - MCKINSTRY AVENUE
STAGE 3 TRAFFIC SIGNAL



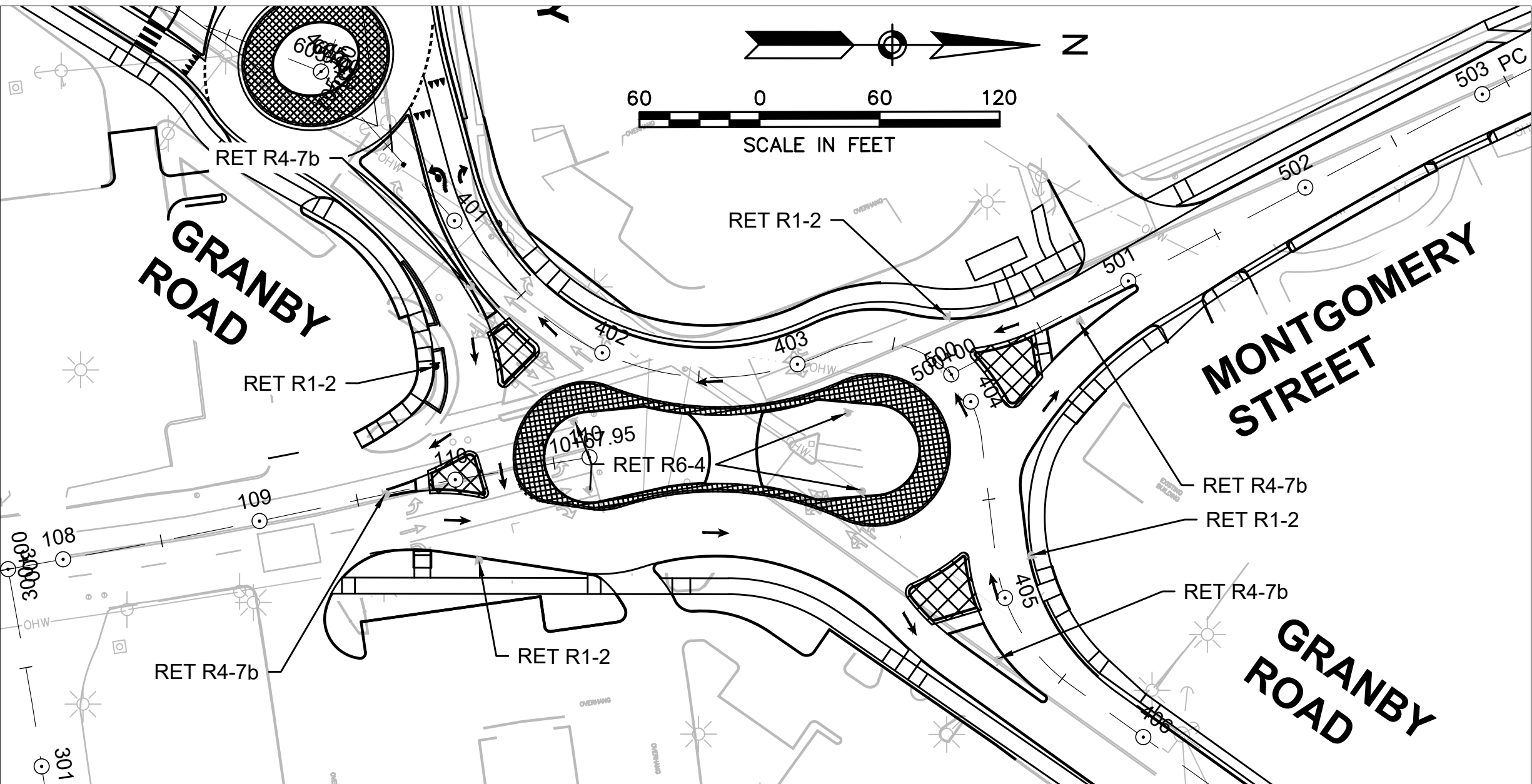
STAGE 1



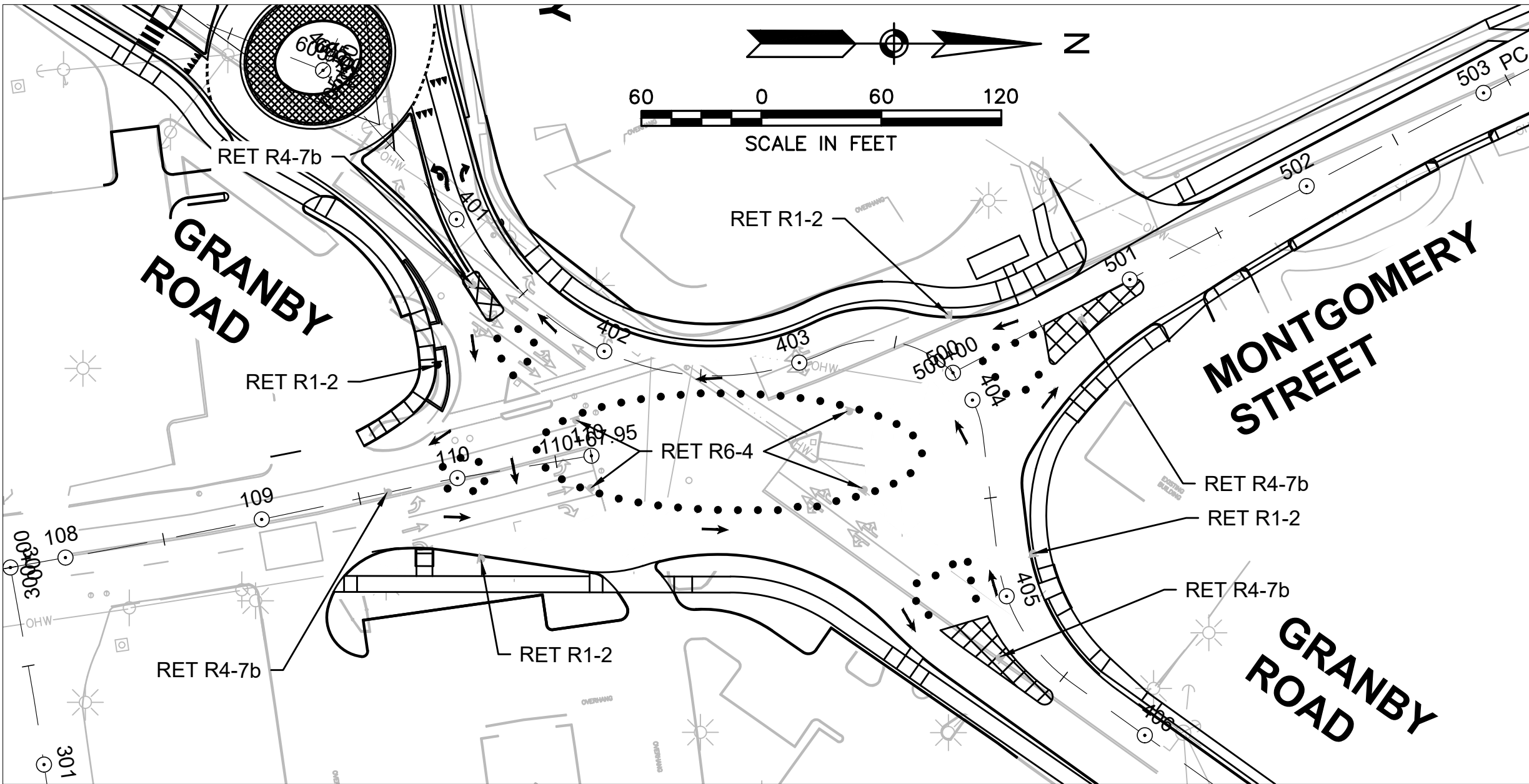
STAGE 4



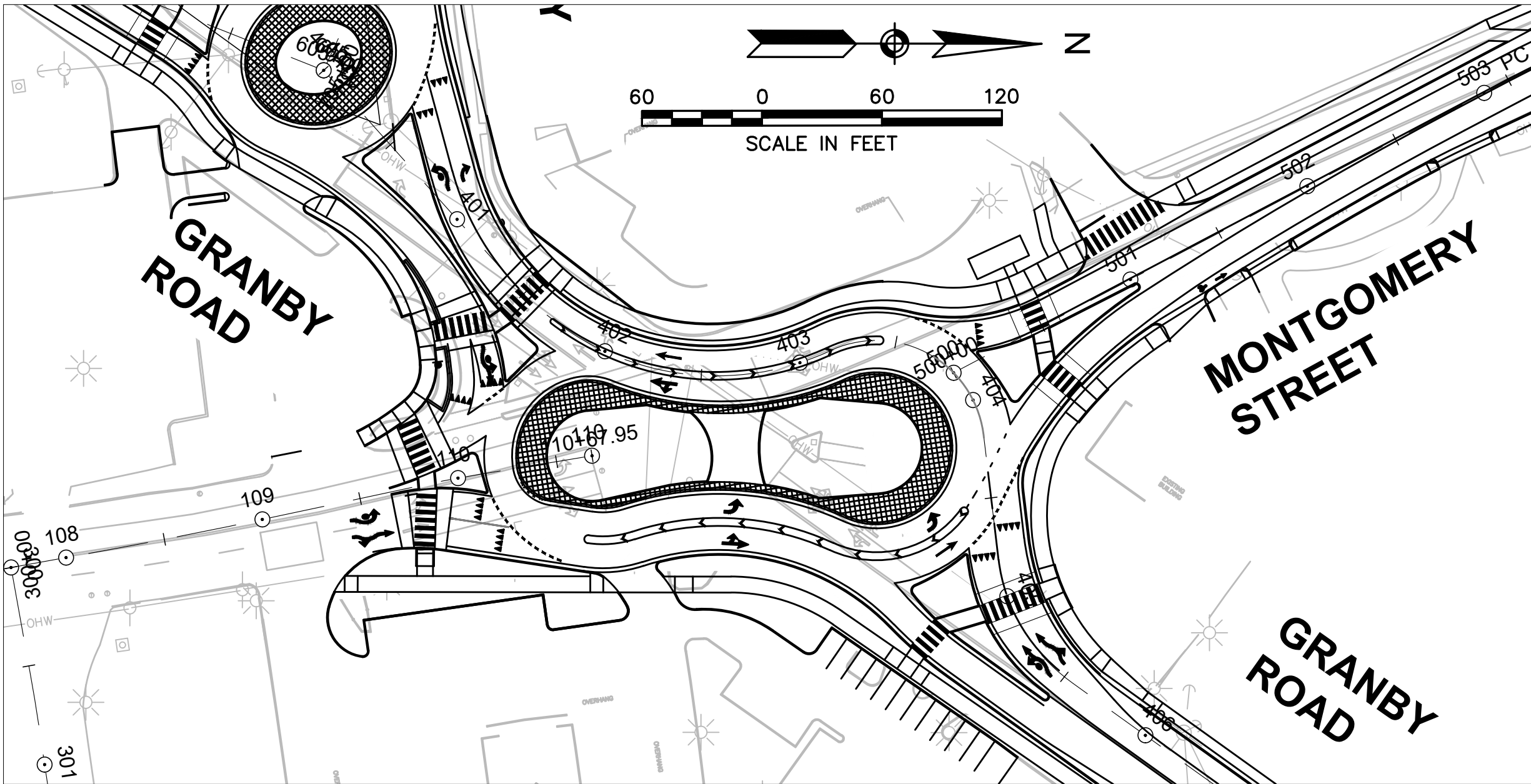
STAGE 2



STAGE 5



STAGE 3



STAGE 6

CHICOPEE MONTGOMERY GRANBY MCKINSTRY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	53	135
PROJECT FILE NO.		609061	

TEMPORARY TRAFFIC CONTROL PLANS
SUGGESTED SEQUENCING - PEANUT

SEQUENCING NOTES

1. MAINTAIN PEDESTRIAN ACCESS ALONG ONE SIDE OF MONTGOMERY STREET AND GRANBY ROAD AT ALL TIMES. PROVIDE AT LEAST ONE PEDESTRIAN CROSSING OF EACH ROADWAY. CONTRACTOR TO MAINTAIN PEDESTRIAN ACCESS THROUGH WORK AREAS SUBJECT TO THEIR OWN MEANS AND METHODS.
2. WIDEN ALL CORNERS OUTSIDE OF THE EXISTING ROADWAY. INSTALL PAVEMENT TO BINDER. INTERSECTION TO REMAIN SIGNALIZED. CONTRACTOR TO ADJUST SIGNAL HEAD AND CONTROL CABINET AS NEEDED.
3. IMPLEMENT A SINGLE LANE ROUNDABOUT (OVAL-SHAPED) AND REMOVE TRAFFIC SIGNAL. CONTRACTOR TO COORDINATE WITH CITY ON REMOVAL AND RELOCATION OF EXISTING MONITORING CAMERA SYSTEM.
4. CONSTRUCT OUTER CURBLINES
5. CONSTRUCT SPLITTER ISLAND CURBLINES OUTSIDE OF PEDESTRIAN CROSSINGS
6. CONSTRUCT CENTER ISLAND AND TRUCK APRON
7. CONSTRUCT REMAINDER OF SPLITTER ISLANDS
8. CONSTRUCT RAISED CROSSWALKS USING ALTERNATING TRAFFIC DETAIL.
9. INSTALL FINAL SIGNAGE. PERFORM FINAL PAVING AND PAVEMENT MARKING INSTALLATION.

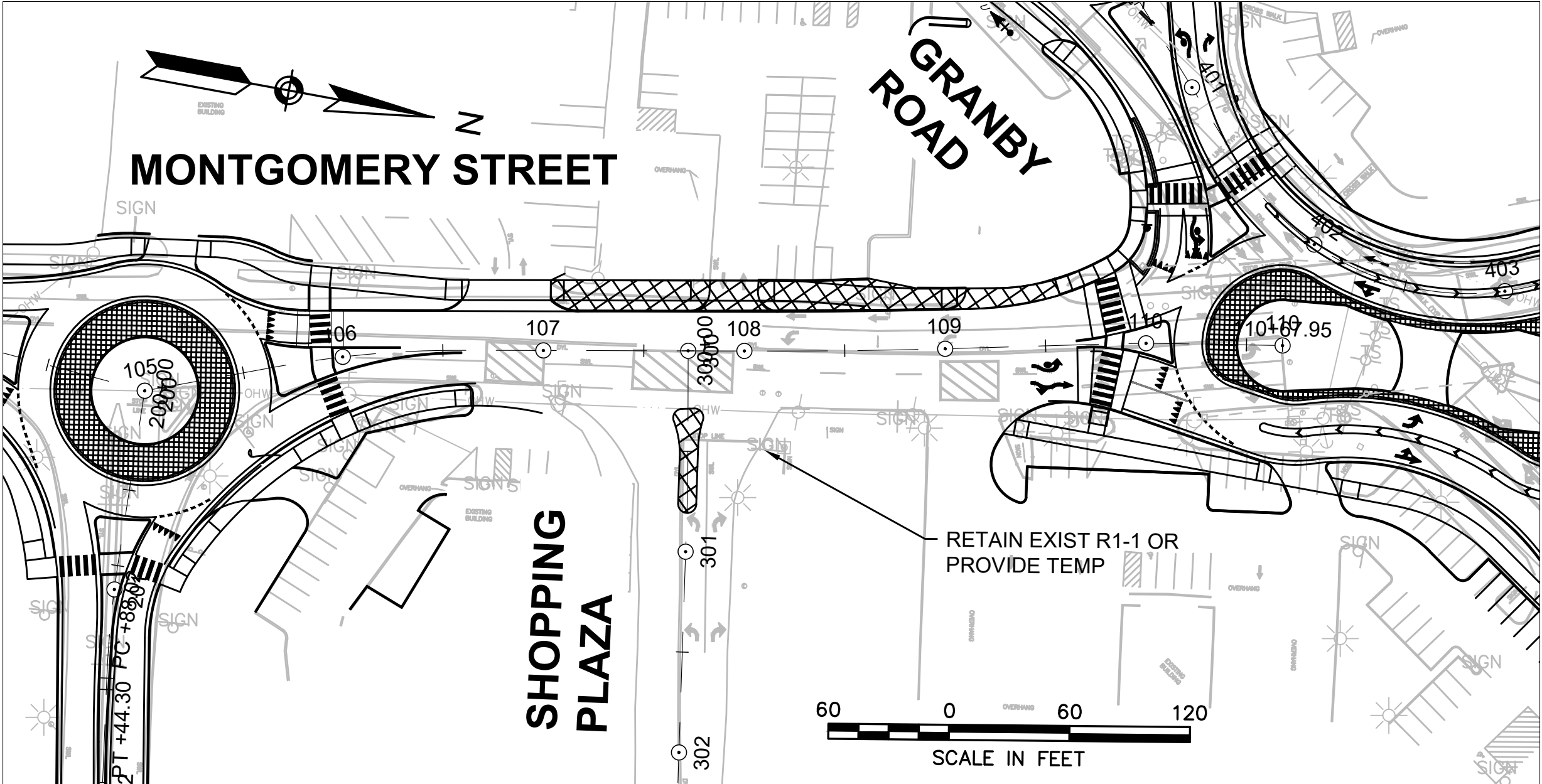
LEGEND	
	TRAFFIC SIGNAL
	REFLECTORIZED DRUM
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	TRAFFIC FLOW
	TRAFFIC SIGN

SEQUENCING NOTES

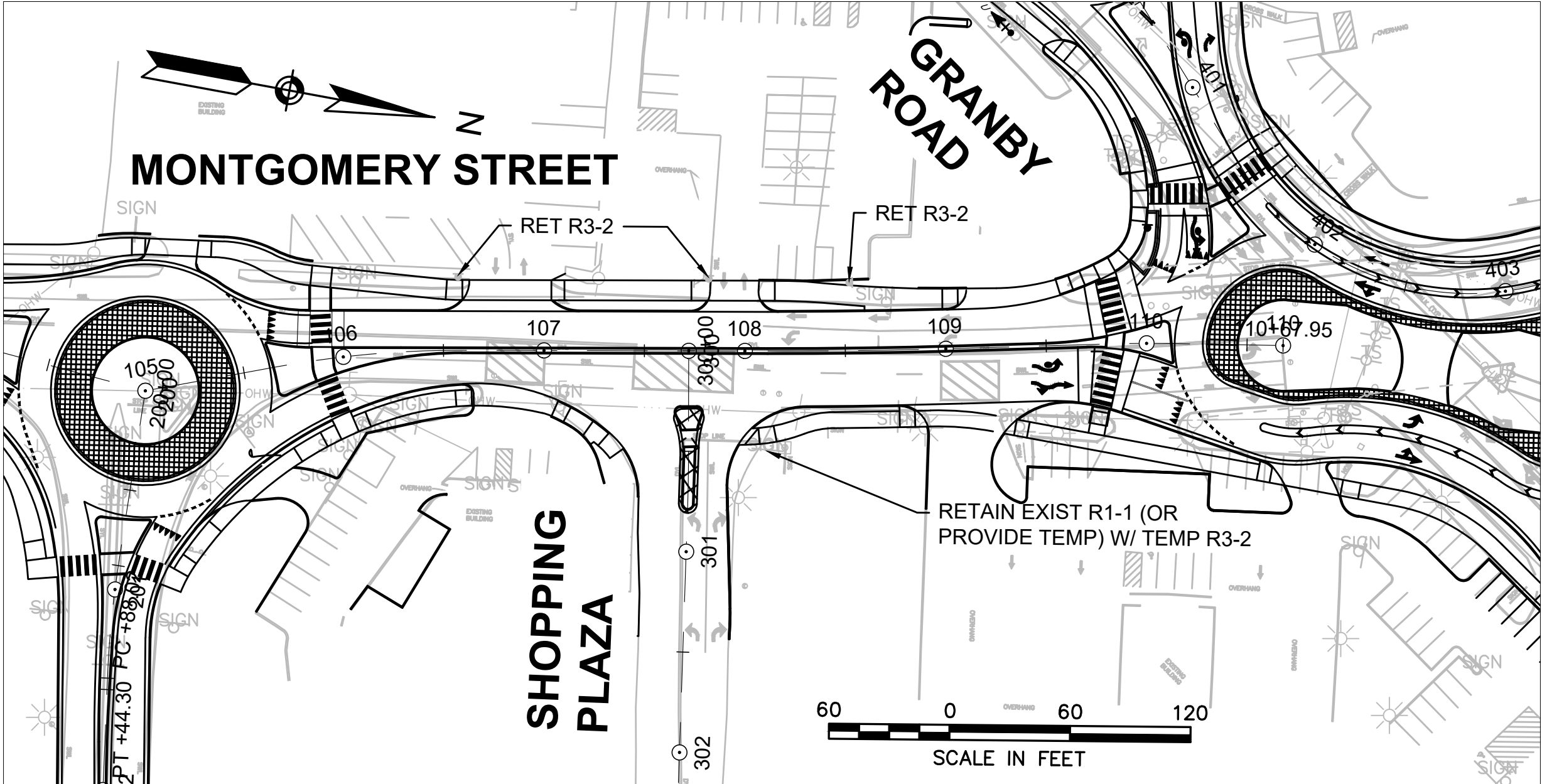
- CONTRACTOR TO MAINTAIN PEDESTRIAN ACCESS THROUGH WORK AREAS SUBJECT TO THEIR OWN MEANS AND METHODS.
- LEFT-TURN ACCESS/EGRESS FROM THE SHOPPING PLAZA AND OTHER DRIVEWAYS SHOULD NOT BE RESTRICTED UNTIL ADJACENT INTERSECTIONS ARE IN ROUNDABOUT PATTERN.
- CONSTRUCT WESTERLY CURBLINE
- CONSTRUCT MEDIAN
- CONSTRUCT EASTERLY CURBLINE. CONSIDER DETOURING SHOPPING PLAZA TRAFFIC TO ROUTE 33.
- INSTALL FINAL SIGNAGE, PERFORM SIGNAL PAVING AND PAVEMENT MARKING INSTALLATION.

LEGEND

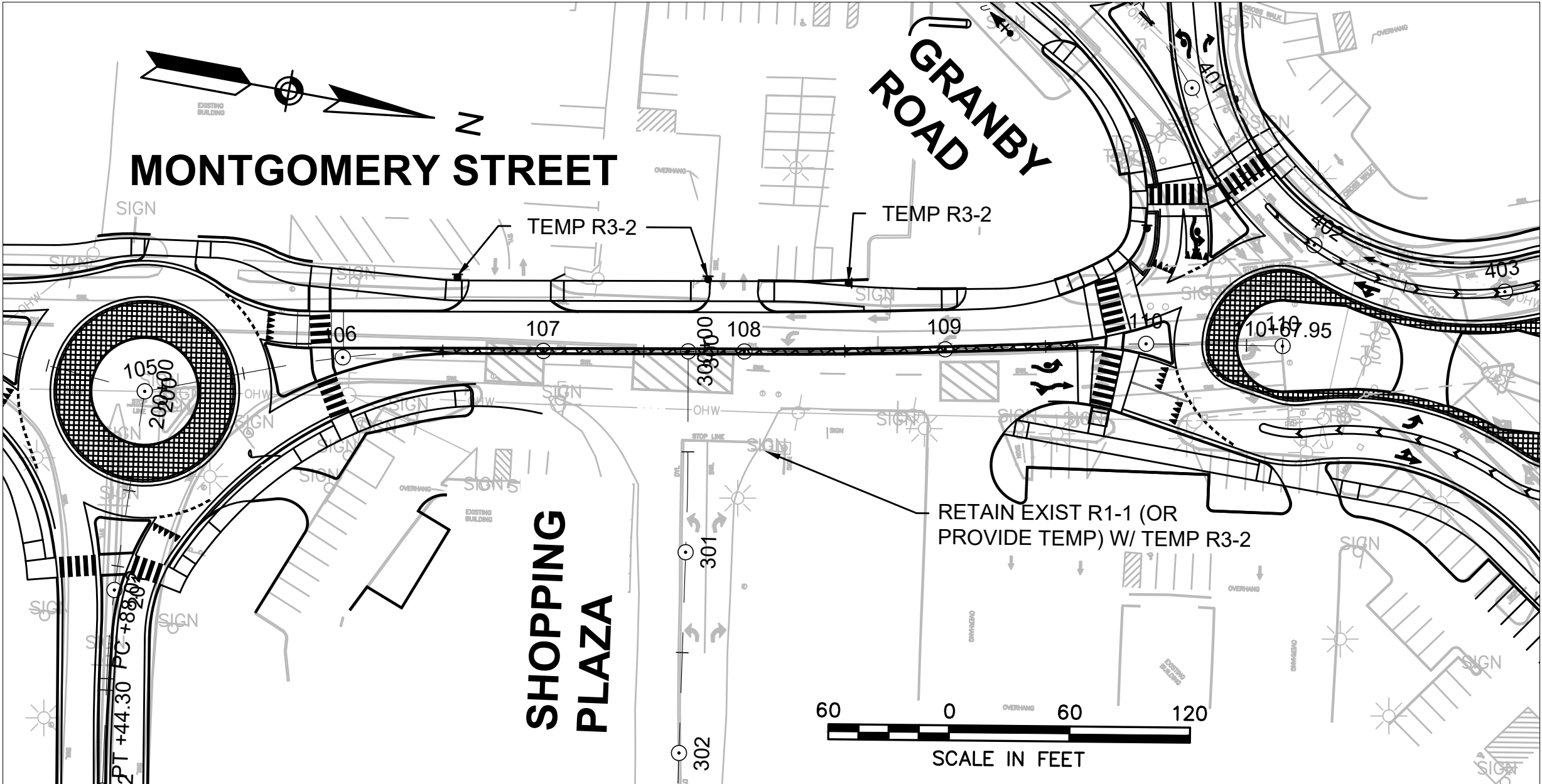
	TRAFFIC SIGNAL
	REFLECTORIZED DRUM
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	TRAFFIC FLOW
	TRAFFIC SIGN



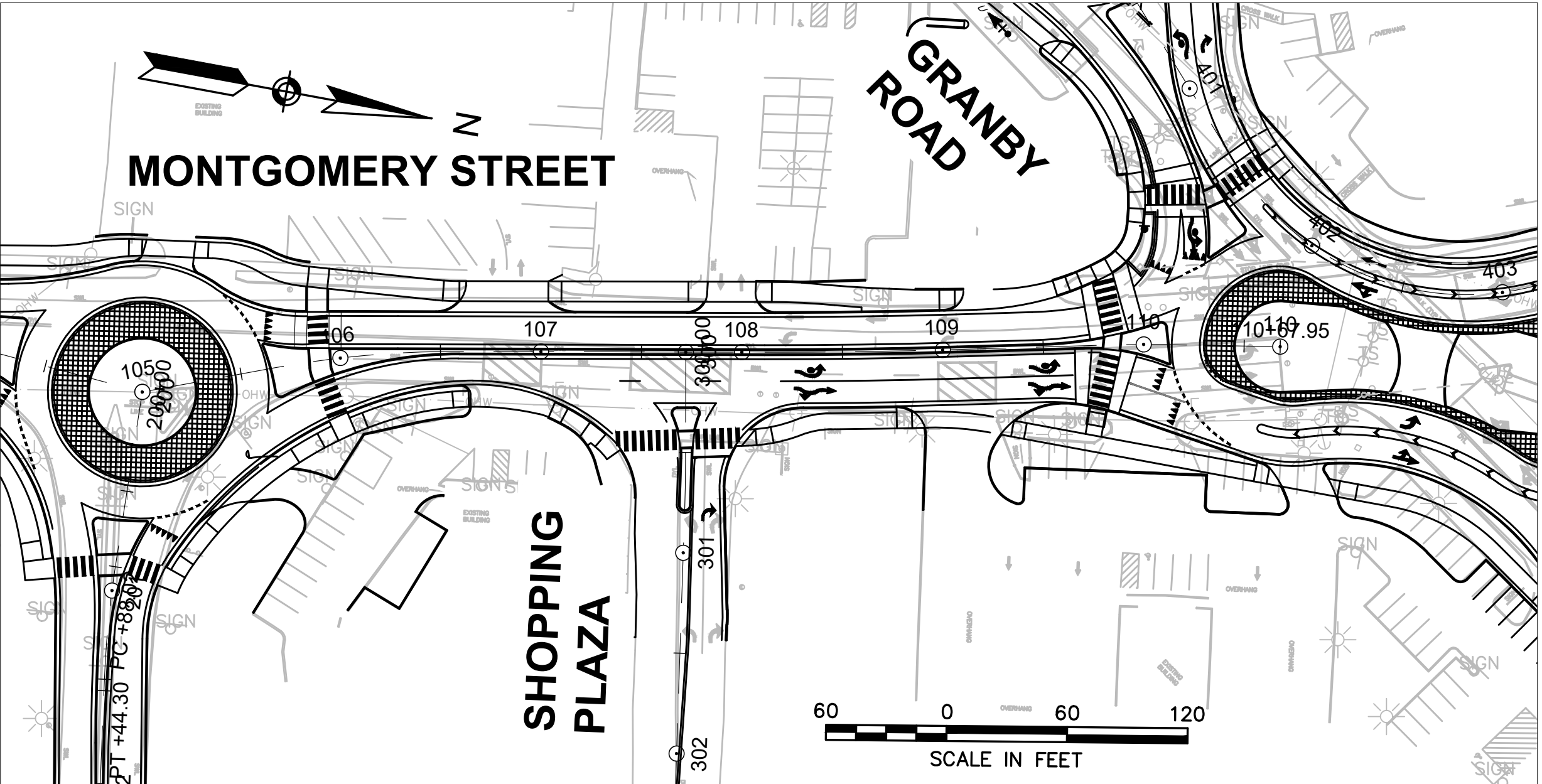
STAGE 1



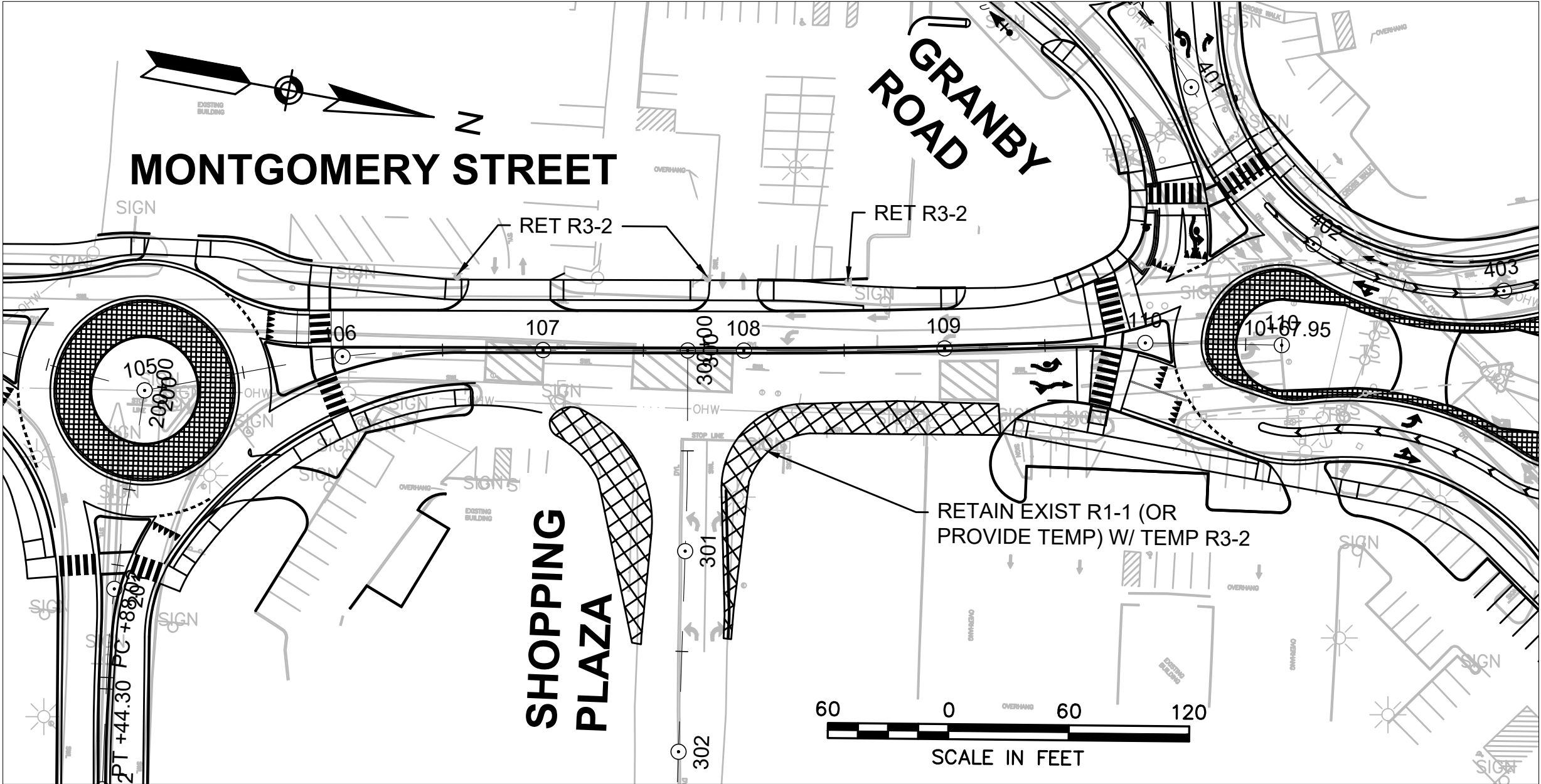
STAGE 4



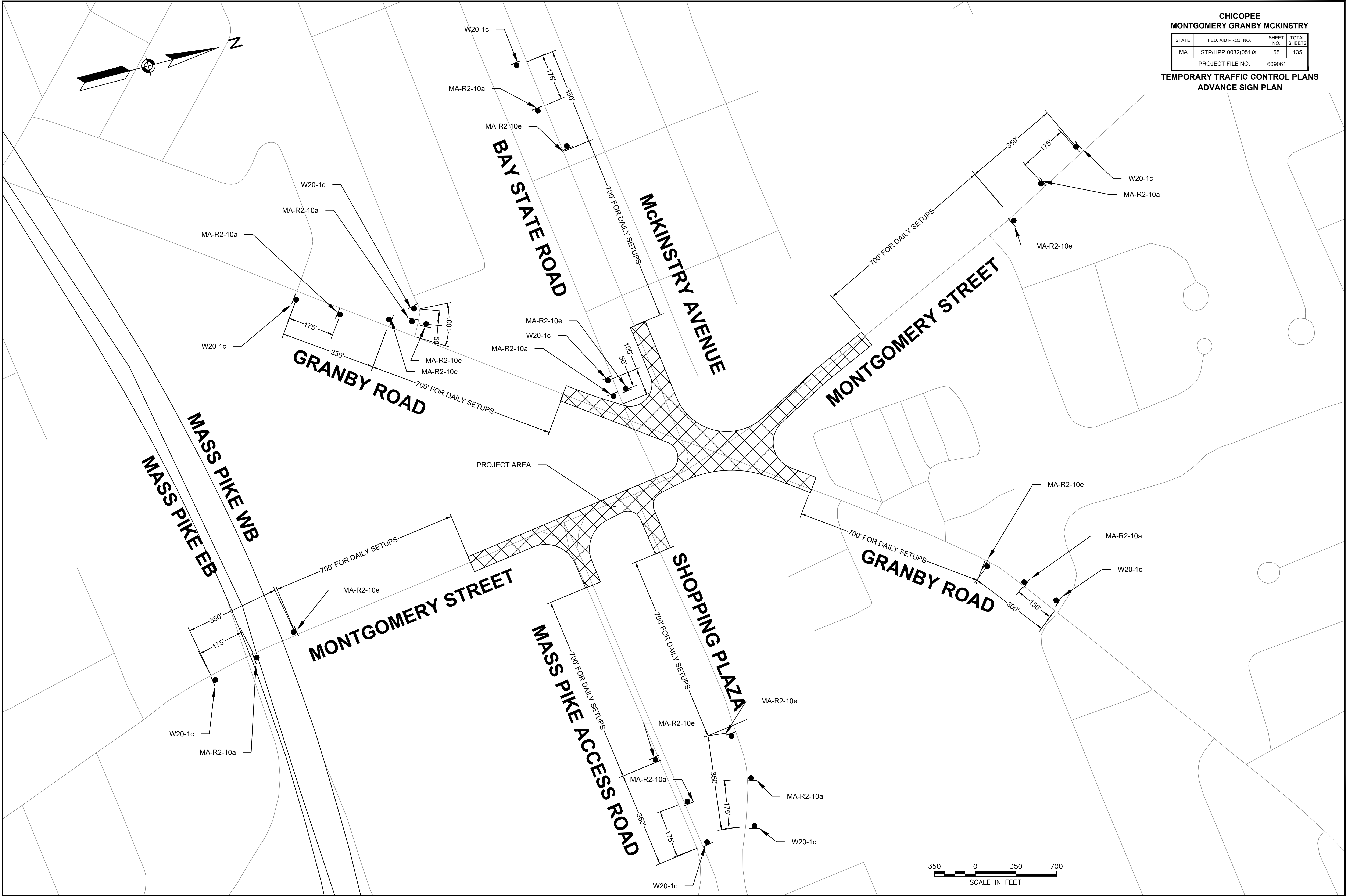
STAGE 2

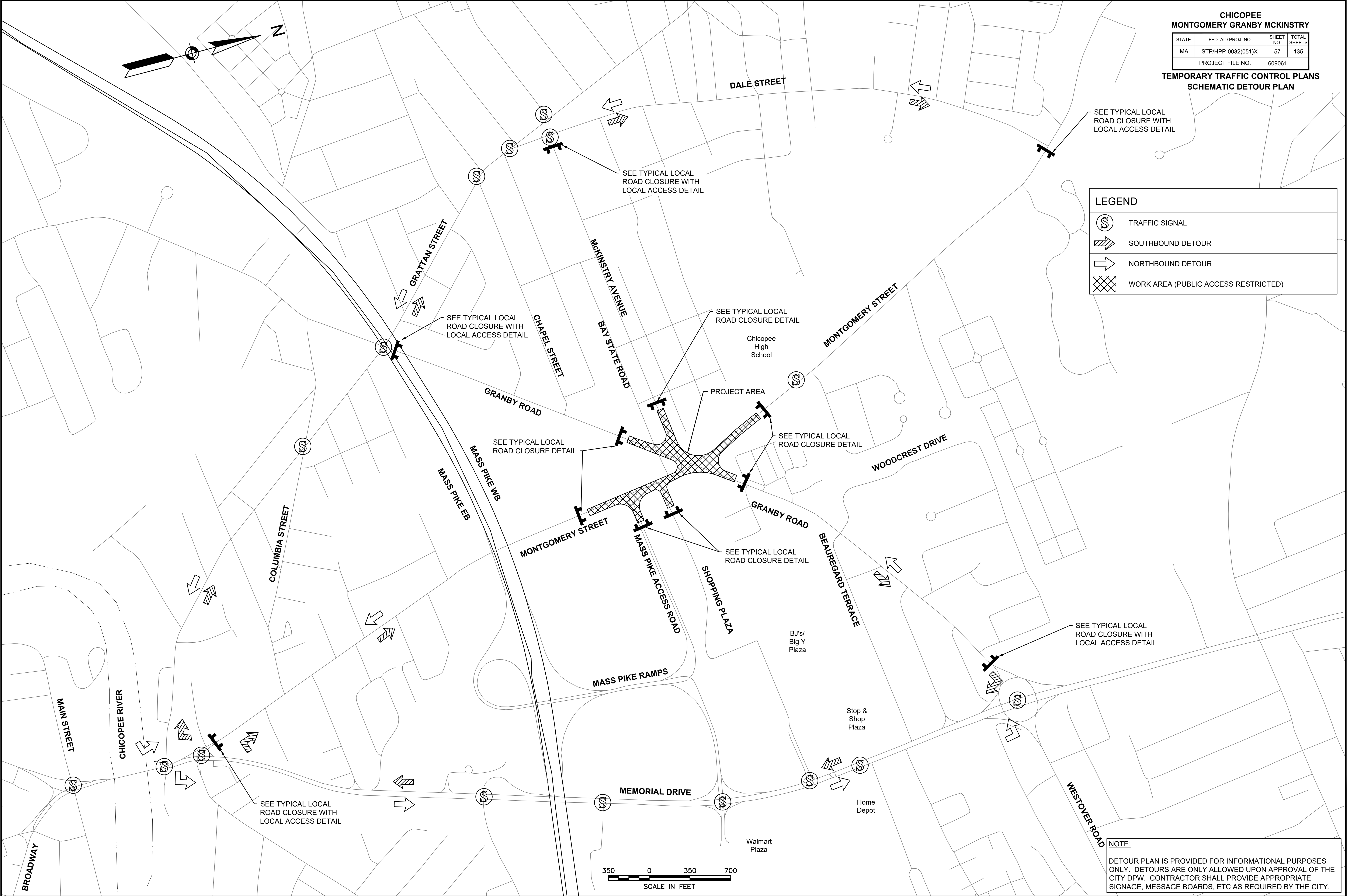


STAGE 5



STAGE 3





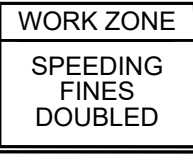
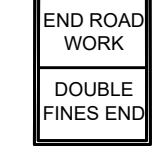
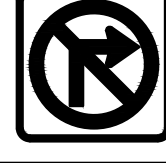
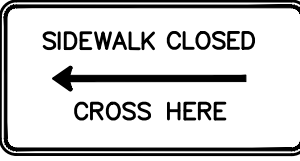
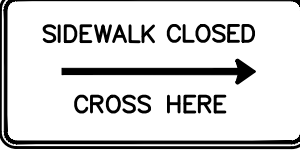
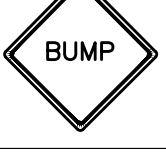
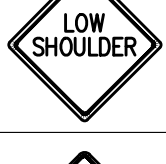
CHICOPEE MONTGOMERY GRANBY MCKINSTRY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	57	135
PROJECT FILE NO.		609061	

TEMPORARY TRAFFIC CONTROL PLANS
SCHEMATIC DETOUR PLAN

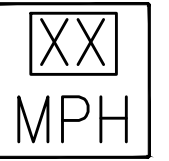
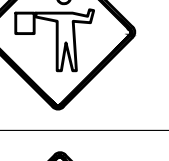
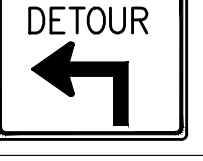
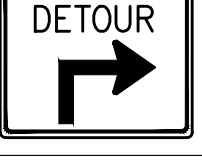
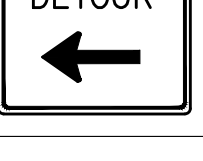
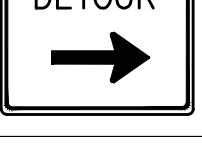
LEGEND	
	TRAFFIC SIGNAL
	SOUTHBOUND DETOUR
	NORTHBOUND DETOUR
	WORK AREA (PUBLIC ACCESS RESTRICTED)

NOTE:
DETOUR PLAN IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. DETOURS ARE ONLY ALLOWED UPON APPROVAL OF THE CITY DPW. CONTRACTOR SHALL PROVIDE APPROPRIATE SIGNAGE, MESSAGE BOARDS, ETC AS REQUIRED BY THE CITY.

TEMPORARY TRAFFIC CONTROL SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR			UNIT AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK- GROUND	LEGEND	BORDER	
R1-1	36"	36"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			RED	WHITE	WHITE	9.00
R1-2	36"X36"X36"						WHITE	RED	RED	3.88
MA-R2-10a	48"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	12.00
MA-R2-10e	36"	48"					WHITE FLUOR- ESCENT ORANGE WHITE	BLACK	BLACK	12.00
R3-1	24"	24"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			WHITE	RED/ BLACK	BLACK	4.00
R3-2	24"	24"					WHITE	RED/ BLACK	BLACK	4.00
R6-4	48"	24"					WHITE	BLACK	-	8.00
R9-9	24"	12"					WHITE	BLACK	BLACK	2.00
R9-11aL	24"	12"					WHITE	BLACK	BLACK	2.00
R9-11aR	24"	12"					WHITE	BLACK	BLACK	2.00
R9-11L/R	24"	18"	 				WHITE	BLACK	BLACK	3.00
R11-2	48"	30"					WHITE	BLACK	BLACK	10.00
R11-3a	60"	30"					WHITE	BLACK	BLACK	12.50
W1-4L/R	36"	36"	 				FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W5-1	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W8-1	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W8-3	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W8-8	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W8-9	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W8-15	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00

TEMPORARY TRAFFIC CONTROL SIGN SUMMARY (CONTINUED)

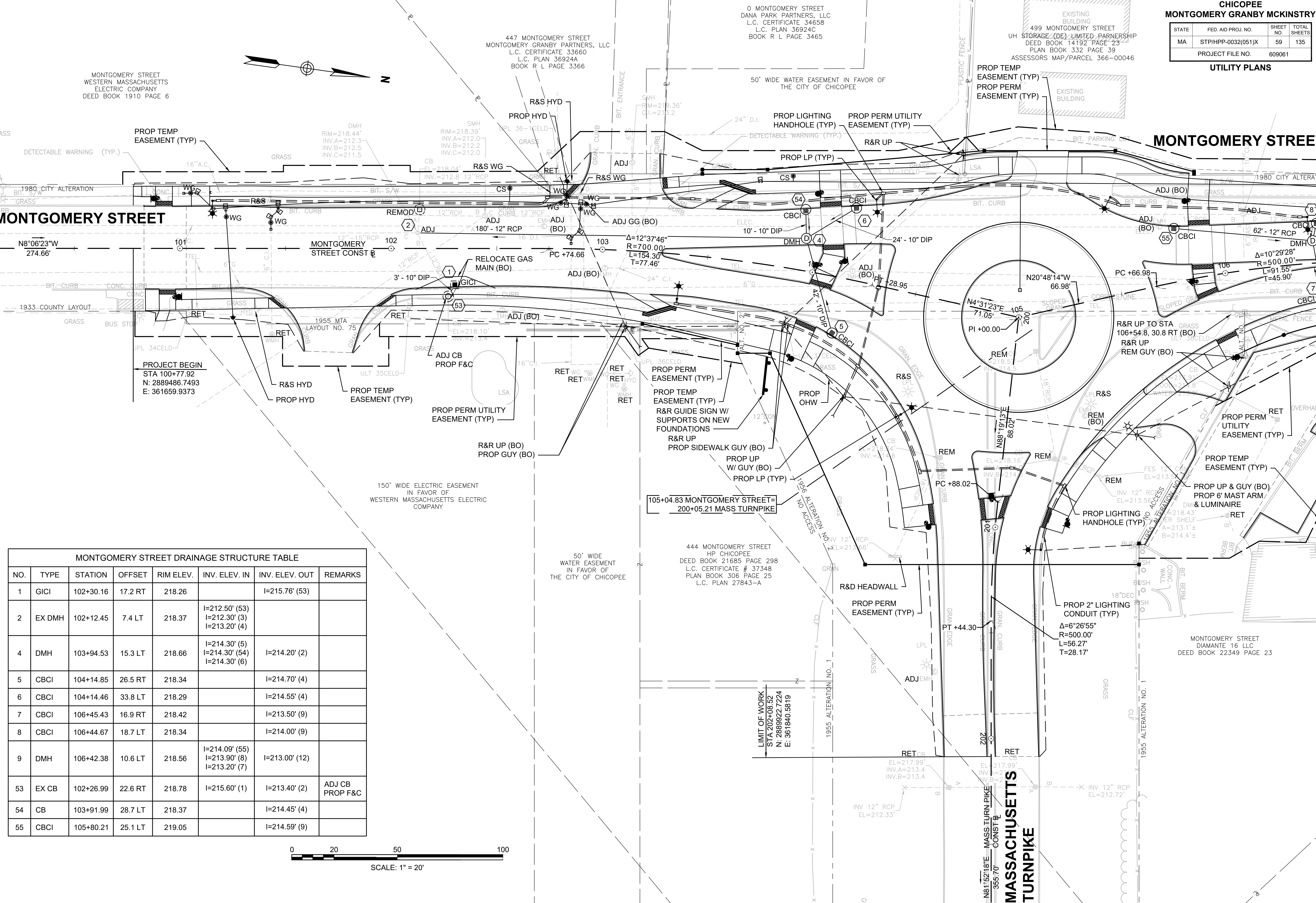
IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR			UNIT AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK- GROUND	LEGEND	BORDER	
W8-24	36"	36"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W11-2L/R	30"	30"	 				FLUOR- ESCENT YELLOW GREEN	BLACK	BLACK	6.25
W13-1p(xx) (SEE NOTE 3)	24"	24"					FLUOR- ESCENT ORANGE	BLACK	BLACK	4.00
W16-7p(L)/(R)	24"	12"	 				FLUOR- ESCENT YELLOW GREEN	BLACK	BLACK	2.00
W16-9p	24"	12"					FLUOR- ESCENT YELLOW GREEN	BLACK	BLACK	2.00
W20-1c	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W20-2c	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W20-3c	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W20-4c	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W20-7	36"	36"					FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
MA-W20-7b	36"	36"		AS PER MASSDOT STANDARD			FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
W21-7	36"	36"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
MA-W30-8R	36"	36"		AS PER MASSDOT STANDARD			FLUOR- ESCENT ORANGE	BLACK	BLACK	9.00
M4-8/M4-8a	24"	12"/18"	 	SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			FLUOR- ESCENT ORANGE	BLACK	BLACK	2.00/3.00
M4-9AL/R	30"	24"	 				FLUOR- ESCENT ORANGE	BLACK	BLACK	5.00
M4-9bL/R	30"	24"	 				FLUOR- ESCENT ORANGE	BLACK	BLACK	5.00
M4-9bSL/R	30"	24"	 				FLUOR- ESCENT ORANGE	BLACK	BLACK	5.00
M4-9L/R	30"	24"	 				FLUOR- ESCENT ORANGE	BLACK	BLACK	5.00
M4-10L	48"	18"					FLUOR- ESCENT ORANGE	BLACK	- - -	6.00
M4-10R	48"	18"					FLUOR- ESCENT ORANGE	BLACK	- - -	6.00

CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	58	135
PROJECT FILE NO.		609061	

TEMPORARY TRAFFIC CONTROL PLANS
TEMPORARY SIGN SUMMARY

- NOTES:
- HIGH INTENSITY REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION" FOR TEXT DIMENSIONS, AS AMENDED; THE 1977 MASSHIGHWAY DEPARTMENT CONSTRUCTION AND TRAFFIC STANDARD DETAILS, AS AMENDED, FOR SIGNS AND SUPPORTS; THE MASSHIGHWAY DEPARTMENT SIGN LISTINGS 1993 EDITION, AS AMENDED; THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR MOUNTING REQUIREMENTS; AND THE 2020 MassDOT STANDARD SIGNS BOOK, AS AMENDED.
 - ALL SIGNS SHOWN GRAPHICALLY FOR INFORMATION ONLY. SIGN VENDOR SHALL FABRICATE ALL SIGNS IN ACCORDANCE WITH THE APPLICABLE STANDARDS.
 - REFER TO GENERAL NOTE 20 ON TTCP GENERAL NOTES AND LEGEND SHEET FOR SPEED LIMIT INFORMATION.



MONTGOMERY STREET DRAINAGE STRUCTURE TABLE						
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
1	GICI	102+30.16	17.2 RT	218.26		I=215.76' (53)
2	EX DMH	102+12.45	7.4 LT	218.37	I=212.50' (53) I=212.30' (3) I=213.20' (4)	
4	DMH	103+94.53	15.3 LT	218.66	I=214.30' (5) I=214.30' (54) I=214.30' (6)	I=214.20' (2)
5	CBCI	104+14.85	26.5 RT	218.34		I=214.70' (4)
6	CBCI	104+14.46	33.8 LT	218.29		I=214.55' (4)
7	CBCI	106+45.43	16.9 RT	218.42		I=213.50' (9)
8	CBCI	106+44.67	18.7 LT	218.34		I=214.00' (9)
9	DMH	106+42.38	10.6 LT	218.56	I=214.09' (55) I=213.90' (8) I=213.20' (7)	I=213.00' (12)
53	EX CB	102+26.99	22.6 RT	218.78	I=215.60' (1)	I=213.40' (2)
54	CB	103+91.99	28.7 LT	218.37		I=214.45' (4)
55	CBCI	105+80.21	25.1 LT	219.05		I=214.59' (9)



CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

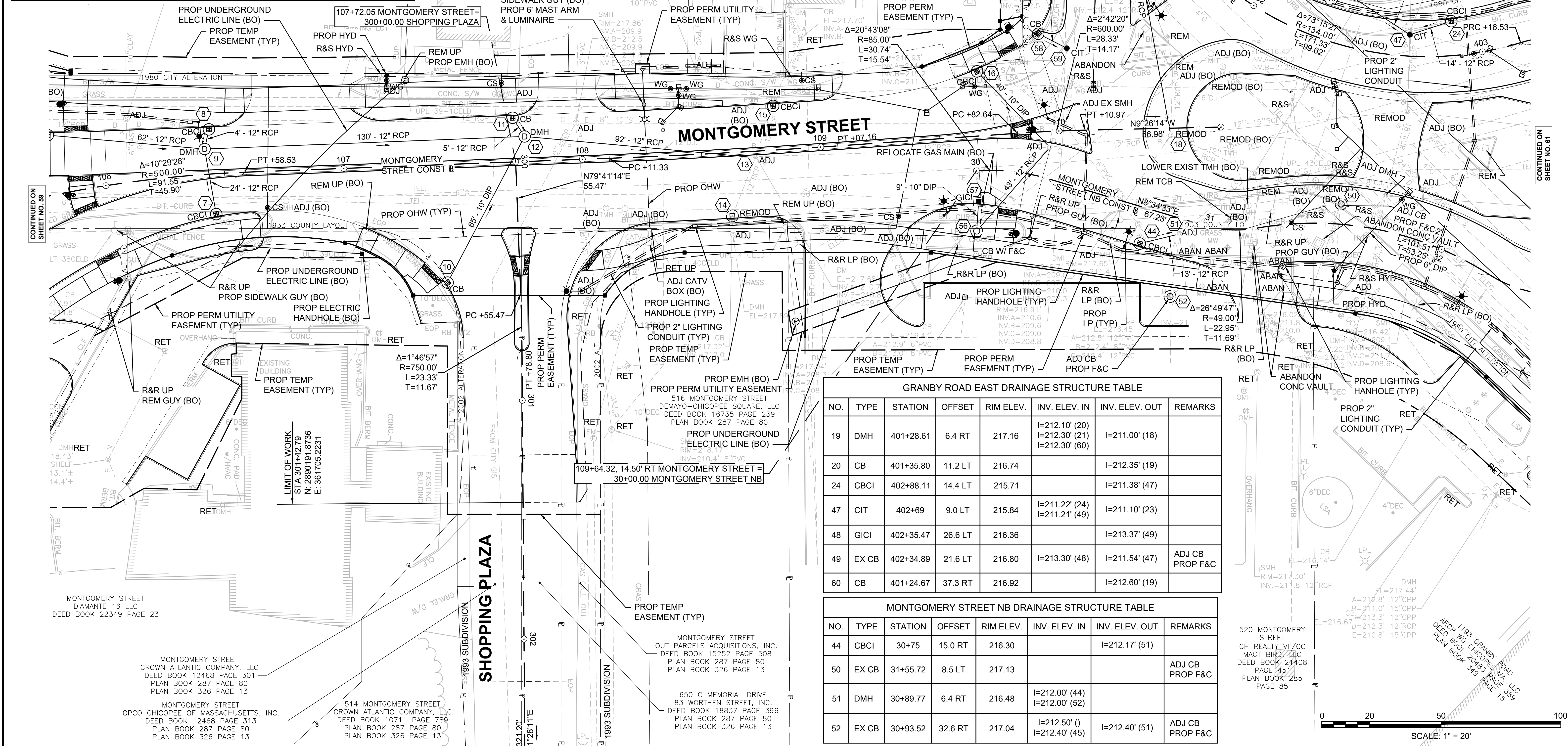
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	59	135

PROJECT FILE NO. 609061

UTILITY PLANS

MONTGOMERY STREET DRAINAGE STRUCTURE TABLE						
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
7	CBCI	106+45.43	16.9 RT	218.42	I=213.50' (9)	
8	CBCI	106+44.67	18.7 LT	218.34	I=214.00' (9)	
9	DMH	106+42.38	10.6 LT	218.56	I=214.09' (55) I=213.90' (8) I=213.20' (7)	I=213.00' (12)
10	CB	107+41.63	49.5 RT	217.62		I=213.20' (12)
11	CB	107+71.47	18.5 LT	217.76		I=213.43' (12)
12	DMH	107+76.20	10.5 LT	217.89	I=213.33' (11) I=212.50' (10) I=211.90' (9)	I=211.30' (13)
13	EX DMH	108+71.42	2.5 RT	217.58	I=210.80' (12) I=210.80' (15) I=210.70' (14)	
14	CBCI	108+61.47	26.5 RT	217.15		I=212.00' (13)
15	CBCI	108+81.19	18.5 LT	217.21		I=211.70' (13)
16	CBCI	109+67.54	27.0 LT	216.62		I=213.00' (17)

MONTGOMERY STREET DRAINAGE STRUCTURE TABLE						
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
18	EX DMH	110+46.81	3.1 RT	217.09	I=207.40' (17) I=208.50' (19)	
56	CB	109+62.71	39.6 RT	217.24	I=213.95' (57)	I=212.90' (17)
57	GI	109+64.38	27.4 RT	216.57		I=214.07' (56)
58	CB	109+93.47	41.1 LT	216.81		I=212.73' (59)
59	DMH	110+04.52	34.5 LT	216.73	I=212.60' (58)	I=212.50' (17)



CHICOPEE MONTGOMERY GRANBY MCKINSTRY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	60	135
PROJECT FILE NO. 609061			
UTILITY PLANS			

GRANBY ROAD EAST DRAINAGE STRUCTURE TABLE						
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
25	CBCI	405+16.72	44.4 RT	216.47		I=209.65' (26)
26	DMH	405+17.80	30.0 RT	216.76	I=209.50' (25) I=206.80' (29) I=211.20' (62)	I=206.75' (22)
27	CBCI	404+83.79	15.4 LT	216.38		I=212.05' (62)
47	CIT	402+69	9.0 LT	215.84	I=211.22' (24) I=211.21' (49)	I=211.10' (23)
61	CBCI	405+19.68	15.4 LT	216.66		I=212.33' (62)

MONTGOMERY STREET NORTH DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
30	CBCI	500+89.52	35.8 LT	214.58		I=210.24' (31)	BUILD OVER EXIST PIPE
31	EX DMH	501+09.75	5.1 RT	214.16	I=209.78' (30)		
32	EX DMH	501+32.99	2.4 LT	213.75	I=208.45' (33)		
33	CBCI	501+47.26	17.5 RT	213.16		I=208.73' (32)	
34	DMH	503+01.28	20.6 LT	211.40	I=206.56' (35)		BUILD OVER EXIST PIPE
35	CBCI	502+95.55	16.0 LT	210.96		I=206.63' (34)	
63	CB	500+37.86	15.2 LT	215.60		I=210.28' (65)	
64	CBCI	500+38.31	40.0 RT	215.55		I=211.20' (65)	
65	DMH	500+55.08	8.9 RT	215.77	I=210.85' (64) I=210.00' (63)	I=209.30' (66)	
66	DMH	501+02.12	7.8 RT	214.30	I=208.80' (65)	I=207.50' ()	

CHICOPEE

MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	61	135
PROJECT FILE NO.		609061	

UTILITY PLANS

CONTINUED ON
SHEET NO. 60

CONTINUED ON
SHEET NO. 63

CHICOPEE MONTGOMERY GRANBY MCKINSTRY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	62	135
PROJECT FILE NO. 609061			

UTILITY PLANS

GRANBY ROAD EAST DRAINAGE STRUCTURE TABLE

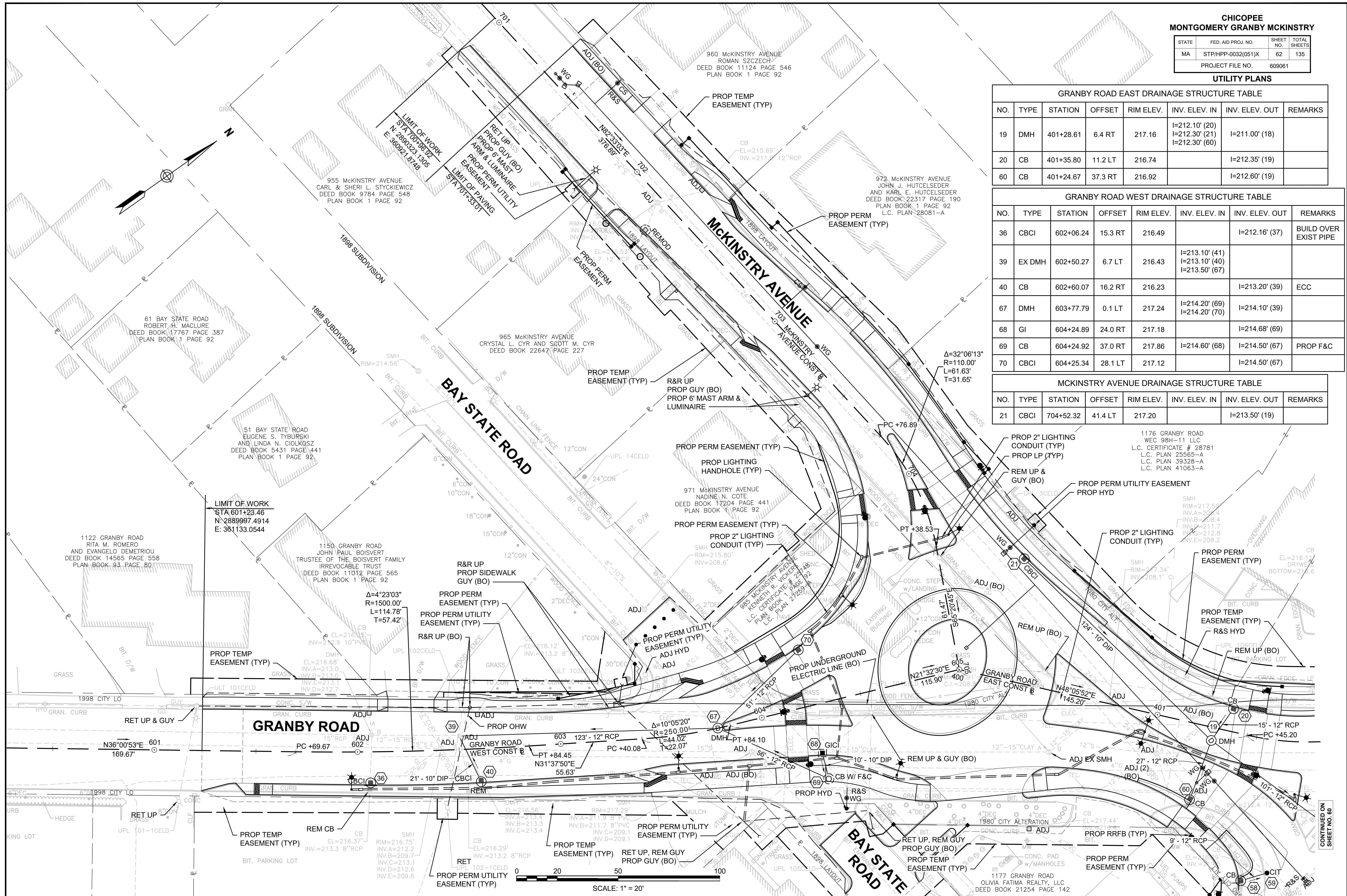
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
19	DMH	401+28.61	6.4 RT	217.16	I=212.10' (20) I=212.30' (21) I=212.30' (60)	I=211.00' (18)	
20	CB	401+35.80	11.2 LT	216.74		I=212.35' (19)	
60	CB	401+24.67	37.3 RT	216.92		I=212.60' (19)	

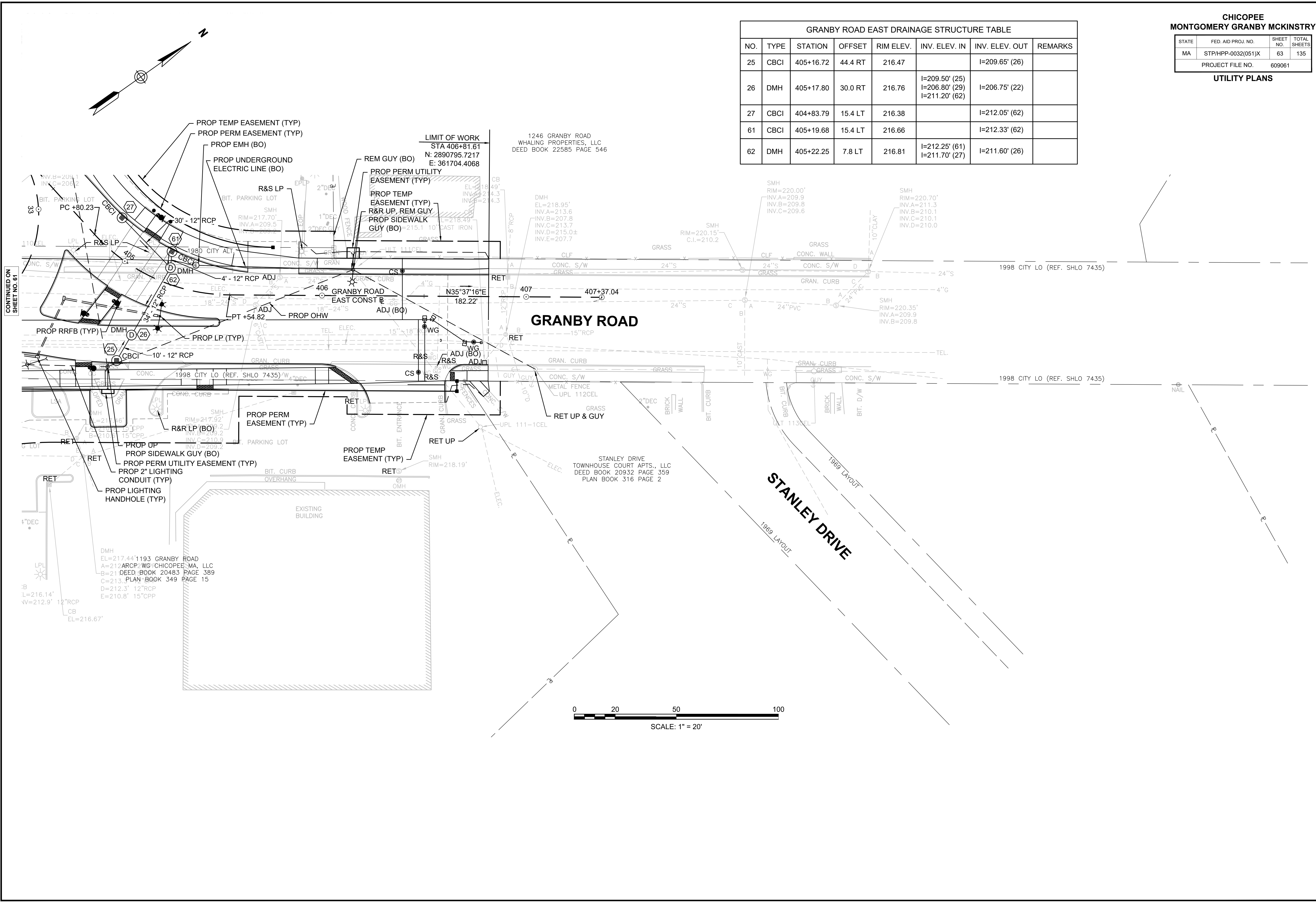
GRANBY ROAD WEST DRAINAGE STRUCTURE TABLE

NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
36	CBCI	602+06.24	15.3 RT	216.49		I=212.16' (37)	BUILD OVER EXIST PIPE
39	EX DMH	602+50.27	6.7 LT	216.43	I=213.10' (41) I=213.10' (40) I=213.50' (67)		
40	CB	602+60.07	16.2 RT	216.23		I=213.20' (39)	ECC
67	DMH	603+77.79	0.1 LT	217.24	I=214.20' (69) I=214.20' (70)	I=214.10' (39)	
68	GI	604+24.89	24.0 RT	217.18		I=214.68' (69)	
69	CB	604+24.92	37.0 RT	217.86	I=214.60' (68)	I=214.50' (67)	PROP F&C
70	CBCI	604+25.34	28.1 LT	217.12		I=214.50' (67)	

MCKINSTRY AVENUE DRAINAGE STRUCTURE TABLE

NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
21	CBCI	704+52.32	41.4 LT	217.20		I=213.50' (19)	





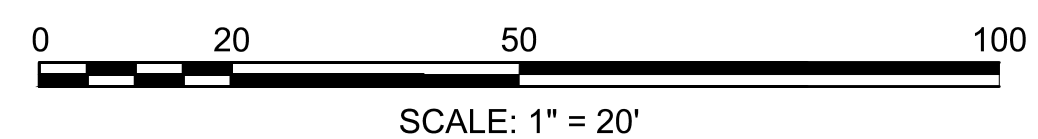
CONTINUED ON
SHEET NO. 61

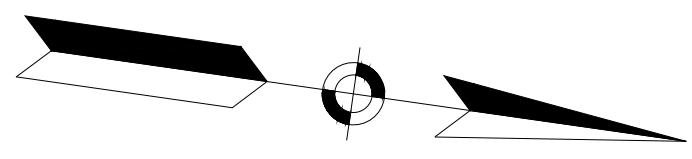
GRANBY ROAD EAST DRAINAGE STRUCTURE TABLE							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
25	CBCI	405+16.72	44.4 RT	216.47		I=209.65' (26)	
26	DMH	405+17.80	30.0 RT	216.76	I=209.50' (25) I=206.80' (29) I=211.20' (62)	I=206.75' (22)	
27	CBCI	404+83.79	15.4 LT	216.38		I=212.05' (62)	
61	CBCI	405+19.68	15.4 LT	216.66		I=212.33' (62)	
62	DMH	405+22.25	7.8 LT	216.81	I=212.25' (61) I=211.70' (27)	I=211.60' (26)	

CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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UTILITY PLANS





MONTGOMERY STREET
WESTERN MASSACHUSETTS
ELECTRIC COMPANY
DEED BOOK 1910 PAGE 6

CUT AND CAP
INSTALL RESTRAINED END CAP
INSTALL BOARD AND PROP
CONCRETE THRUST BLOCK

INSTALL FROM 16" WATER MAIN:
1-16" COUPLING
2-16" 45° BENDS
1-16" NIPPLE LENGTH AS REQUIRED
2-THRUST BLOCKS
1-16" GATE VALVE AND BOX - OPEN LEFT
CONTINUE WITH 16"

PROP HYD ASSEMBLY
1-16"x16"x6" ANCHORING TEE
1-6" GATE VALVE AND BOX
1-6" DIP NIPPLE LENGTH AS REQUIRED
1-THRUST BLOCK
7'-6" DIP

447 MONTGOMERY STREET
MONTGOMERY GRANBY PARTNERS, LLC
L.C. CERTIFICATE 33660
L.C. PLAN 36924A
BOOK R L PAGE 3366

0 MONTGOMERY STREET
DANA PARK PARTNERS, LLC
L.C. CERTIFICATE 34658
L.C. PLAN 36924C
BOOK R L PAGE 3465

EXISTING
BUILDING
499 MONTGOMERY STREET
UH STORAGE (DE) LIMITED PARTNERSHIP
DEED BOOK 14192 PAGE 23
PLAN BOOK 332 PAGE 39
ASSESSORS MAP/PARCEL 366-00046

CHICOPEE MONTGOMERY GRANBY MCKINSTRY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	64	135
PROJECT FILE NO. 609061			
WATER SUPPLY ALTERATION PLANS			

MONTGOMERY STREET

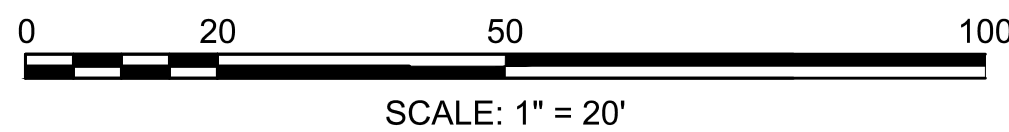
MONTGOMERY STREET

PROJECT BEGIN
STA 100+77.92
N: 2889486.7493
E: 361659.9373

PROP HYD ASSEMBLY
1-16"x16"x6" ANCHORING TEE
1-6" GATE VALVE AND BOX
1-6" DIP NIPPLE LENGTH AS REQUIRED
1-THRUST BLOCK
46'-6" DIP

444 MONTGOMERY STREET
HP CHICOPEE
DEED BOOK 21685 PAGE 298
L.C. CERTIFICATE # 37348
PLAN BOOK 306 PAGE 25
L.C. PLAN 27843-A

MONTGOMERY STREET
DIAMANTE 16 LLC
DEED BOOK 22349 PAGE 23



NOTE:
CONTRACTOR TO FIELD VERIFY ANY LEAVEOUTS FOR WATER
SERVICES PRIOR TO ABANDONING THE CONNECTION.

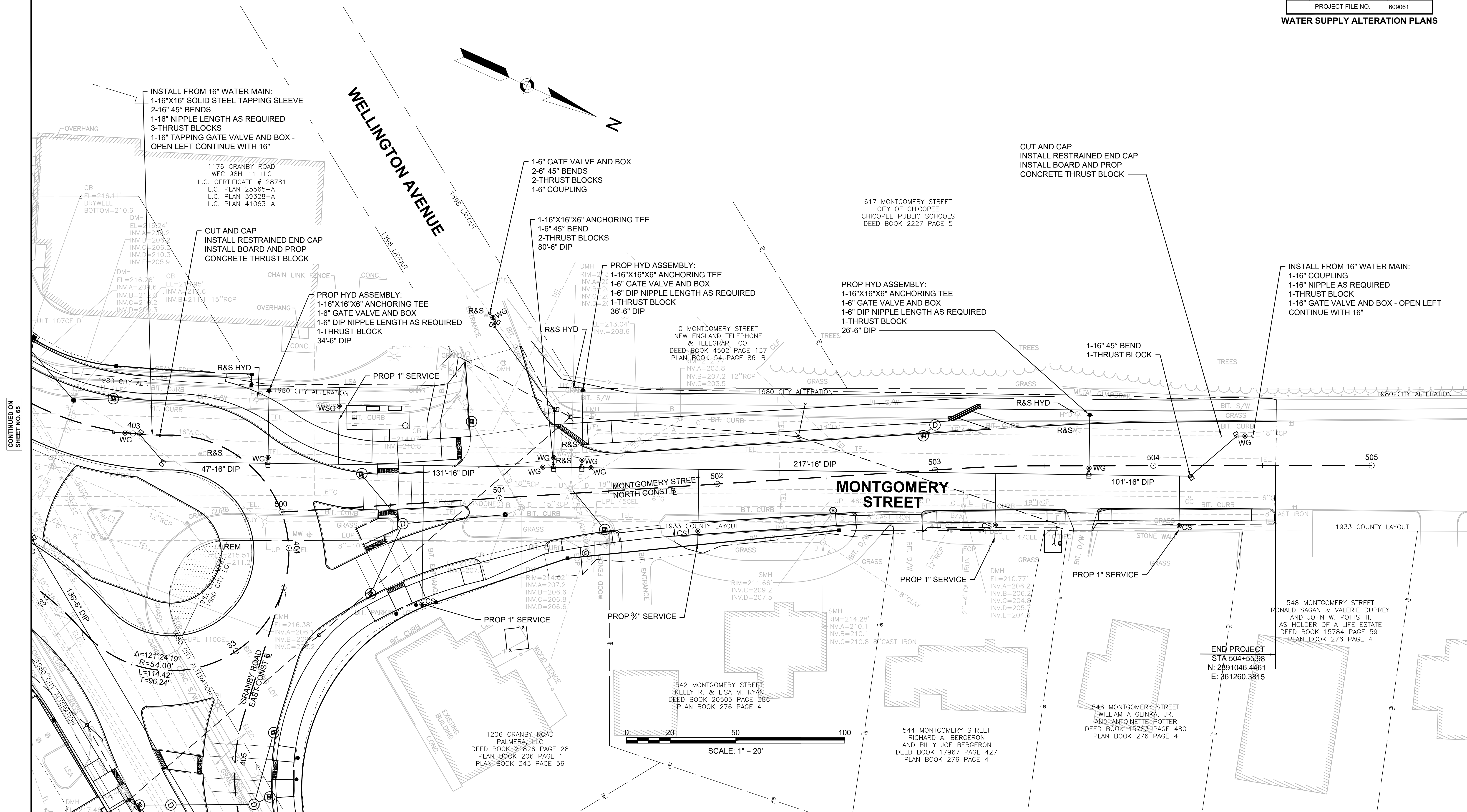
MASSACHUSETTS
TURNPIKE

CONTINUED ON
SHEET NO. 65

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	65	135
PROJECT FILE NO.		609061	



0 20 50 100
SCALE: 1" = 20'



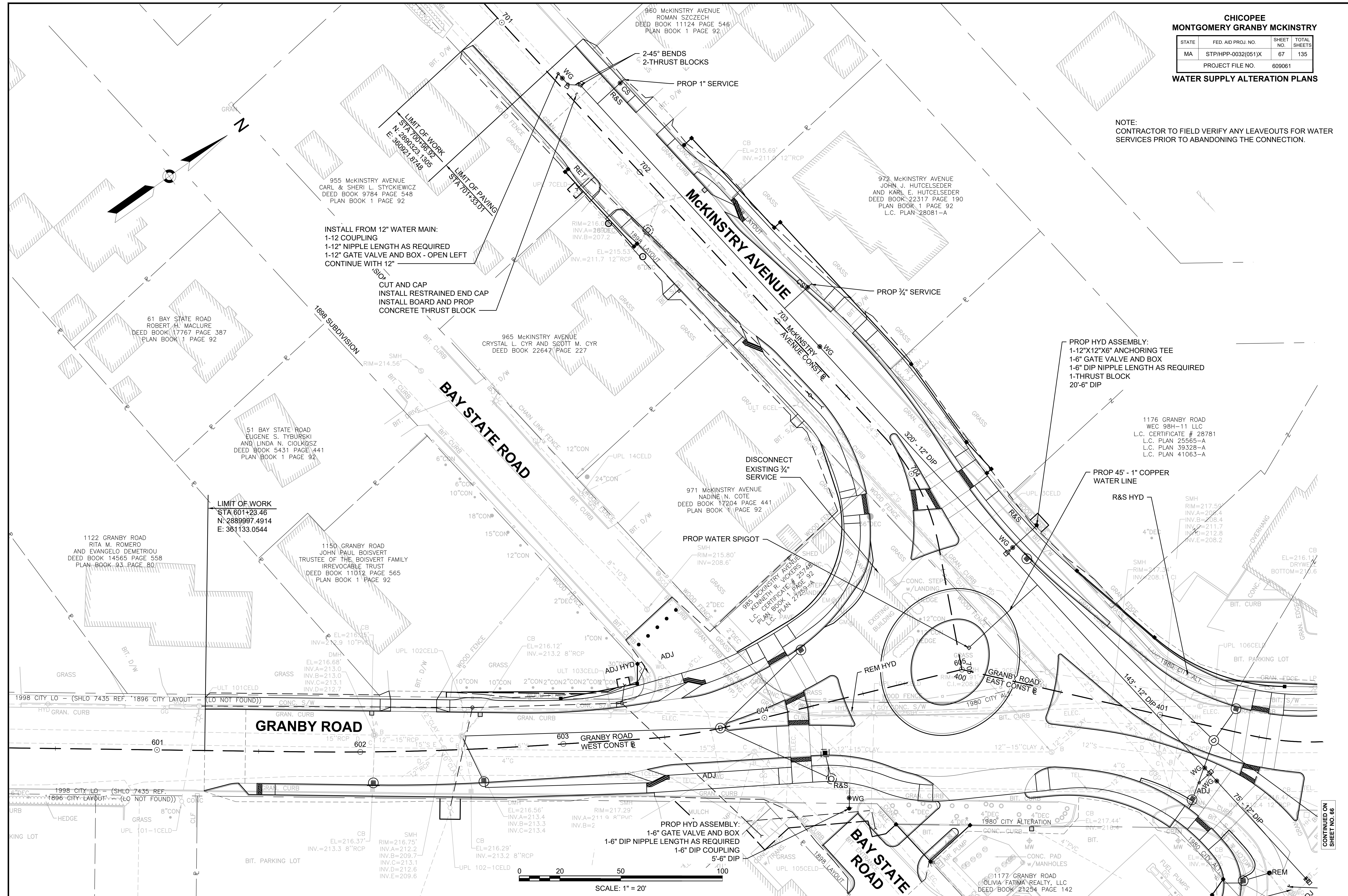
NOTE:
CONTRACTOR TO FIELD VERIFY ANY LEAVEOUTS FOR WATER
SERVICES PRIOR TO ABANDONING THE CONNECTION.

CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	67	135
PROJECT FILE NO.		609061	

WATER SUPPLY ALTERATION PLANS

NOTE:
CONTRACTOR TO FIELD VERIFY ANY LEAVEOUTS FOR WATER SERVICES PRIOR TO ABANDONING THE CONNECTION.

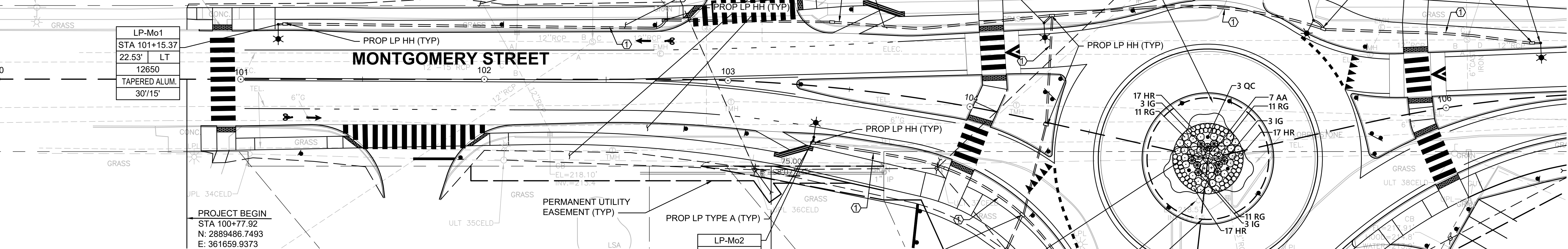


CONTINUED ON
SHEET NO. 66



PLANT SCHEDULE SHEET 69

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
TREES					
QA	2	Quercus alba	Oak - White	2 - 2 1/2" CAL.	
QC	3	Quercus coccinea	Oak - Scarlet	2 - 2 1/2" CAL.	
SHRUBS					
AA	7	Aronia arbutifolia	Chokeberry - Red	18 - 24" HT.	48" o.c.
IG	9	Ilex glabra `Compacta`	Inkberry - Compact	18 - 24" HT.	36" o.c.
RG	33	Rhus aromatica `Gro-Low`	Sumac - Fragrant `Gro-Low`	18 - 24" SPD	36" o.c.
PERENNIALS					
HR	51	Hemerocallis x `Happy Returns`	Happy Returns Daylily	1 GAL.	24" o.c.



PLANT SCHEDULE PROJECT SUMMARY

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
TREES					
QA	3	Quercus alba	Oak - White	2 - 2 1/2" CAL.	
QC	3	Quercus coccinea	Oak - Scarlet	2 - 2 1/2" CAL.	
TA	5	Tilia americana `Redmond`	Linden - Redmond	2 - 2 1/2" CAL.	
EVERGREEN TREES					
PG	3	Picea glauca `Montrose Charm`	Montrose Charm White Spruce	5 - 6' HT.	
PBB	3	Picea pungens `Baby Blue`	Baby Blue Colorado Spruce	5 - 6' HT.	
TG	6	Thuja occidentalis `Nigra`	Dark American Arborvitae	5 - 6' HT.	
FLOWERING TREES					
AC	5	Amelanchier canadensis	Serviceberry - Shadblow	5 - 6' HT., CLUMP	
AL	2	Amelanchier laevis `Snowcloud`	Serviceberry - Snowcloud	1 1/2 - 2" CAL., SINGLE STEM	
SHRUBS					
AA	88	Aronia arbutifolia	Chokeberry - Red	18 - 24" HT.	48" o.c.
IG	16	Ilex glabra `Compacta`	Inkberry - Compact	18 - 24" HT.	36" o.c.
IN	13	Ilex verticillata `Nana`	Red Sprite Winterberry	18 - 24" HT.	36" o.c.
RG	64	Rhus aromatica `Gro-Low`	Sumac - Fragrant `Gro-Low`	18 - 24" SPD	36" o.c.
PERENNIALS					
HR	83	Hemerocallis x `Happy Returns`	Happy Returns Daylily	1 GAL.	24" o.c.
HP	65	Hemerocallis x `Pardon Me`	Pardon Me Daylily	1 GAL.	24" o.c.
PERENNIALS AND GRASSES					
ES	517	Eragrostis spectabilis	Purple Lovegrass	1 GAL.	18" o.c.
RF	389	Rudbeckia fulgida	Coneflower	1 GAL.	18" o.c.
SHRUBS					
JB	58	Juniperus horizontalis `Bar Harbor`	Juniper - Bar Harbor	18 - 24" SPD	42" o.c.

NOTE:
DECOMPACT LANDSCAPED AREAS THAT ARE FORMERLY PAVED TO MEET SOIL/BORROW DEPTH REQUIREMENTS PER DETAILS ON SHEET 94 FOR LAWN/PLANTING BED IN FORMER PAVED AREAS.

PLANTING NOTES

- CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
- PLANT LOCATIONS ARE APPROXIMATE. PRIOR TO PLANTING, LOCATION OF ALL PLANT MATERIAL WILL BE APPROVED BY THE RESIDENT ENGINEER AND THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIAL WILL HAVE TAGS INDICATING COMMON NAME, BOTANICAL NAME, CULTIVAR, & SIZE.
- IMMEDIATELY AFTER ACCEPTANCE OF PLANTING, TAGS AND RIBBONS SHALL BE REMOVED.
- ALL PLANTS WILL BE MULCHED PER PLANS AND SPECIFICATIONS.
- ALL SHRUB AND PERENNIAL BEDS WILL BE WEEDED AND OTHERWISE NEATLY MAINTAINED FOR THE DURATION OF THE CONTRACT.
- PLANTS AND PLANTING BEDS SHALL BE THOROUGHLY WATERED AS NECESSARY AND PER SPECIFICATIONS.

WATERING NOTES

- IRRIGATION BAGS MAY BE USED FOR STREETScape AND PARK PLANTINGS ONLY.
- A SCHEDULE FOR FILLING AND REMOVAL SHALL BE SUBMITTED TO THE ENGINEER.
- USE AND SCHEDULE MUST BE APPROVED BY THE MASSDOT LANDSCAPE ARCHITECT.
- A MINIMUM OF 2 BAGS PER TREE SHALL BE USED. BAGS SHALL BE ATTACHED TO STAKES.
- NO BAGS SHALL BE PLACED AROUND THE TREE TRUNK.
- BAGS SHALL BE MAINTAINED FULL JUNE 1 - OCTOBER 1 OR AS APPROVED.
- BAGS SHALL BE REMOVED AT THE END OF THE SEASON.

CHICOPEE MONTGOMERY GRANBY MCKINSTRY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	69	135
PROJECT FILE NO. 609061			
LIGHTING & LANDSCAPING PLANS			

PROP LP TYPE A (TYP)

PROP LP HH (TYP)

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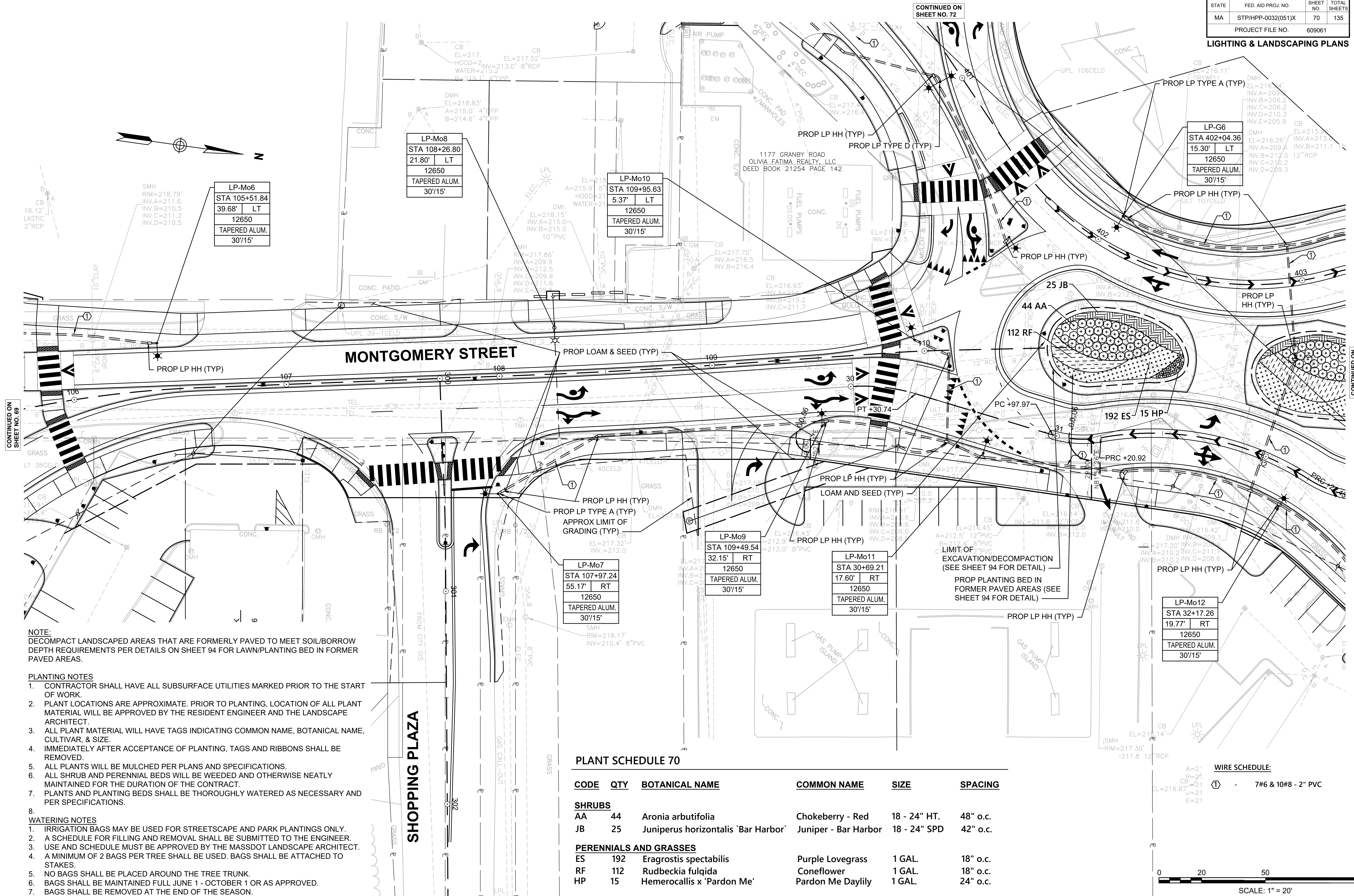
PROP LP HH (TYP)

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NOTE:
DECOMPACT LANDSCAPED AREAS THAT ARE FORMERLY PAVED TO MEET SOIL/BORROW DEPTH REQUIREMENTS PER DETAILS ON SHEET 94 FOR LAWN/PLANTING BED IN FORMER PAVED AREAS.

PLANTING NOTES

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- NO BAGS SHALL BE PLACED AROUND THE TREE TRUNK.
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- BAGS SHALL BE REMOVED AT THE END OF THE SEASON.

PLANT SCHEDULE 70

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
SHRUBS					
AA	44	Aronia arbutifolia	Chokeberry - Red	18 - 24" HT.	48" o.c.
JB	25	Juniperus horizontalis 'Bar Harbor'	Juniper - Bar Harbor	18 - 24" SPD	42" o.c.
PERENNIALS AND GRASSES					
ES	192	Eragrostis spectabilis	Purple Lovegrass	1 GAL.	18" o.c.
RF	112	Rudbeckia fulgida	Coneflower	1 GAL.	18" o.c.
HP	15	Hemerocallis x 'Pardon Me'	Pardon Me Daylily	1 GAL.	24" o.c.

WIRE SCHEDULE:

① - 7#6 & 10#8 - 2" PVC



PLANT SCHEDULE 71

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
FLOWERING TREES					
AC	3	Amelanchier canadensis	Serviceberry - Shadblow	5 - 6' HT., CLUMP	
AL	2	Amelanchier laevis 'Snowcloud'	Serviceberry - Snowcloud	1 1/2 - 2" CAL., SINGLE STEM	
SHRUBS					
AA	37	Aronia arbutifolia	Chokeberry - Red	18 - 24" HT.	48" o.c.
IG	3	Ilex glabra 'Compacta'	Inkberry - Compact	18 - 24" HT.	36" o.c.
IN	5	Ilex verticillata 'Nana'	Red Sprite Winterberry	18 - 24" HT.	36" o.c.
RG	9	Rhus aromatica 'Gro-Low'	Sumac - Fragrant 'Gro-Low'	18 - 24" SPD	36" o.c.
JB	33	Juniperus horizontalis 'Bar Harbor'	Juniper - Bar Harbor	18 - 24" SPD	42" o.c.
PERENNIALS AND GRASSES					
ES	325	Eragrostis spectabilis	Purple Lovegrass	1 GAL.	18" o.c.
RF	225	Rudbeckia fulgida	Coneflower	1 GAL.	18" o.c.
HR	32	Heemerocallis x 'Happy Returns'	Happy Returns Daylily	1 GAL.	24" o.c.
HP	18	Heemerocallis x 'Pardon Me'	Pardon Me Daylily	1 GAL.	24" o.c.

CHICOPEE

MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	71	135
PROJECT FILE NO.		609061	

LIGHTING & LANDSCAPING PLANS

CONTINUED ON
SHEET NO. 70

CONTINUED ON
SHEET NO. 73

NOTE:
DECOMPACT LANDSCAPED AREAS THAT ARE FORMERLY PAVED TO MEET SOIL/BORROW DEPTH REQUIREMENTS
PER DETAILS ON SHEET 94 FOR LAWN/PLANTING BED IN FORMER PAVED AREAS.

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 - BAGS SHALL BE REMOVED AT THE END OF THE SEASON.

WIRE SCHEDULE:
① - 7#6 & 10#8 - 2" PVC

NOTE:
DECOMPACT LANDSCAPED AREAS THAT ARE FORMERLY PAVED TO MEET SOIL/BORROW DEPTH REQUIREMENTS PER DETAILS ON SHEET 94 FOR LAWN/PLANTING BED IN FORMER PAVED AREAS.

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7. BAGS SHALL BE REMOVED AT THE END OF THE SEASON.

PLANT SCHEDULE 72

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
QA	1	Quercus alba	Oak - White	2 - 2 1/2" CAL.
TA	5	Tilia americana 'Redmond'	Linden - Redmond	2 - 2 1/2" CAL.
EVERGREEN TREES				
PG	3	Picea glauca 'Montrose Charm'	Montrose Charm White Spruce	5 - 6' HT.
PBB	3	Picea pungens 'Baby Blue'	Baby Blue Colorado Spruce	5 - 6' HT.
TG	6	Thuja occidentalis 'Nigra'	Dark American Arborvitae	5 - 6' HT.
FLOWERING TREES				
AC	2	Amelanchier canadensis	Serviceberry - Shadblow	5 - 6' HT., CLUMP
SHRUBS				
IG	4	Ilex glabra 'Compacta'	Inkberry - Compact	18 - 24" HT. 36" o.c.
IN	8	Ilex verticillata 'Nana'	Red Sprite Winterberry	18 - 24" HT. 36" o.c.
RG	22	Rhus aromatica 'Gro-Low'	Sumac - Fragrant 'Gro-Low'	18 - 24" SPD 36" o.c.
PERENNIALS AND GRASSES				
RF	52	Rudbeckia fulgida	Coneflower	1 GAL. 18" o.c.
HP	32	Hemerocallis x 'Pardon Me'	Pardon Me Daylily	1 GAL. 24" o.c.

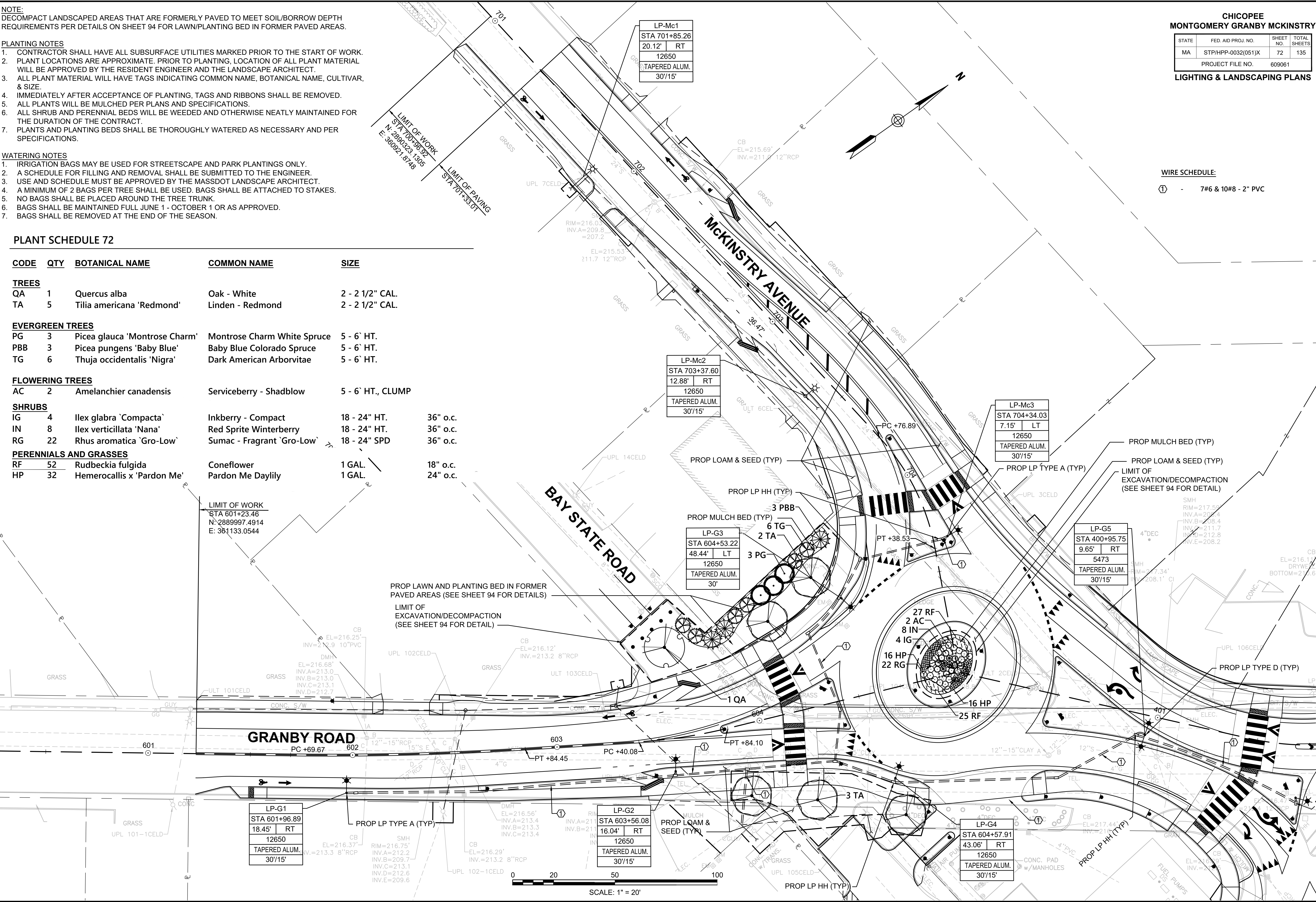
CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	72	135
PROJECT FILE NO.		609061	

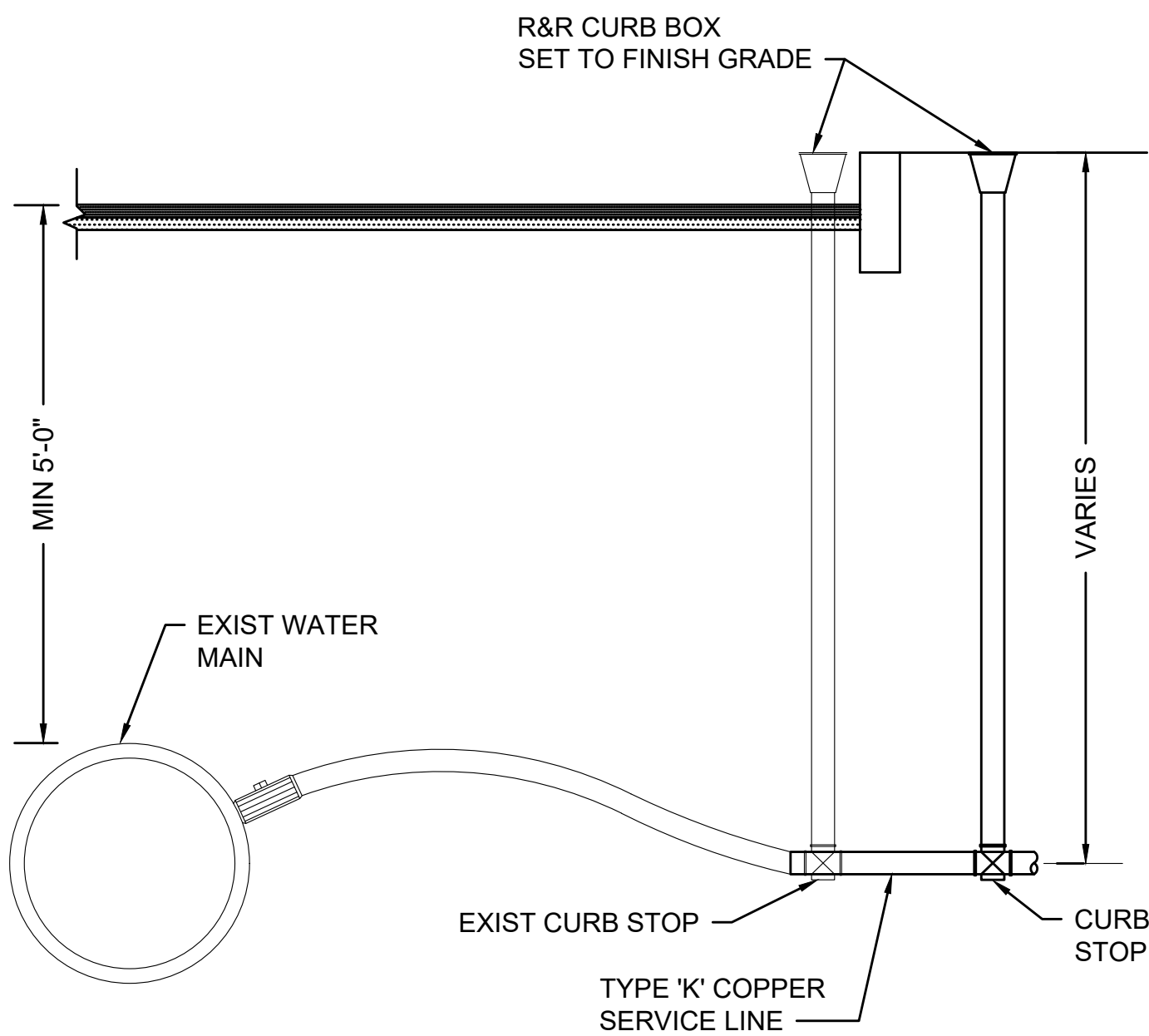
LIGHTING & LANDSCAPING PLANS

WIRE SCHEDULE:

① - 7#6 & 10#8 - 2" PVC



CONTINUED ON
SHEET NO. 70

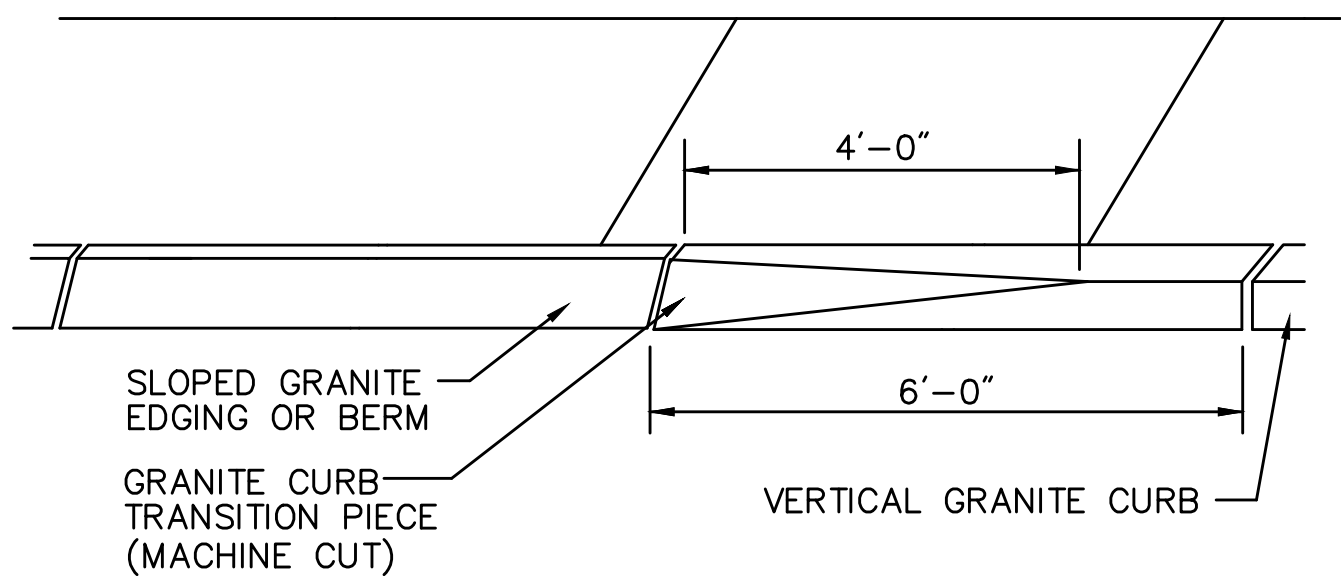


NOTES

1. INSTALLATIONS SHALL CONFORM WITH CHICOPEE WATER DISTRICT SPECIFICATIONS AND STANDARDS.

REMOVE & RESET CURB STOP

SCALE: NTS

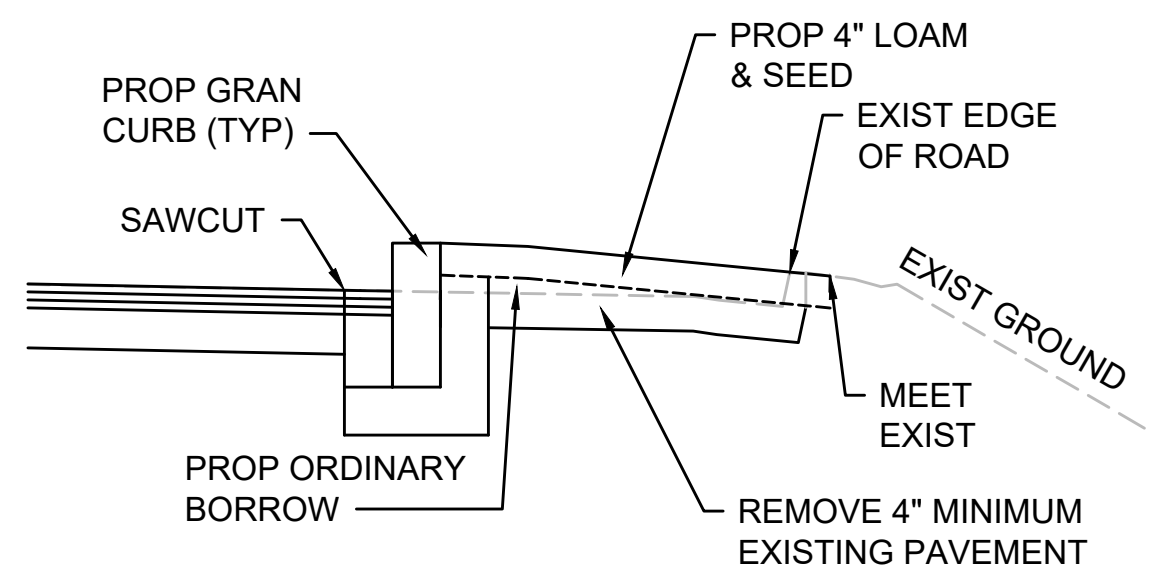


SPLAYED END GRANITE CURB

SCALE: N.T.S.

DWG: CURB-07

DATE: OCT. 2012

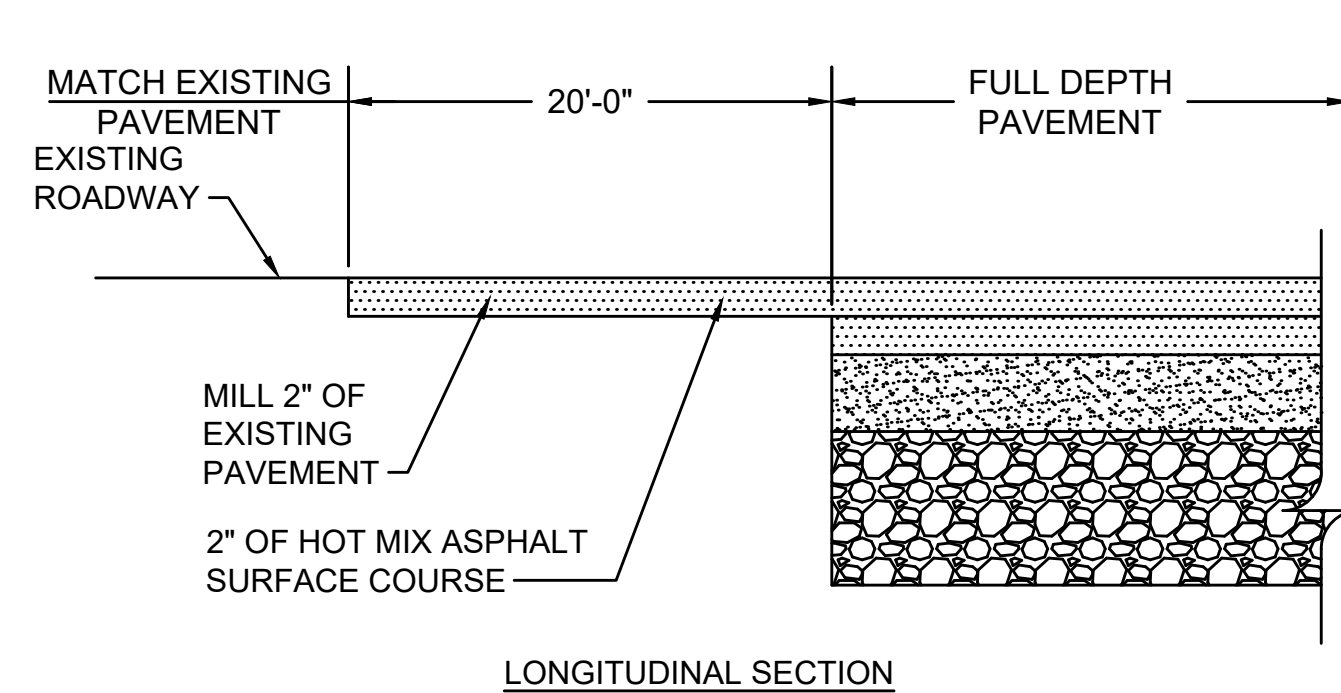


REMOVAL OF EXIST ROADWAY

SCALE: N.T.S.

DWG: PVMT-08

DATE: FEB. 2012



FULL DEPTH PAVEMENT TRANSITION

SCALE: N.T.S.

DWG: PVMT-03

DATE: OCT. 2012

PLAN

UNDISTURBED
SOIL
SECTION

PLAN

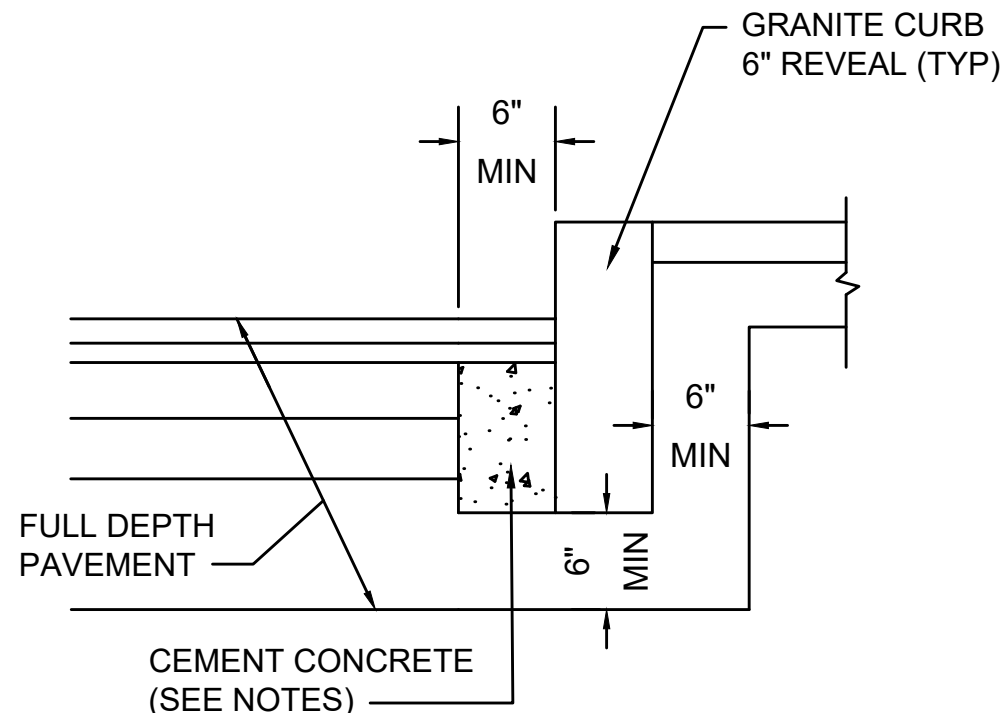
UNDISTURBED
SOIL
SECTION

BENDS						BENDS							
6"	11-1/4°	B	C	D	E	F	6"	45°	B	C	D	E	F
6"	22-1/2°	"	15"	12"	24"	12"	6"	90°	"	30"	12"	24"	14"
8"	22-1/2°	"	19"	"	"	13"	8"	45°	"	30"	"	"	27"
11-1/4"	"	"	20"	"	"	12"	8"	90°	"	30"	"	"	24"
22-1/2"	"	"	22"	"	"	17"	12"	90°	"	38"	"	"	36"
11-1/4"	"	"	30"	"	"	15"	12"	45°	"	40"	"	"	40"
22-1/2"	"	"	35"	"	"	25"	12"	90°	"	60"	"	"	52"
22-1/2"	"	"	56"	"	"	28"	16"	45°	"	78"	"	"	34"
							16"	90°	"	106"	"	"	39"
TEES						TEES							
6"x 6"x 6"		G	H	I	J		12"x 12"x 6"	G	H	I	J		
8"x 8"x 6"	12"	"	24"	24"	18"		12"x 12"x 8"	12"	24"	24"	12"		
8"x 8"x 8"	"	"	"	"	"		12"x 12"x 12"	"	36"	"	24"		
16"x 6"x 16"	"	"	"	24"	38"		16"x 12"x 16"	"	44"	"	36"		
							16"x 16"x 16"	"	48"	"			

NOTES:

1. PROVIDE BLOCKS FOR TAPPING SLEEVES, DEAD ENDS, GATE VALVES AND VERTICAL BENDS, SAME SIZE AS REQUIRED FOR TEES.
2. PROVIDE ANCHOR RODS AT VERTICAL BENDS AND GATE VALVES
3. CONCRETE SHALL NOT BE PLACED AGAINST PIPE BEYOND FITTING.

CONCRETE THRUST BLOCK



NOTES:

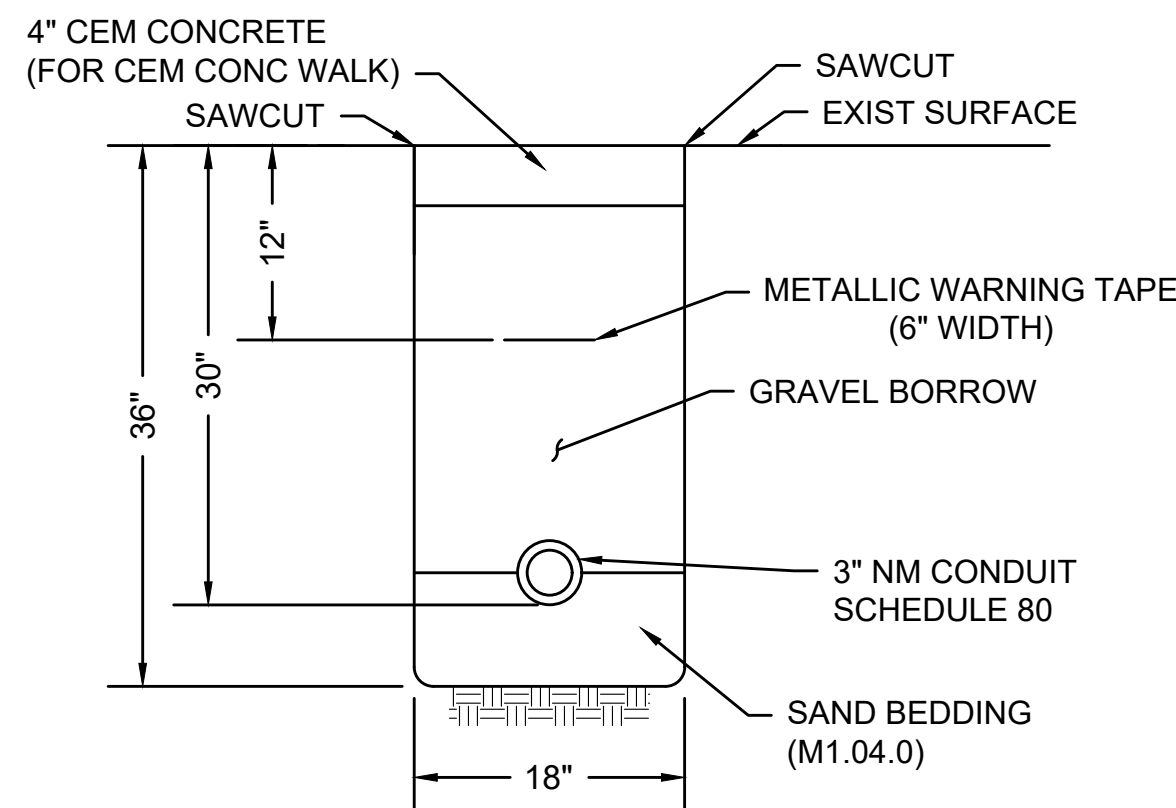
1. TO BE PLACED IF CURB IS INSTALLED AFTER HOT MIX ASPHALT
2. CONCRETE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB
3. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

GRANITE CURB IN FULL DEPTH PAVEMENT

SCALE: N.T.S.

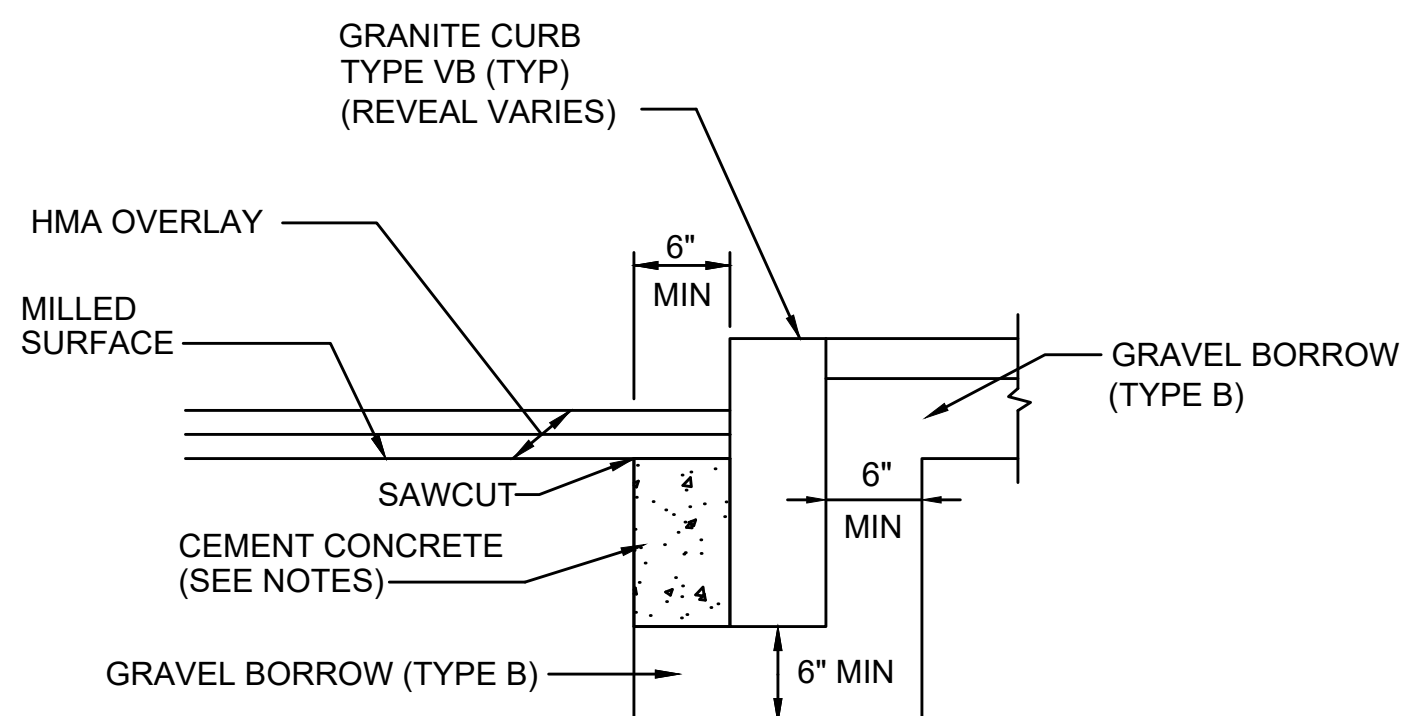
DWG: CURB-05

DATE: MARCH 2013



CONDUIT IN SIDEWALK

SCALE: N.T.S.



NOTES:

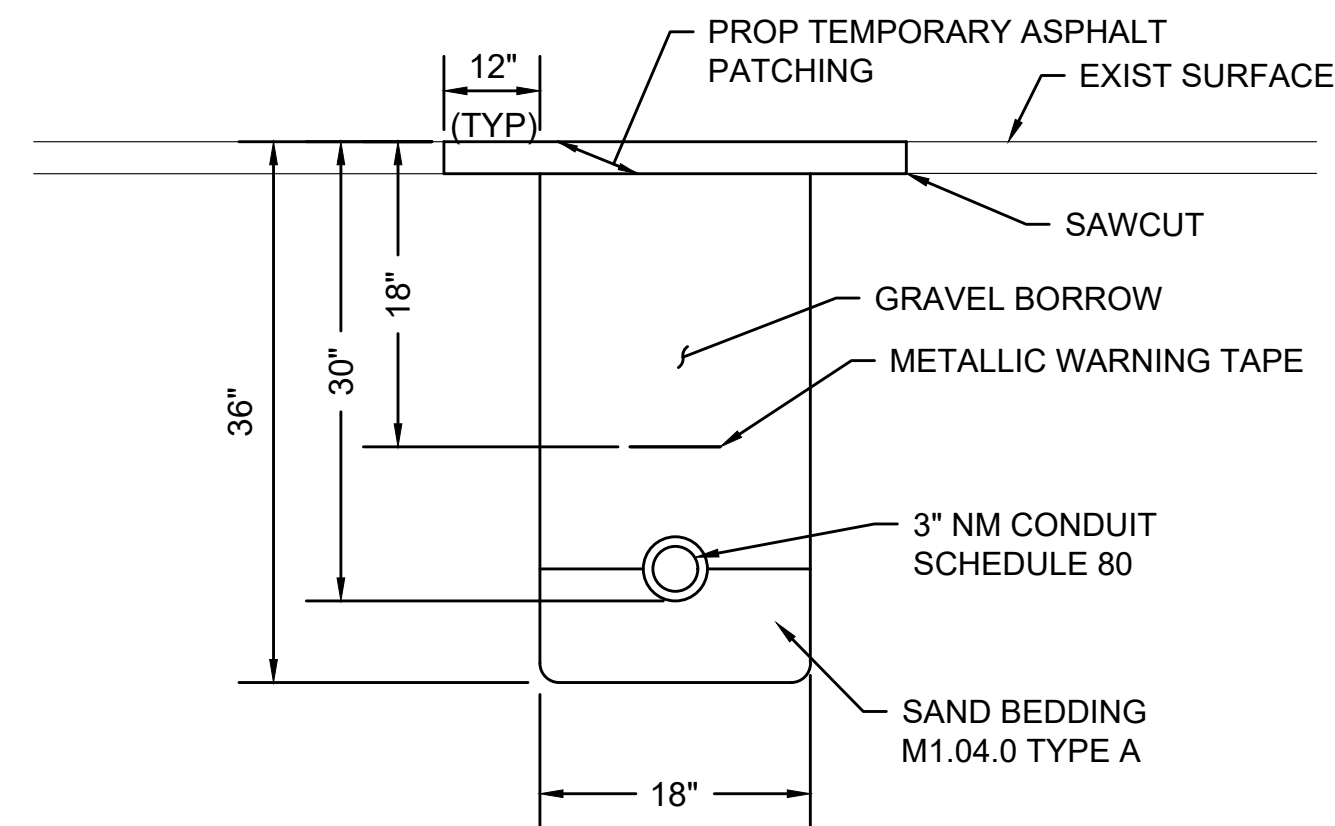
1. CONCRETE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB.
2. SAWCUT 6" FROM CURB LINE AND REMOVE EXISTING PAVEMENT AND GRAVEL. REPLACE WITH CEMENT CONCRETE.
3. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

GRANITE CURB IN PAVEMENT MILLING AND OVERLAY

SCALE: N.T.S.

DWG: CURB-04

DATE: APRIL 2003

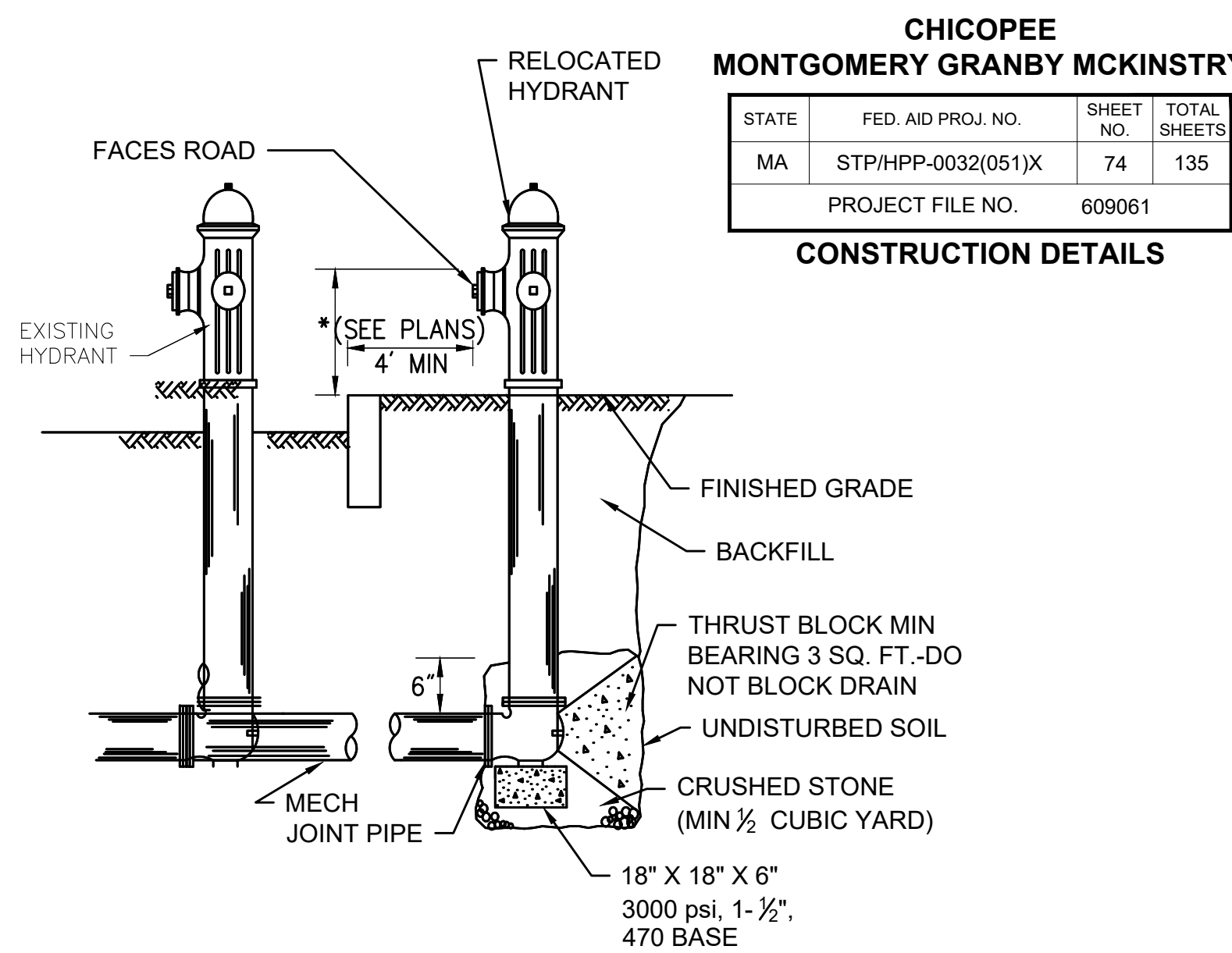


CONDUIT CROSSING ROADWAY/DRIVEWAY

SCALE: N.T.S.

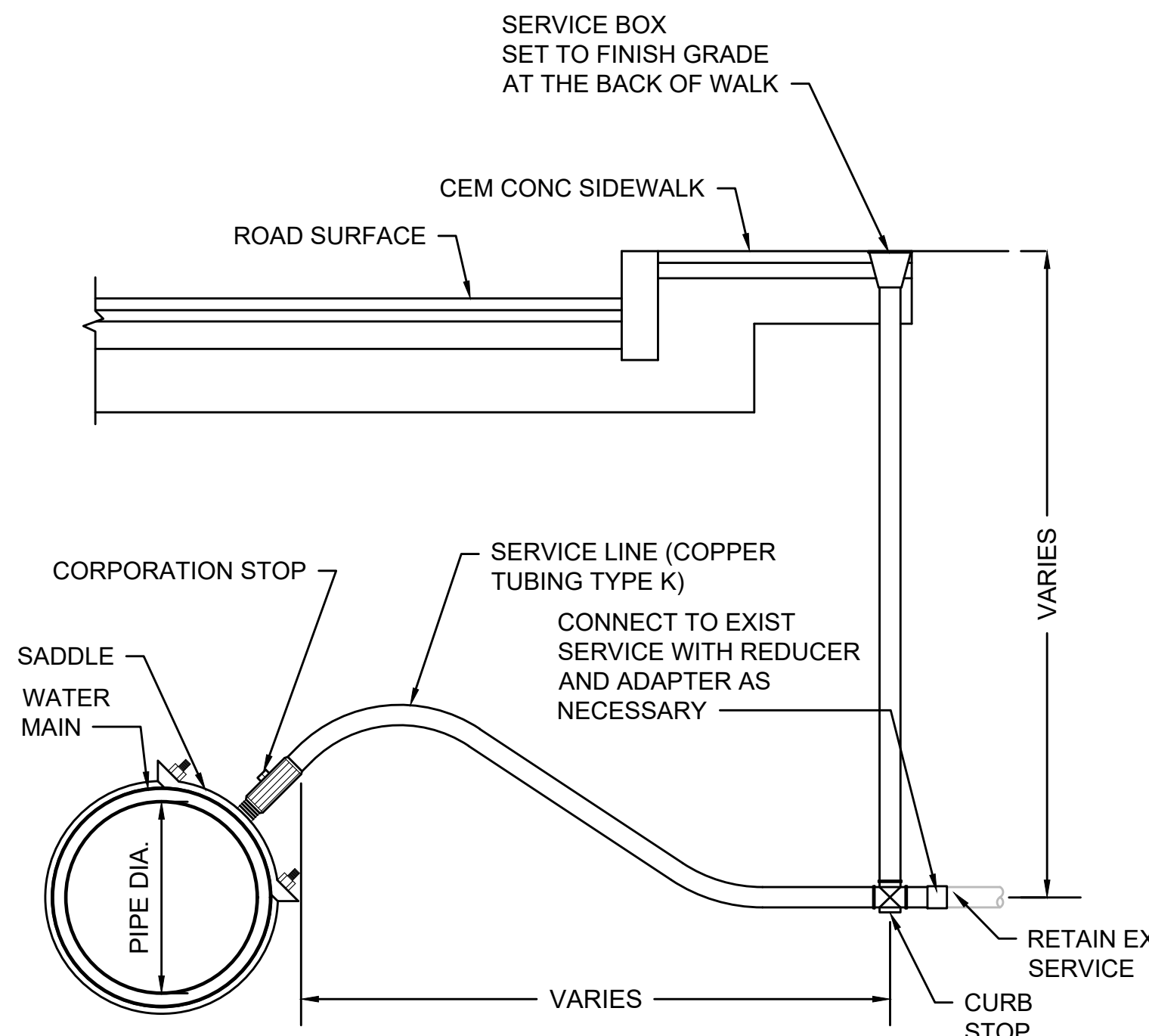
DWG: TRENCH-01

DATE: MARCH 2013



HYDRANT RELOCATION

SCALE: NTS

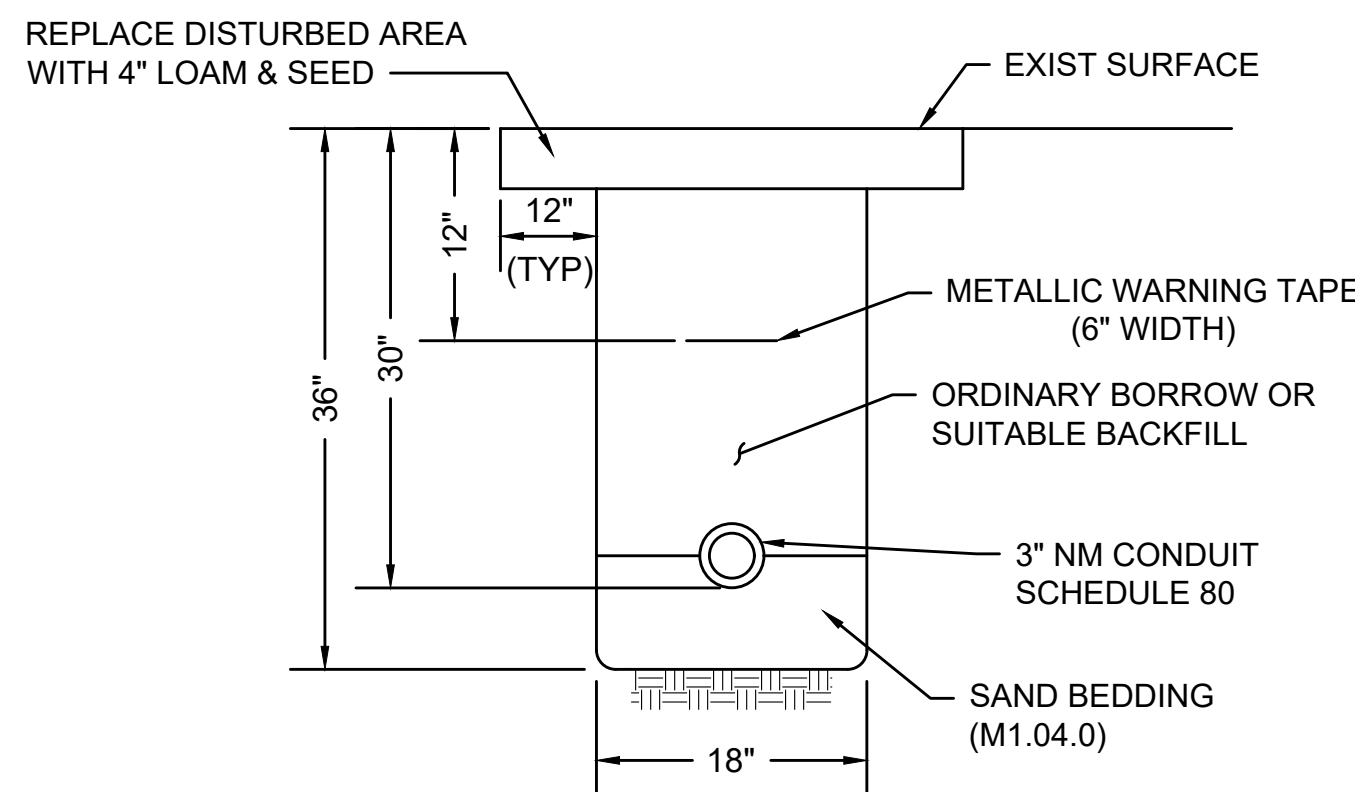


NOTES

1. INSTALLATIONS SHALL CONFORM WITH CHICOPEE WATER DISTRICT SPECIFICATIONS AND STANDARDS.

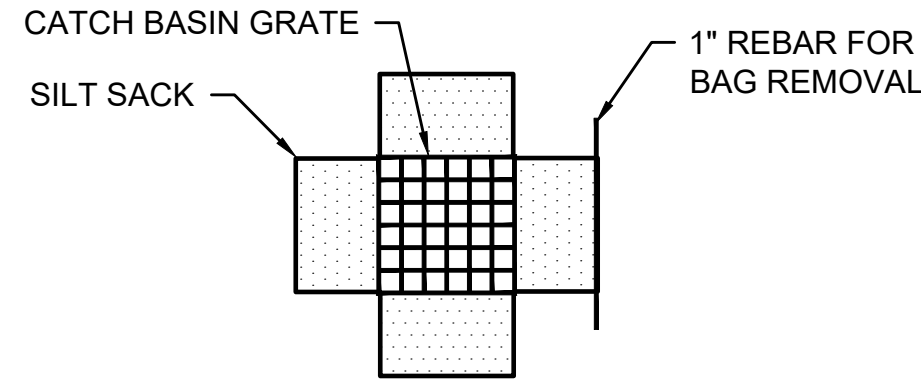
WATER SERVICE

SCALE: N.T.S.

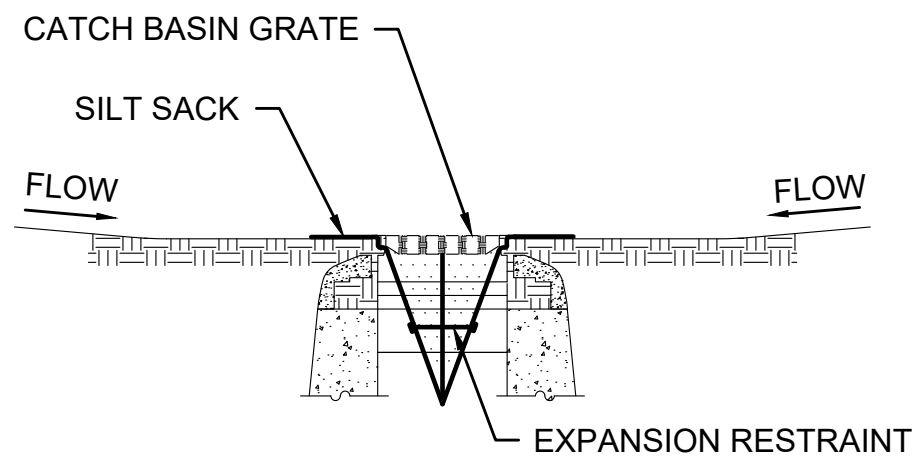


CONDUIT IN GRASS

SCALE: N.T.S.



PLAN VIEW

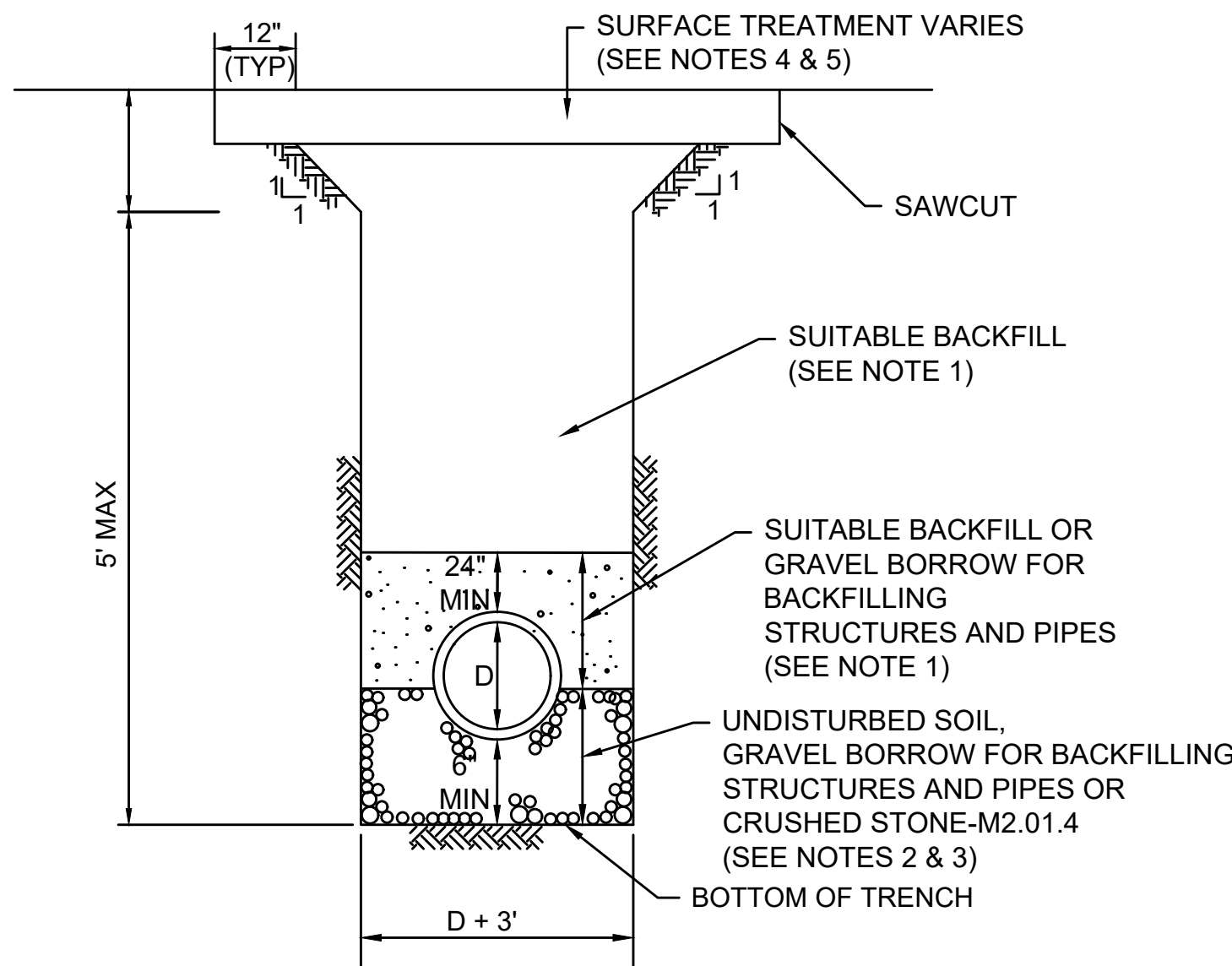


SECTION VIEW

- NOTES:
1. INSTALL SILT SACK IN EXISTING CATCH BASINS, BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL BINDER COURSE PAVING IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
 2. GRATE TO BE PLACED OVER SILT SACK.
 3. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED

INLET PROTECTION - SILT SACK
IN CATCH BASIN

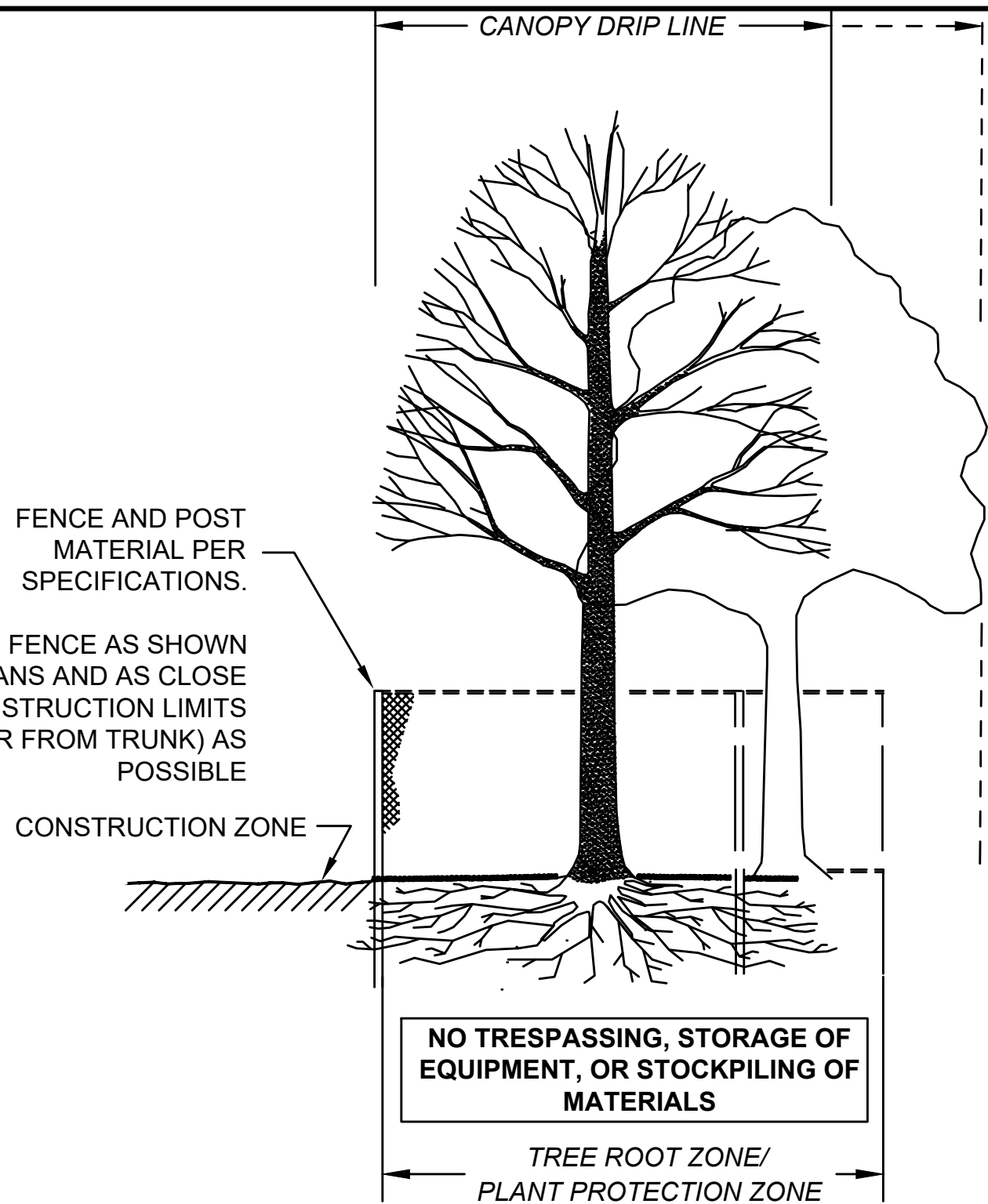
SCALE: N.T.S.



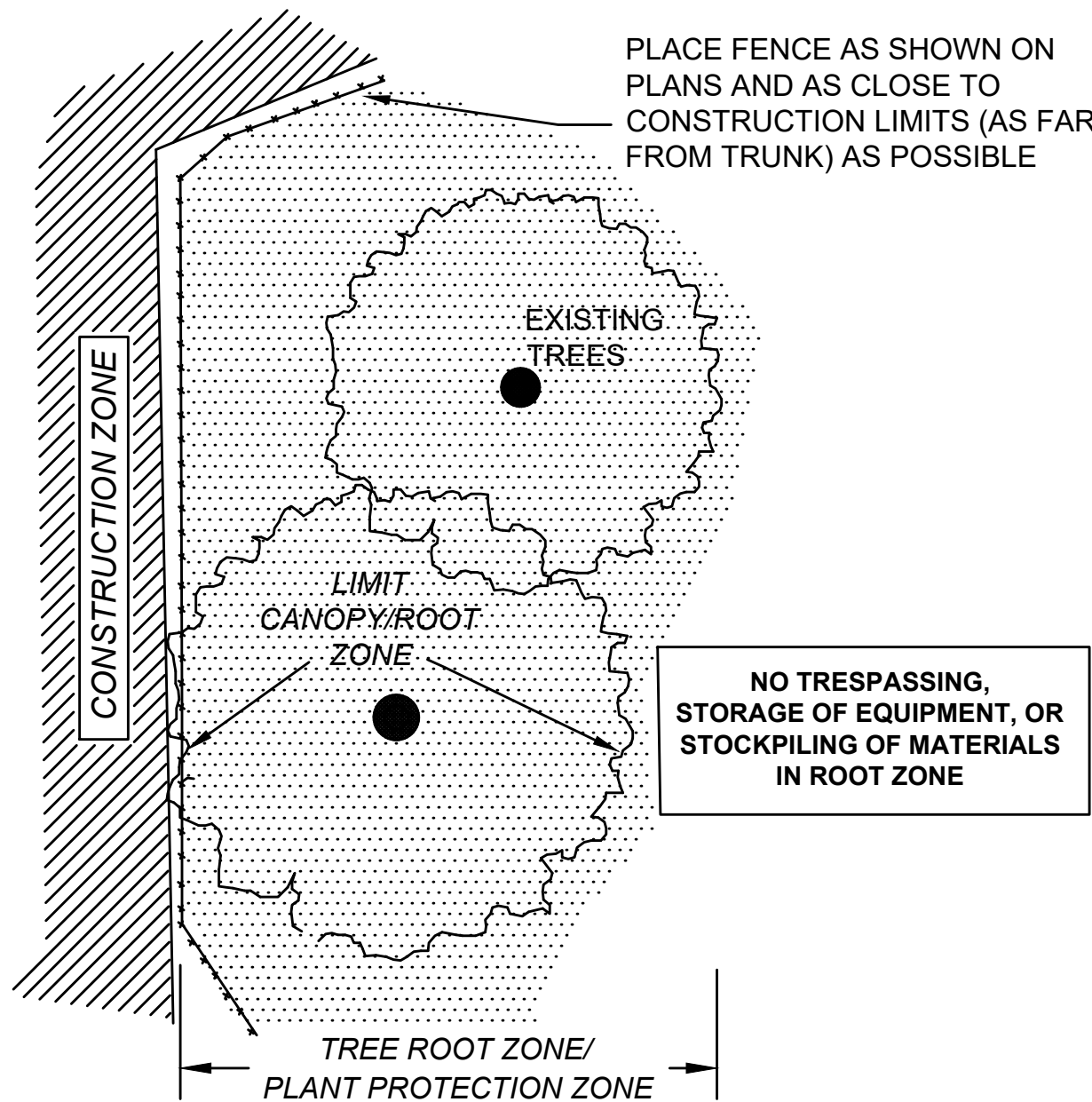
- NOTES:
1. EXISTING MATERIAL OBTAINED FROM EXCAVATION THAT IS DETERMINED TO BE SUITABLE AND APPROVED BY THE ENGINEER SHALL BE USED. STONES LARGER THAN 6 INCH SHALL NOT BE USED. BACKFILL SHALL BE PLACED IN 6 INCH MAX LIFTS AND COMPACTED. BACKFILL PLACED WITH 24 INCH ABOVE THE PIPE SHALL CONTAIN NO STONES LARGER THAN 3 INCH.
 2. SOFT OR UNSUITABLE MATERIAL EXISTING BELOW THE BEDDING GRADE SHALL BE REMOVED AS DIRECTED. REPLACEMENT GRAVEL BORROW, TYPE C OR CRUSHED STONE SHALL BE COMPACTED.
 3. CRUSHED STONE TO BE USED DURING WET CONDITIONS AS DIRECTED BY THE ENGINEER.
 4. IN AREAS OF FULL DEPTH PAVEMENT, CONTINUE SUITABLE BACKFILL. IF OPEN TO VEHICLE TRAFFIC, USE TEMPORARY ASPHALT PATCHING (ITEM 472) PLACED IN 2.0 INCH LIFTS (4 INCH MIN).
 5. IN AREAS OF MICROMILL & OVERLAY, PAVEMENT SHALL BE PLACED AS FOLLOWS: 2 INCH SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER 3 INCH OF HMA FOR PATCHING (ITEM 451.)
 6. THIS DETAIL ASSUMES FULL DEPTH PAVEMENT IS CONSTRUCTED AFTER PIPE IS INSTALLED.
 7. FOR WATER PIPE TRENCHES, SEE CITY OF CHICOPEE WATER SPECIFICATIONS.

TRENCH DETAIL

SCALE: NTS



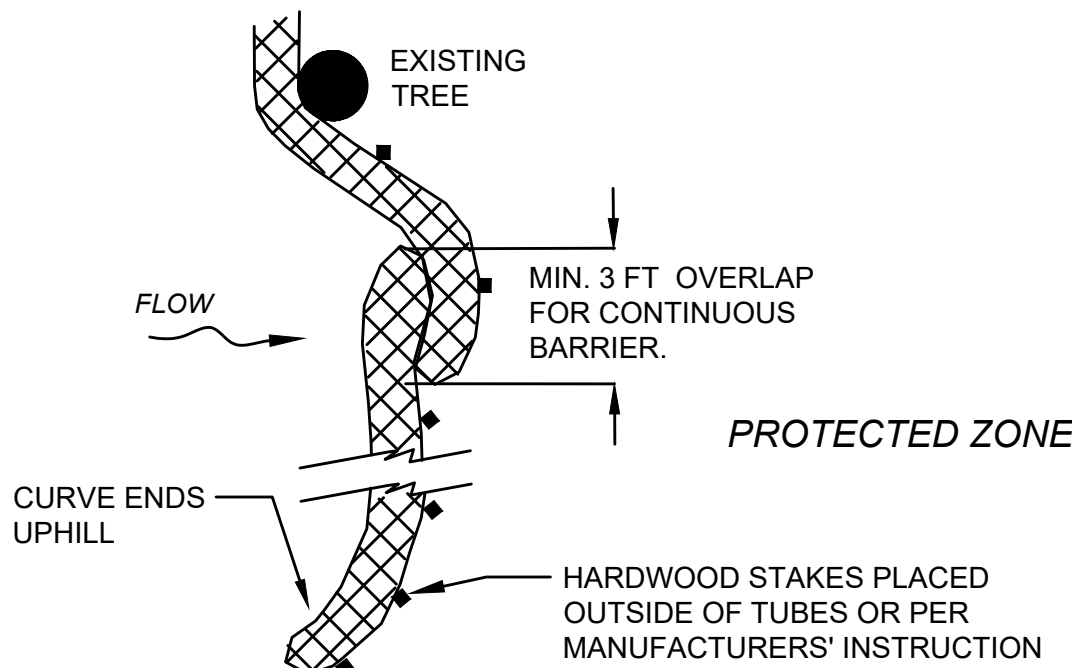
SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION - ROOT ZONE

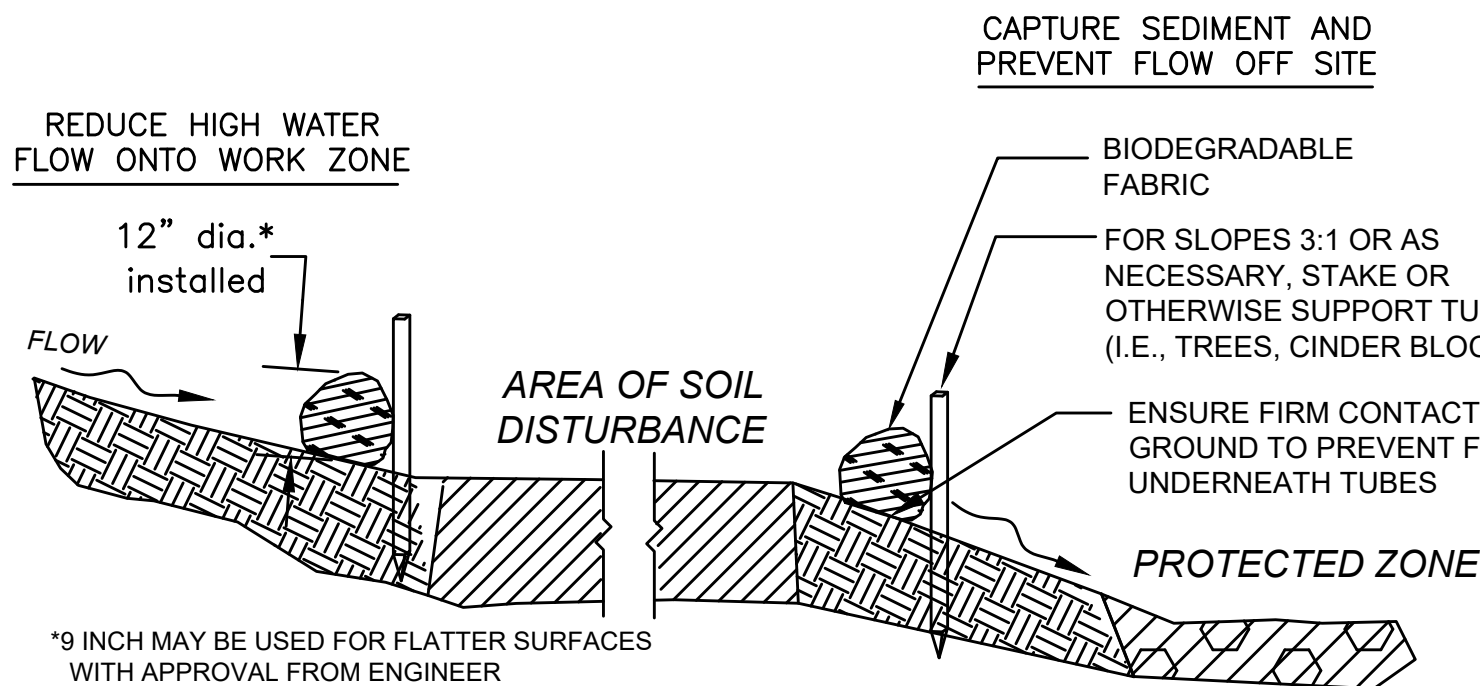
NOT TO SCALE



PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW.

ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

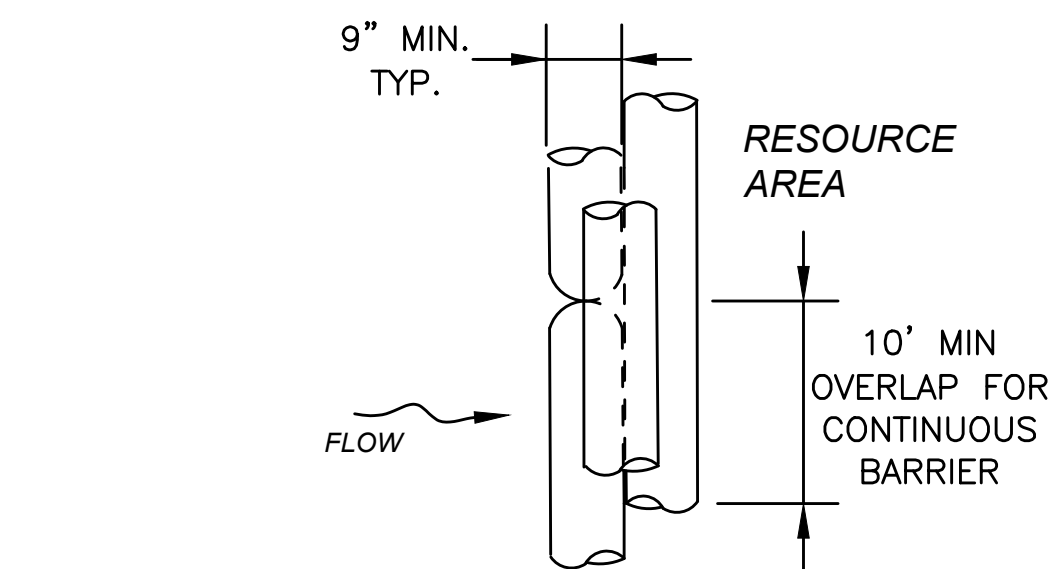
PLAN VIEW



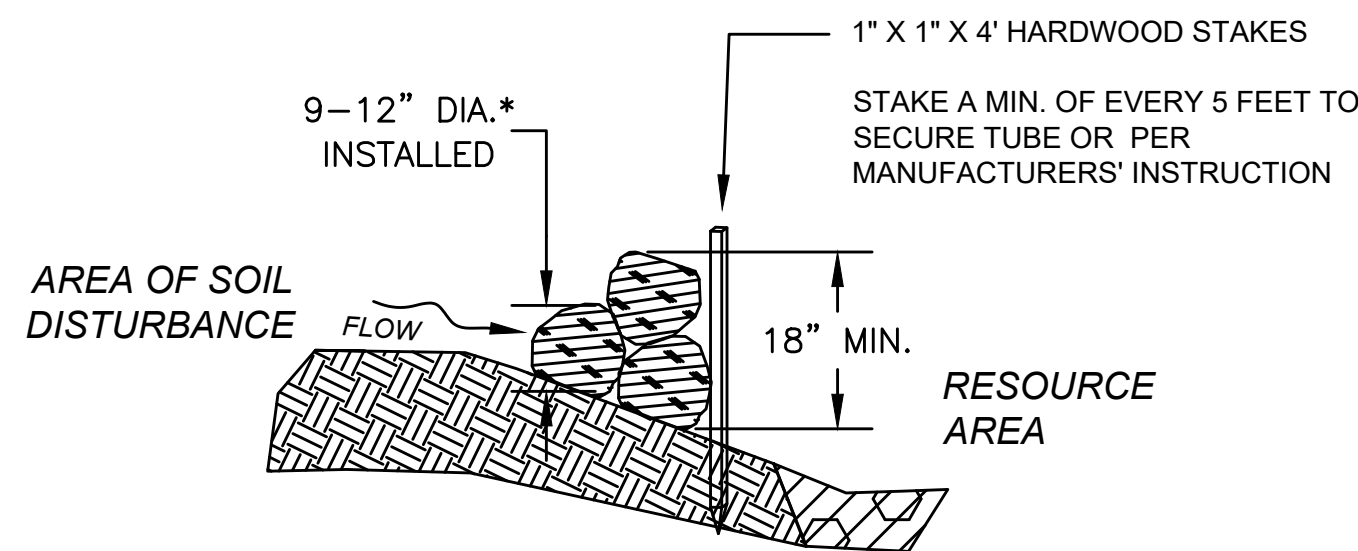
SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBE

NOT TO SCALE



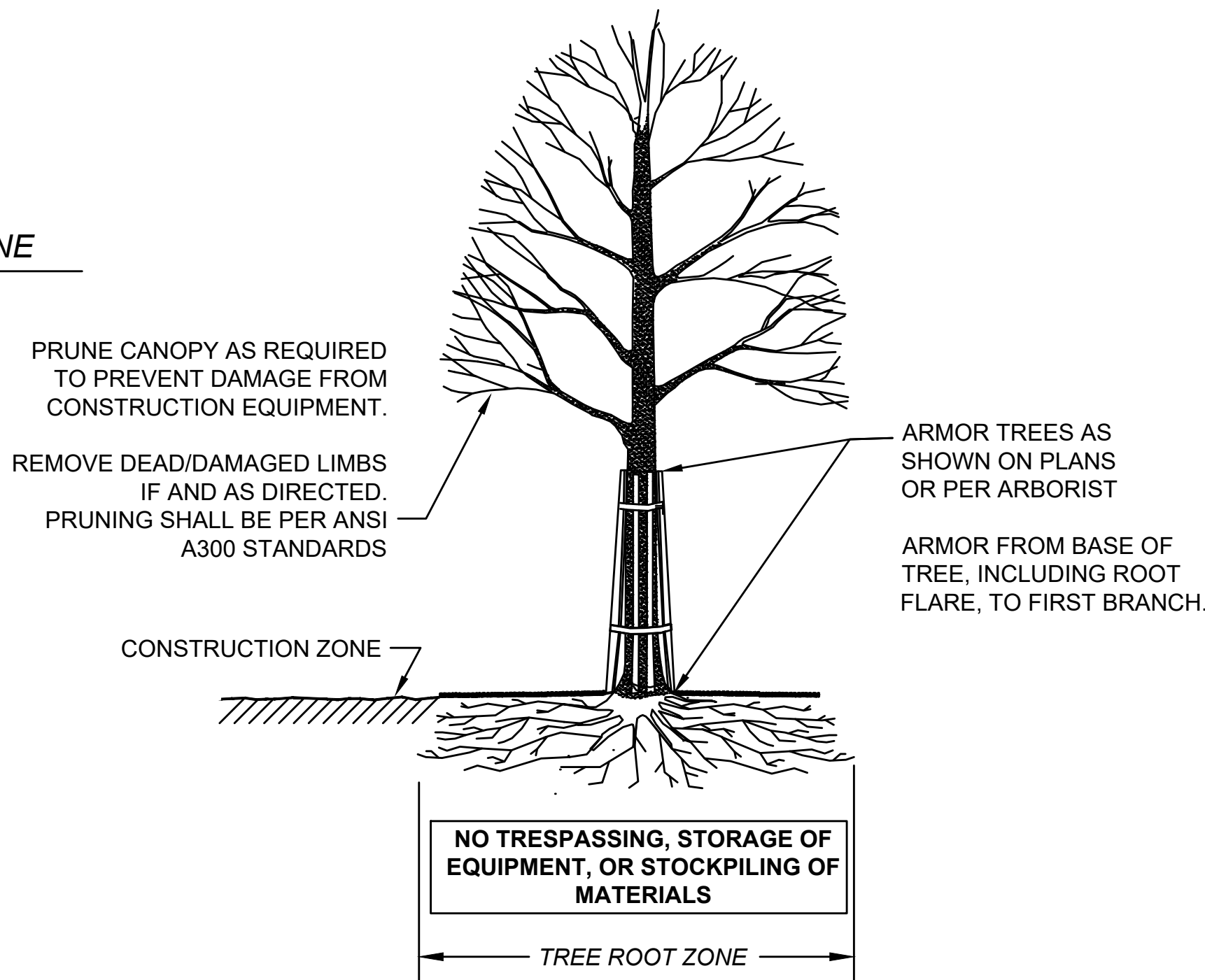
PLAN VIEW



SECTION

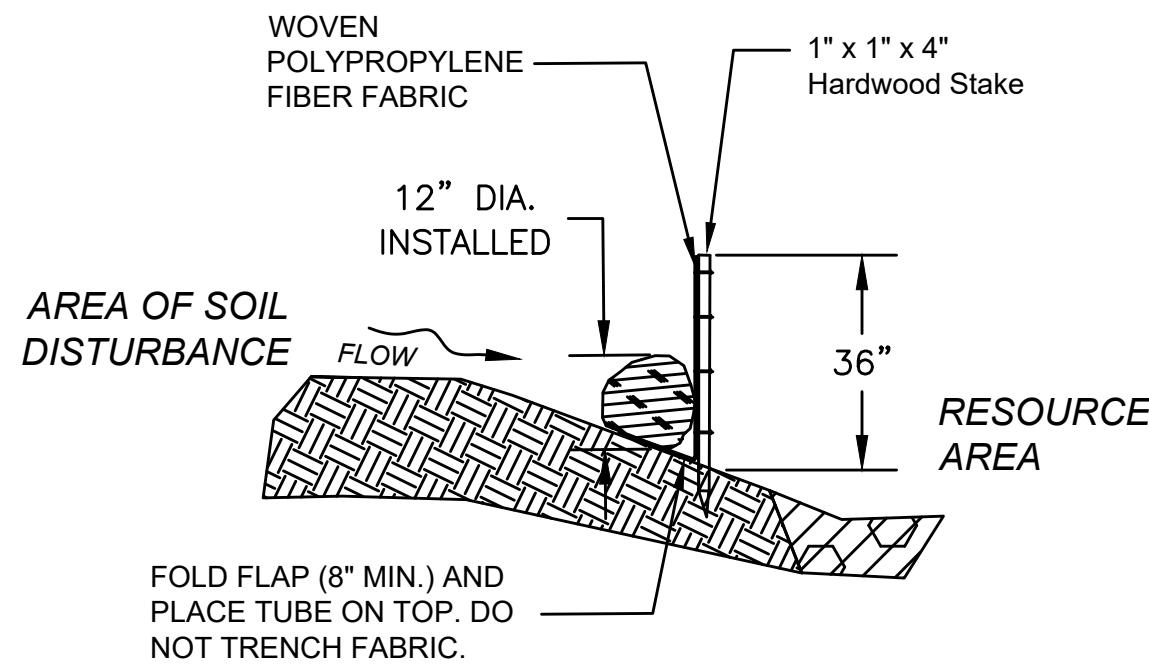
COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)

NOT TO SCALE



SECTION - TRUNK ARMORING & PRUNING

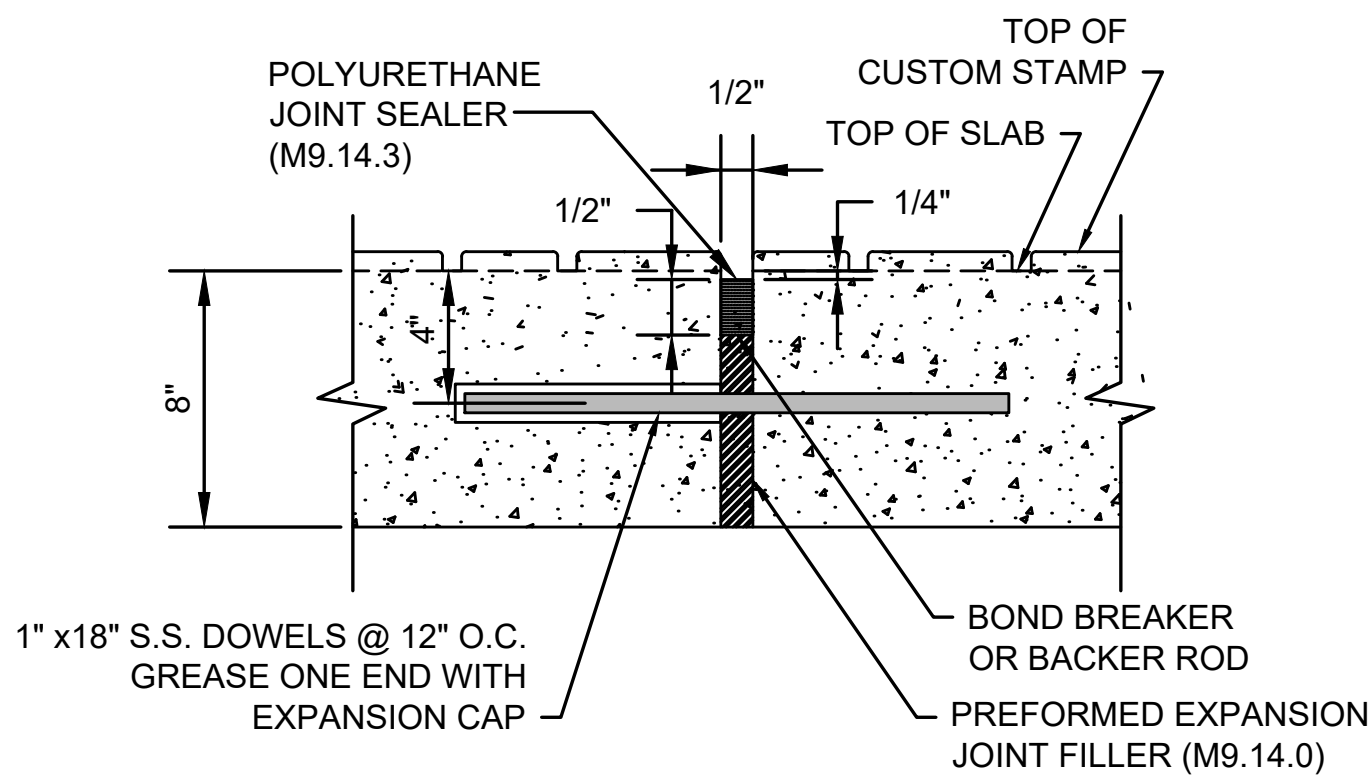
TREE PROTECTION - TRUNK



SECTION

COMPOST FILTER TUBE & SILT FENCE

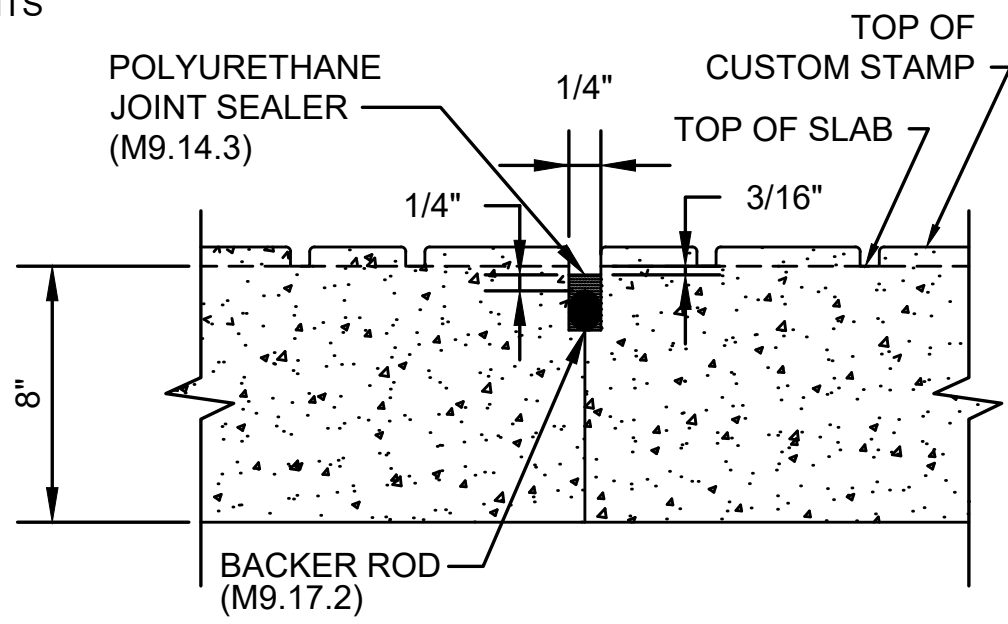
NOT TO SCALE



NOTE:
1. REINFORCEMENT SHALL END 2" CLEAR OF EXPANSION JOINT.
2. EXPANSION JOINTS TO BE SPACED AT 72'-0" MAX. CONTRACTOR SHALL SUBMIT JOINT LAYOUT PLAN TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.

EXPANSION CONTROL JOINT (EJ)

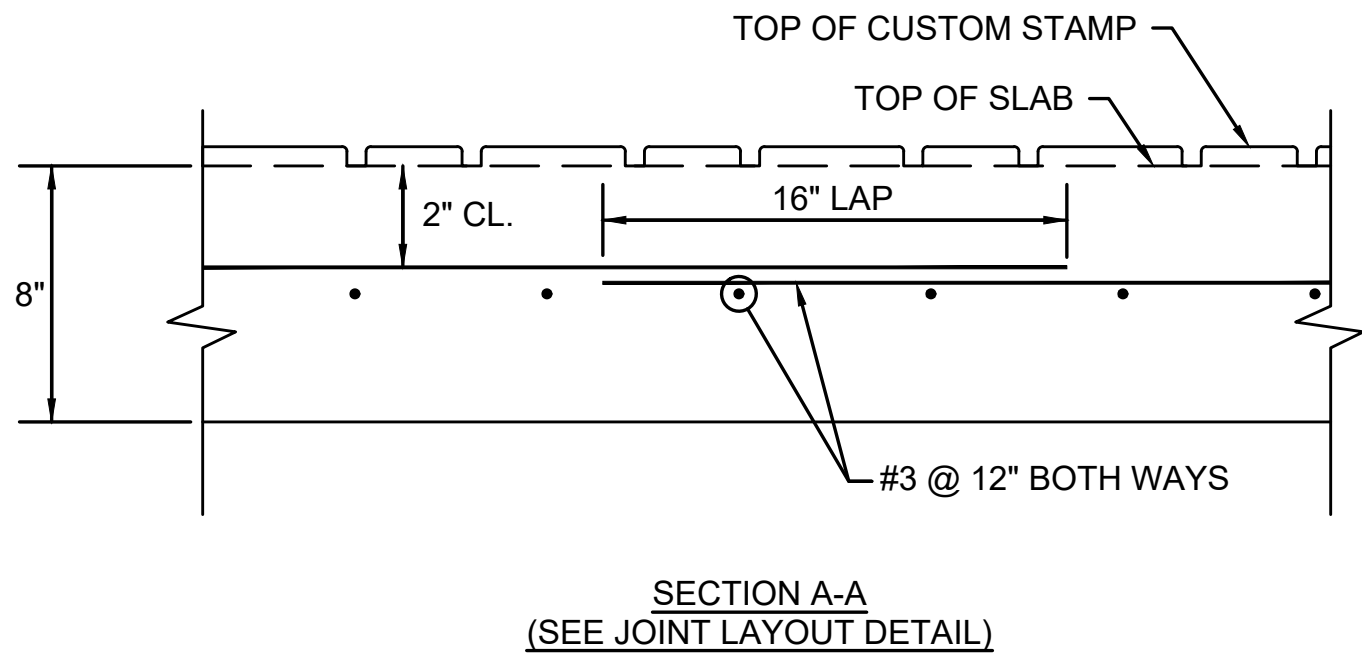
SCALE: NTS



NOTE:
1. REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINT.
2. CONSTRUCTION JOINTS TO BE SPACED AT 24'-0" MAX. CONTRACTOR SHALL SUBMIT JOINT LAYOUT PLAN TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.

SEALED CONSTRUCTION JOINT DETAILS (CJ)

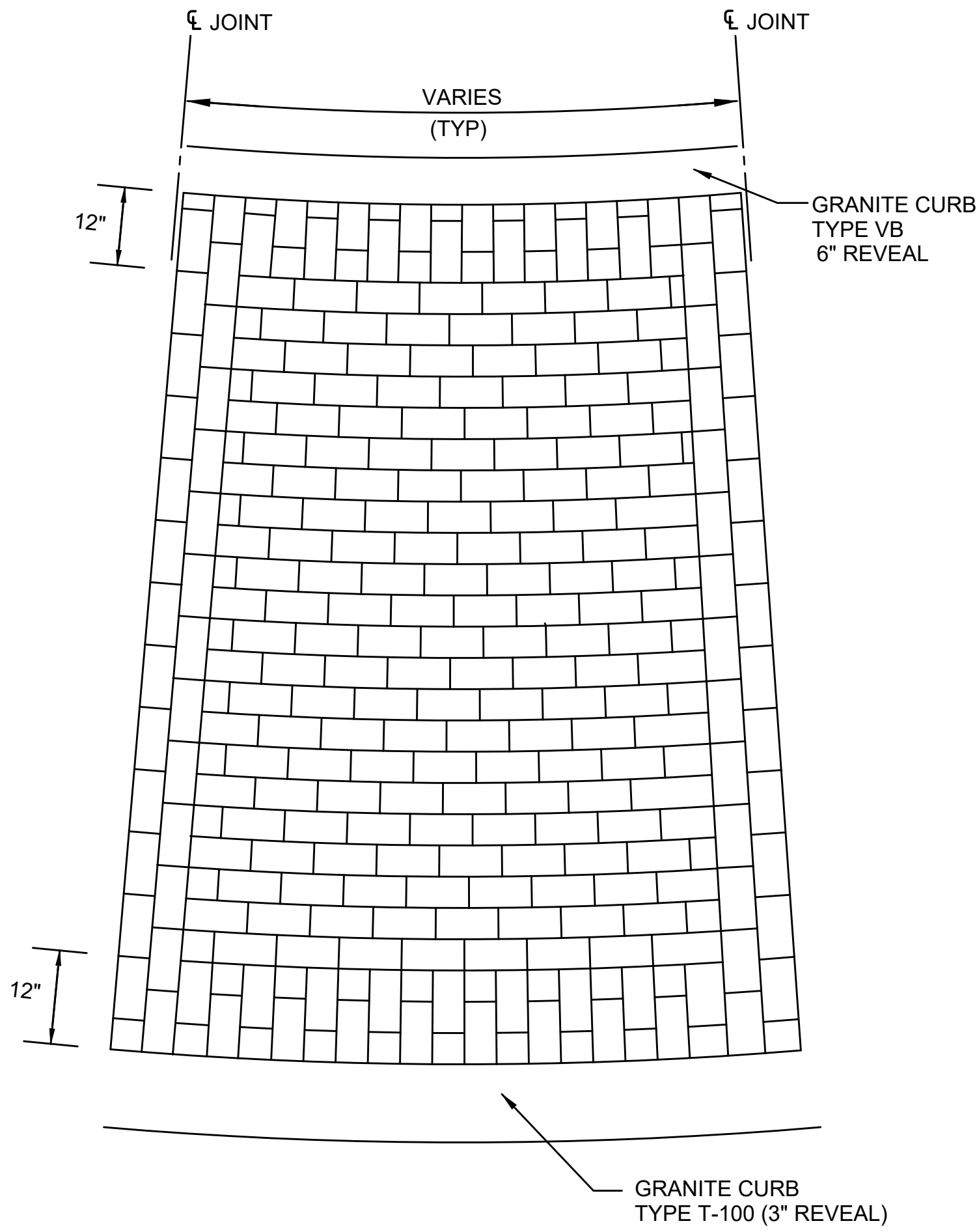
SCALE: NTS



NOTE:
1. REINFORCEMENT SHALL BE RADIAL AND CONCENTRIC WITH THE CENTRAL ISLAND

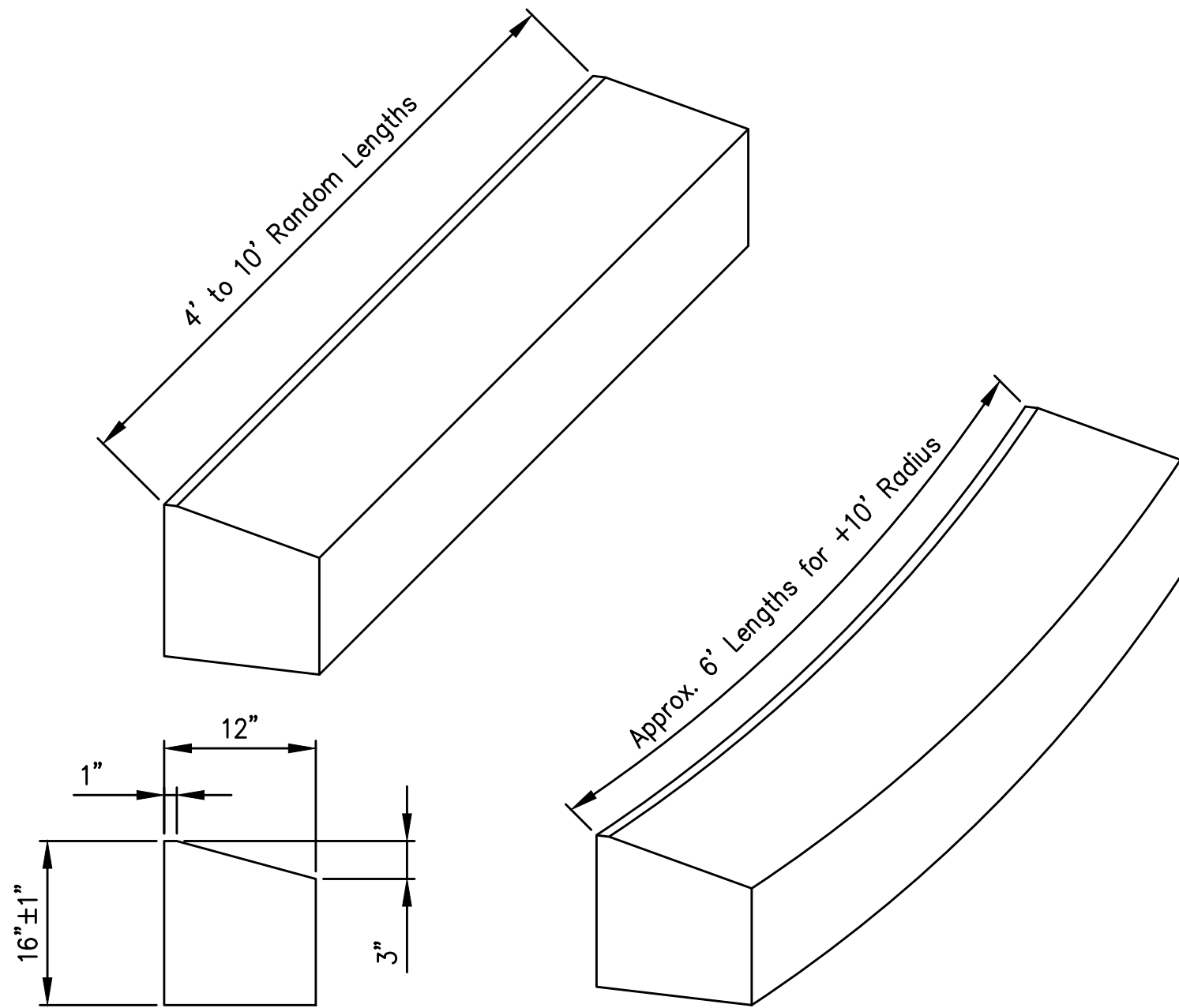
REINFORCED CEMENT CONCRETE TRUCK APRON

SCALE: NTS



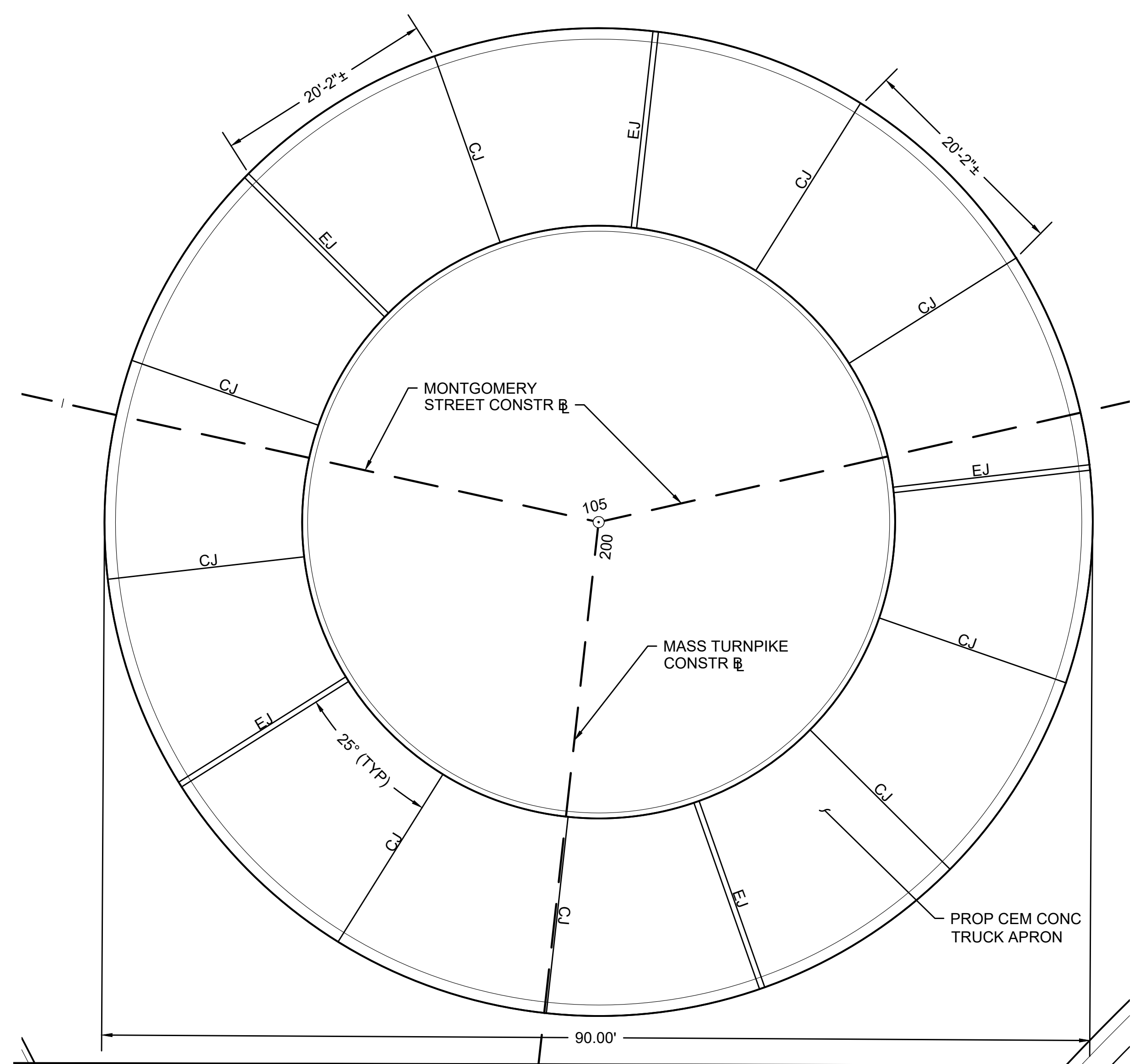
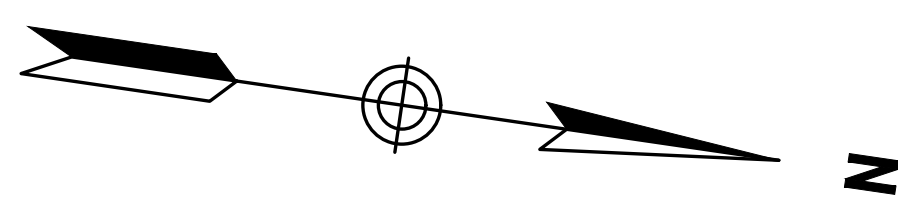
STAMPED CEMENT CONCRETE TRUCK APRON

SCALE: N.T.S. DWG: -- DATE: APR. 2014



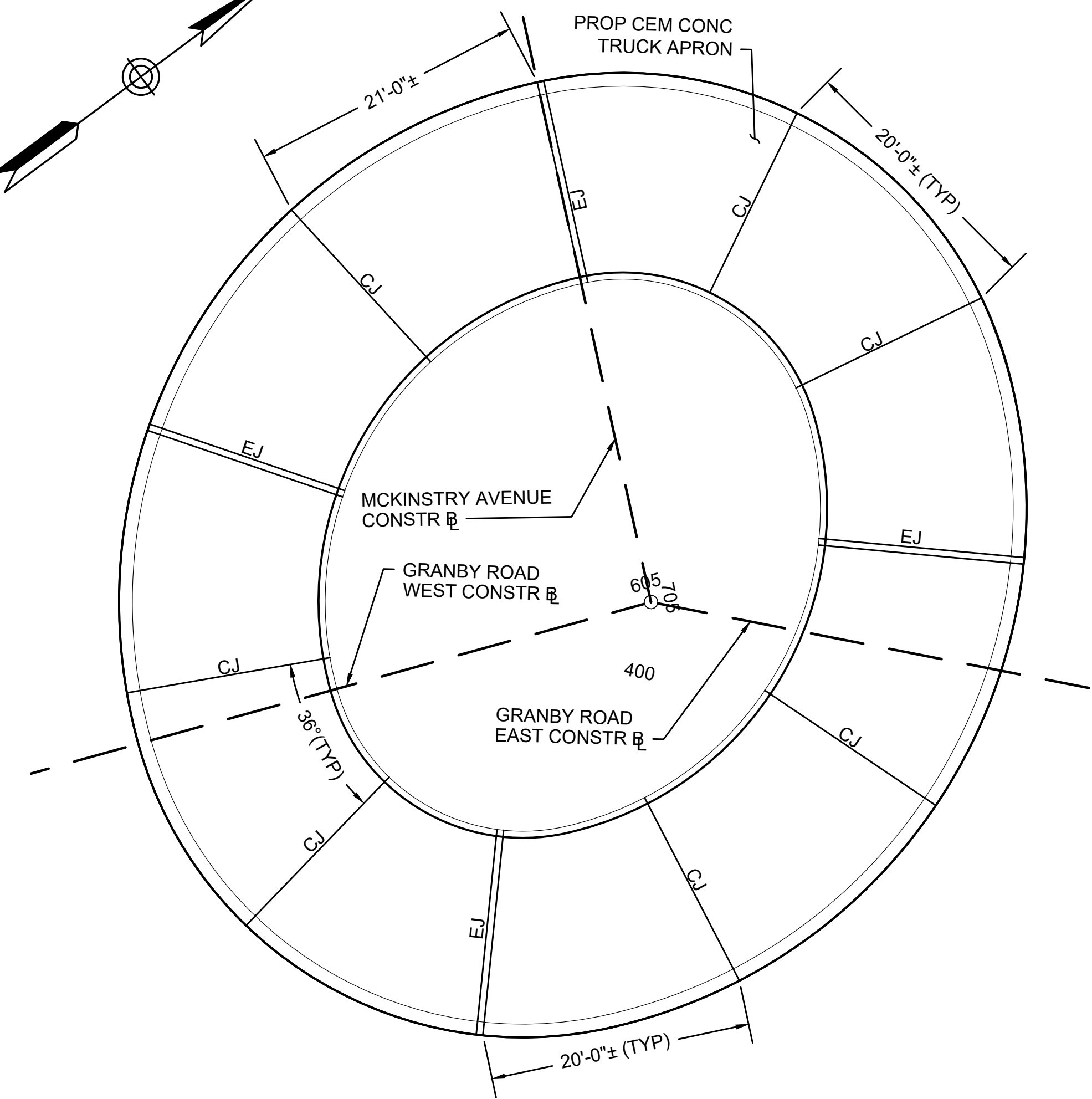
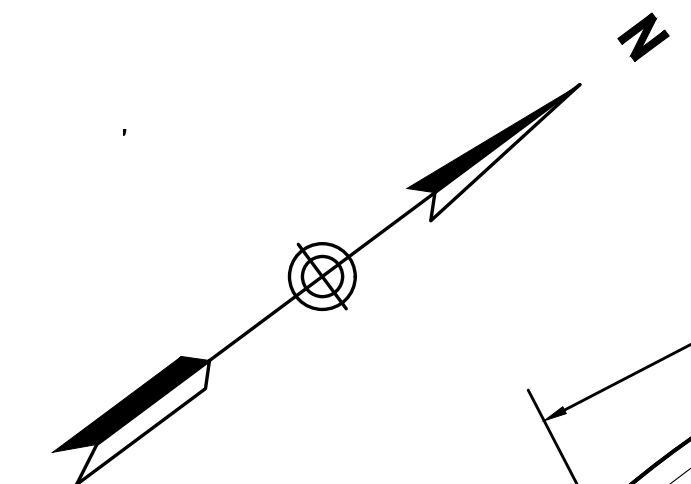
TYPE T-100 TRAVERSABLE GRANITE CURBING

SCALE: N.T.S. DWG: -- DATE:



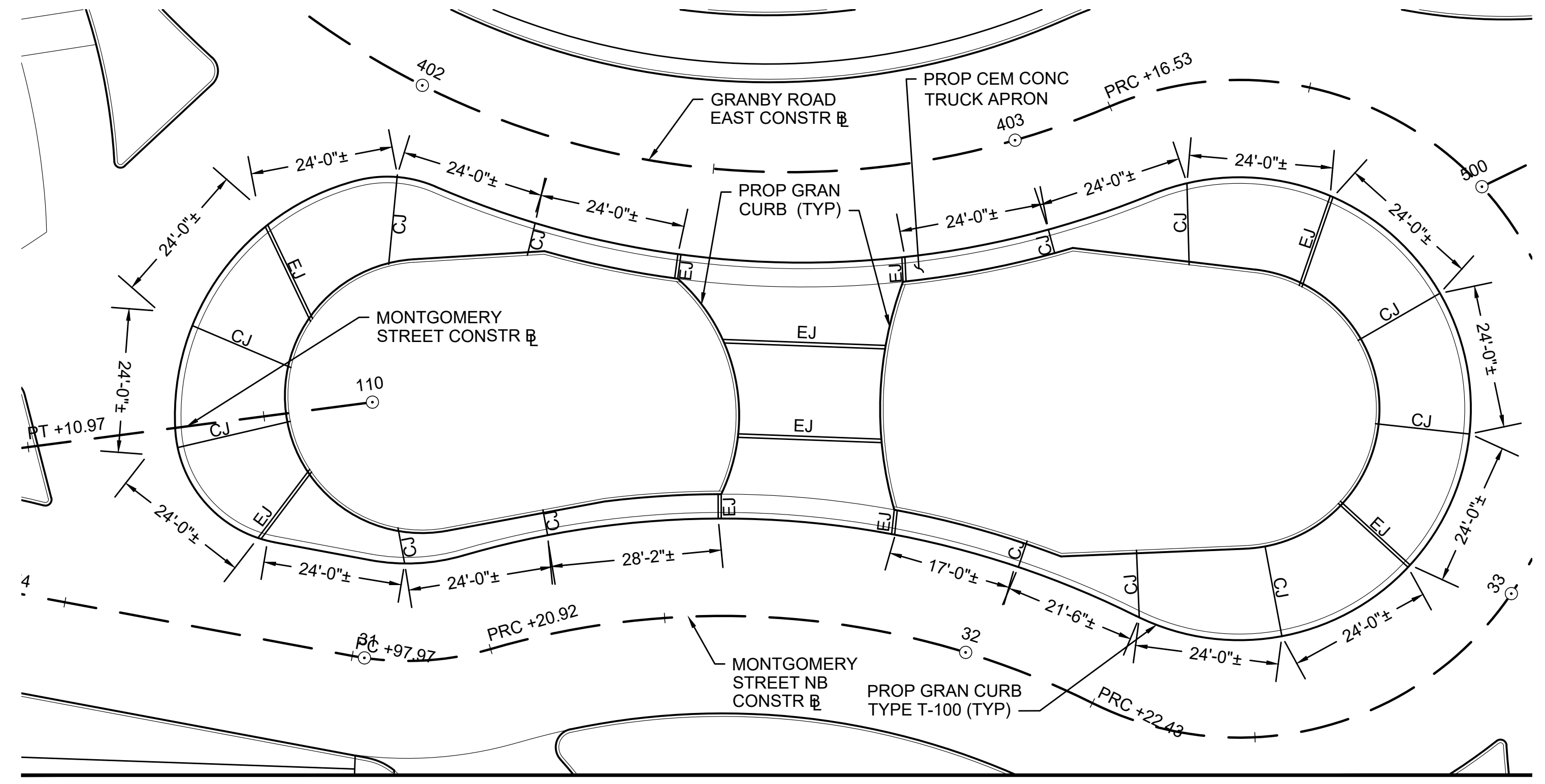
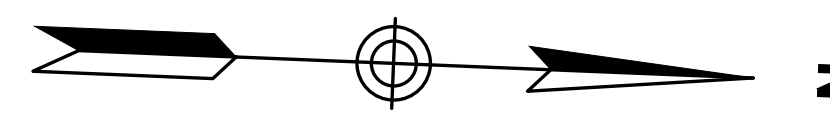
TRUCK APRON JOINT LAYOUT (1)

SCALE: $\frac{1}{8}$ " = 1'-0"



TRUCK APRON JOINT LAYOUT (3)

SCALE: $\frac{1}{8}$ " = 1'-0"

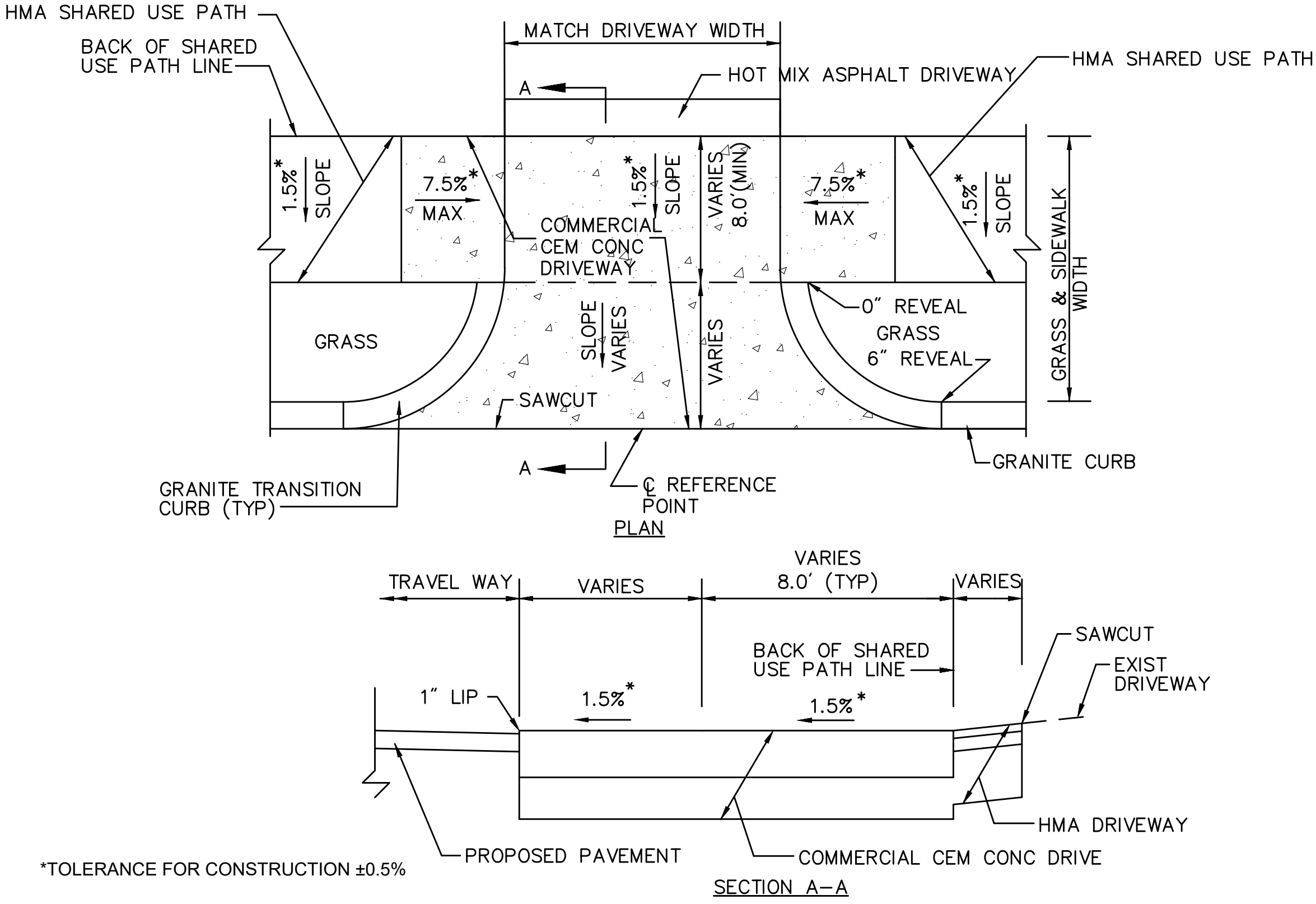


TRUCK APRON JOINT LAYOUT (2)

SCALE: $\frac{1}{16}$ " = 1'-0"

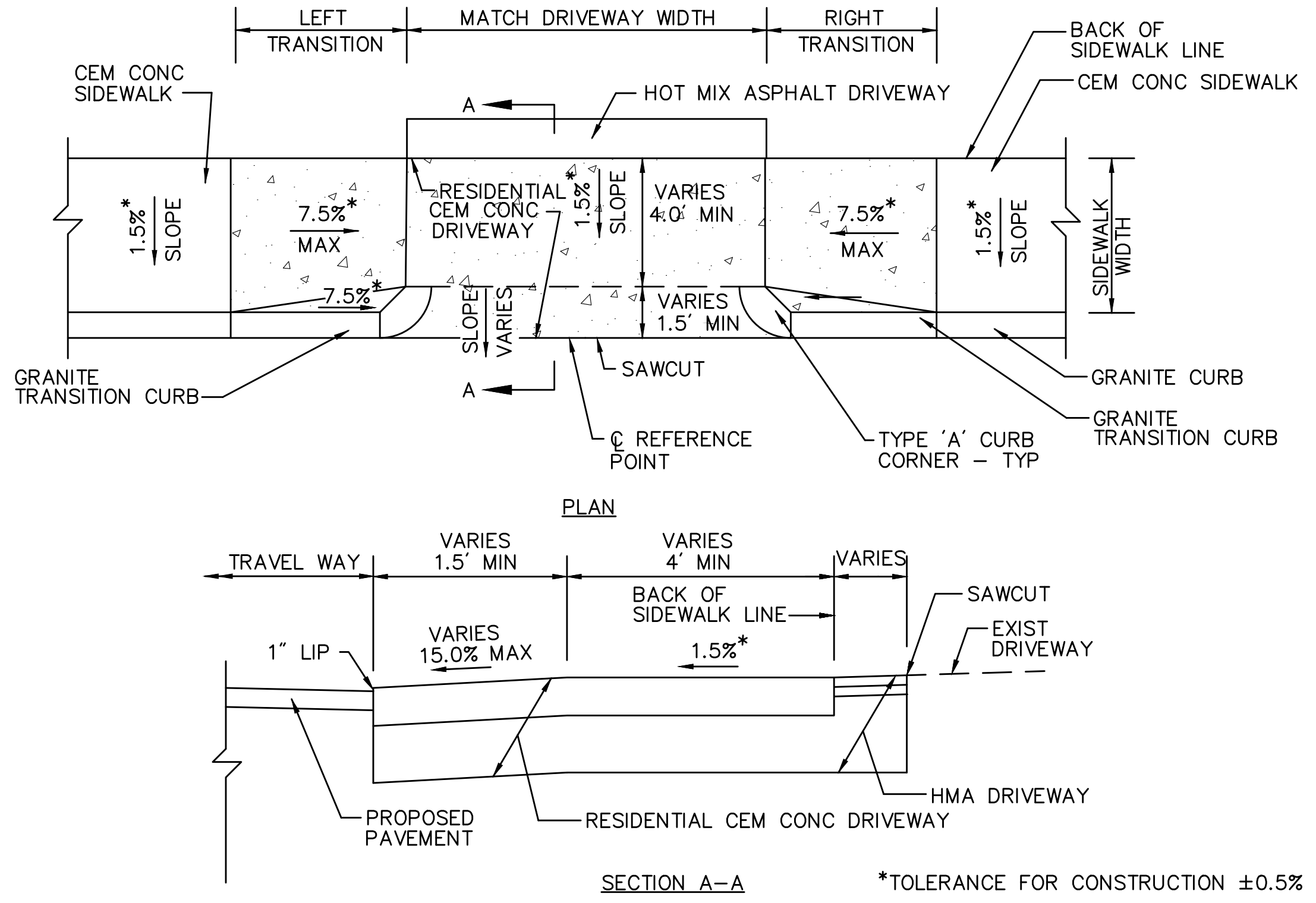
CHICOPEE MONTGOMERY GRANBY MCKINSTRY			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	77	135
PROJECT FILE NO.		609061	

CONSTRUCTION DETAILS



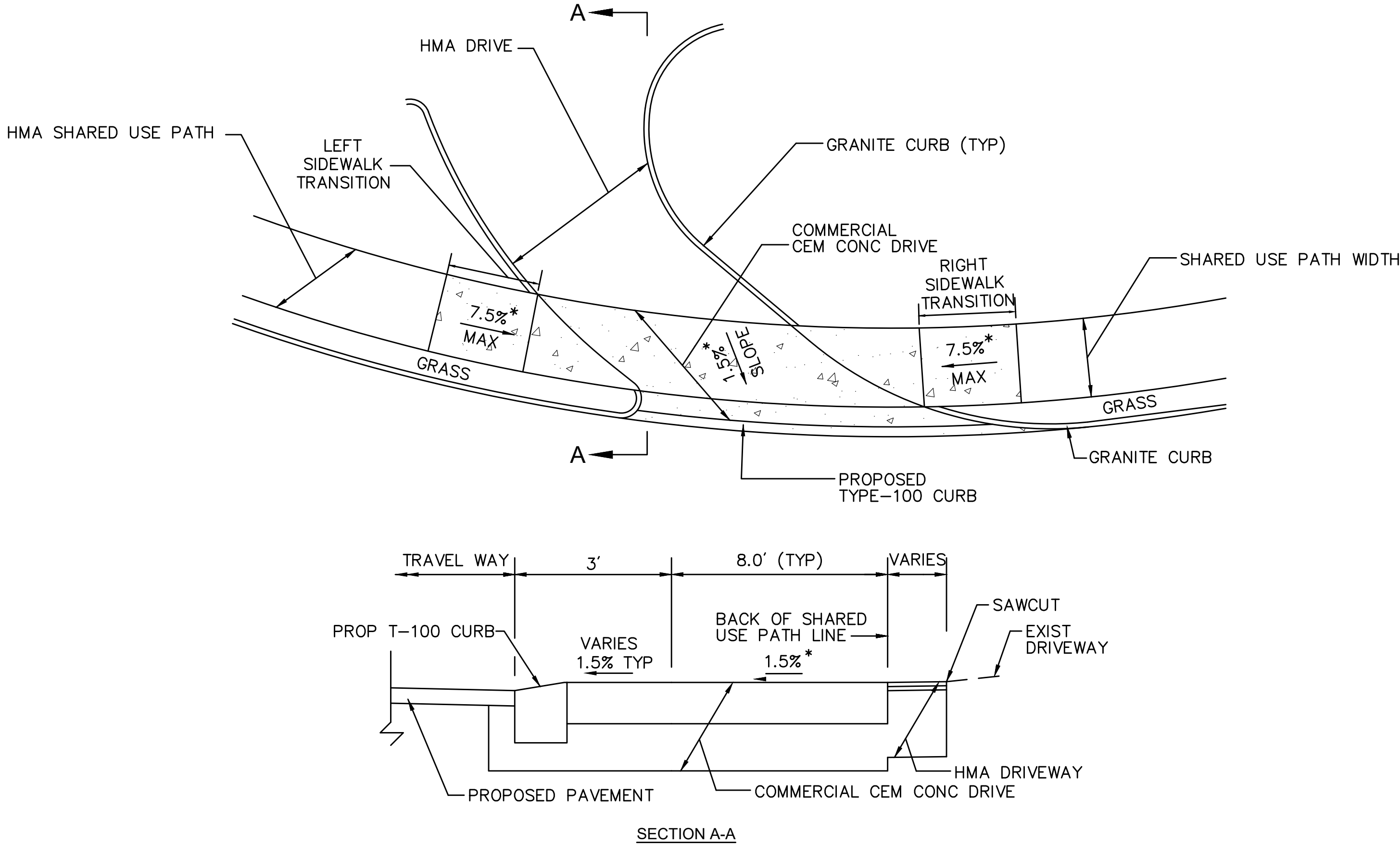
TYPICAL COMMERCIAL DRIVEWAY WITH SHARED USE PATH AND CURVED TRANSITION CURB AND GRASS STRIP
SCALE: N.T.S. DWG: DRIVE-09

DRIVEWAY DATA									
NO.	LOCATION	SIDEWALK WIDTH	DWY SLOPE	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		€ OPENING ELEVATION
					REVEAL	TRANS	REVEAL	TRANS	
MONTGOMERY STREET									
3	105+23.46 60.61' LT	8'-0"	0.70%	+0.20%	6"	6'-6"	6"	6'-6"	219.70
5	106+84.02 28.41' LT	10'-0"	1.50%	-0.50%	6"	7'-8"	6"	6'-6"	218.25
7	107+95.51 19.50' LT	10'-0"	10.00%	-0.50%	6"	7'-8"	6"	6'-6"	217.70
8	109+07.15 27.50' RT	8'-0'	2.00%	+0.80%	6"	6'-6"	6"	7'-8"	216.86
MONTGOMERY STREET NB									
10	31+17.83 16.00' RT	8'-0"	1.50%	+2.29%	6"	9'-0"	6"	6'-6"	216.38



TYPICAL RESIDENTIAL DRIVEWAY WITH SIDEWALK AND CURB CORNERS NO GRASS STRIP
SCALE: N.T.S. DWG: DRIVE-09 DATE: JUNE 2013

DRIVEWAY DATA									
NO.	LOCATION	SIDEWALK WIDTH	DWY SLOPE	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		§ OPENING ELEVATION
					REVEAL	TRANS	REVEAL	TRANS	
MONTGOMERY STREET NORTH									
13	501+66.26 20.38' RT	5'-6"	15.00%	+1.50%	6"	6'-6"	6"	3'-0"	212.80
14	502+77.53 17.59' RT	5'-6"	15.00%	+1.50%	6"	6'-6"	6"	9'-0"	211.19
15	503+67.32 19.74' RT	5'-6"	10.00%	+1.90%	6"	6'-6"	6"	9'-0"	209.83

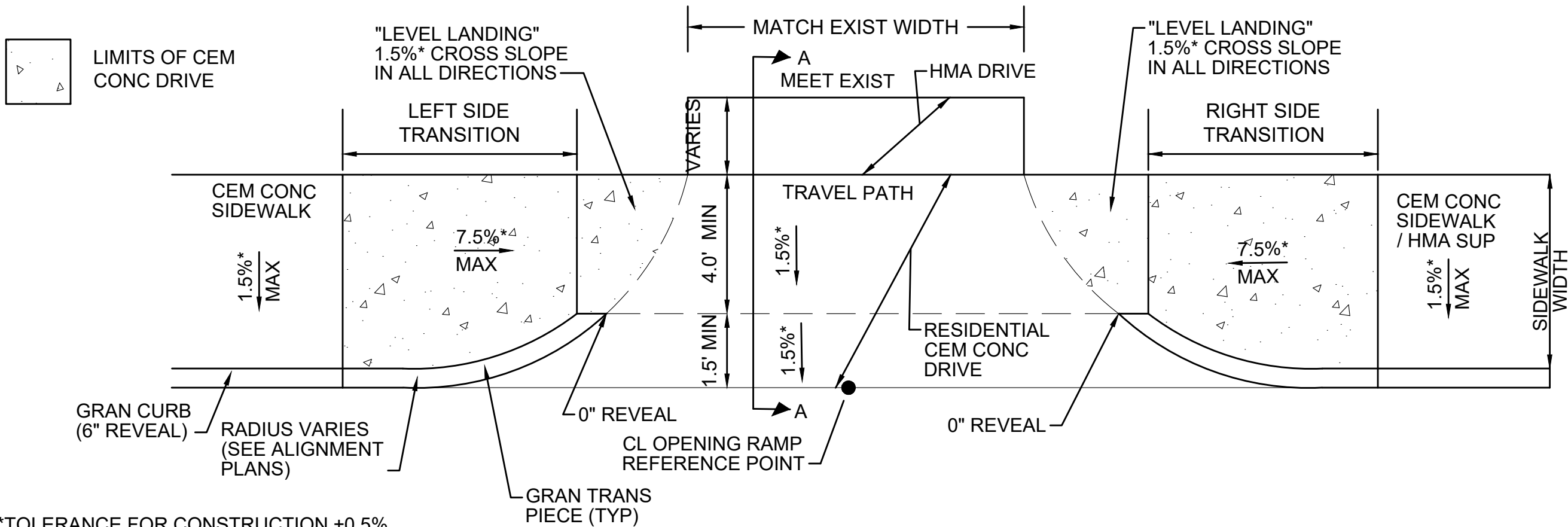


*TOLERANCE FOR CONSTRUCTION ±0.5%

TYPICAL COMMERCIAL DRIVEWAY WITH SHARED USE PATH AND CURVED TRANSITION CURB AND T-100 CURB WITH GRASS STRIP

SCALE: N.T.S.

DRIVEWAY DATA								
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		± OPENING ELEVATION
				REVEAL	TRANS	REVEAL	TRANS	
MASS TURNPIKE								
4	200+38.74 52.24' LT	8'	+0.70%	6"	6'-6"	6"	7'-8"	219.11

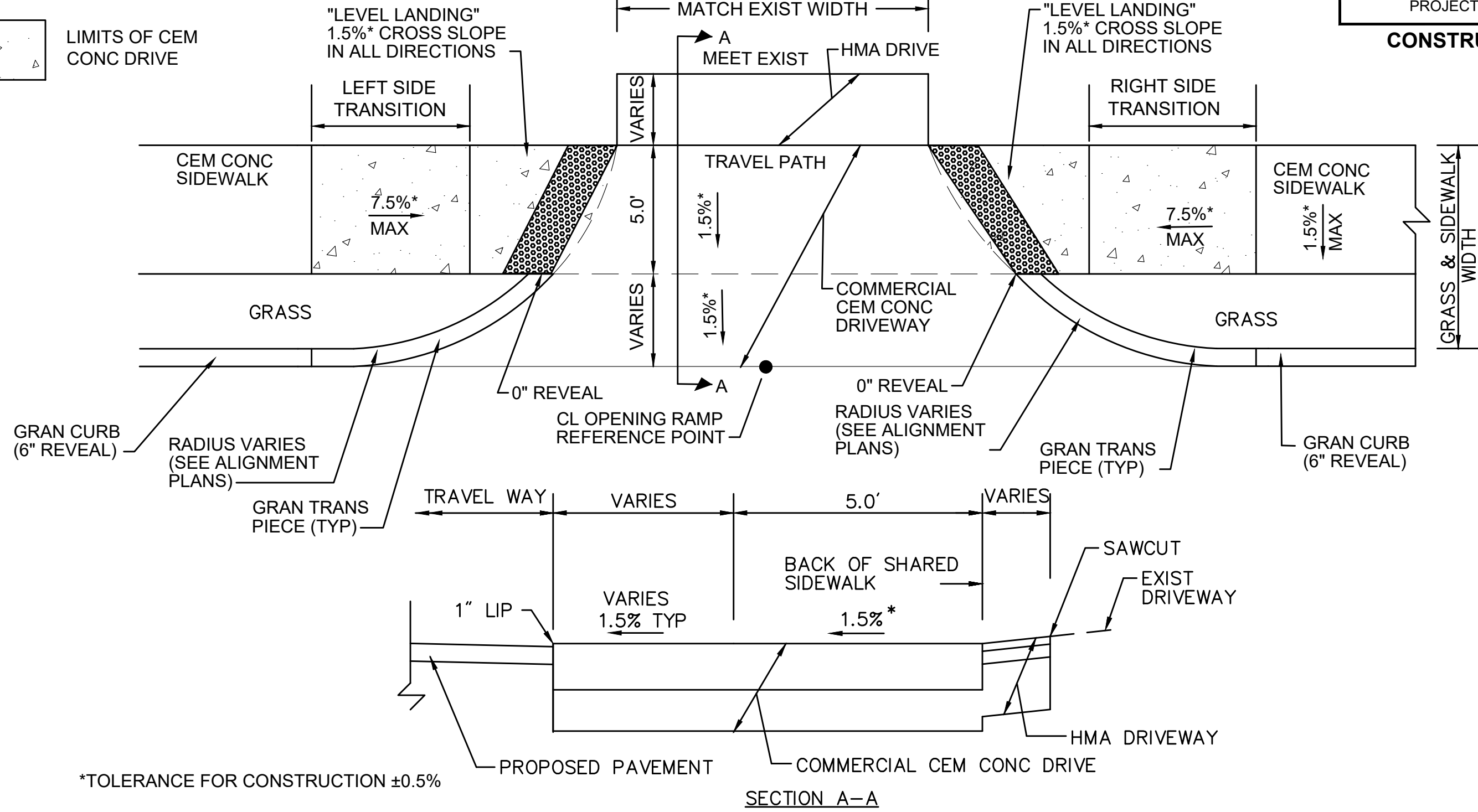
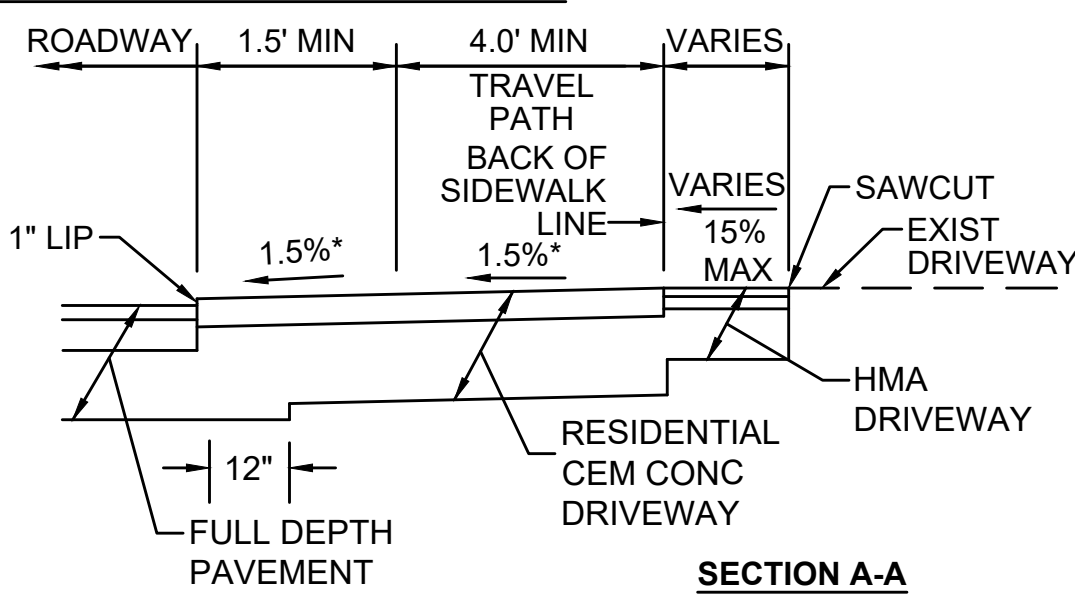


*TOLERANCE FOR CONSTRUCTION ±0.5%

TYPICAL RESIDENTIAL DRIVEWAY WITH SIDEWALK OR SUP ADJACENT TO CURB AND CURVED TRANSITION CURB

SCALE: NTS

DRIVEWAY DATA								
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		± OPENING ELEVATION
				REVEAL	TRANS	REVEAL	TRANS	
MCKINSTRY AVENUE								
19	* 701+99.74 18.00' RT	6'-0"	-0.50%	6"	7'-8"	6"	6'-6"	215.59

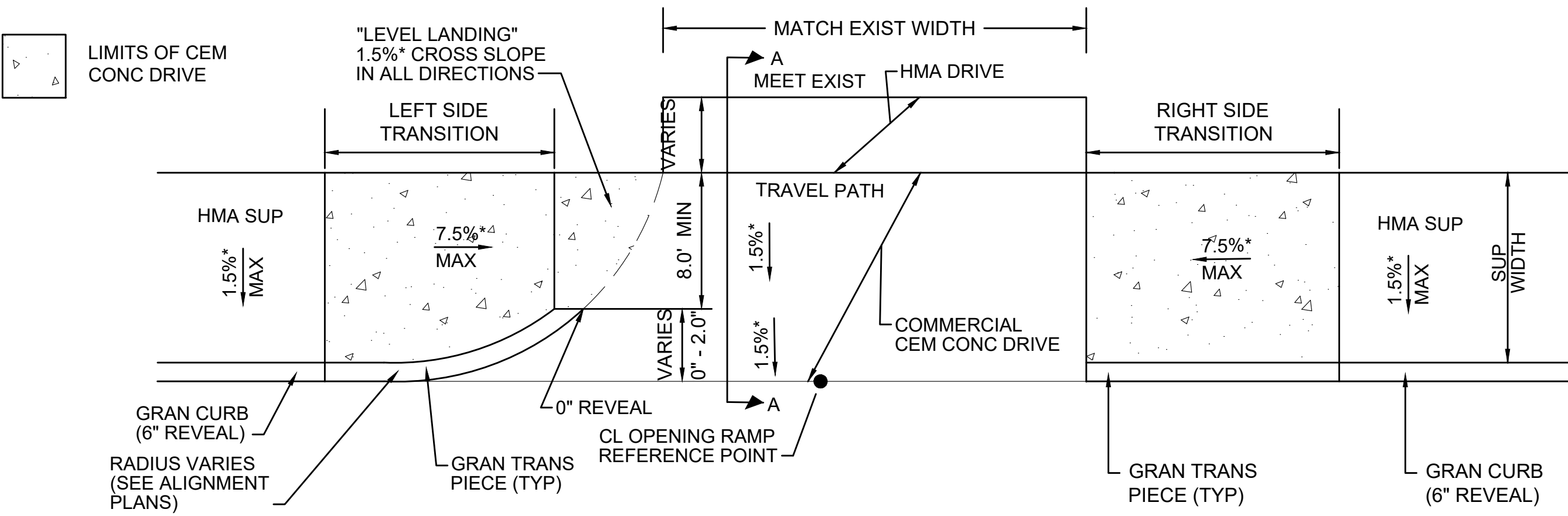


*TOLERANCE FOR CONSTRUCTION ±0.5%

TYPICAL COMMERCIAL DRIVEWAY WITH SHARED USE PATH AND CURVED TRANSITION CURB AND GRASS STRIP

SCALE: N.T.S.

DRIVEWAY DATA								
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		± OPENING ELEVATION
				REVEAL	TRANS	REVEAL	TRANS	
MONTGOMERY STREET								
1	101+70.35 18.66' RT	5'-0"	-0.50%	6"	7'-8"	6"	6'-6"	218.02
2	103+03.73 18.50' LT	5'-0"	+0.50%	6"	6'-6"	6"	7'-8"	218.60

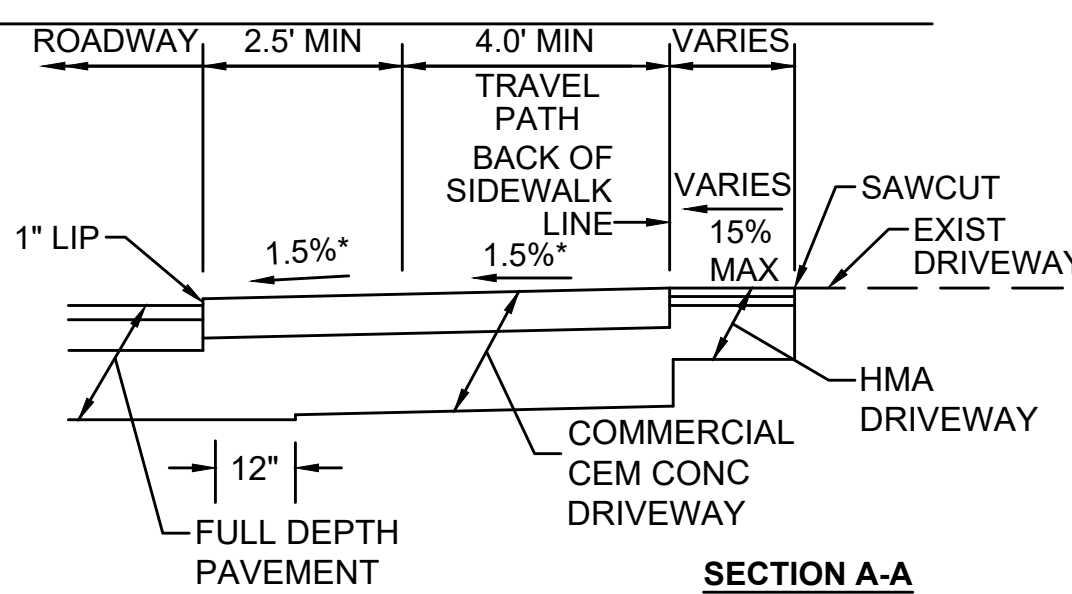


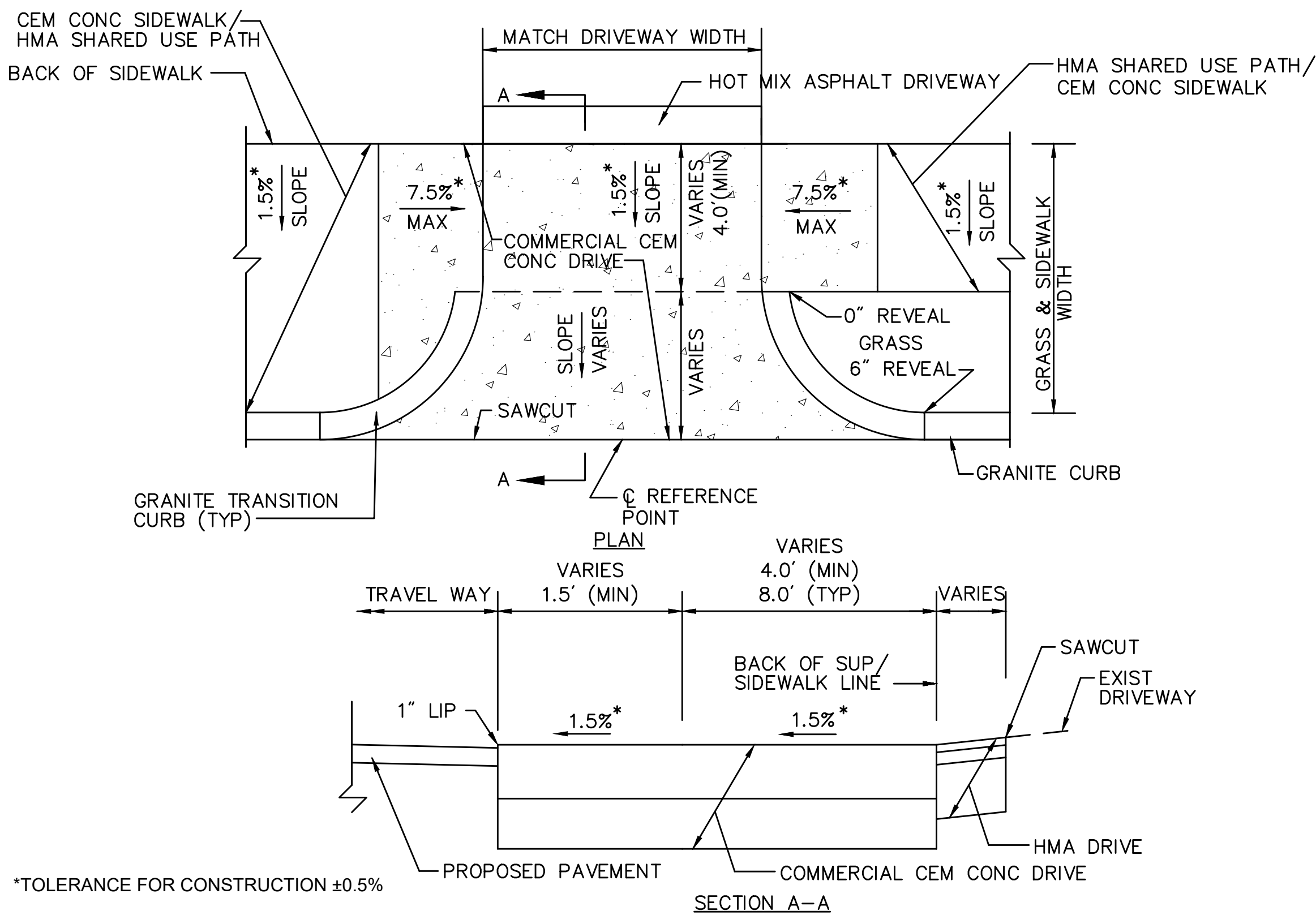
*TOLERANCE FOR CONSTRUCTION ±0.5%

TYPICAL COMMERCIAL DRIVEWAY WITH SUP ADJACENT TO CURB WITH CURVED AND STRAIGHT TRANSITION CURB

SCALE: NTS

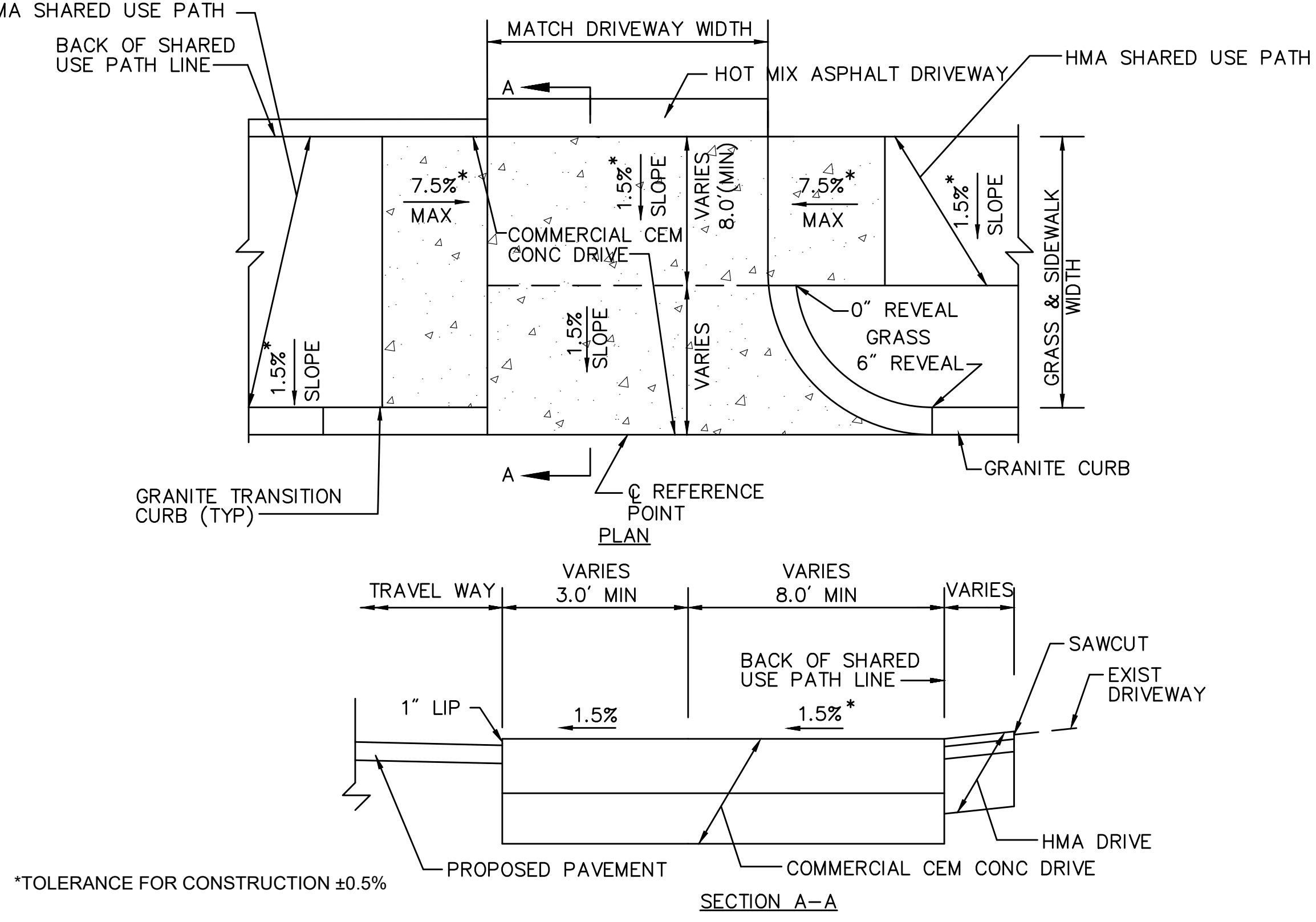
DRIVEWAY DATA								
NO.	LOCATION	SUP WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		± OPENING ELEVATION
				REVEAL	TRANS	REVEAL	TRANS	
MONTGOMERY STREET								
9	109+37.83 20.88' LT	8'-10'	-0.65%	6"	7'-8"	6"	6'-6"	216.81





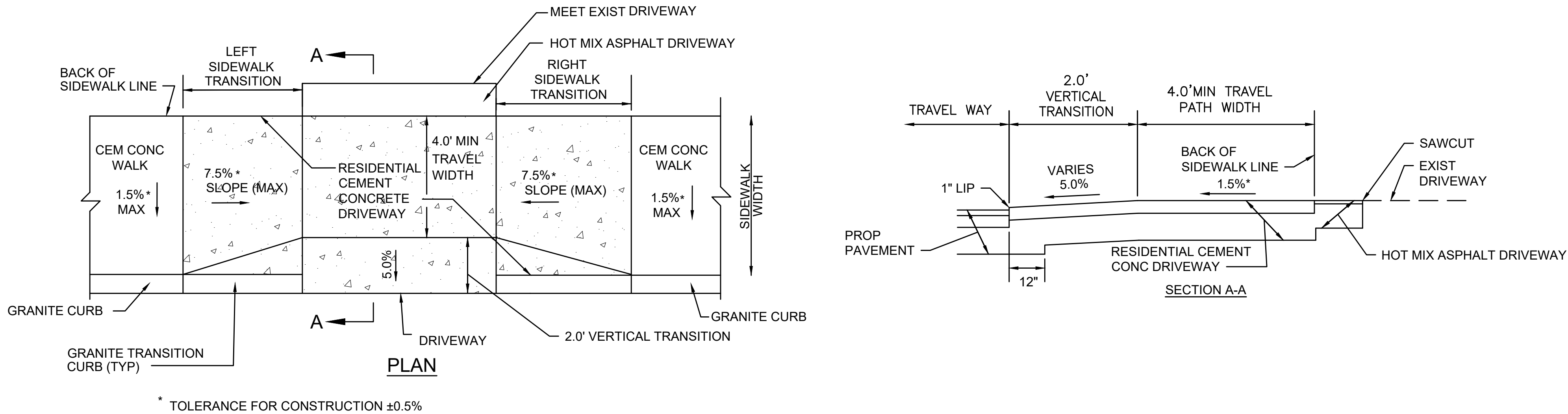
TYPICAL COMMERCIAL DRIVEWAY WITH SHARED USE PATH AND CURVED TRANSITION CURB AND GRASS STRIP
SCALE: N.T.S. DWG: DRIVE-09

DRIVEWAY DATA									
NO.	LOCATION	SIDEWALK WIDTH	DWY SLOPE	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		℄ OPENING ELEVATION
					REVEAL	TRANS	REVEAL	TRANS	
MONTGOMERY STREET NORTH									
12	501+03.81 23.59' RT	5'-8'	1.50%	+2.00%	6"	6'-6"	6"	9'-0"	214.05
GRANBY ROAD EAST									
17	400+33.39 41.93' RT	8'-11"	1.50%	-0.60%	6"	6'-6"	6"	6'-6"	217.70



TYPICAL COMMERCIAL DRIVEWAY WITH SHARED USE PATH AND CURVED TRANSITION CURB AND GRASS STRIP
SCALE: N.T.S. DWG: DRIVE-09

DRIVEWAY DATA								
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		℄ OPENING ELEVATION
				REVEAL	TRANS	REVEAL	TRANS	
MONTGOMERY STREET								
6	106+87.14 18.51' RT	8'-0"	+0.50%	6"	6'-6"	6"	7'-8"	218.26



TYPICAL RESIDENTIAL DRIVEWAY WITH SIDEWALK AND STRAIGHT TRANSITION CURB
SCALE: N.T.S. DWG: DRIVE-09 DATE: JUNE 2013

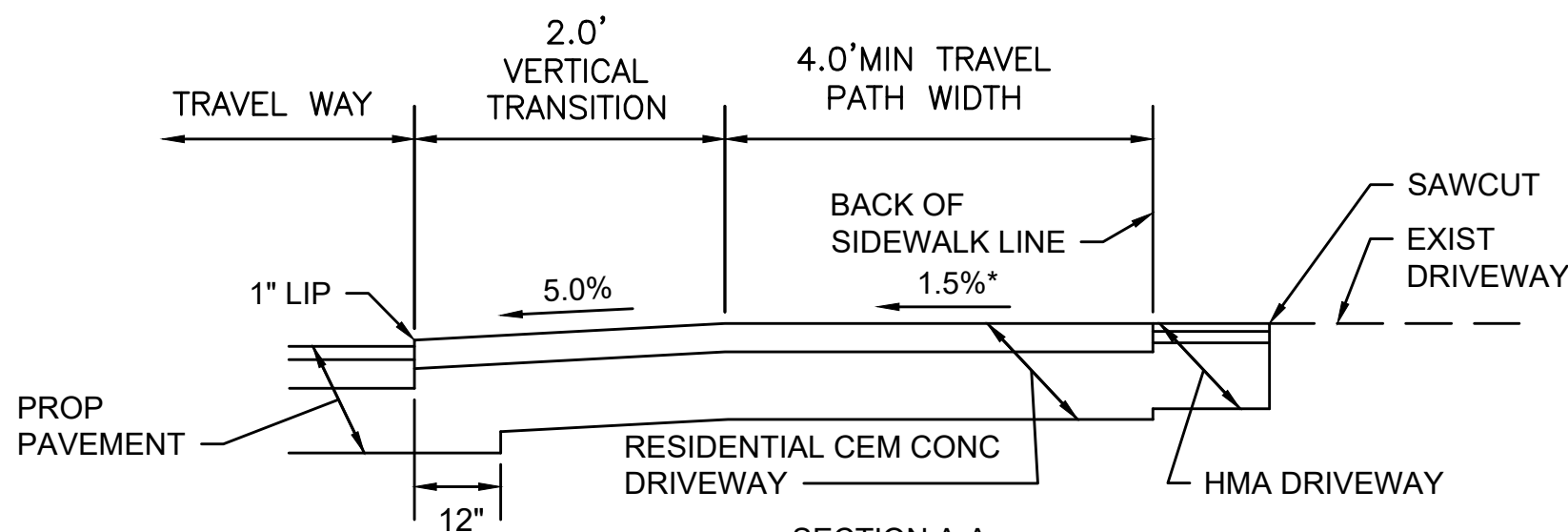
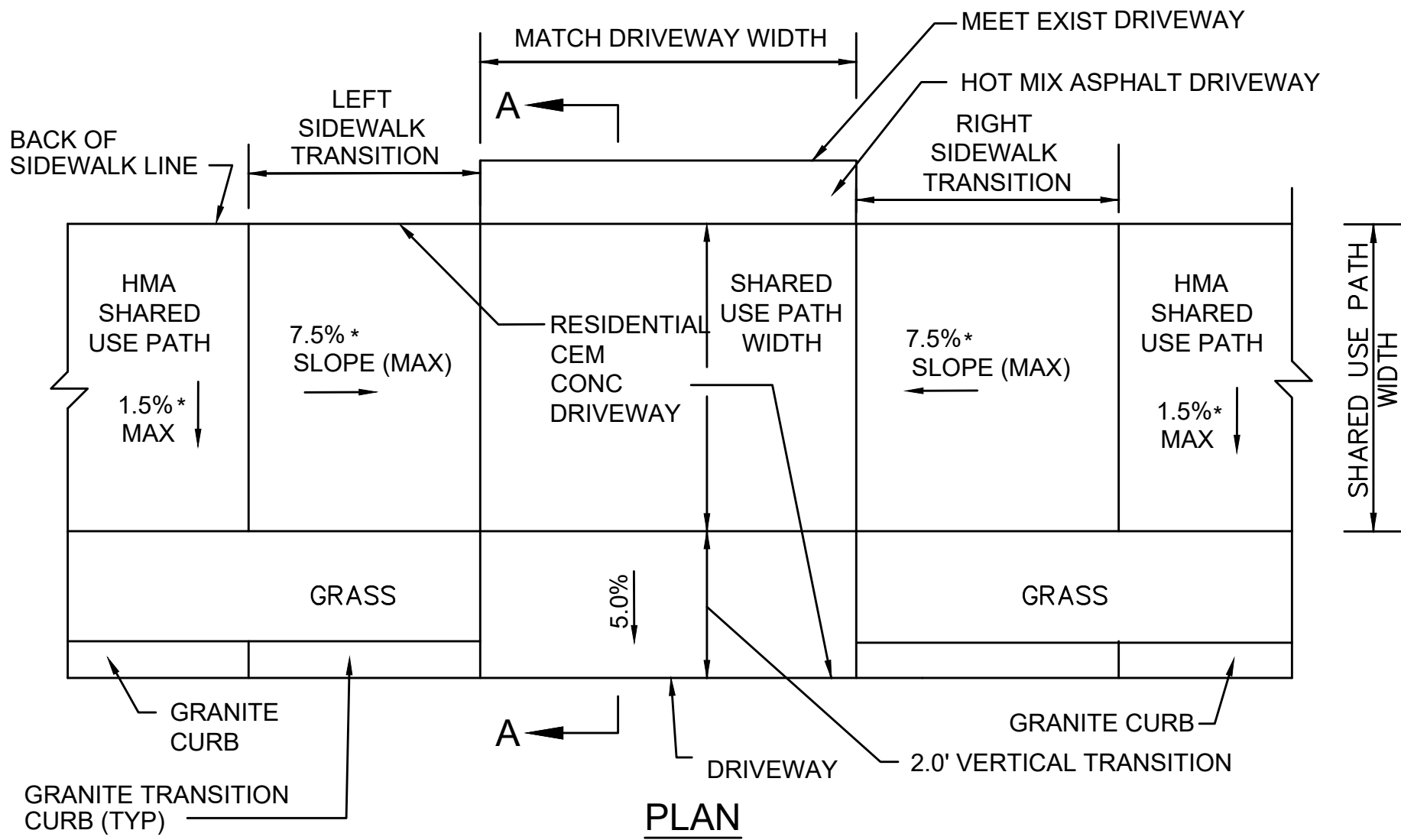
DRIVEWAY DATA								
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		℄ OPENING ELEVATION
				REVEAL	TRANS	REVEAL	TRANS	
GRANBY ROAD WEST								
16	602+26.68 19.44' LT	6'	-0.70%	6"	5'-2"	6"	6'-6"	216.35

CHICOPEE

MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	80	135
PROJECT FILE NO.		609061	

CONSTRUCTION DETAILS

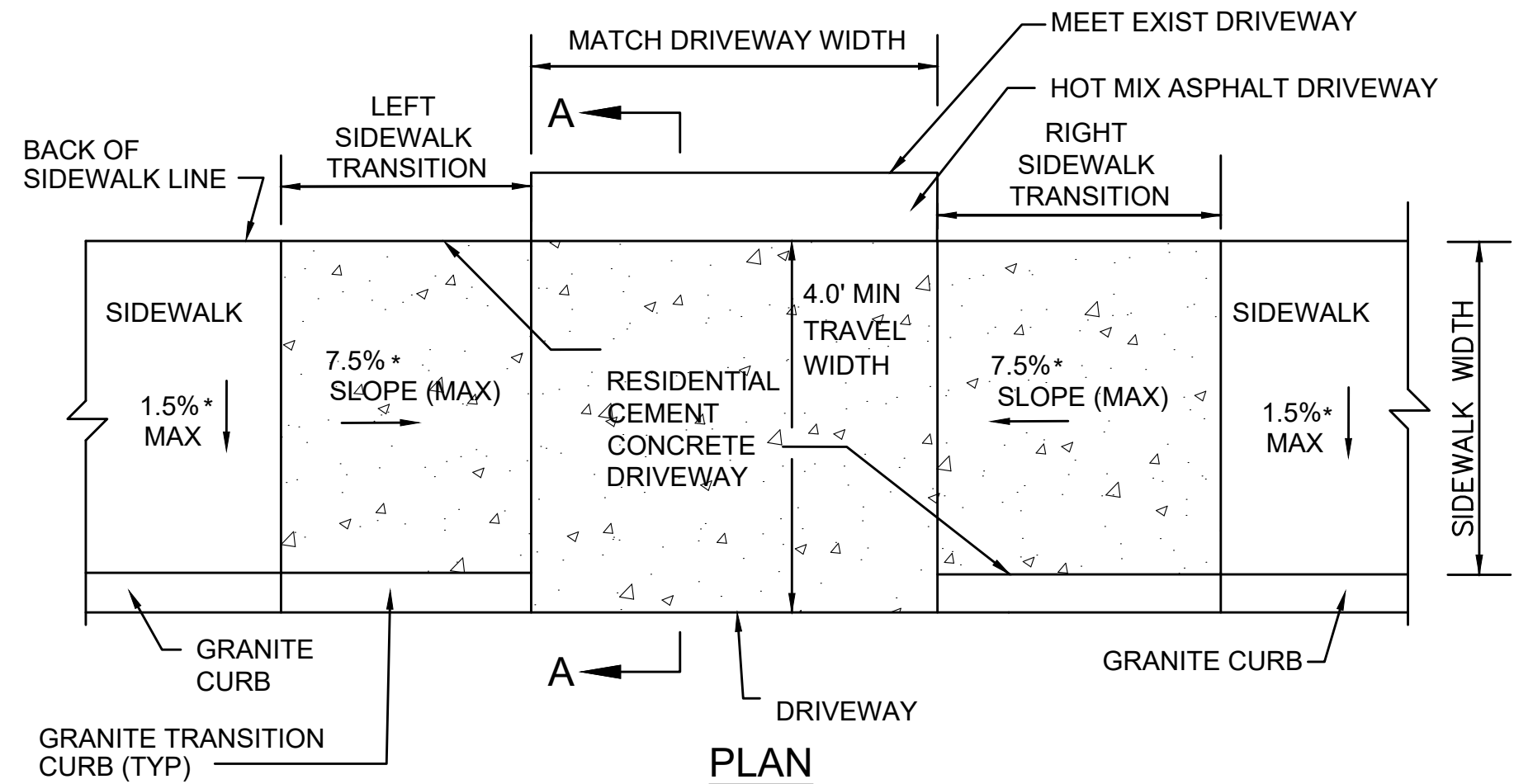


* TOLERANCE FOR CONSTRUCTION ±0.5%

RESIDENTIAL DRIVEWAY WITH SIDEWALK AND STRAIGHT TRANSITION CURB WITH GRASS STRIP

SCALE: N.T.S.

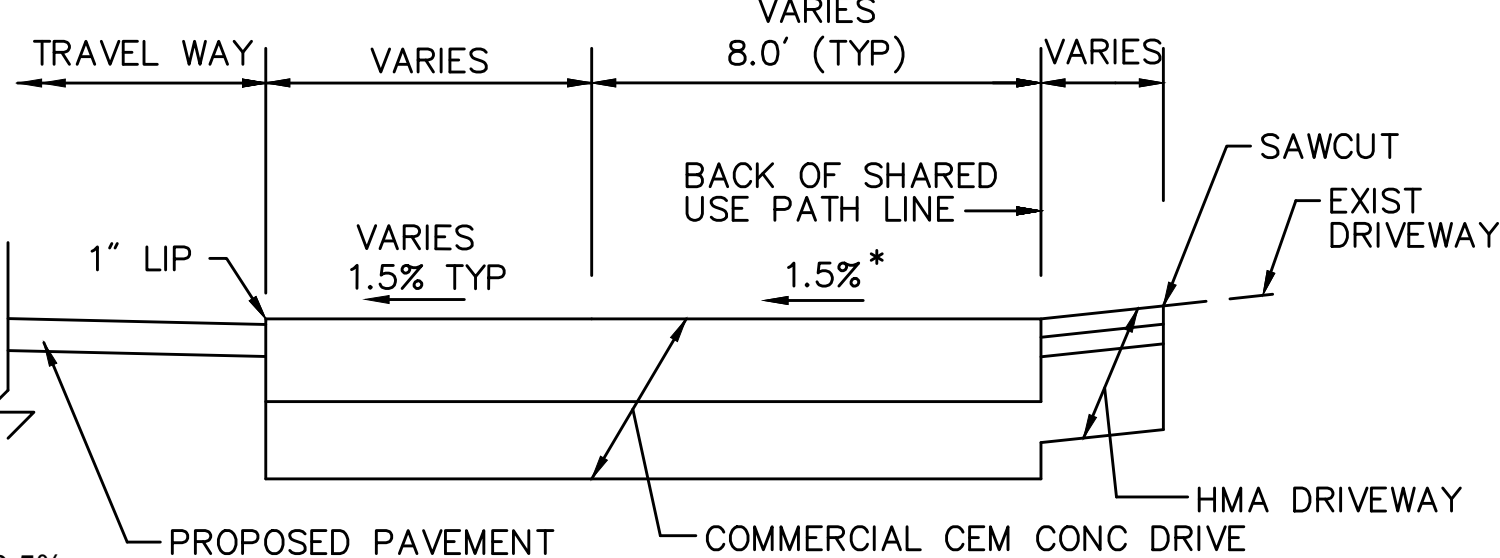
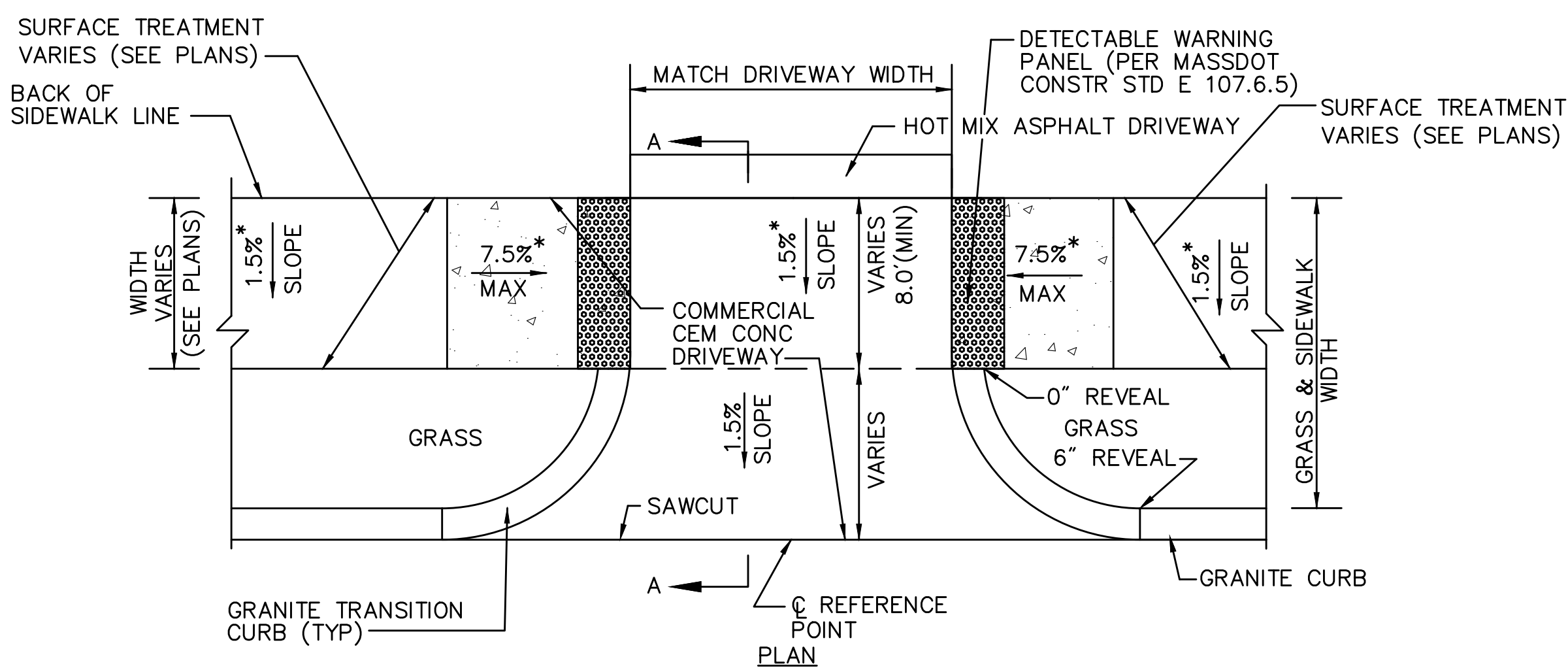
DRIVEWAY DATA								
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		ø OPENING ELEVATION
				REVEAL	TRANS	REVEAL	TRANS	
MCKINSTRY AVENUE								
20	703+22.78 22.88' LT	8'-0"	+0.50%	6"	6'-6"	6"	7'-8"	216.13
GRANBY ROAD EAST								
21	405+75.69 10.60' LT	5'-8'	+1.80%	6"	6'-6"	6"	9'-0"	217.63



* TOLERANCE FOR CONSTRUCTION ±0.5%

RESIDENTIAL DRIVEWAY WITH SIDEWALK AND STRAIGHT TRANSITION CURB

SCALE: N.T.S.



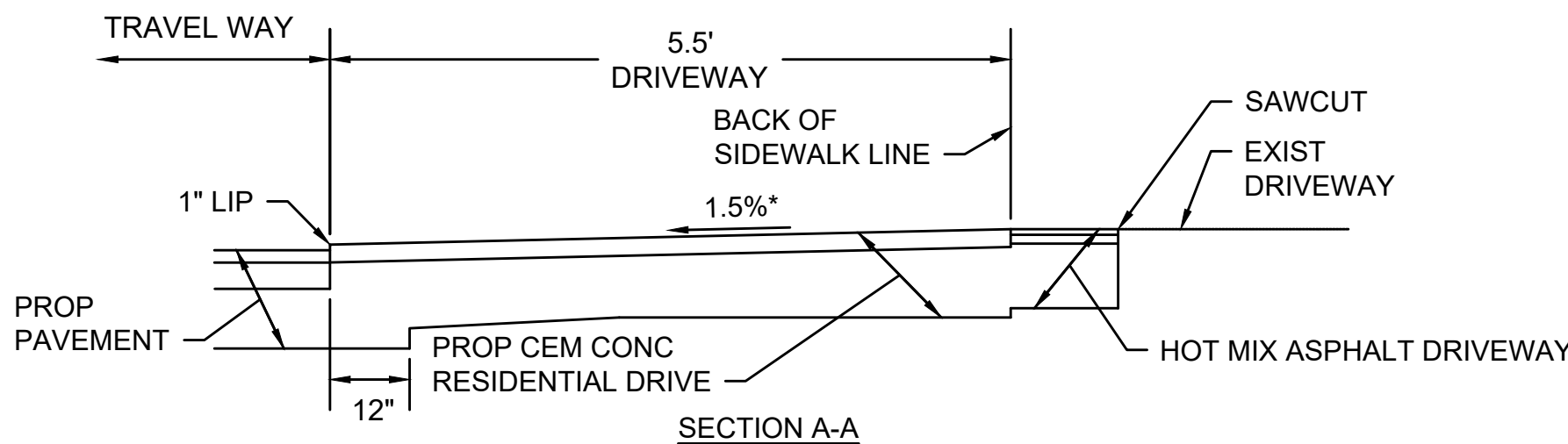
*TOLERANCE FOR CONSTRUCTION ±0.5%

SECTION A-A

TYPICAL COMMERCIAL DRIVEWAY WITH SHARED USE PATH AND CURVED TRANSITION CURB AND GRASS STRIP

SCALE: N.T.S.

DRIVEWAY DATA								
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		℄ OPENING ELEVATION
				REVEAL	TRANS	REVEAL	TRANS	
GRANBY ROAD EAST								
22	406+34.94 33.41' RT	5'- 8'	-0.80%	6"	7'-8"	6"	6'-6"	218.27
MONTGOMERY STREET NORTH								
11	501+13.03 15.50' LT	10'-0"	-2.15%	6"	9'-0"	6"	6'-6"	213.83



SECTION A-A

DRIVEWAY DATA								
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		ø OPENING ELEVATION
				REVEAL	TRANS	REVEAL	TRANS	
MCKINSTRY AVENUE								
18	701+84.70 18.50' LT	5'-0"	+0.50%	6"	6'-6"	6"	7'-8"	215.58

DWG: DRIVE-09

DATE: JUNE 2013

CHICOPEE

MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	81	135
PROJECT FILE NO.		609061	

CONSTRUCTION DETAILS



SCALE: N.T.S.

PEDESTRIAN CURB RAMP DATA

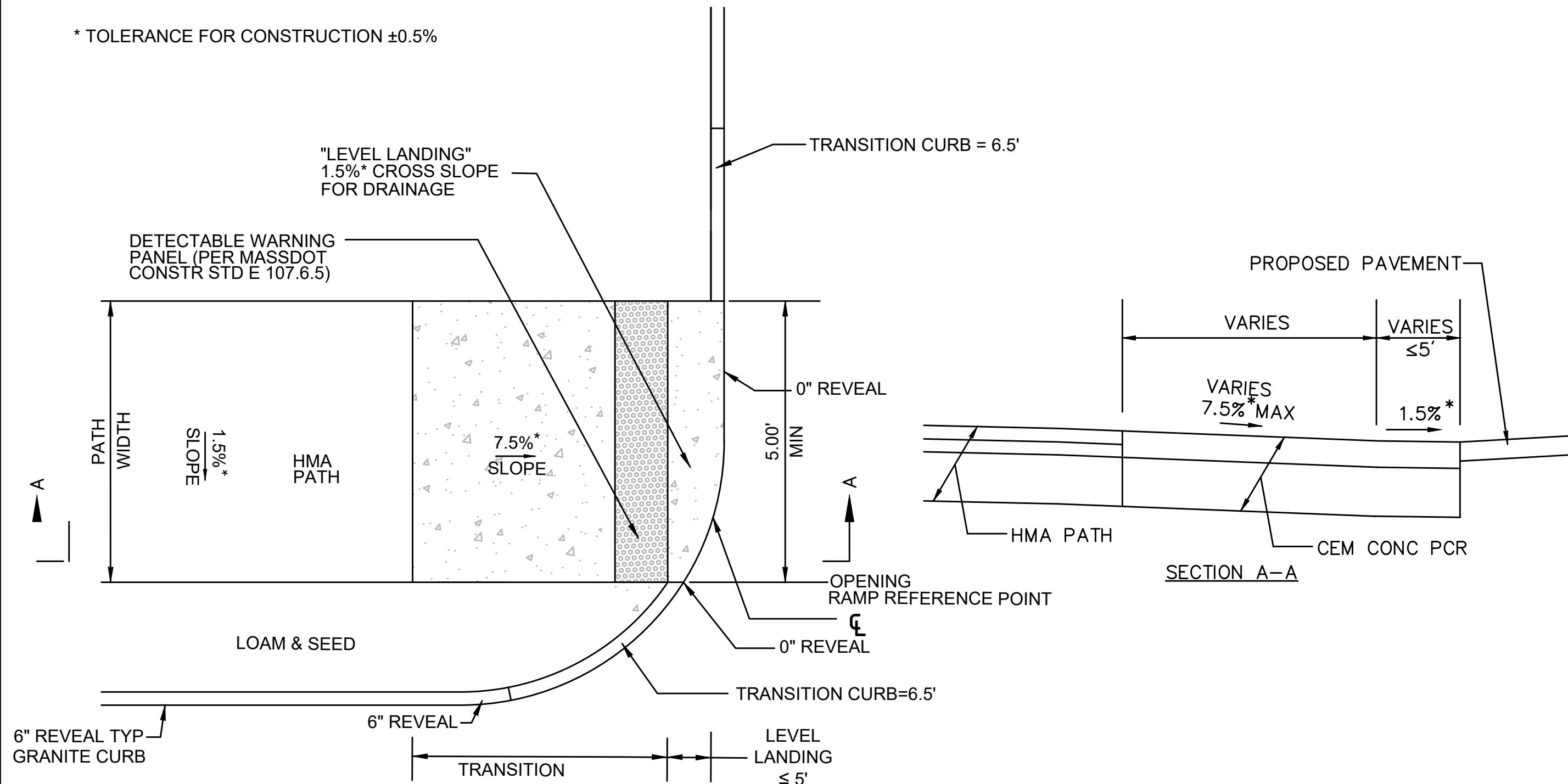
PEDESTRIAN CURB RAMP DATA

SCALE: N.T.S.

DWG: PCR-02

PEDESTRIAN CURB RAMP DATA

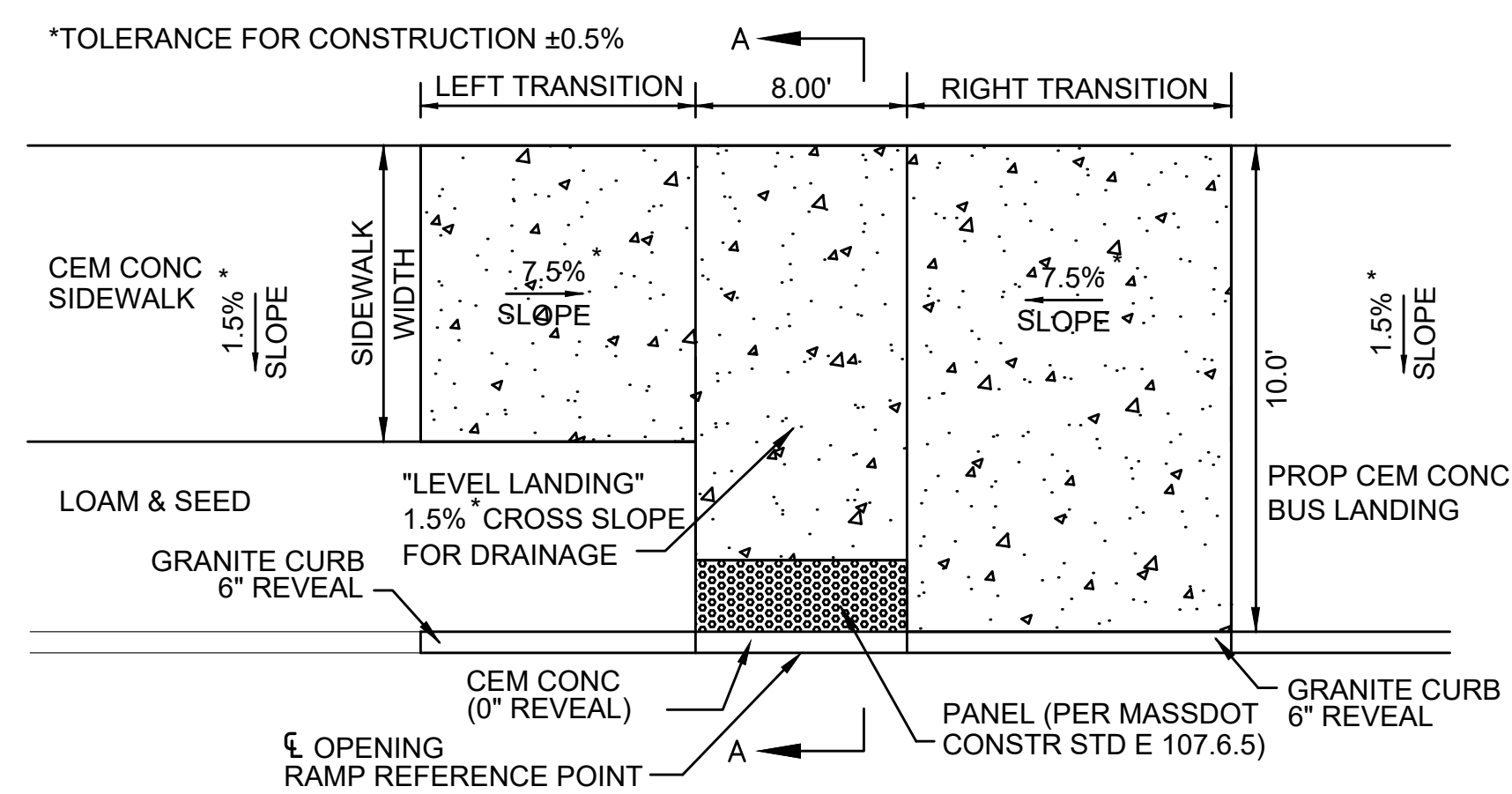
CONSTRUCTION DETAILS



PEDESTRIAN CURB RAMP - "T" INTERSECTION GRASS ADJACENT ONE SIDE - LEVEL LANDING $\leq 5'$

SCALE: N.T.S.

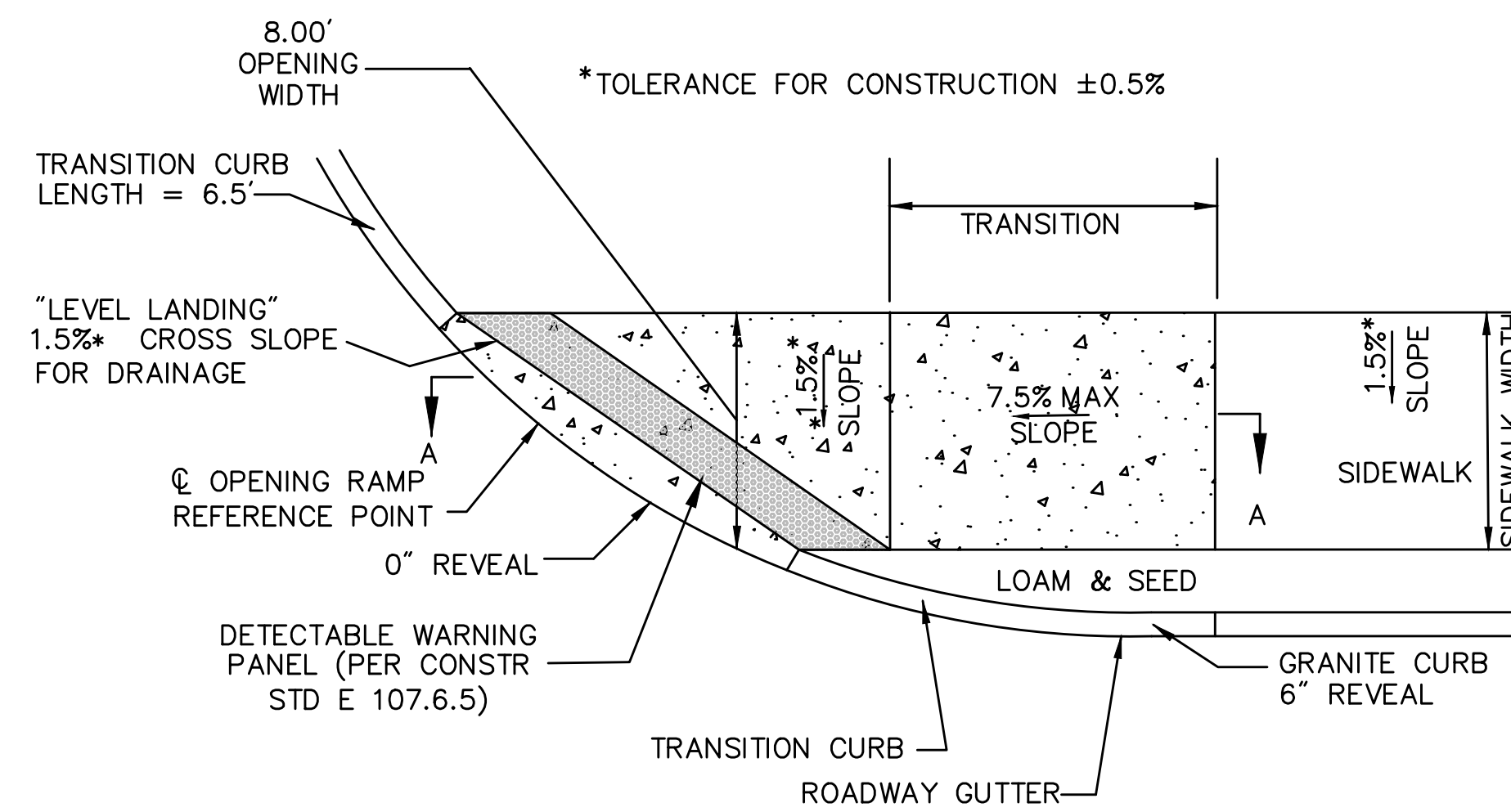
PEDESTRIAN CURB RAMP DATA						
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	REVEAL	TRANS	ϵ OPENING ELEVATION
GRANBY ROAD EAST						
31	406+61.08 39.68' RT	5'-0"	-0.80%	6"	7'-8"	218.66
MONTGOMERY STREET NORTH						
19	500+87.46 23.42' LT	10'-0"	-2.15%	6"	11'-0"	214.64
SHOPPING PLAZA						
10	300+42.46 27.71' LT	8'-0"	-0.81%	6"	7'-8"	217.61



PEDESTRIAN CURB RAMP - WITH GRASS STRIP

SCALE: N.T.S.

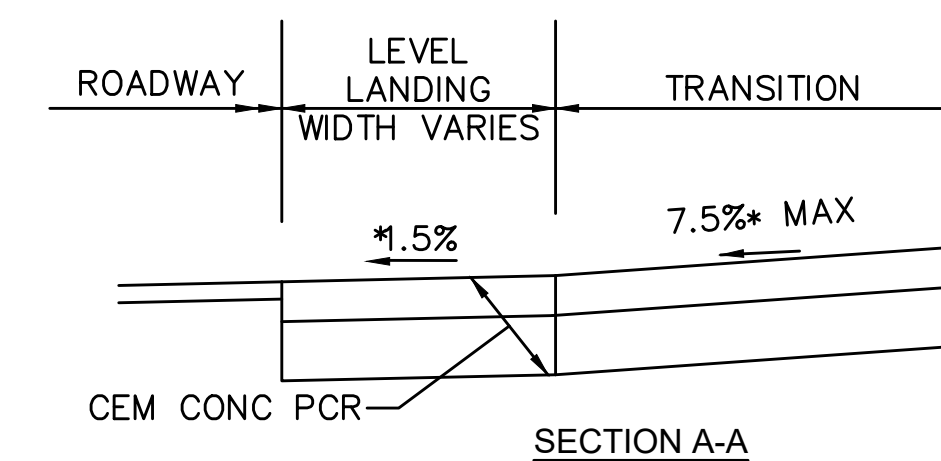
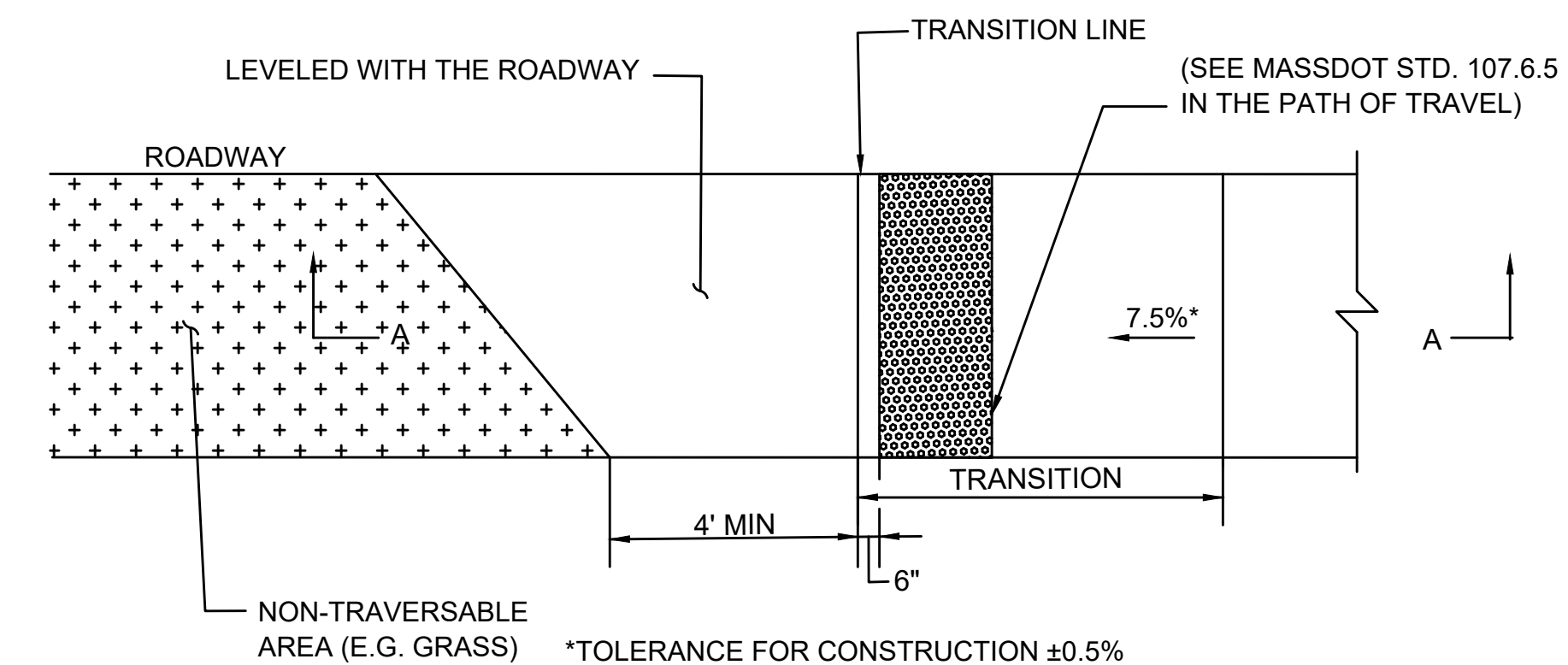
PEDESTRIAN CURB RAMP DATA								
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		§ OPENING ELEVATION
				REVEAL	TRANS	REVEAL	TRANS	
MONTGOMERY STREET								
39	100+91.94 19.84' LT	5'-0"	+1.50%	6"	6'-6"	6"	9'-0"	217.63



PEDESTRIAN CURB RAMP - SINGLE DIRECTION W/ GRASS STRIP

SCALE: N.T.S.

PEDESTRIAN CURB RAMP DATA						
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	REVEAL	TRANS	ϵ OPENING ELEVATION
GRANBY ROAD EAST						
30	406+13.67 37.91' RT	8'-0"	-0.80%	6"	6'-6"	218.51



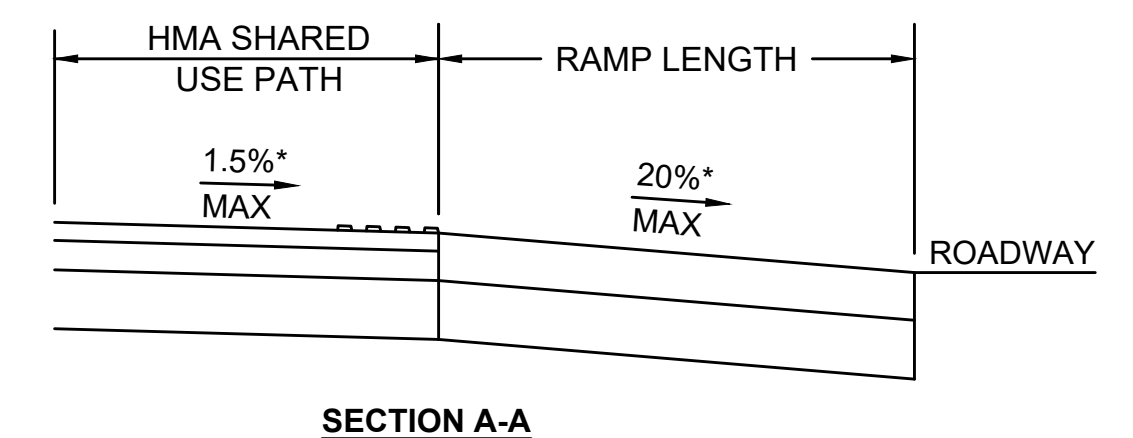
PEDESTRIAN CURB RAMP - SINGLE DIRECTION W/ LEVEL LANDING

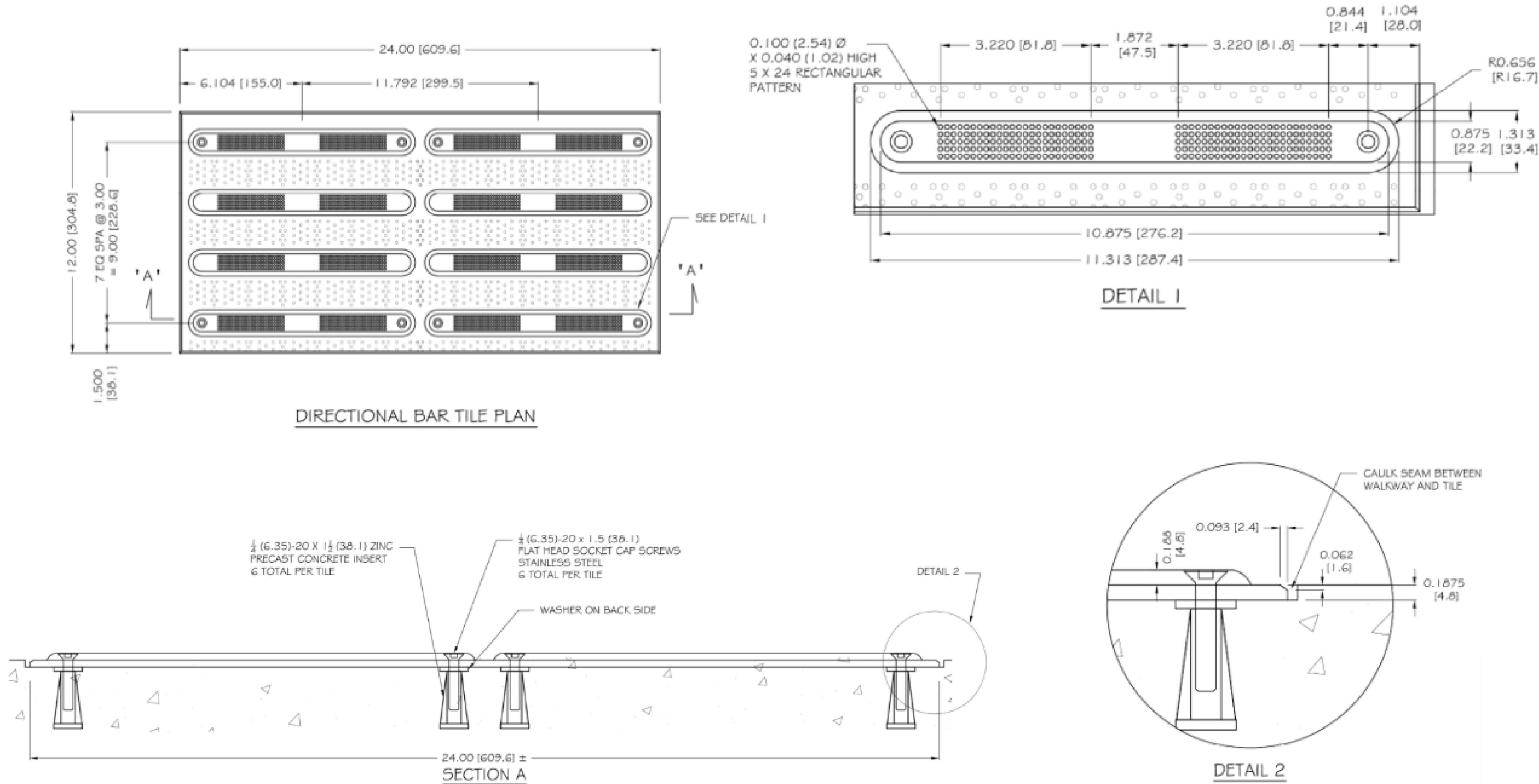
SCALE: N.T.S.

PEDESTRIAN CURB RAMP DATA						
NO.	LOCATION	SIDEWALK WIDTH	ROADWAY GUTTER	REVEAL	TRANS	ϵ OPENING ELEVATION
GRANBY ROAD WEST						
38	601+44.86 15.86' RT	5'-0"	-1.50%	6"	9'-0"	216.87



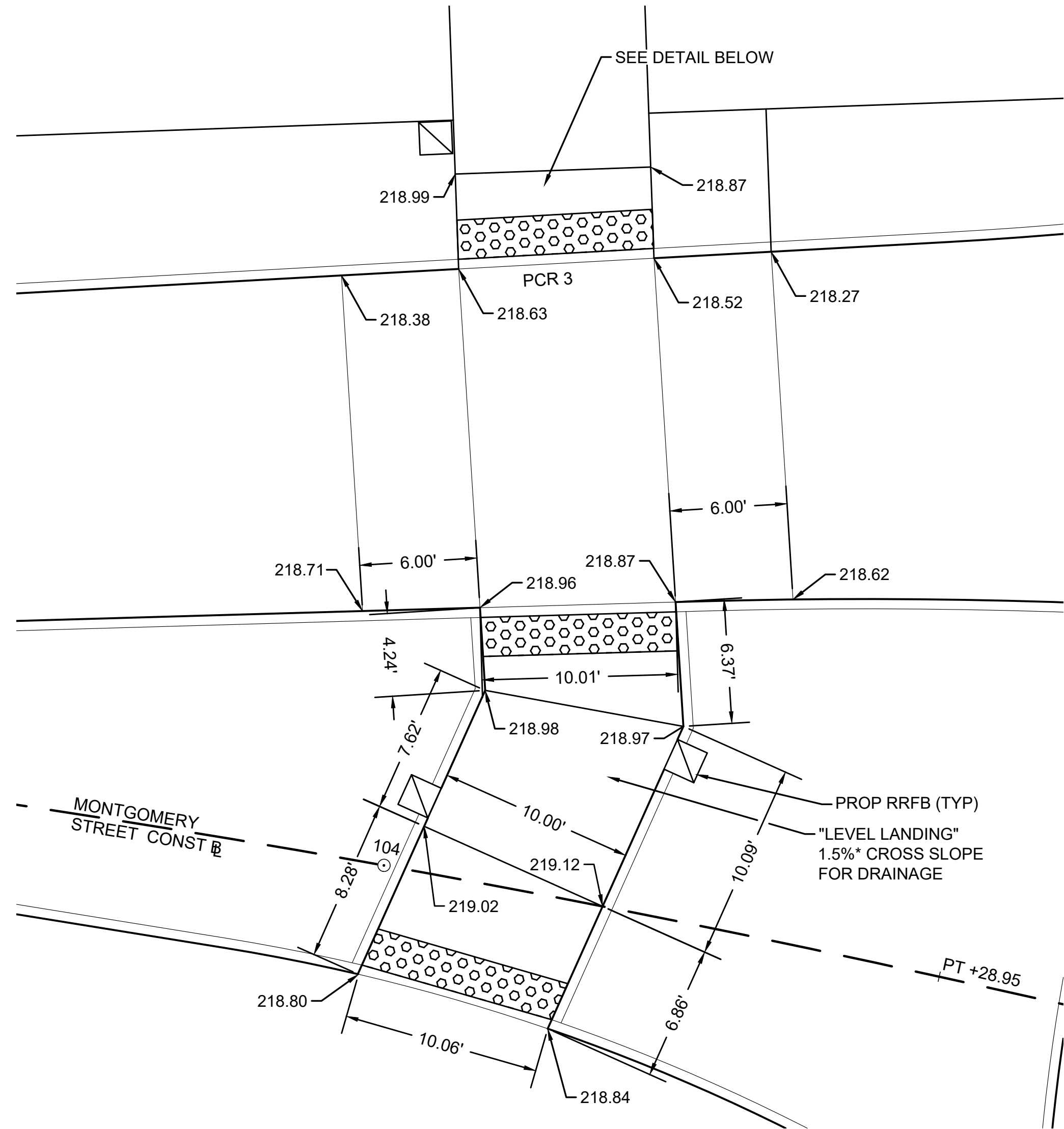
BIKE RAMP DATA					
NO.	LOCATION	RAMP WIDTH	ROADWAY GUTTER	TRANSITION LENGTH	ε OPENING ELEVATION
MONTGOMERY STREET					
36	103+18.21 20.02' RT	5'-0"	-1.50%	11'-0"	218.63
37	103+46.26 127.70' LT	5'-0"	+1.50%	17'-0"	218.67
MONTGOMERY STREET NORTH					
21	503+28.43 17.22' LT	5'-0"	-1.50%	15'-8"	210.45
GRANBY ROAD WEST					
22	603+35.52 15.80' RT	5'-0"	-0.50%	9'-4"	217.05
23	603+54.03 18.04' LT	5'-0"	+0.50%	12'-1"	216.85
MCKINSTRY AVENUE					
26	702+37.26 18.01' LT	5'-0"	+0.50%	7'-11"	215.78
27	702+92.67 13.40' RT	5'-0"	-0.60%	5'-11"	216.24



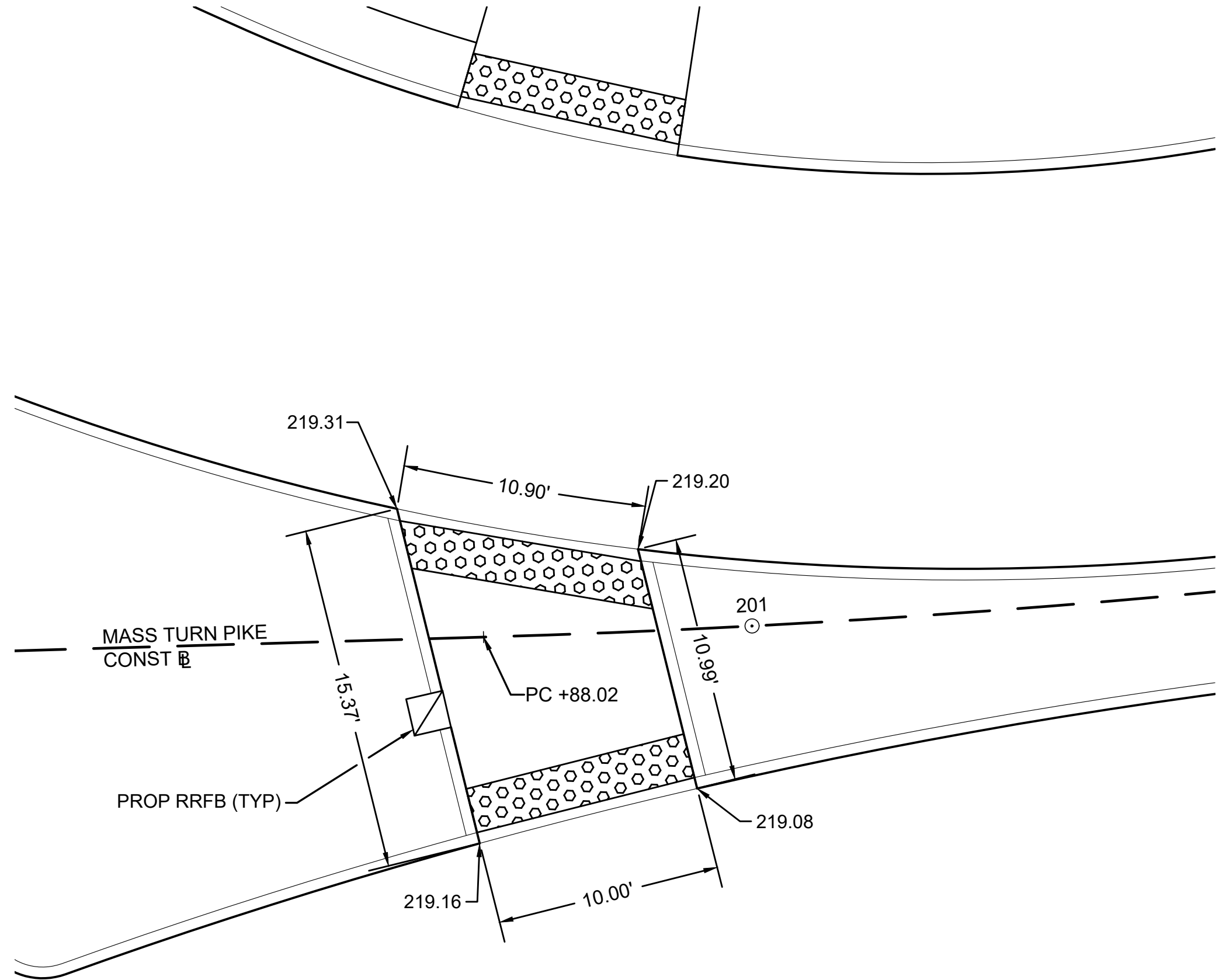


TACTILE DIRECTIONAL INDICATOR (TDI)

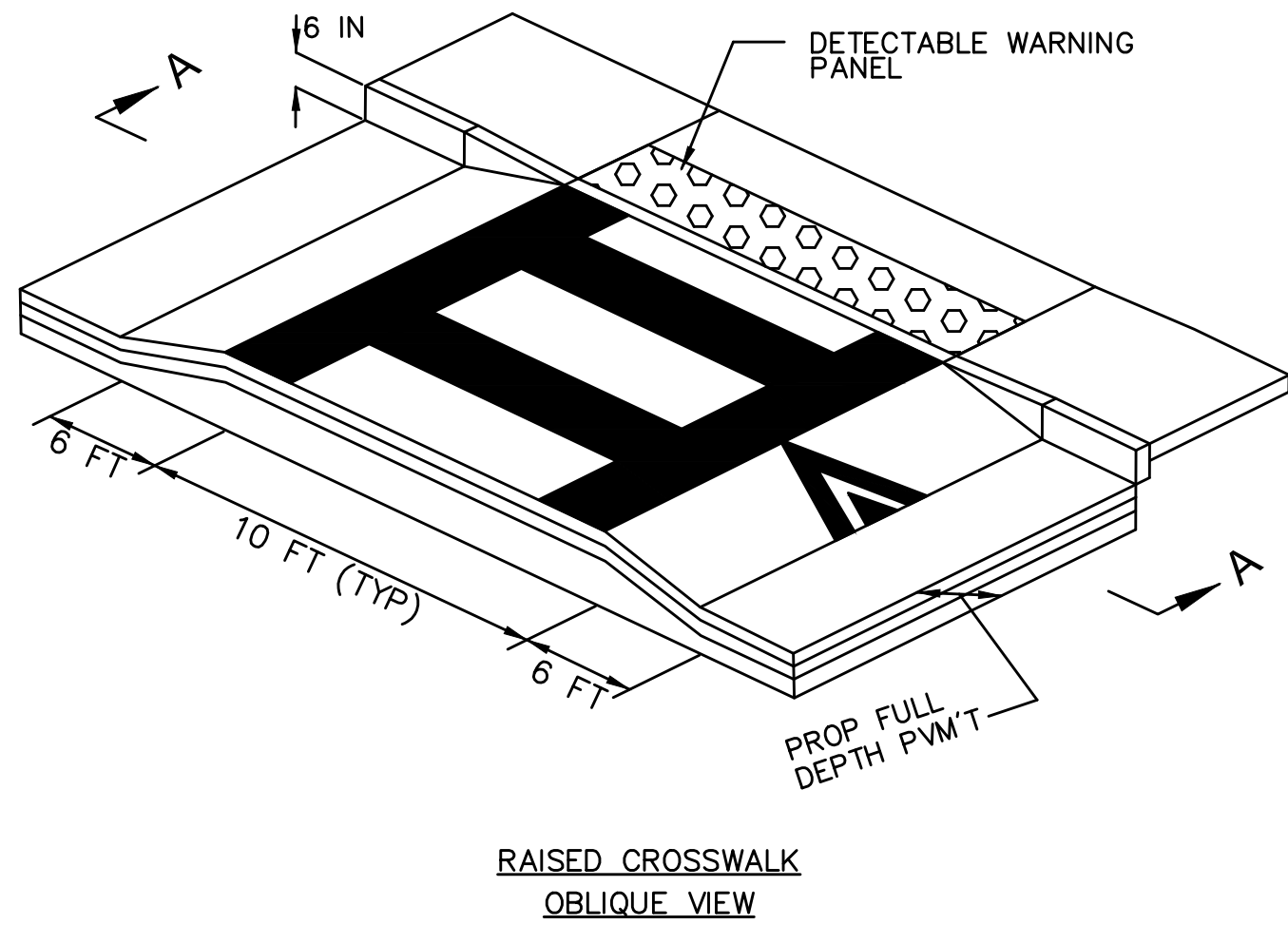
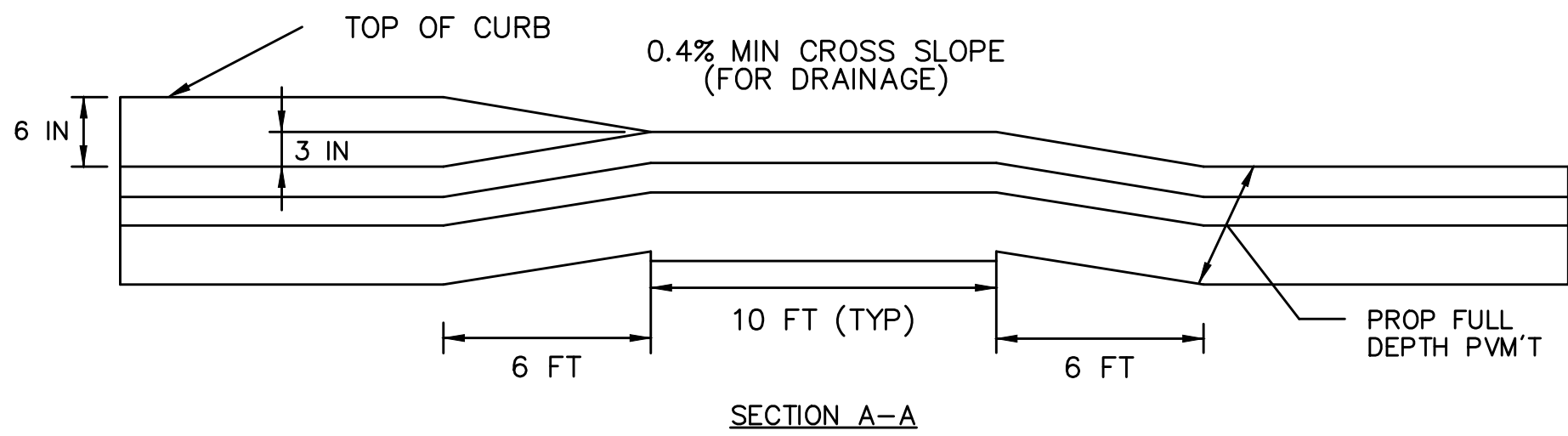
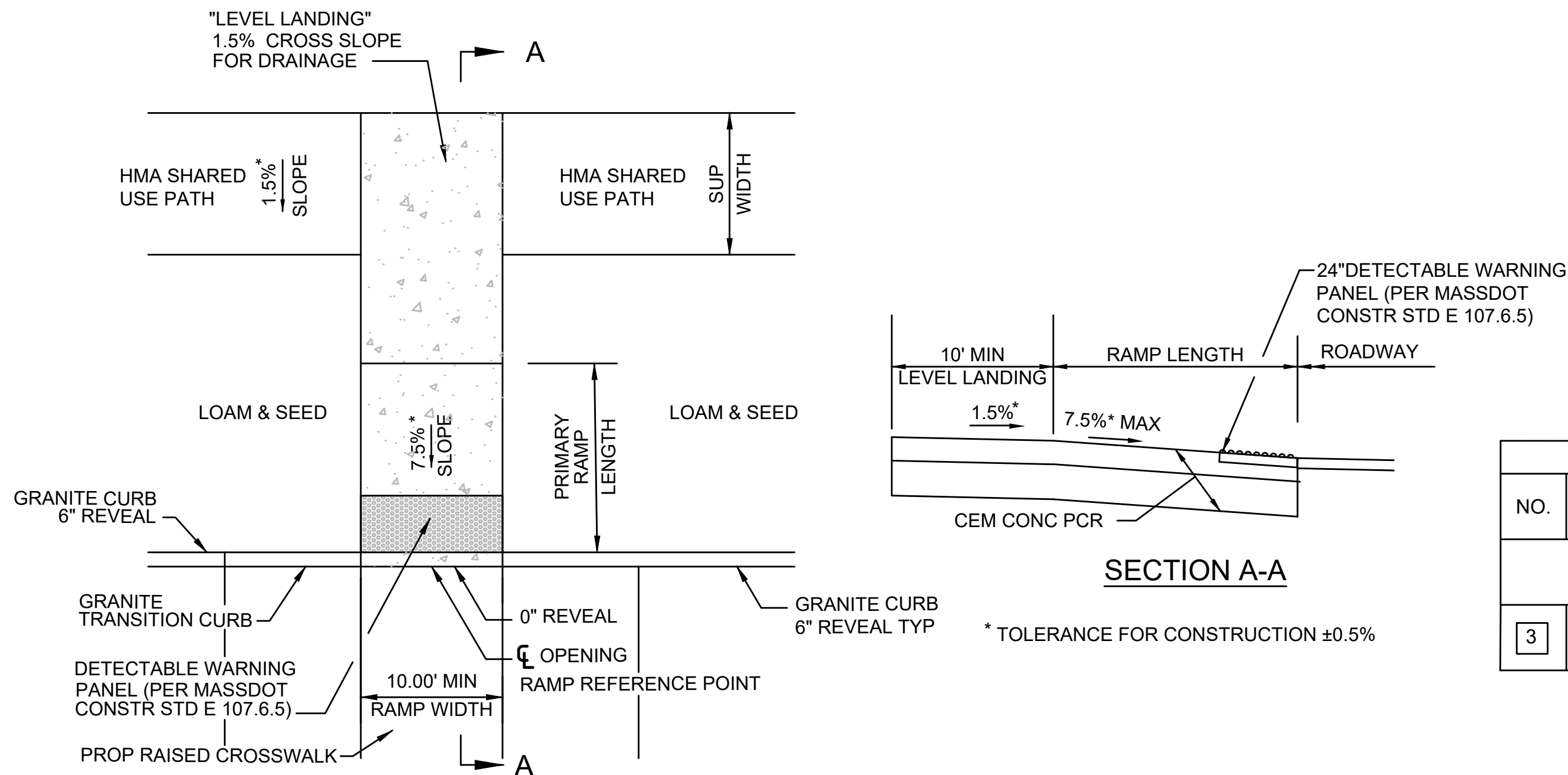
SCALE: N.T.S.



MEDIAN CUT THROUGH ON MONTGOMERY STREET STA 104+05
SCALE: 1"=5'

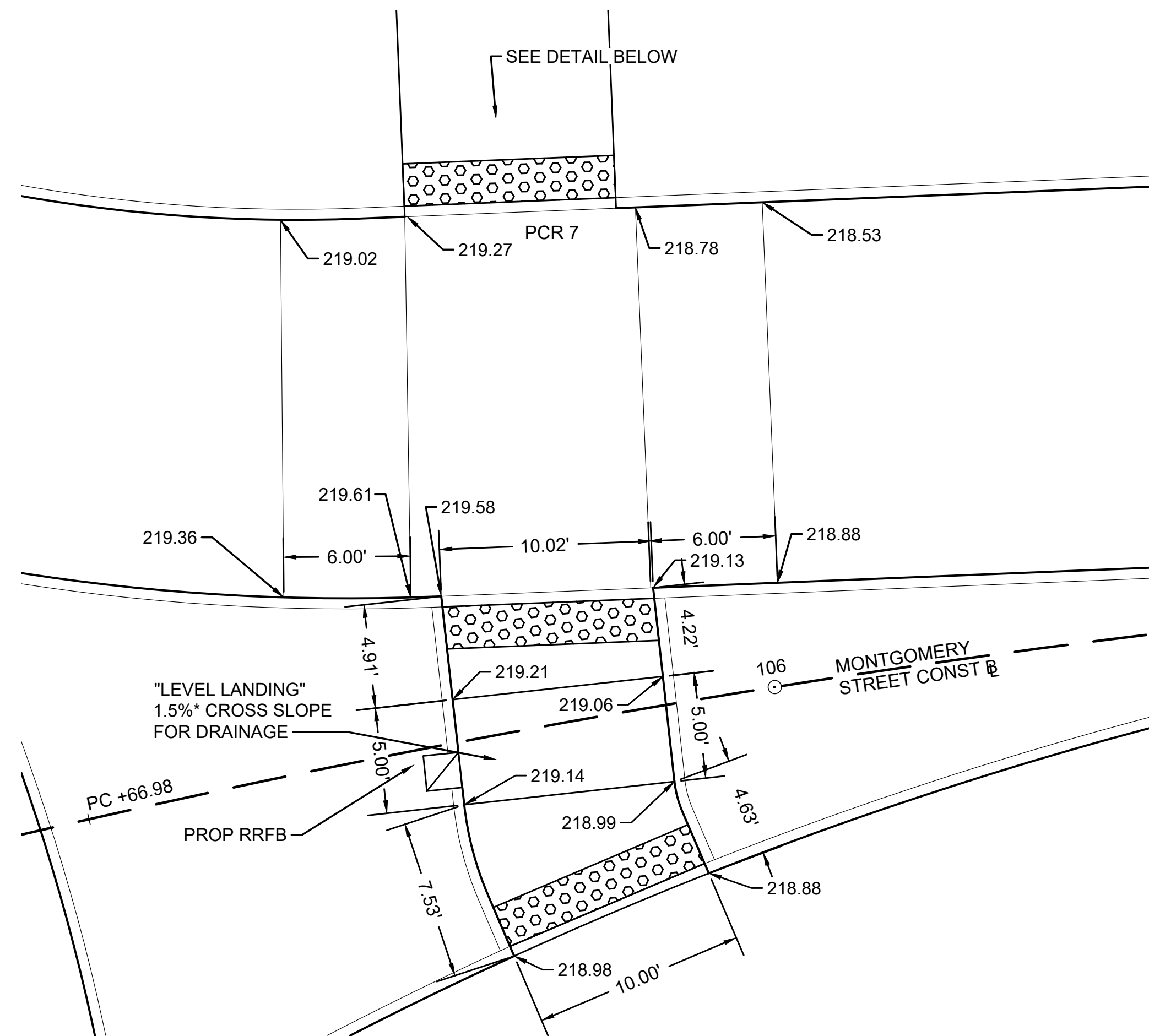


MEDIAN CUT THROUGH ON MASSACHUSETTS TURNPIKE STA 200+92
SCALE: 1"=5'

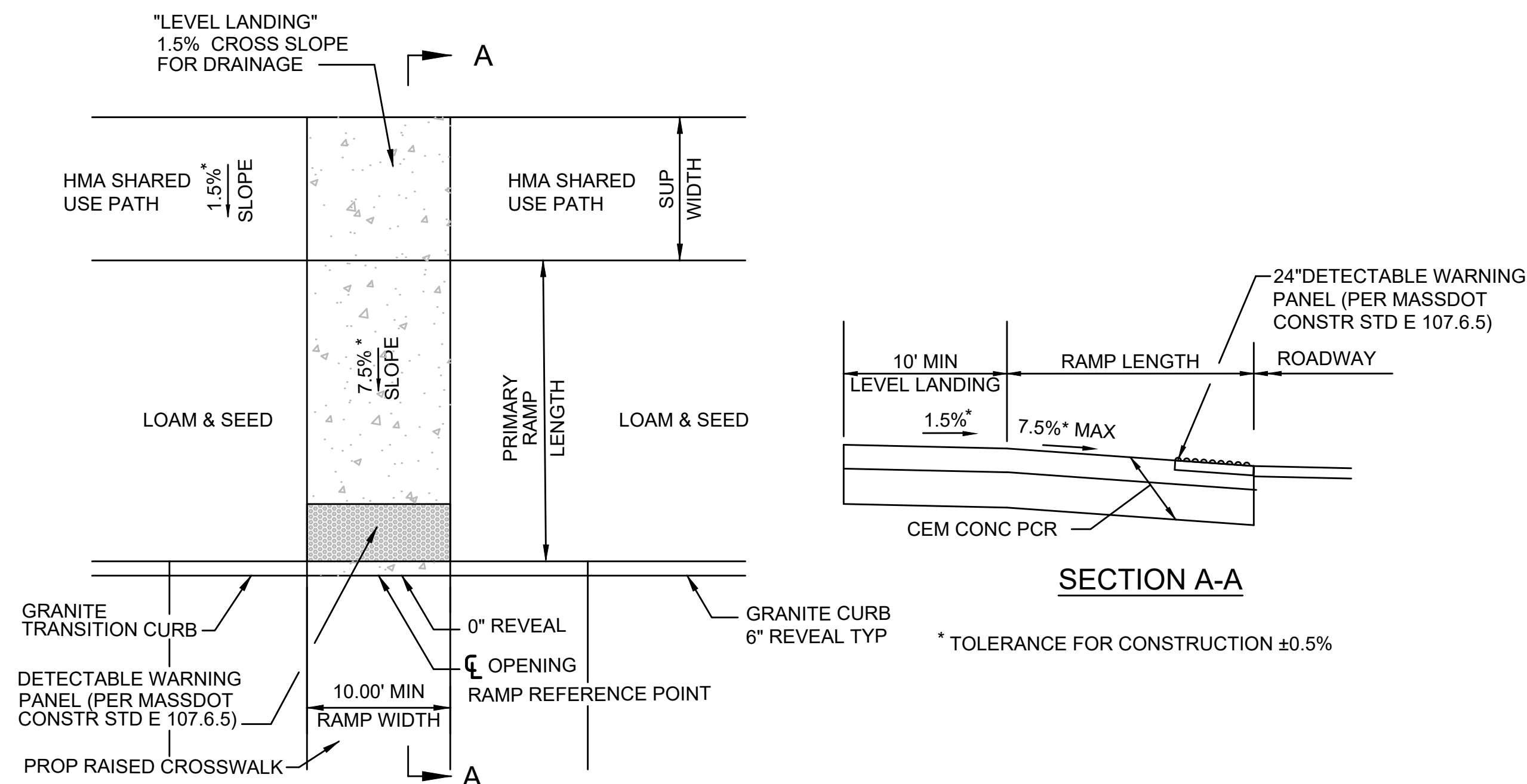


STANDARD RAISED CROSSWALK DETAIL

PEDESTRIAN CURB RAMP DATA							
NO.	LOCATION	SUP WIDTH	RAMP WIDTH	PRIMARY RAMP LENGTH	REVEAL	ROADWAY GUTTER	OPENING ELEVATION
MONTGOMERY STREET							
3	104+03.10 31.84' LT	10'-0"	10'-0"	4'-2"	6"	-0.63%	218.57



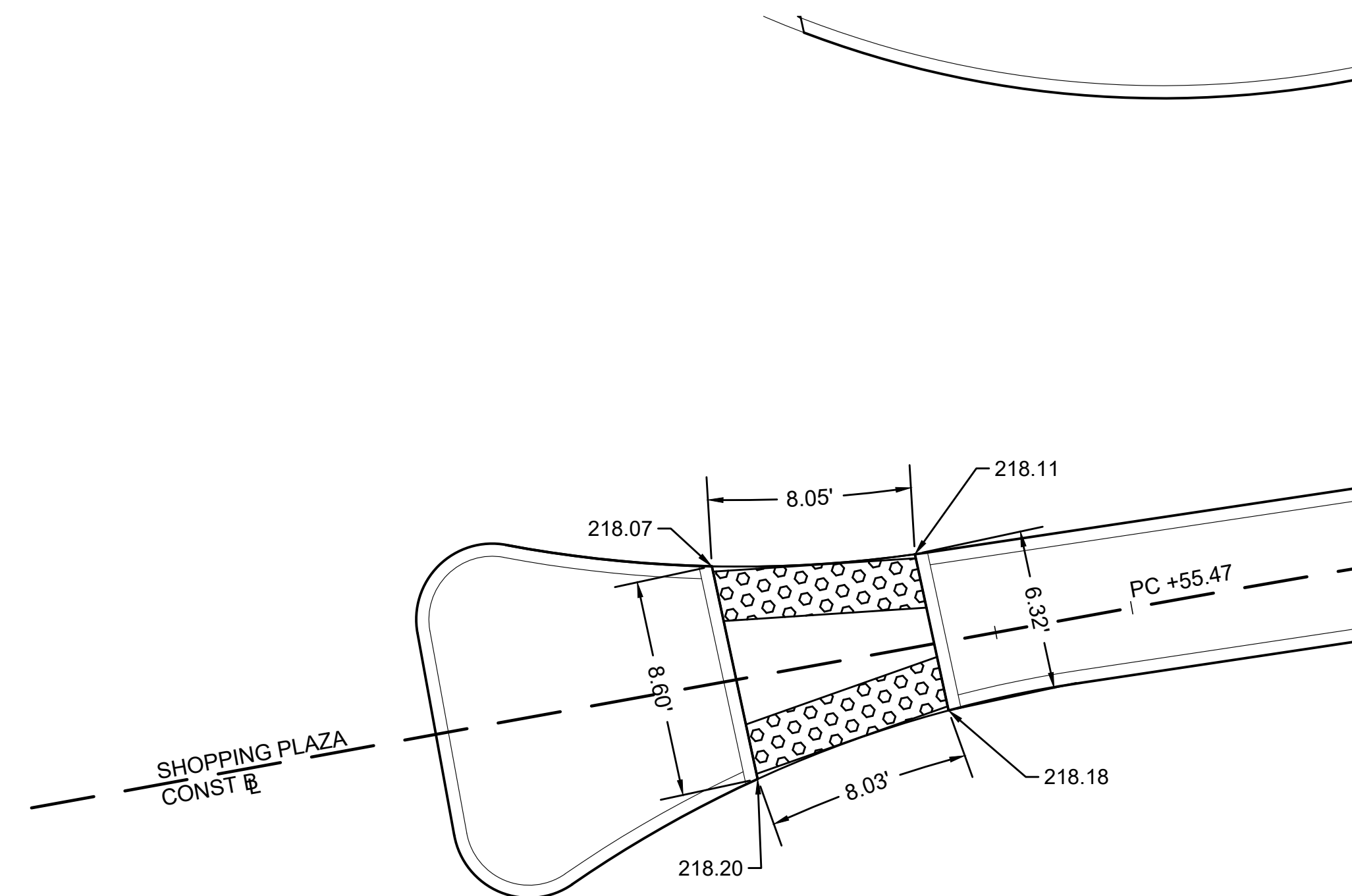
MEDIAN CUT THROUGH ON MONTGOMERY STREET STA 105+91
SCALE: 1"=5'



PEDESTRIAN CURB RAMP - WITH GRASS STRIP
WITHOUT SIDE TRANSITIONS

SCALE: N.T.S.

PEDESTRIAN CURB RAMP DATA							
NO.	LOCATION	SUP WIDTH	RAMP WIDTH	PRIMARY RAMP LENGTH	REVEAL	ROADWAY GUTTER	℄ OPENING ELEVATION
7	105+91.53 24.20' LT	10'-0"	10'-0"	11'-2"	6"	-2.23%	219.05

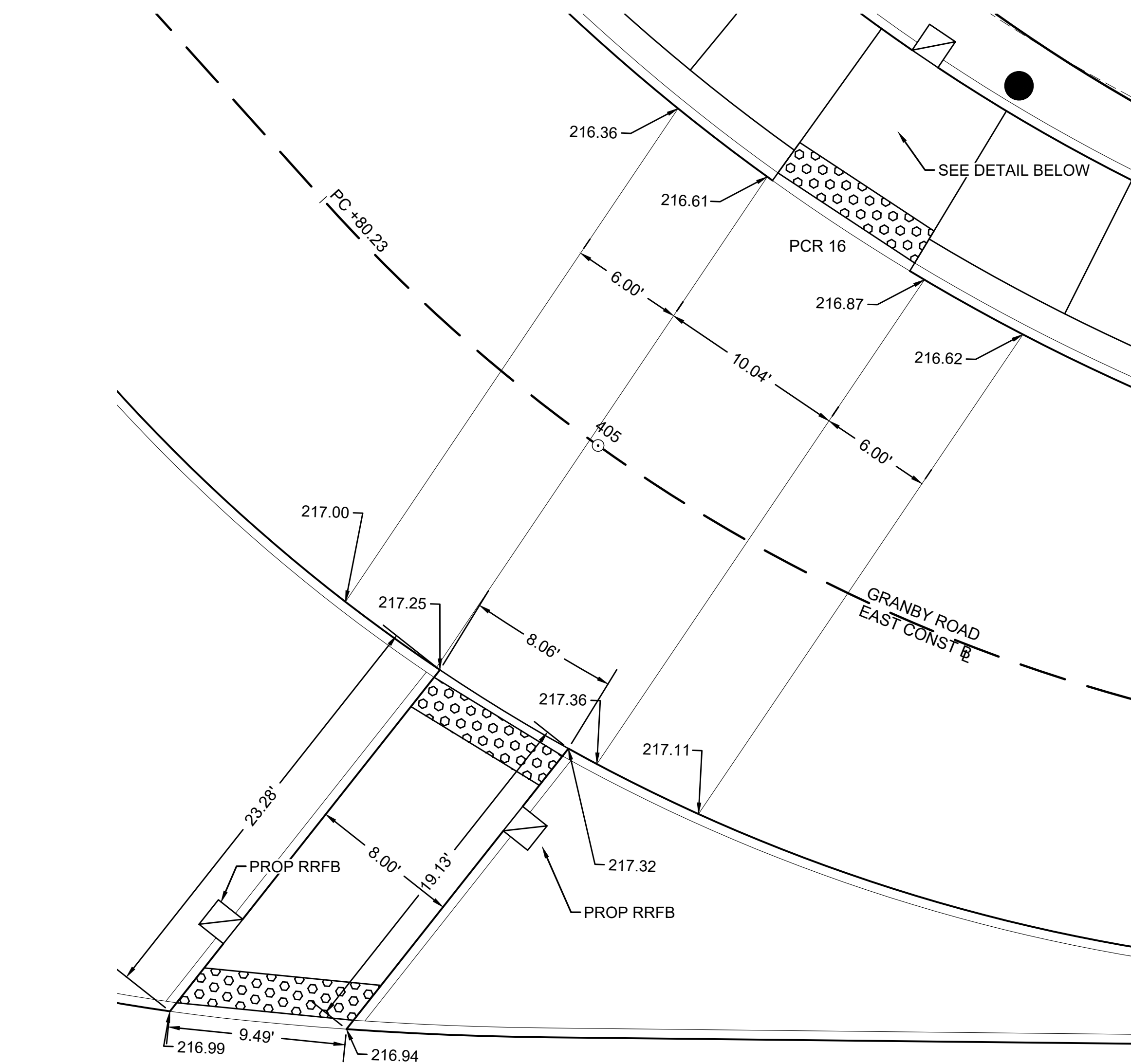


MEDIAN CUT THROUGH ON SHOPPING PLAZA STA 300+44

SCALE: 1"=5'

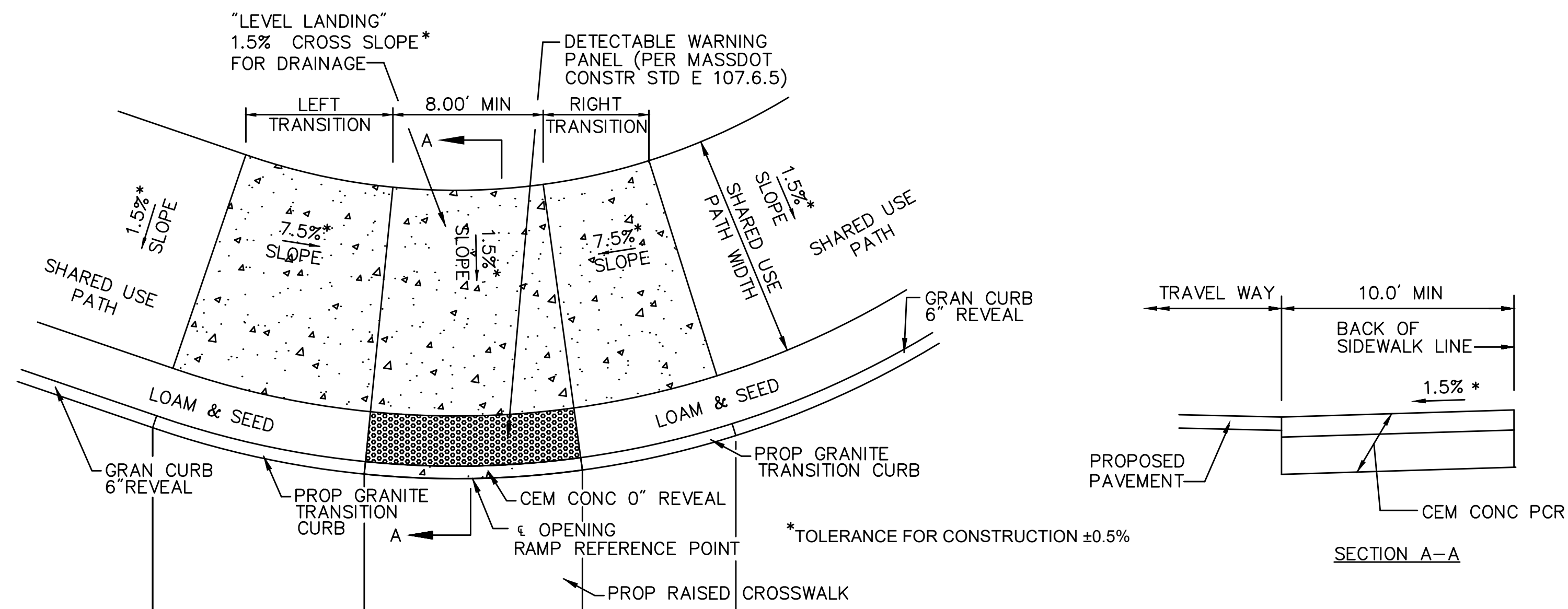


PEDESTRIAN CURB RAMP DATA									
NO.	LOCATION	SUP WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		OPENING ELEVATION	OPENING WIDTH
				REVEAL	TRANS	REVEAL	TRANS		
11	109+80.24 33.26' LT	8'-0"	+0.50%	6"	6'-6"	6"	6'-6"	216.72	8'-5"
13	401+35.77 47.86' RT	8'-0"	+0.45%	6"	6'-6"	6"	7'-8"	217.18	8'-8"
14	401+54.01 12.14' LT	10'-0"	-1.14%	6"	9'-0"	6"	6'-6"	216.85	8'-10"



MEDIAN CUT THROUGH ON GRANBY ROAD EAST STA 405+04

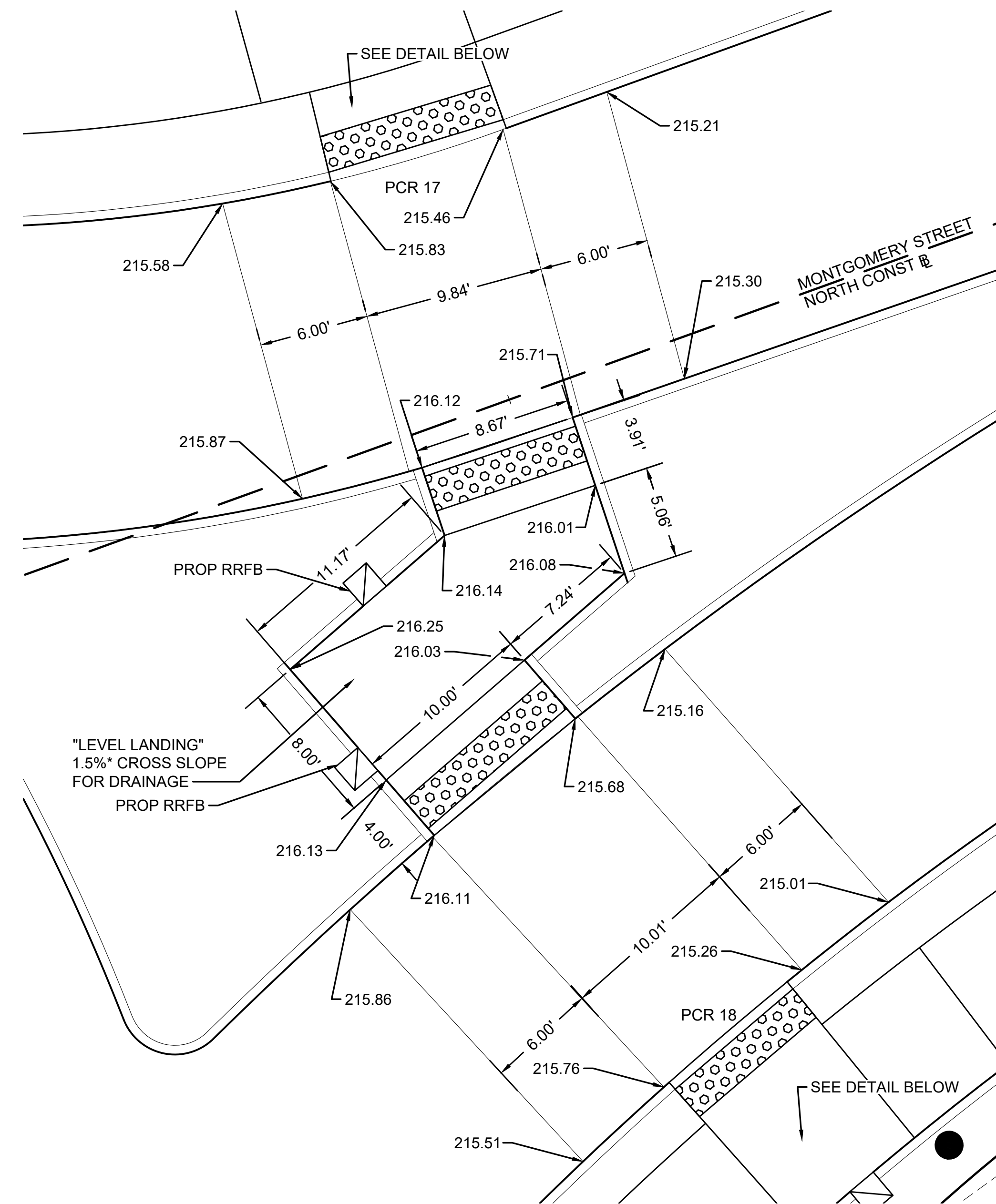
SCALE: 1"=5'



PEDESTRIAN CURB RAMP - TWO WING SHARED USE PATH WITH GRASS STRIP

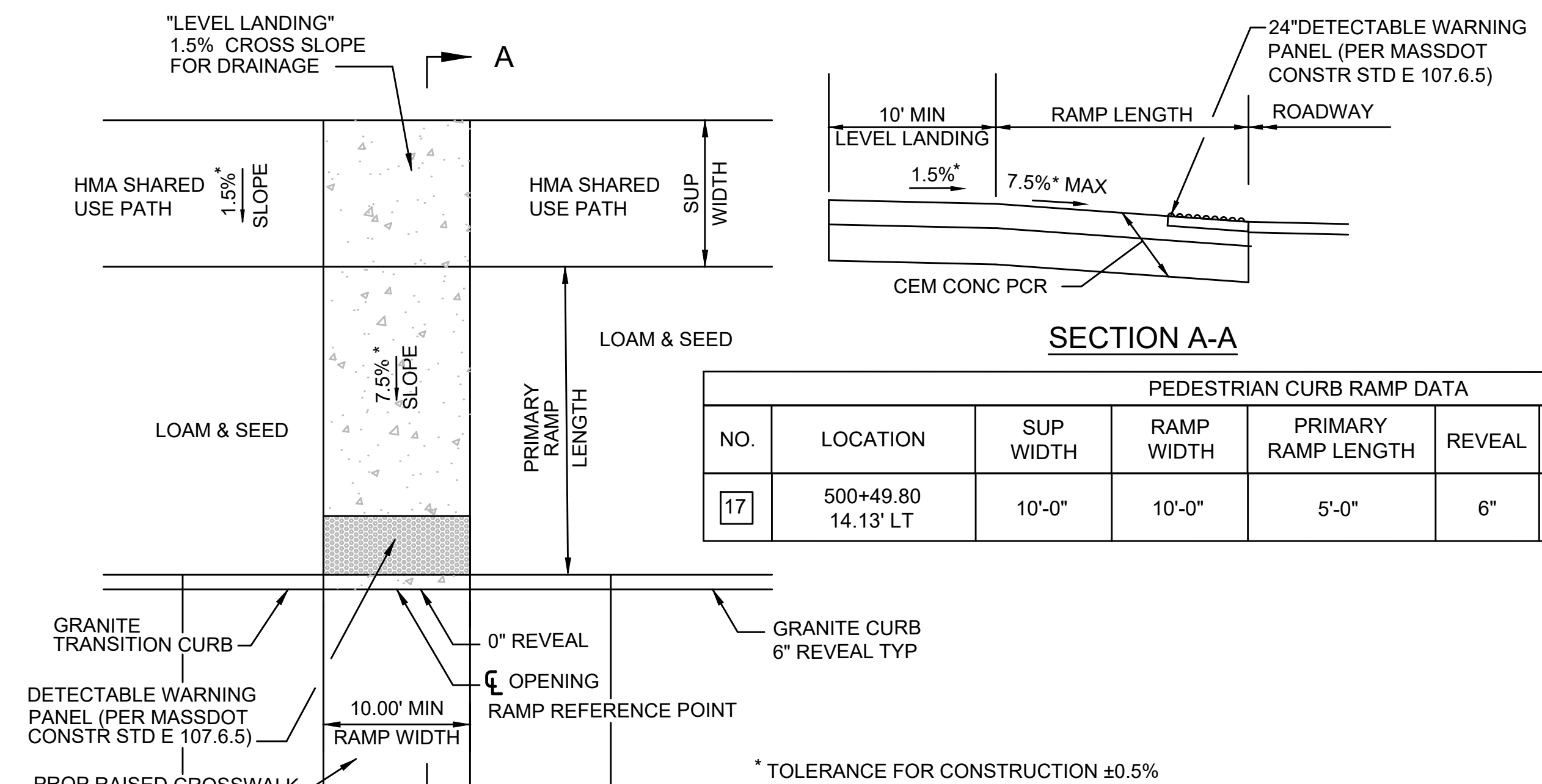
SCALE: N.T.S.

PEDESTRIAN CURB RAMP DATA									
NO.	LOCATION	SUP WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		OPENING ELEVATION	OPENING WIDTH
				REVEAL	TRANS	REVEAL	TRANS		
16	405+04.62 16.93' LT	8'-0"	+1.18%	6"	6'-6"	6"	7'-8"	216.73	8'-10"
18	500+49.47 36.51' RT	8'-0"	+2.27%	6"	6'-6"	6"	11'-0"	215.51	8'-6"



MEDIAN CUT THROUGH ON MONTGOMERY STREET NORTH STA 500+43

SCALE: 1"=5'



PEDESTRIAN CURB RAMP - WITH GRASS STRIP WITHOUT SIDE TRANSITIONS

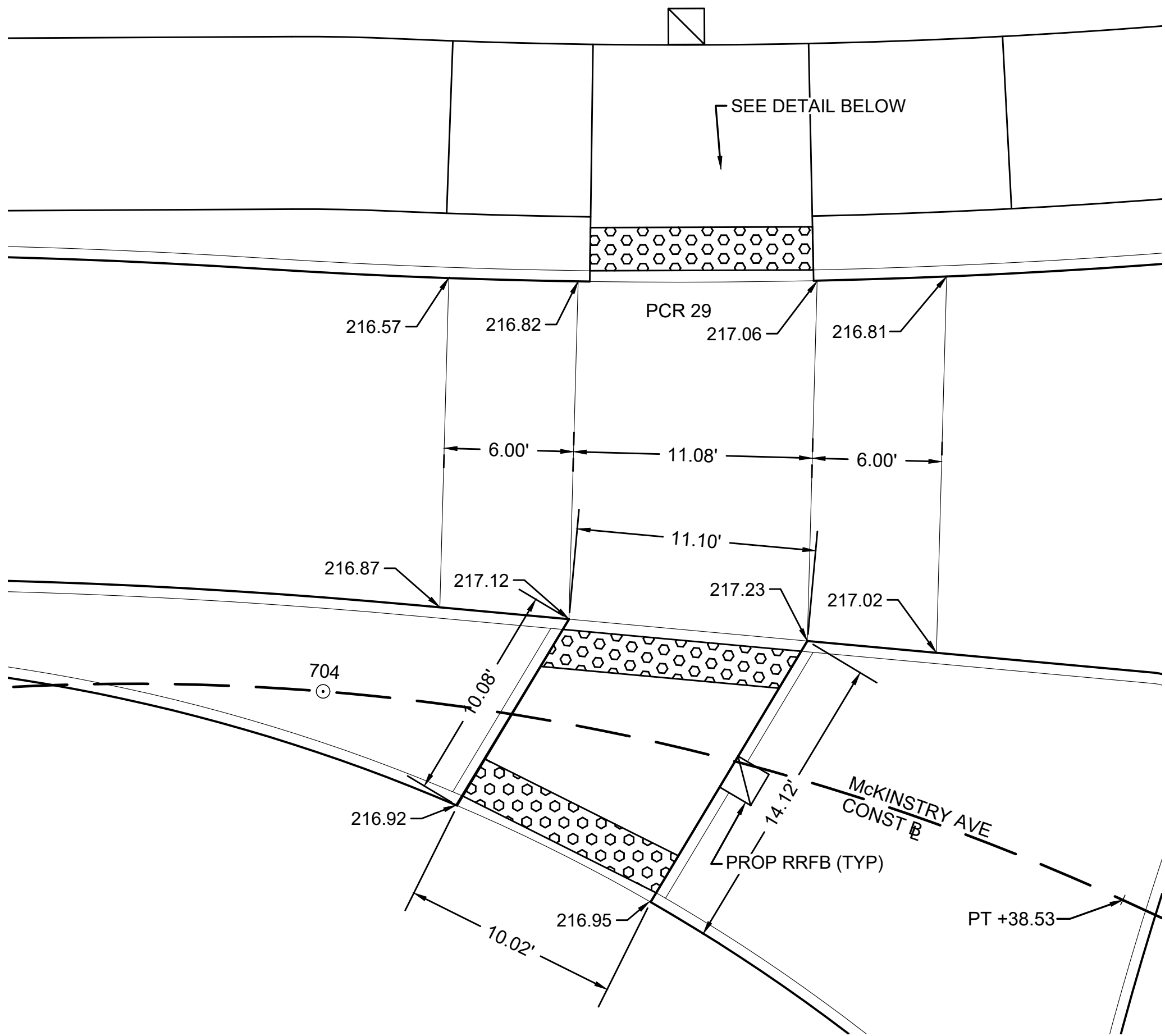
SCALE: N.T.S.

CHICOPEE

MONTGOMERY GRANBY MCKINSTRY

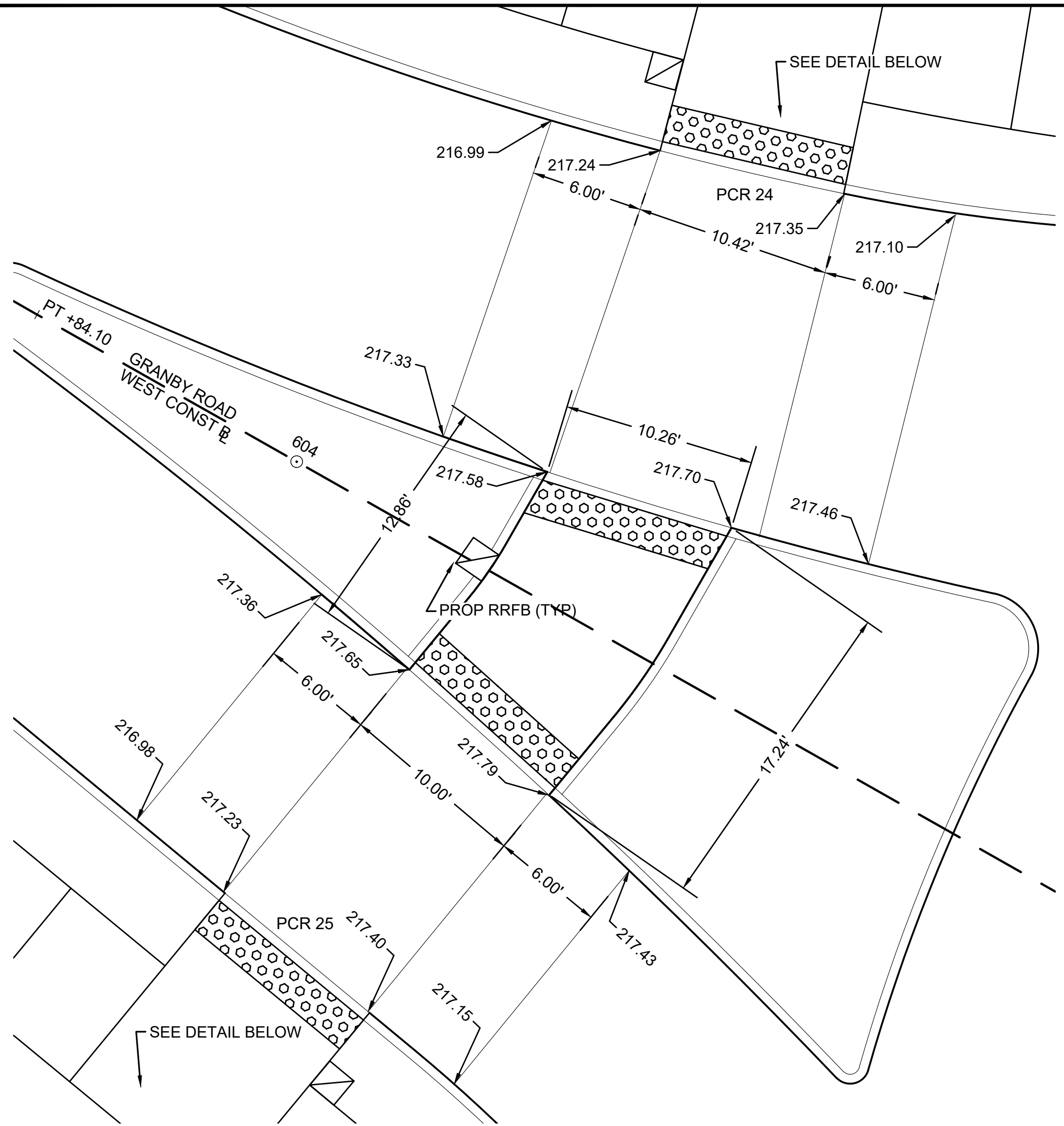
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	89	135
PROJECT FILE NO.		609061	

CONSTRUCTION DETAILS



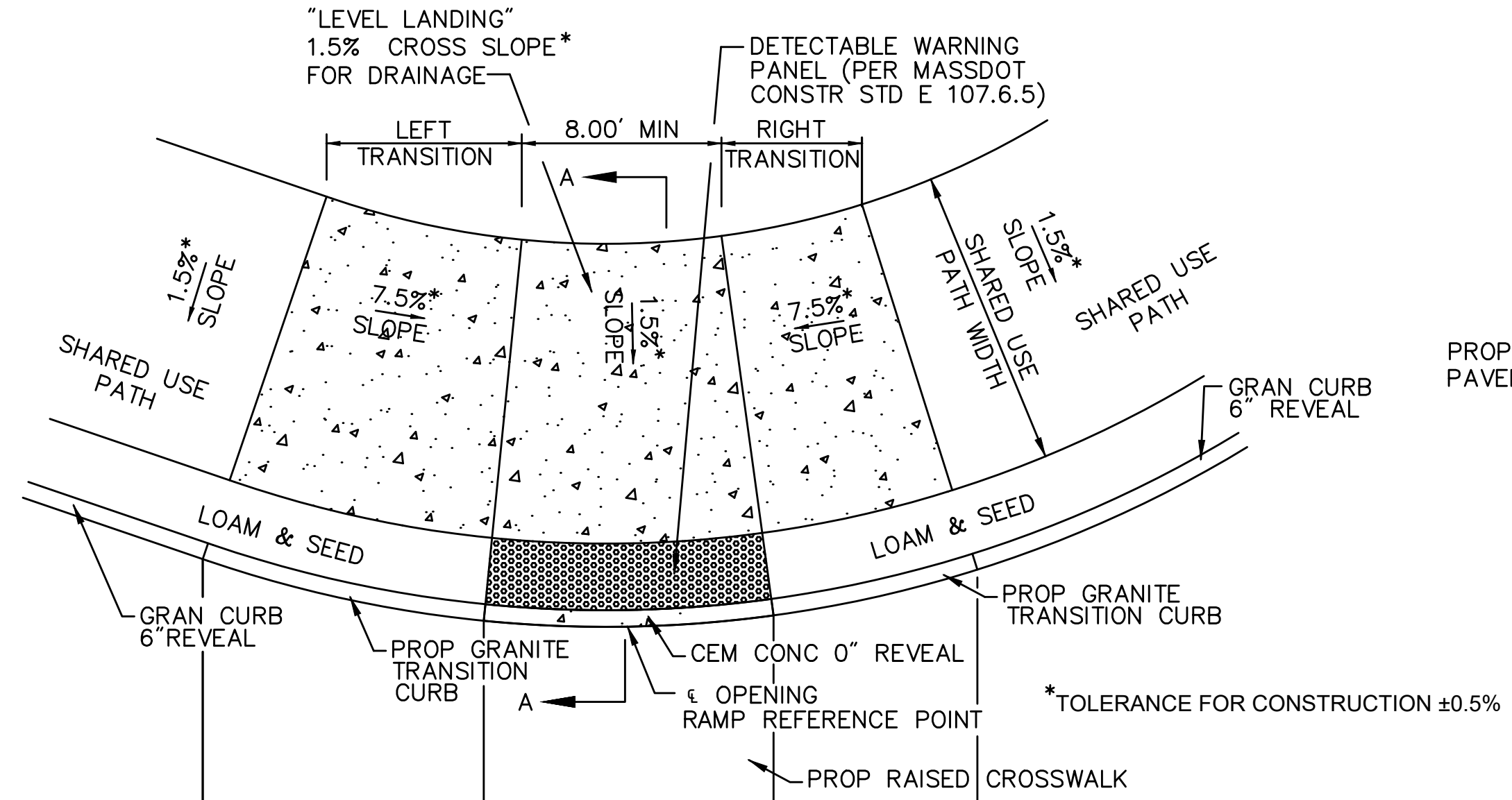
MEDIAN CUT THROUGH ON MCKINSTRY AVENUE STA 704+12

SCALE: 1"=5'



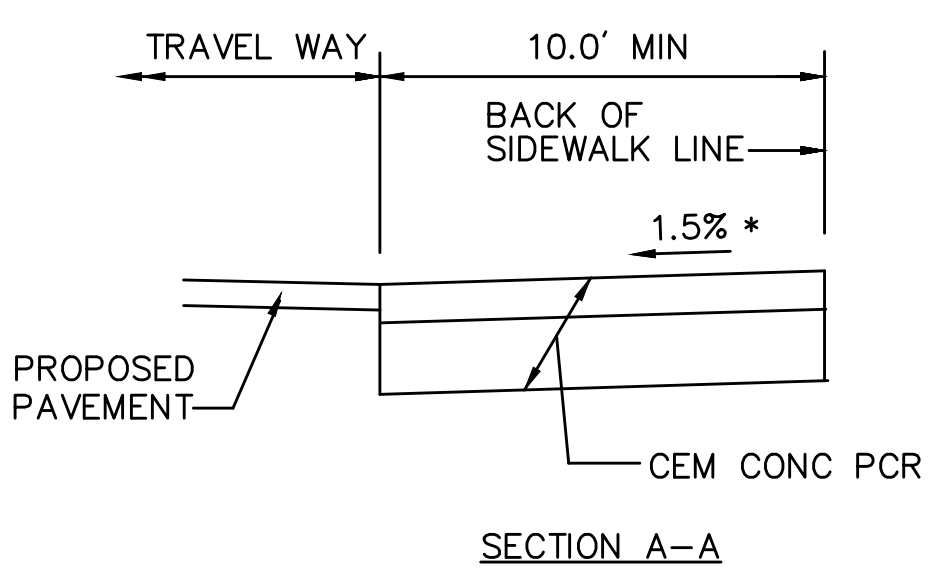
MEDIAN CUT THROUGH ON GRANBY ROAD WEST STA 604+17

SCALE: 1"=5'



PEDESTRIAN CURB RAMP - TWO WING SHARED USE PATH WITH GRASS STRIP

SCALE: N.T.S.



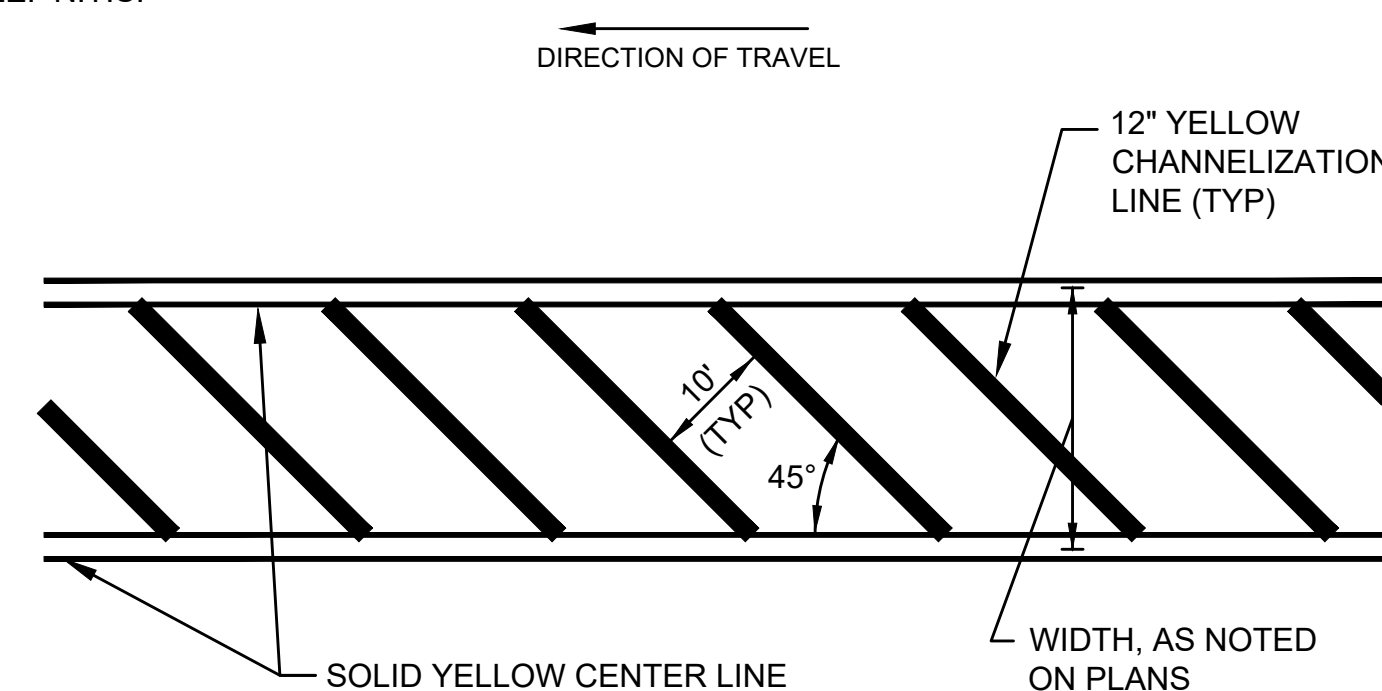
PEDESTRIAN CURB RAMP DATA									
NO.	LOCATION	SUP WIDTH	ROADWAY GUTTER	LEFT SIDE		RIGHT SIDE		€ OPENING ELEVATION	OPENING WIDTH
				REVEAL	TRANS	REVEAL	TRANS		
24	604+13.51 25.33' LT	8'-0"	+0.49%	6"	6'-6"	6"	7'-8"	217.30	10'-1"
25	604+12.94 22.77' RT	8'-0"	-0.77%	6"	7'-8"	6"	6'-6"	217.32	9'-11"
29	704+13.42 21.30' LT	8'-0"	+1.04%	6"	6'-6"	6"	9'-0"	216.94	10'-6"

The diagram illustrates a proposed median barrier system with the following components and dimensions:

- Barrier Types:**
 - 24" SWL (Solid Wall Barrier)
 - 6" SWL (Solid Wall Barrier)
 - 6" SYL (Solid Wall Barrier)
 - 3'-9" (Solid Wall Barrier)
 - 2' (Solid Wall Barrier)
 - CURBLINE
- Dimensions:**
 - 12' (Overall width of the first barrier section)
 - 11' (Width of the first barrier section)
 - 10' (Height of the 24" SWL barrier)
 - 3'-9" (Width of the third barrier section)
 - 2' (Width of the fourth barrier section)
 - 4' MIN (Minimum width of the gap between the last barrier and the curbline)
 - 2' MIN (Minimum width of the gap between the curbline and the next barrier section)
- Direction of Travel:** Indicated by an arrow pointing upwards.

- NOTES:**
1. ALL EXISTING CROSSWALK MARKINGS SHALL BE FULLY ERADICATED BY APPROVED METHOD PRIOR TO THE APPLICATION OF PROPOSED MARKINGS.
 2. ALL 24" RECESSED POLYUREA LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (e.g., TWO - 12" LINES) WILL BE ACCEPTED.
 3. LAYOUT OF CROSSWALKS SHALL BE ORIENTATED IN THE DIRECTION OF TRAVEL AND LOCATED OUTSIDE OF THE WHEEL PATH OF VEHICLES. LAYOUT SHALL BE APPROVED BY CHICOPEE DPW PRIOR TO APPLICATION OF RECESSED POLYUREA.
 4. ALL CROSSWALKS INSTALLED SHALL CONFORM TO THE RELEVANT PROVISIONS OF THE MASSACHUSETTS HIGHWAY DEPARTMENT "STANDARD SPECIFICATION FOR HIGHWAY AND BRIDGES" DATED 2024, SECTION 860 FOR REFLECTORIZED LINE (POLYUREA) & MATERIAL M7.01.3. LATEST REVISIONS.

SCALE: N.T.S.

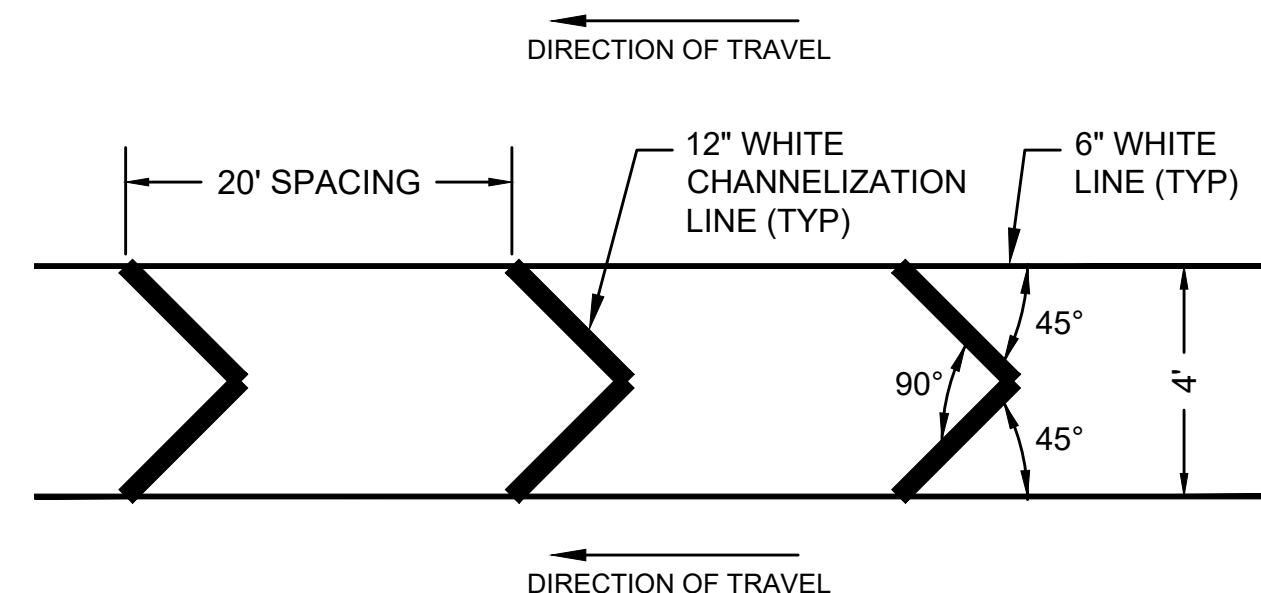


- NOTES:
1. ALL 12" LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (e.g. TWO - 6" LINES) WILL BE ACCEPTED.

SCALE: NTS

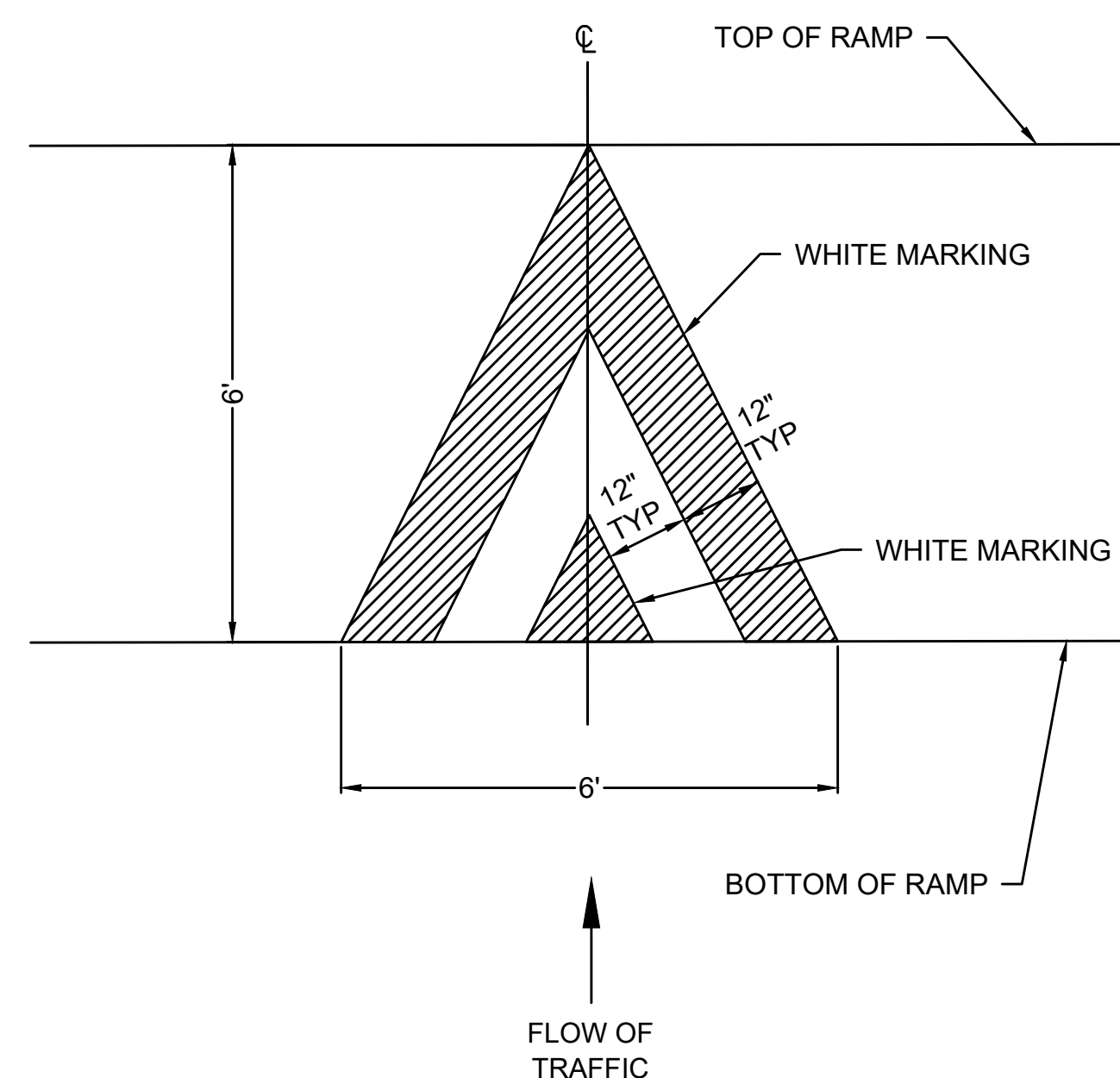
DWG: PM-13

DATE: OCT 2015



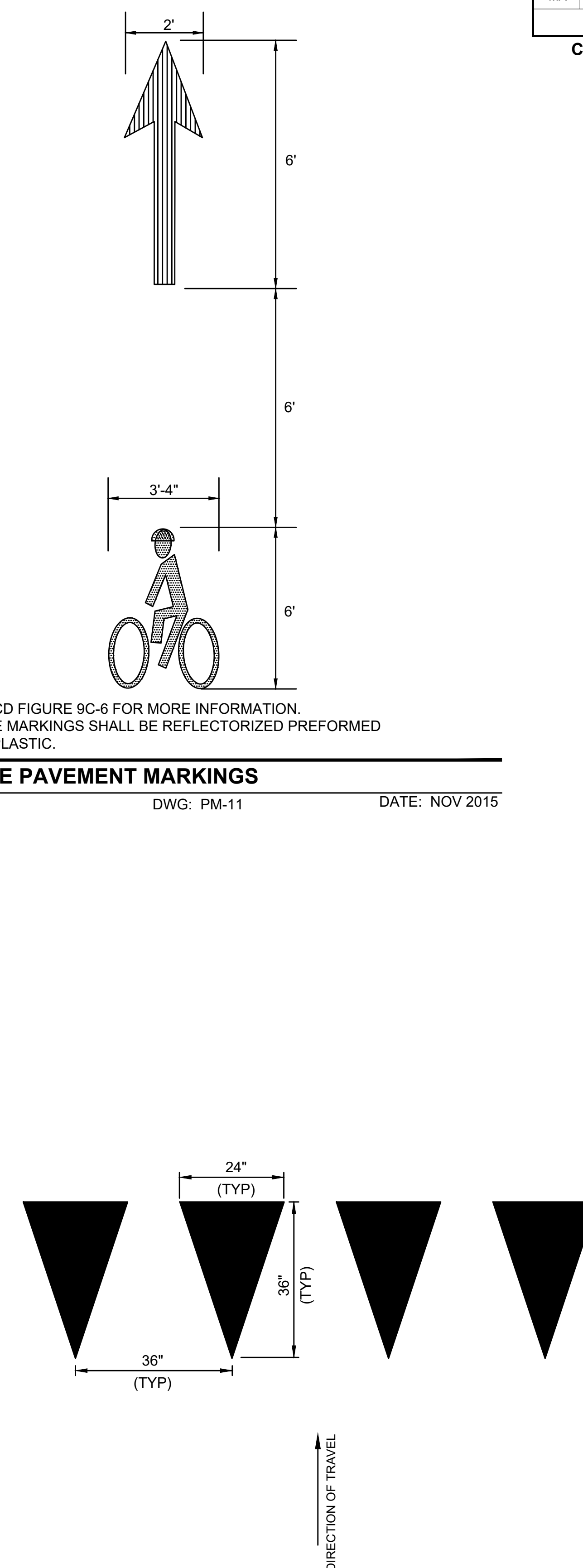
- NOTES:
1. CHEVRON MARKINGS SHALL BE REFLECTORIZED RECESSED POLYUREA.

SCALE: N.T.S.



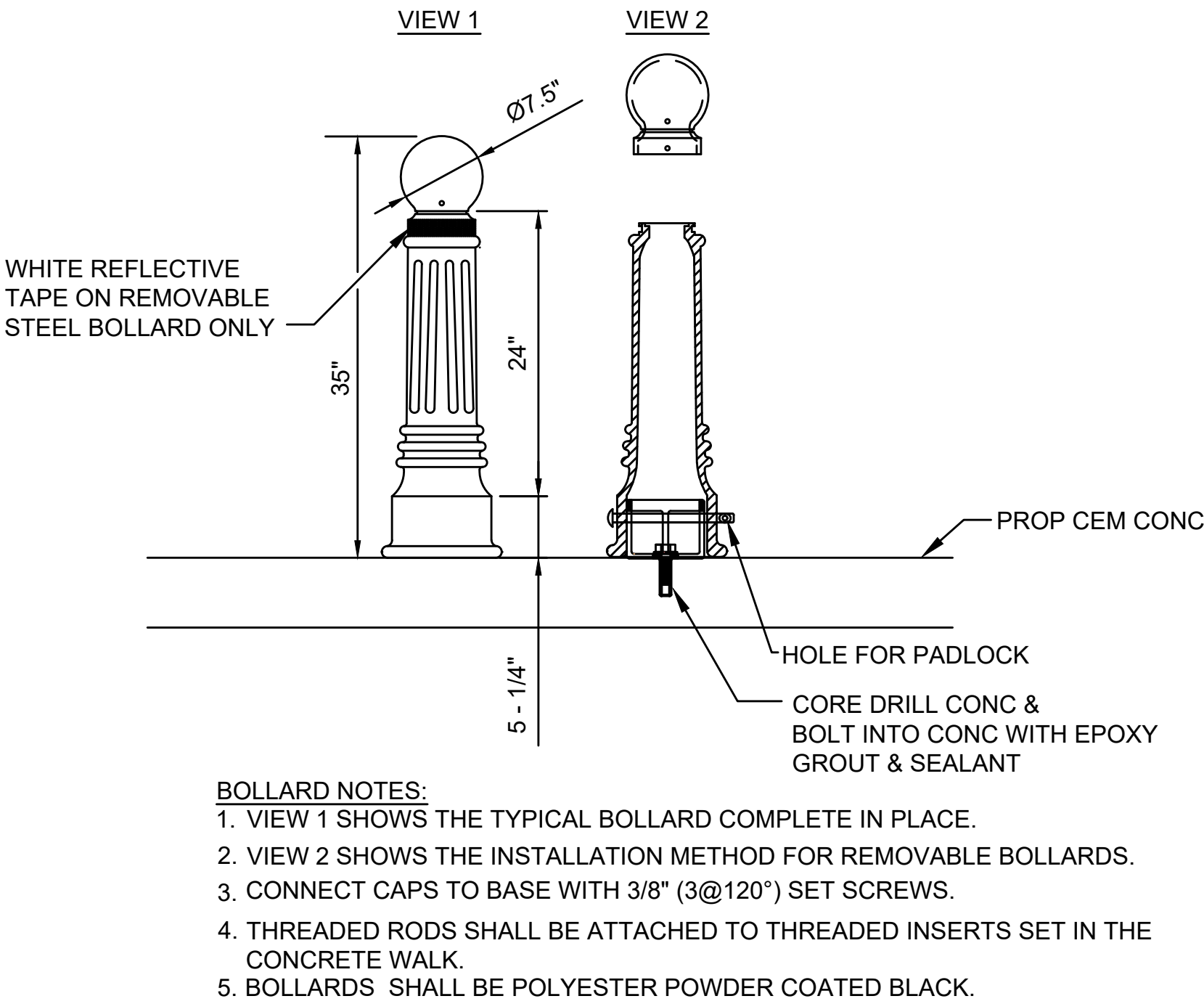
SCALE: N.T.S.

- NOTES:
1. SEE MUTCD FIGURE 3B-29 FOR MORE INFORMATION.
 2. RAISED CROSSWALK MARKING SHALL BE REFLECTIVE PREFORMED THERMOPLASTIC.
 3. MARKINGS TO BE LOCATED IN CENTER OF TRAVEL LANE. SEE SIGNAGE AND MARKING PLANS FOR LOCATIONS.



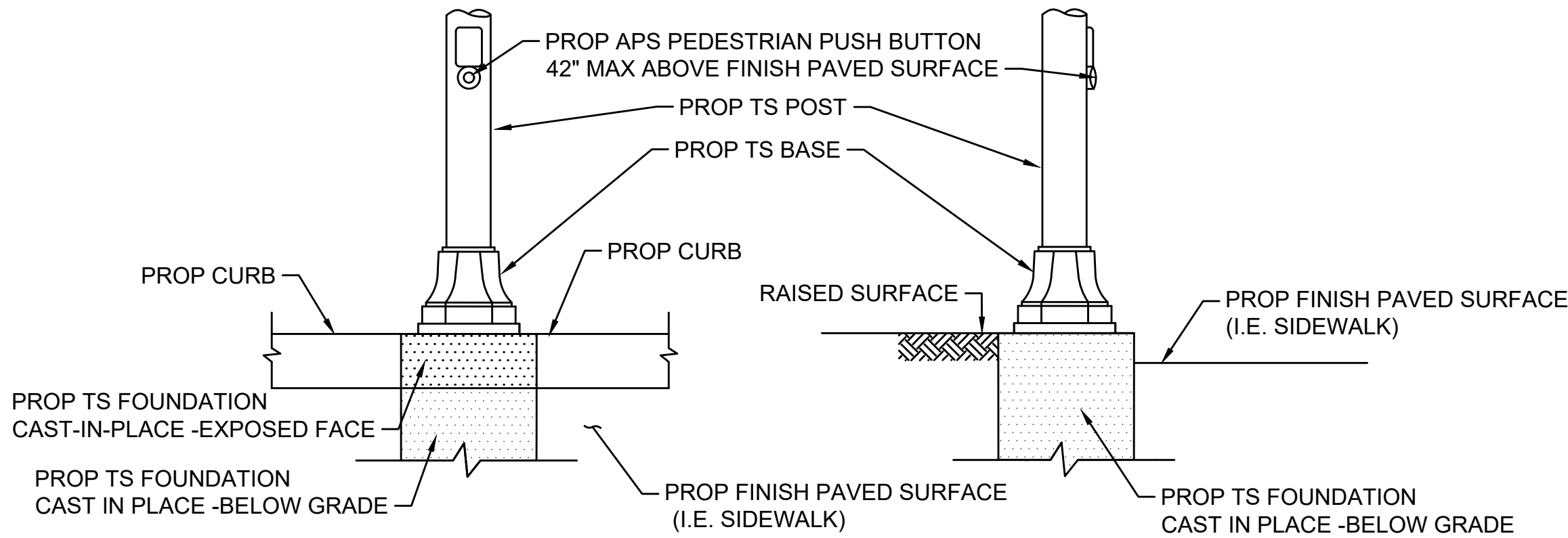
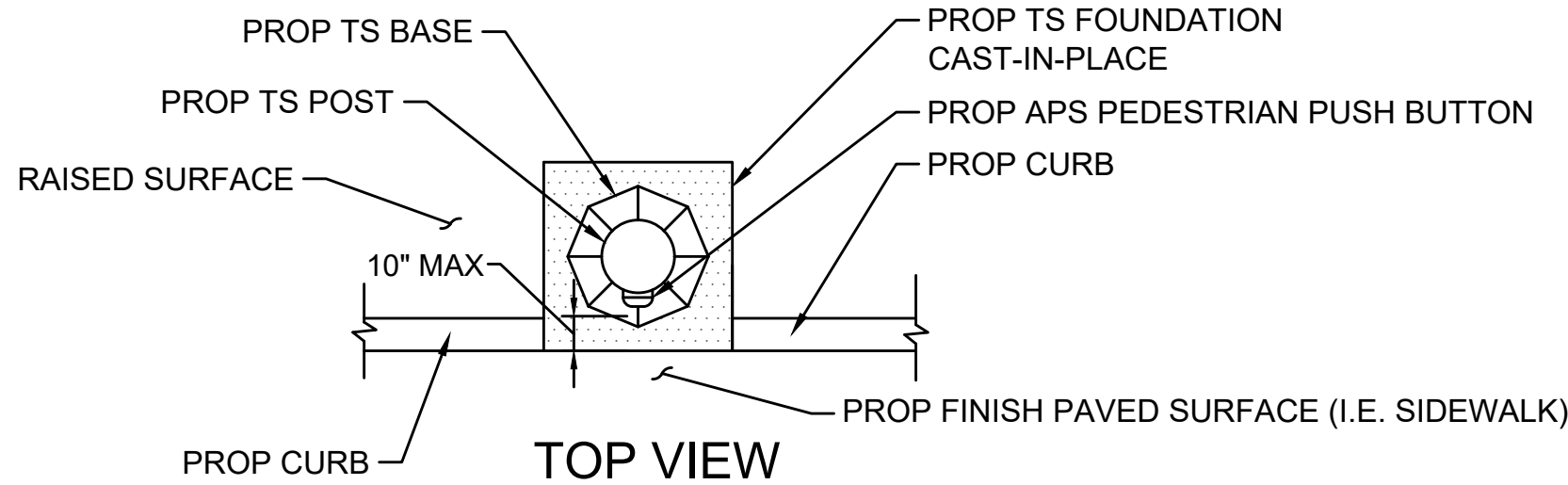
- NOTES:
1. YIELD LINES SHALL CONSIST OF A ROW OF SOLID WHITE TRIANGLES.
 2. IF APPLICABLE, YIELD LINES SHALL BE PLACED 4-FEET IN ADVANCE OF THE NEAREST CROSSWALK LINE.
 3. IN THE ABSENCE OF A MARKED CROSSWALK, YIELD LINES SHALL BE PLACED AS SHOWN ON THE PLANS.
 4. YIELD MARKINGS SHALL BE REFLECTORIZED PREFORMED THERMOPLASTIC

SCALE: NTS



BOLLARD DETAIL

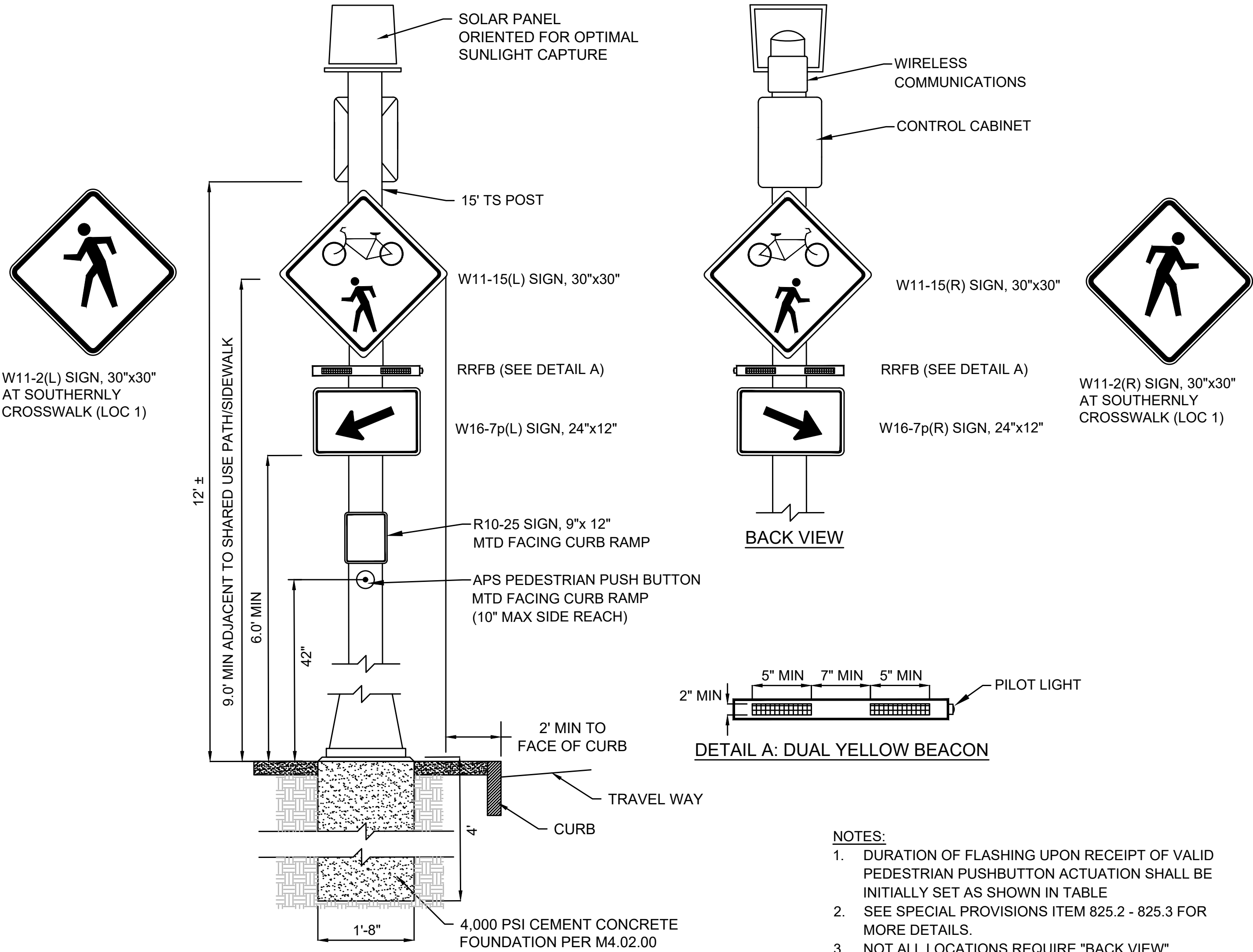
SCALE: N.T.S.



- NOTES:
- SEE DETAIL SD3-031 IN THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AS AMENDED FOR DIMENSIONS AND CONCRETE MIXTURE.
 - FOUNDATION TO BE USED FOR LOCATIONS IN MEDIANS AND ANY LOCATIONS SHOWING FOUNDATION ON TOP OF CURB

TRAFFIC SIGNAL POST CAST IN PLACE (POURED)FOUNDATION

SCALE: N.T.S.



RECTANGULAR RAPID FLASHING BEACON (SOLAR)

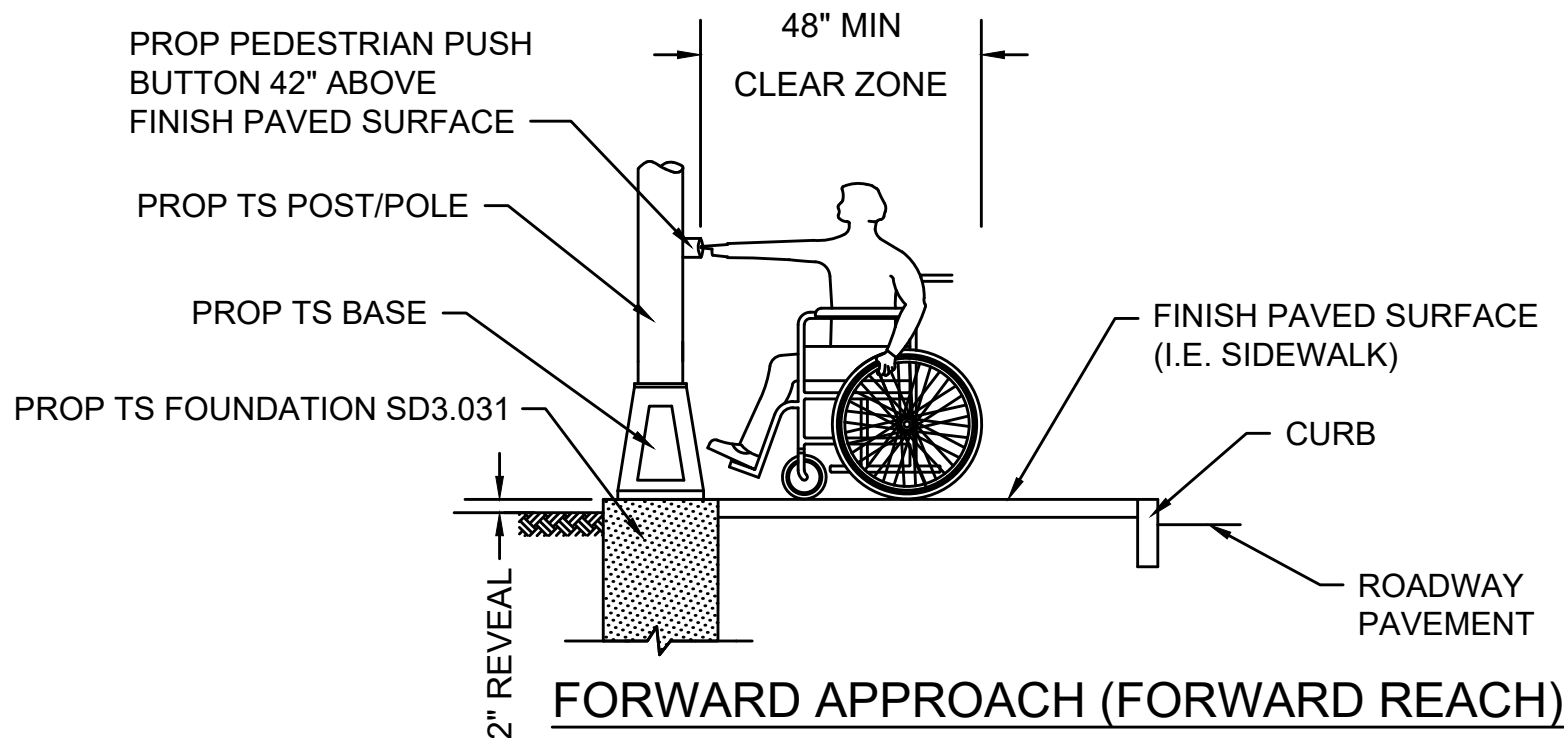
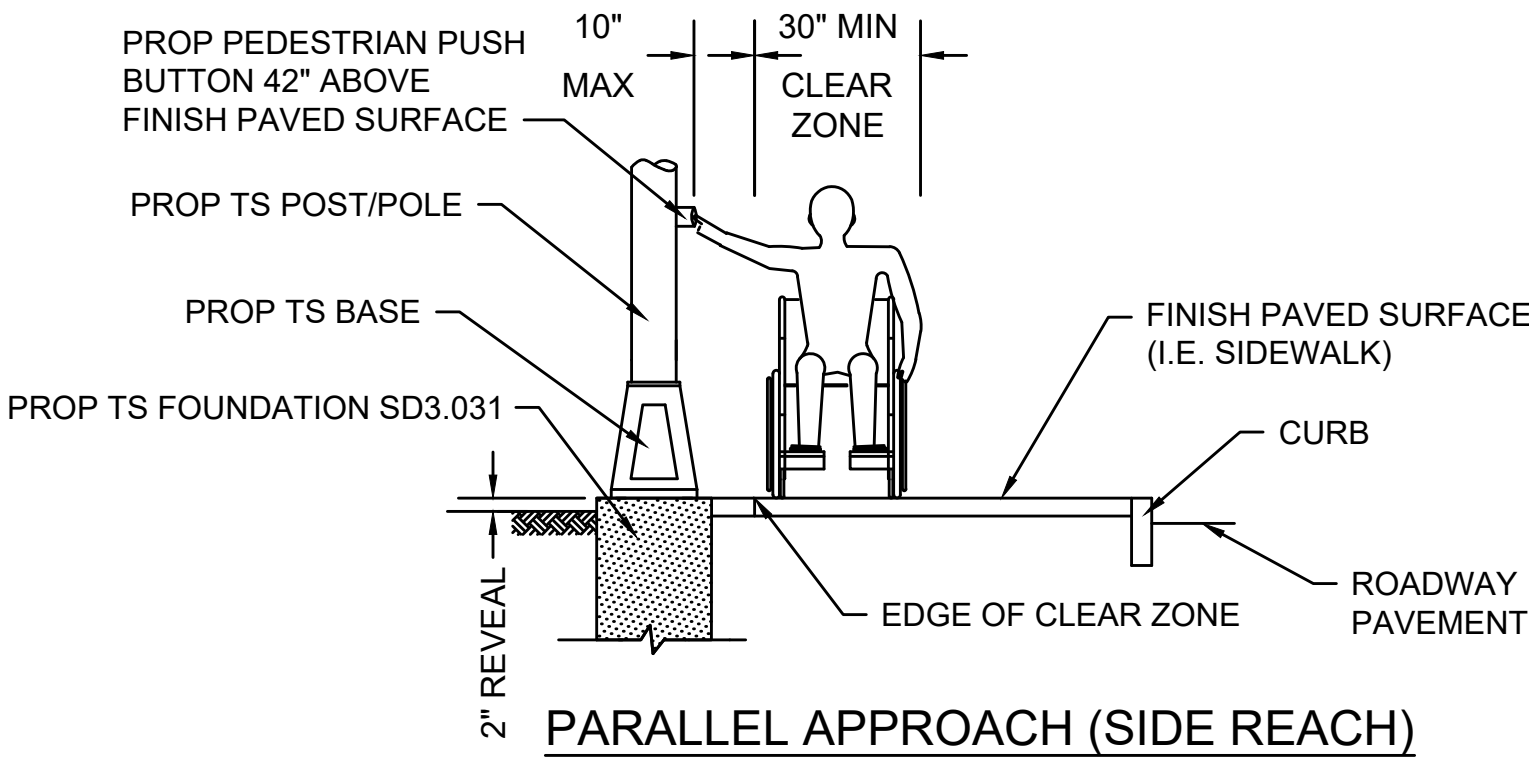
SCALE: NTS

- NOTES:
- DURATION OF FLASHING UPON RECEIPT OF VALID PEDESTRIAN PUSHBUTTON ACTUATION SHALL BE INITIALLY SET AS SHOWN IN TABLE
 - SEE SPECIAL PROVISIONS ITEM 825.2 - 825.3 FOR MORE DETAILS.
 - NOT ALL LOCATIONS REQUIRE "BACK VIEW"

RRFB DURATION

LOCATION	CROSSWALK LENGTH	MINIMUM FLASH DURATION	PROGRAMMED FLASH DURATION
1	43'	14	14
2	23'	8	8
3	22'	7	7
4	26'	9	9
5	26'	9	9
6	33'	11	11
7	23'	8	8
8	36'	12	12
9	25'	9	11
9	25'	9	11
11	31'	10	10
12	23'	8	8
13	22'	7	7

- NOTES:
- SEE SPECIAL PROVISION FOR ADDITIONAL INFORMATION.
 - CROSSWALK LENGTH IS DETERMINED FROM FARTHEST BUTTON TO OPPOSITE CURB RAMP OPENING.
 - MINIMUM FLASH DURATION IS CROSSWALK LENGTH DIVIDED BY 3.0 FEET PER SECOND.
 - PROGRAMMED FLASH DURATION NOT TO BE LESS THAN 7 SECONDS.



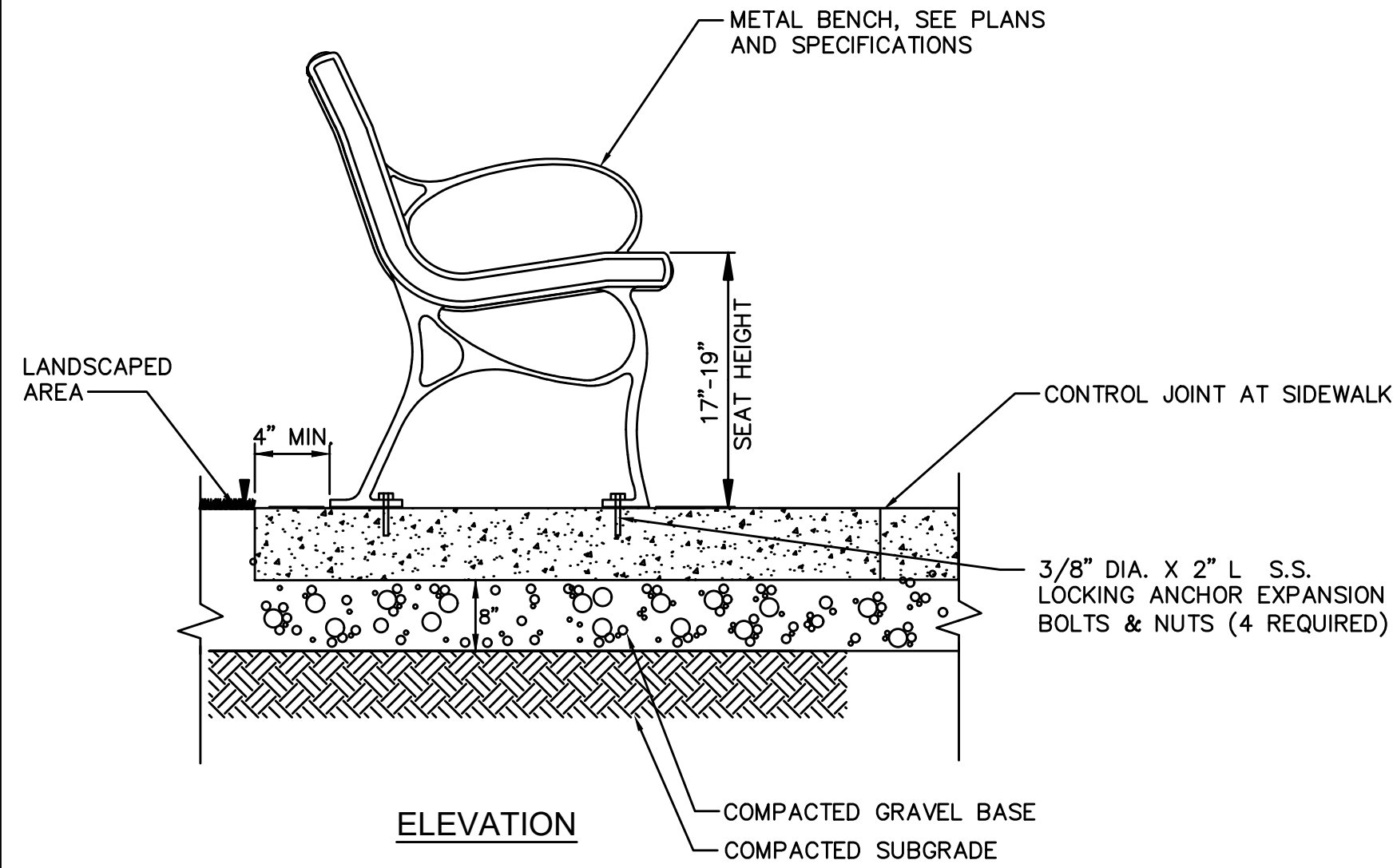
- NOTE:
- A CLEAR GROUND SPACE SHALL CONSIST OF A STABLE AND FIRM AREA, COMPLYING WITH 521 CMR 6.5 (FORWARD REACH) OR 521 CMR 6.6 (SIDE REACH) AND SHALL BE PROVIDED AT EACH OF THE PEDESTRIAN PUSH BUTTONS.
- WHERE A FORWARD APPROACH IS PROVIDED, PEDESTRIAN PUSH BUTTONS SHALL ABUT AND BE CENTERED ON THE CLEAR GROUND SPACE.
 - WHERE A PARALLEL APPROACH IS PROVIDED, PEDESTRIAN PUSH BUTTONS SHALL BE WITHIN TEN INCHES (10") HORIZONTALLY OF AND CENTERED ON THE CLEAR GROUND SPACE.

PEDESTRIAN PUSH BUTTON CLEAR ZONE

SCALE: N.T.S.

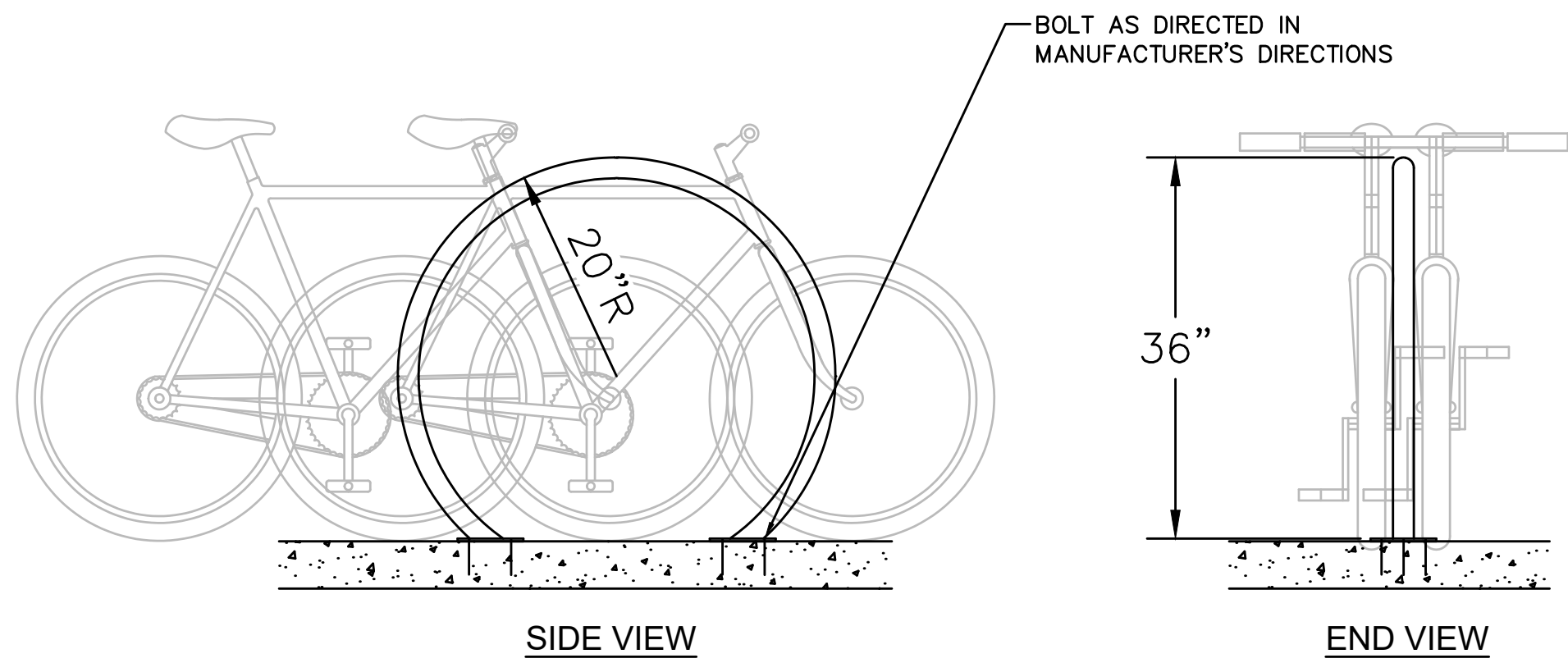
DWG: PM-10

DATE: APRIL 2013



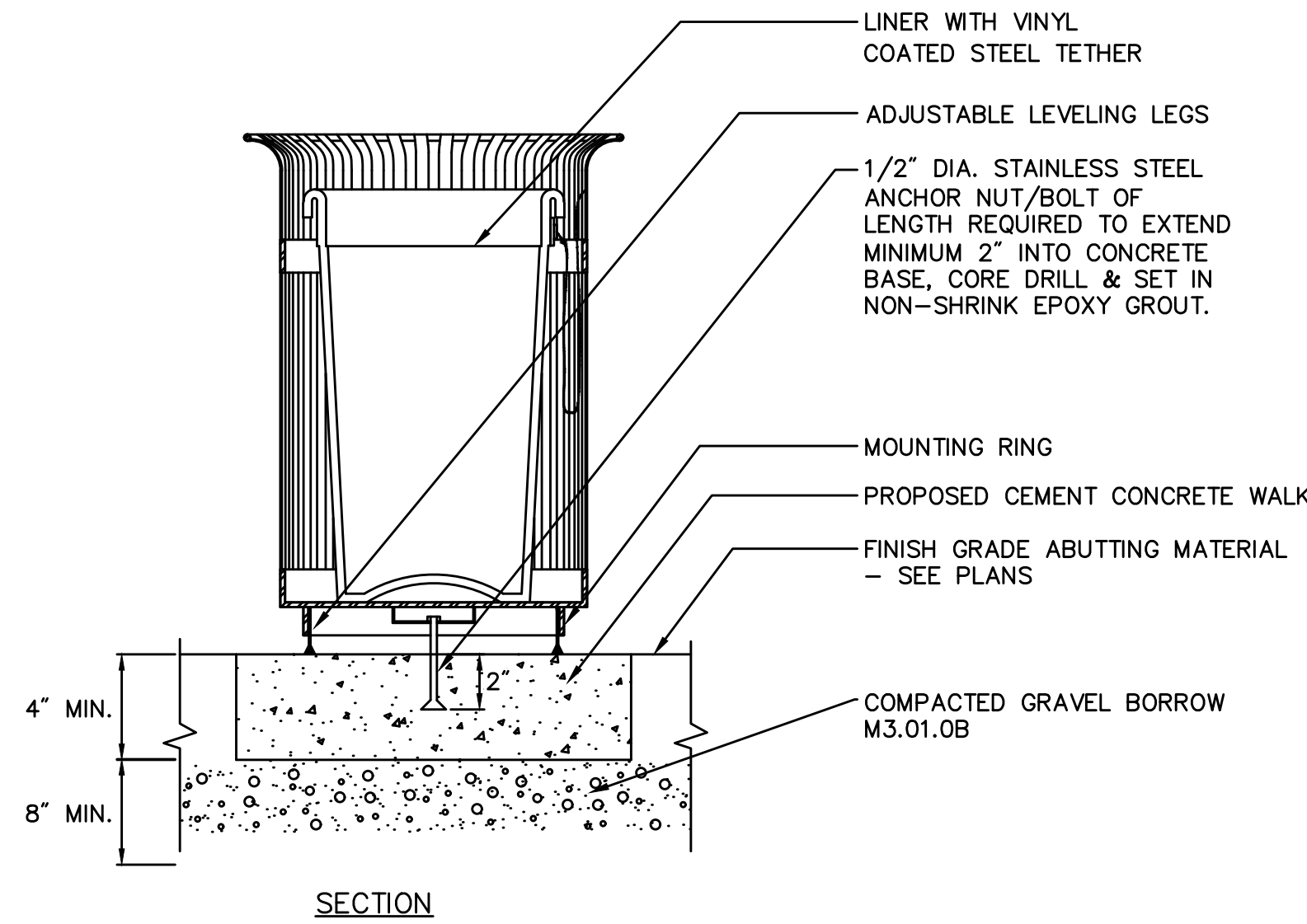
PARK BENCH

SCALE: N.T.S.



BICYCLE RACK

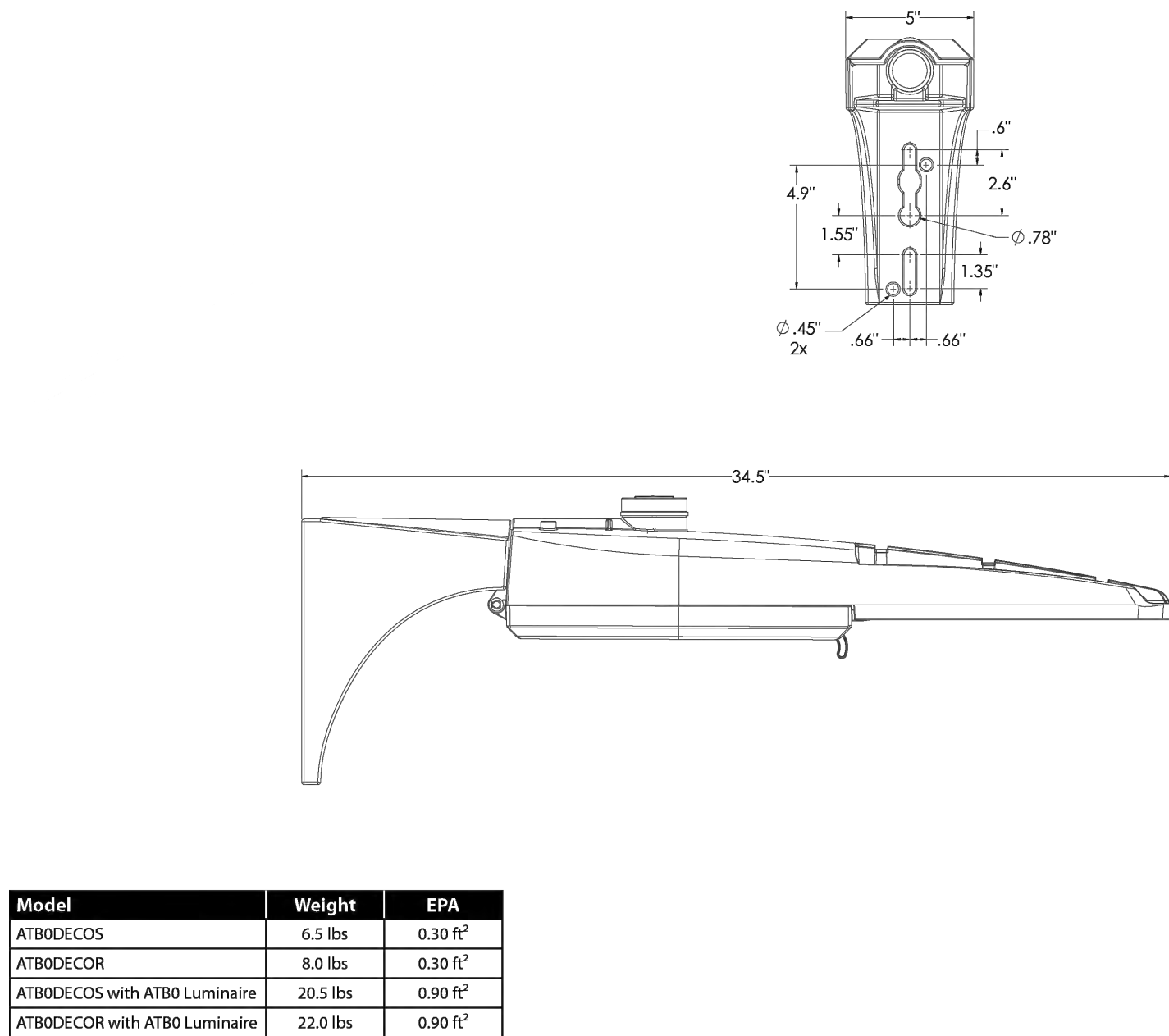
SCALE: N.T.S.



TRASH RECEPTACLE

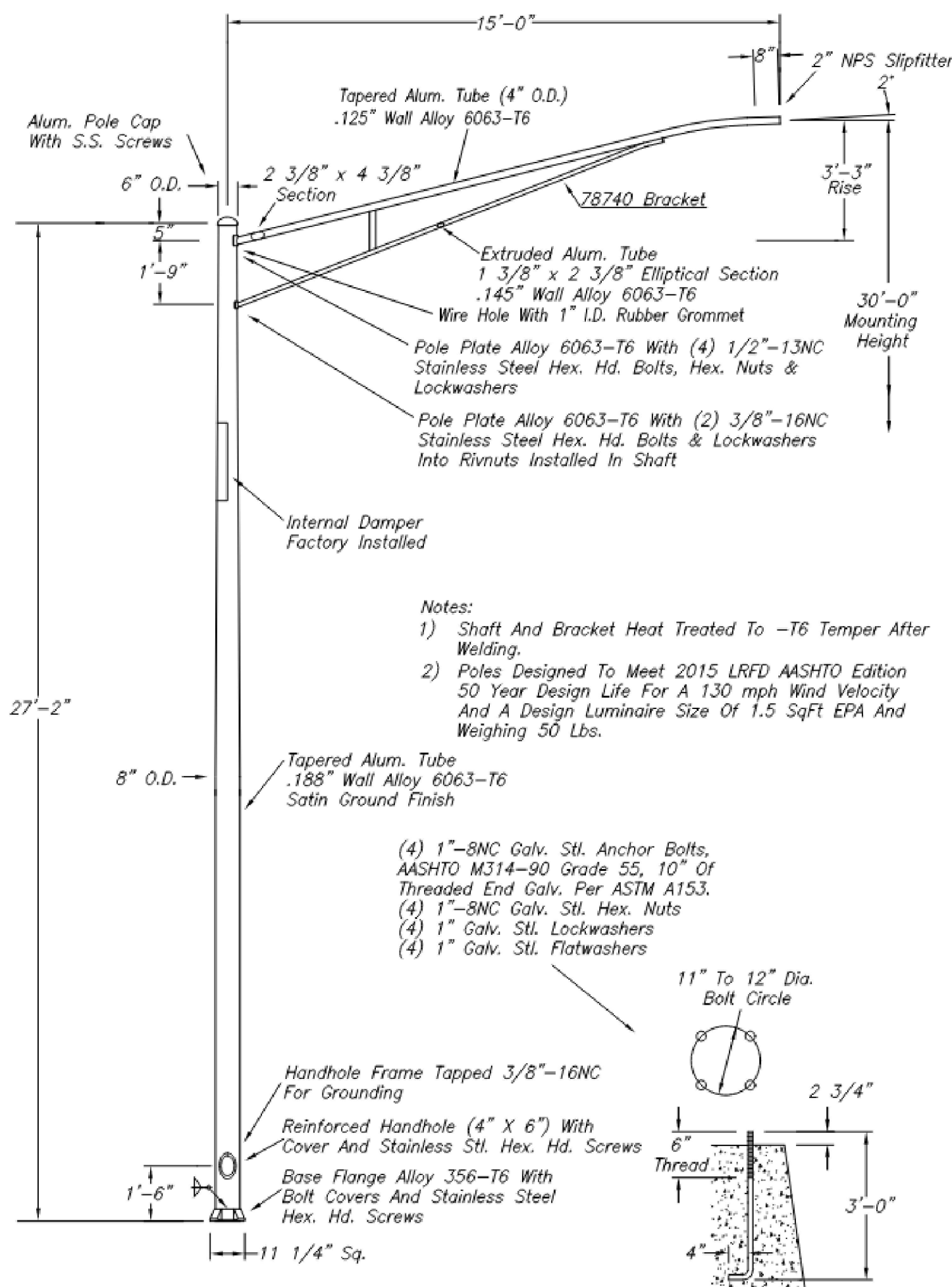
SCALE: N.T.S.

Autobahn Series ATB0 Roadway Lighting



LUMINAIRE FOR ROADWAY LIGHTING

SCALE: N.T.S.



30' STREET LIGHTING POLE

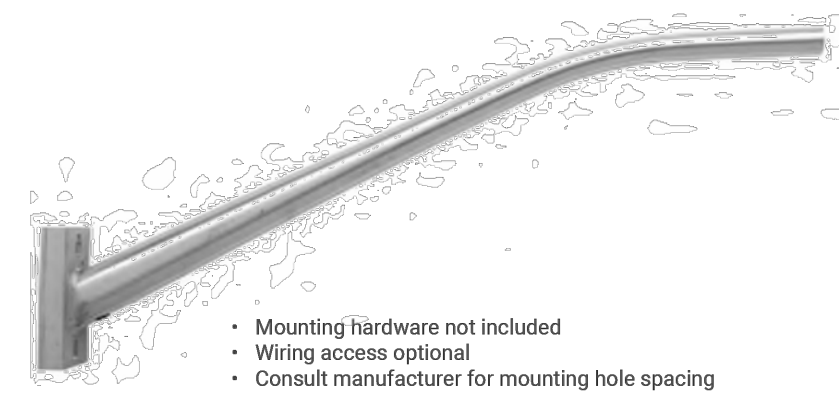
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CHICOPEE MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/HPP-0032(051)X	93	135
PROJECT FILE NO.		609061	

CONSTRUCTION DETAILS

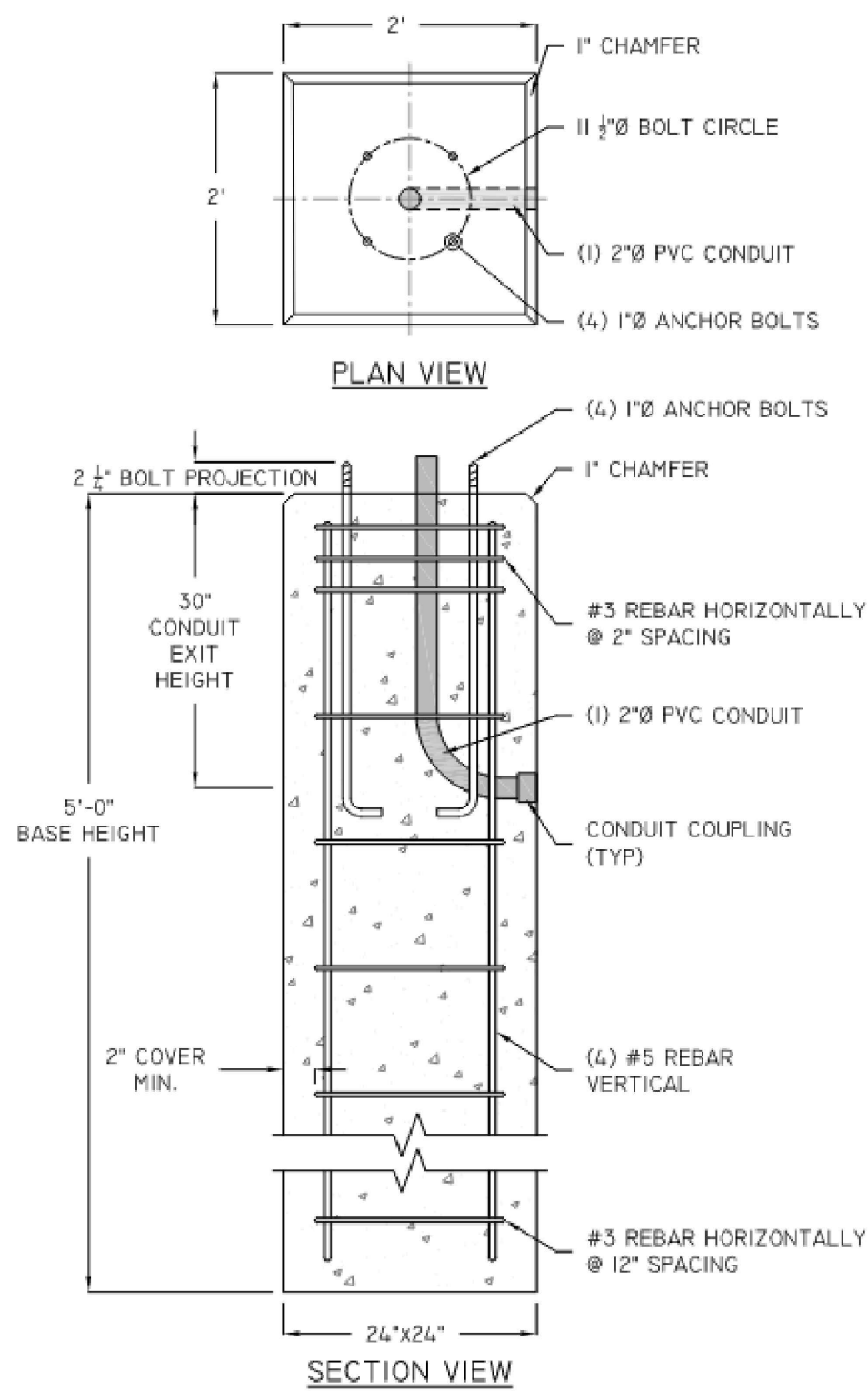
Single Tapered Elliptical Bracket (Wood Pole Mount)



Bracket Model	Material	Pipe Size	Nom. Length	Length	Height	Fixture Mount Length	Weight	Finish
UM-A-MST6PM1-000-RW-24	Aluminum	2"	2'	24"	12"	8"	9 lb	None
UM-A-MST6PM1-000-RW-48	Aluminum	2"	4'	48"	24"	10"	10 lb	None
UM-A-MST6PM1-000-RW-72	Aluminum	2"	6'	68"	24"	10"	17 lb	None
UM-A-MST6PM1-000-RW-96	Aluminum	2"	8'	90"	24"	10"	19 lb	None
UM-A-MST6PM1-000-RW-10	Aluminum	2"	10'	114"	24"	10"	21 lb	None

HIGHWAY LIGHTING 6 FOOT MAST ARM - WOOD POLE

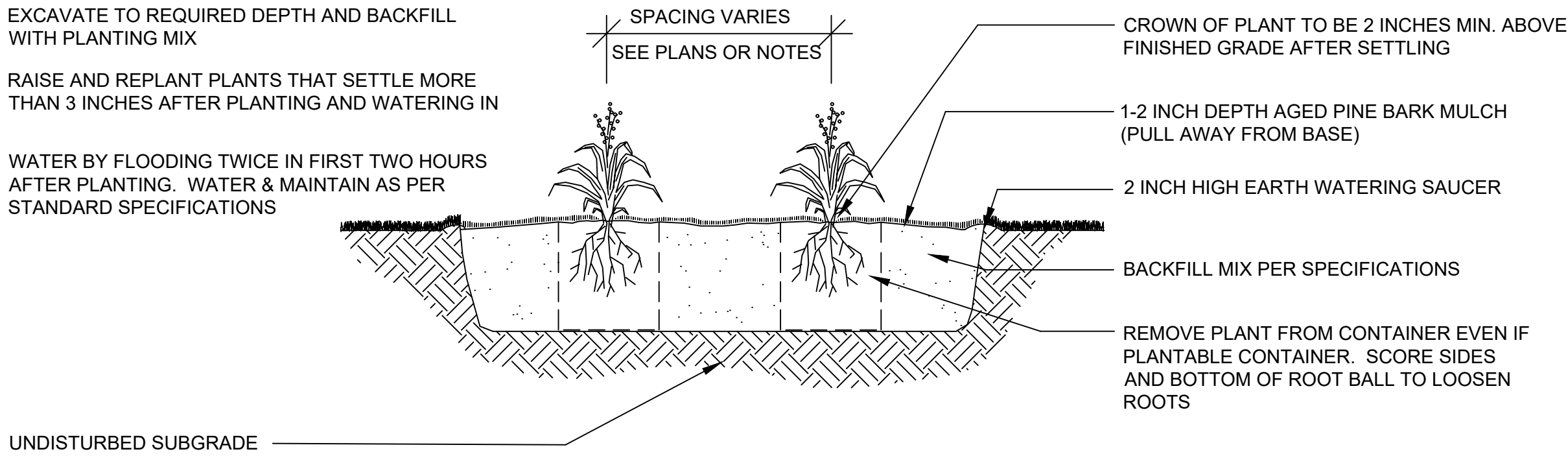
SCALE: N.T.S.



- DESIGN NOTES:
1. CONCRETE - MIN 5,000 PSI, 28 DAYS.
 2. ANCHOR BOLTS AND SWEEPS CAST IN BY ARROW CONCRETE PRODUCTS.
 3. (3) #3 REBAR HORIZONTAL WRAP 2" O.C.
 4. #3 REBAR HORIZONTAL WRAP 12" O.C.
 5. (4) #5 REBAR VERTICAL.
 6. REINFORCING STEEL CONFORMS TO LATEST ASTM A615 GRADE 60 AND A82 OR A185 SPECS.

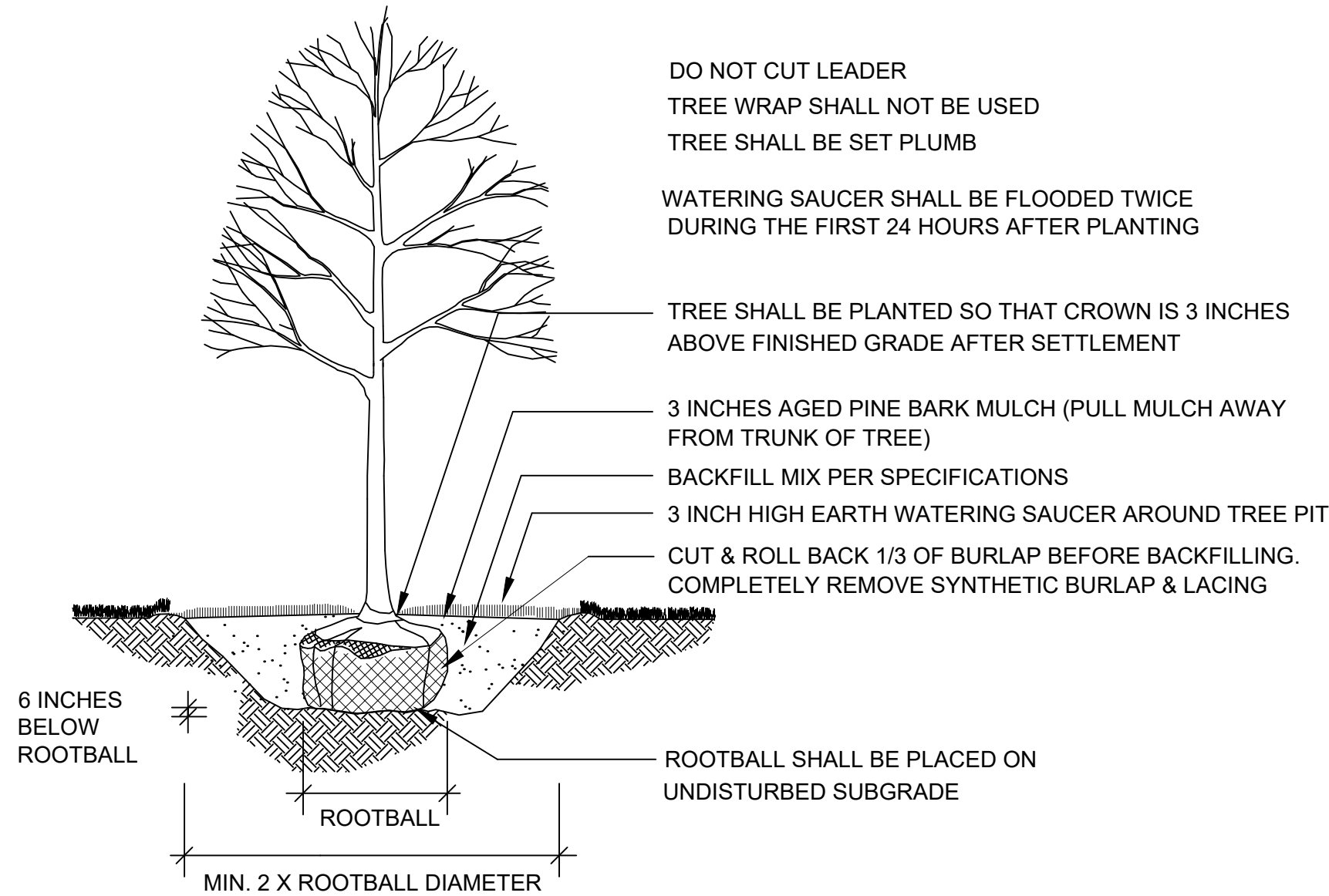
STREET LIGHT BASE

SCALE: N.T.S.



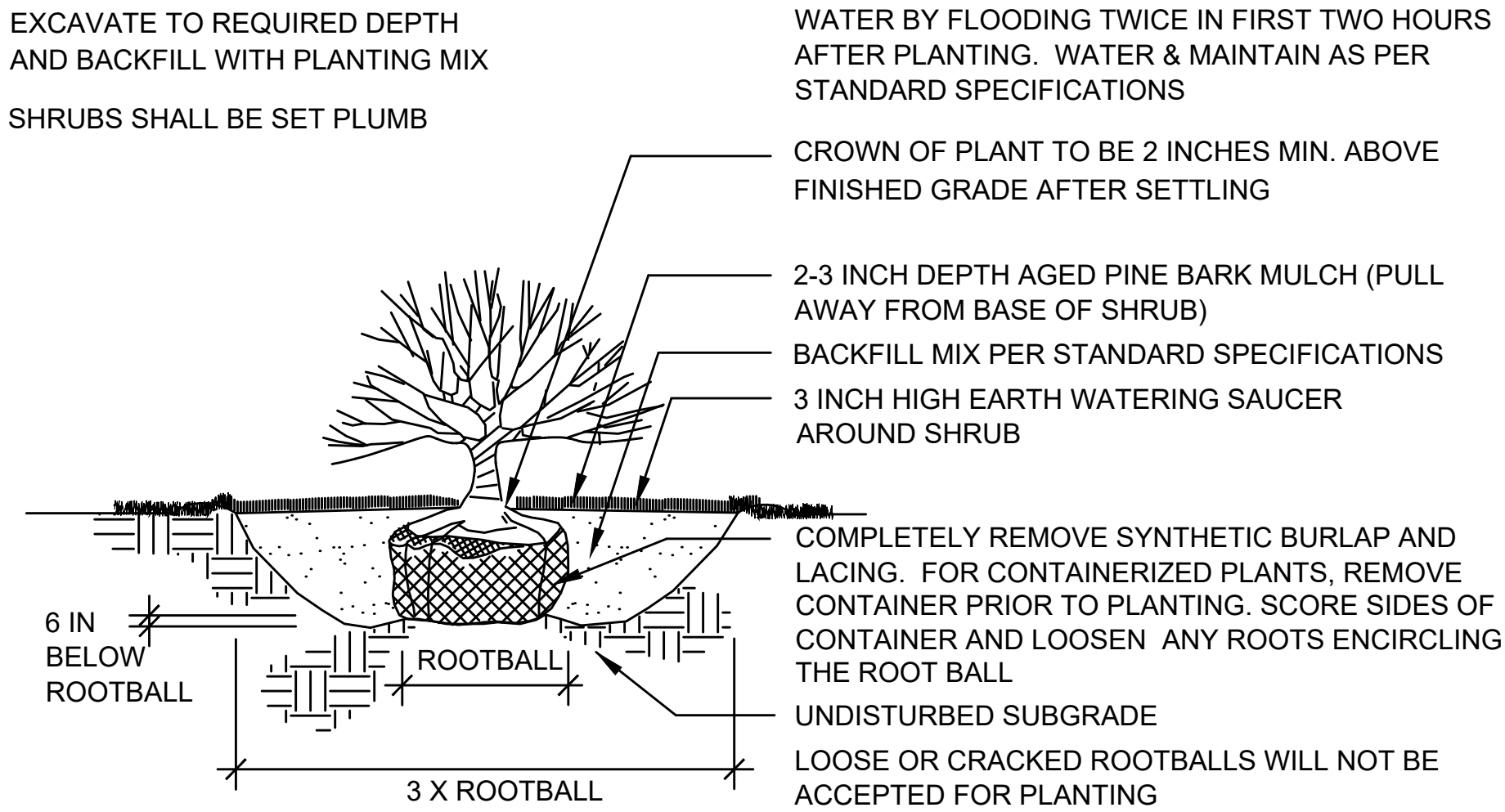
PERENNIAL PLANTING

NOT TO SCALE



DECIDUOUS TREE PLANTING

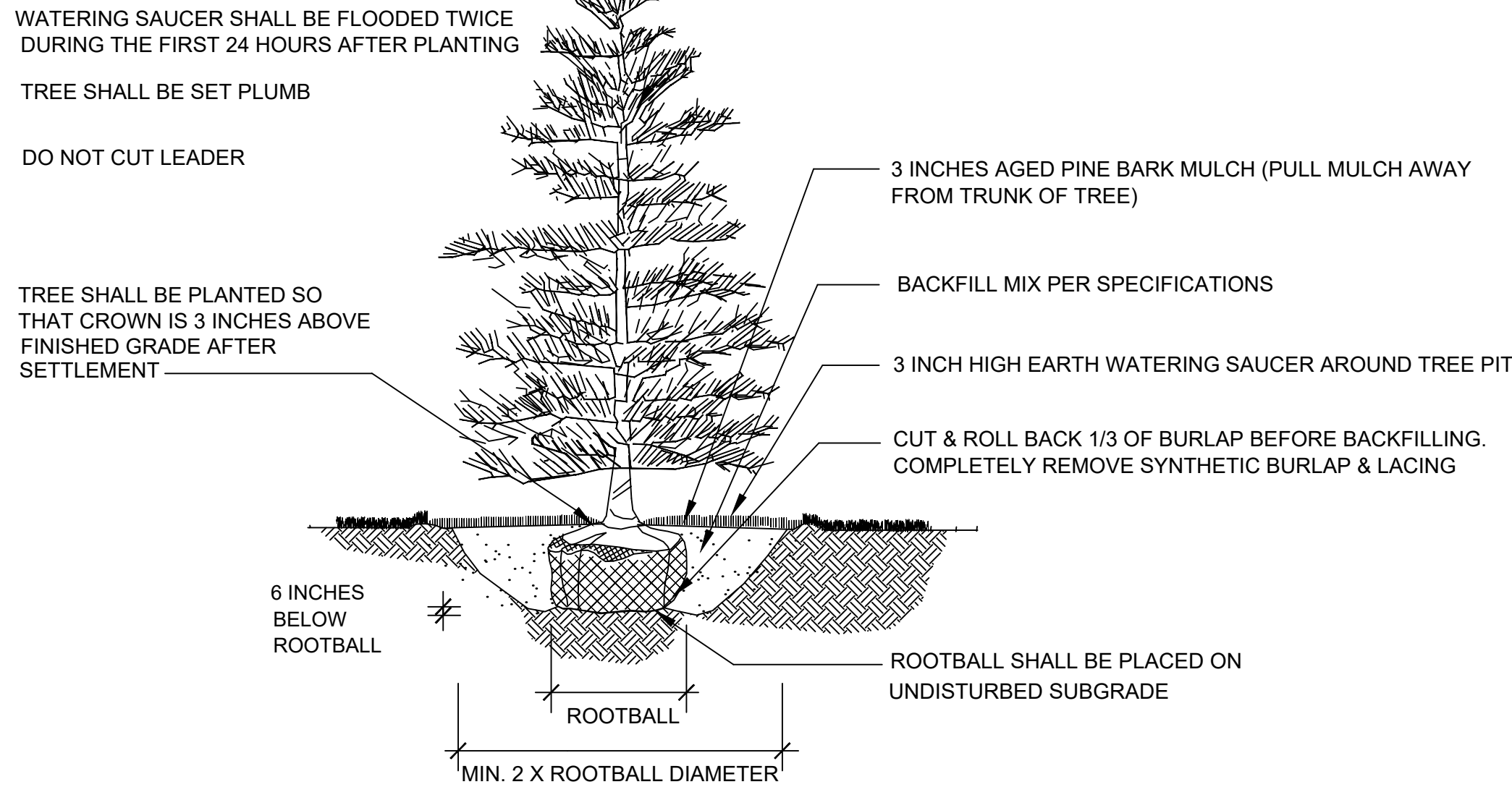
NOT TO SCALE



SHRUB PLANTING

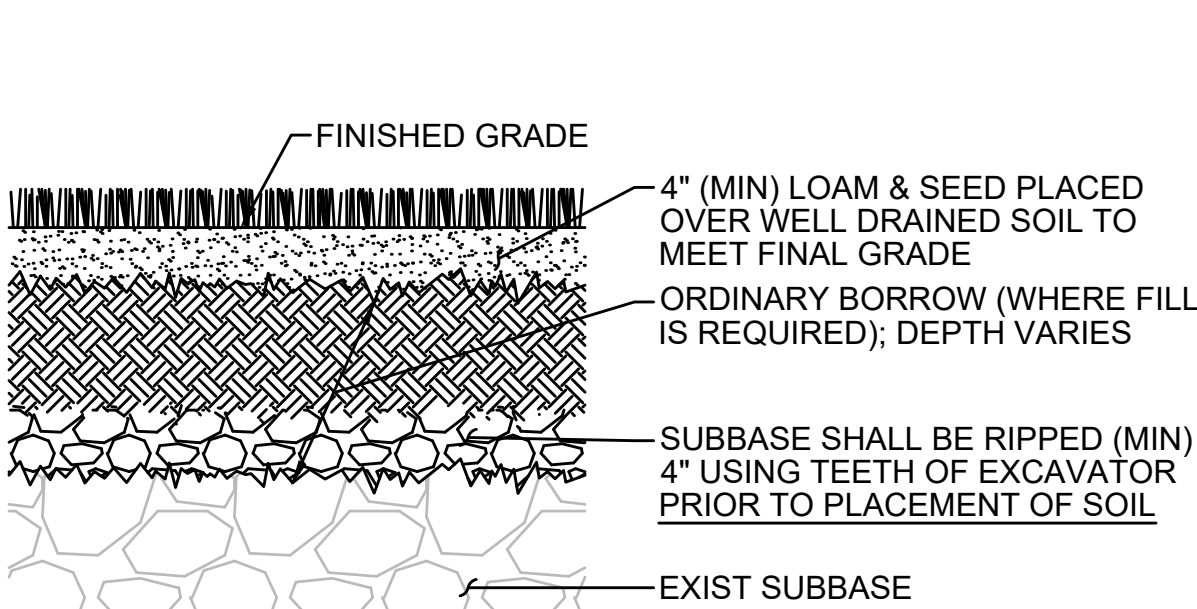
NOT TO SCALE

FEB 28, 2013



EVERGREEN TREE PLANTING

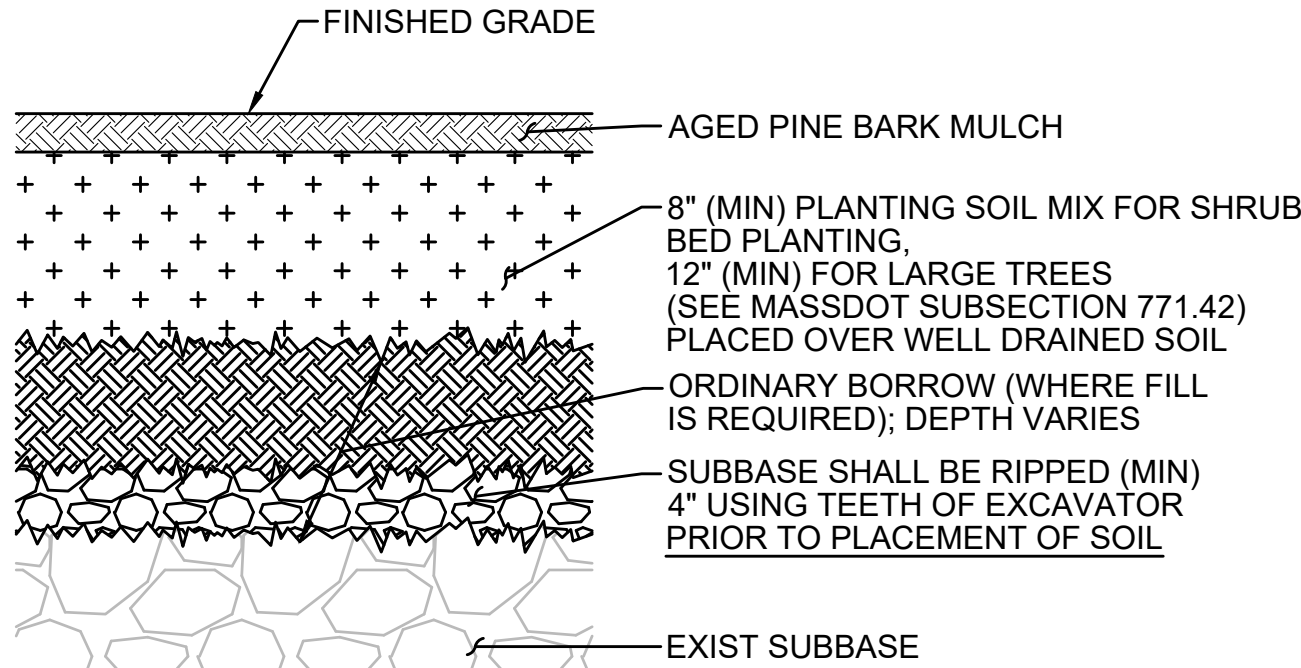
NOT TO SCALE



NOTE
ALL EXISTING ASPHALT SHALL BE STRIPPED AND REMOVED PRIOR TO TILLING. ASPHALT SHALL NOT BE MIXED WITH THE SUBBASE.

LAWN IN FORMER PAVED AREAS

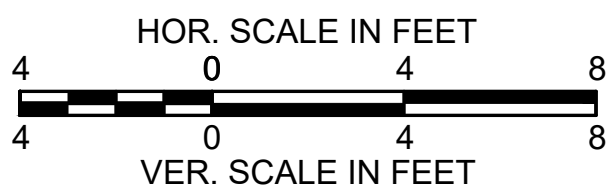
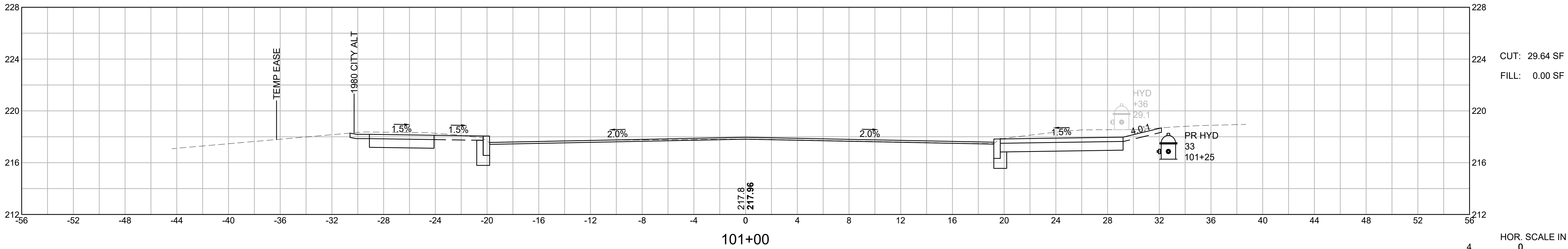
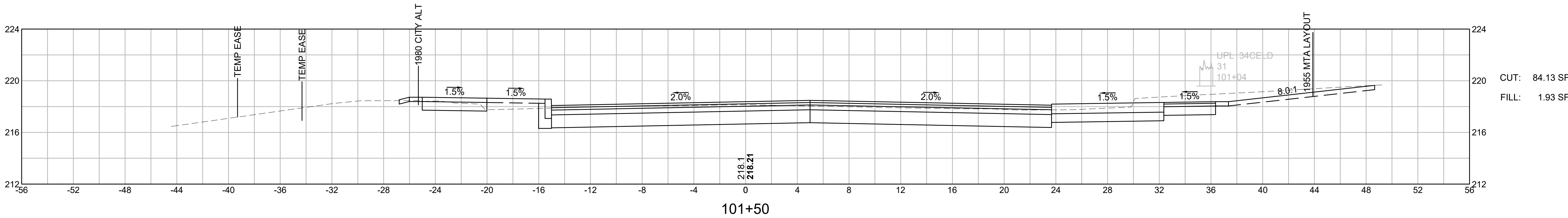
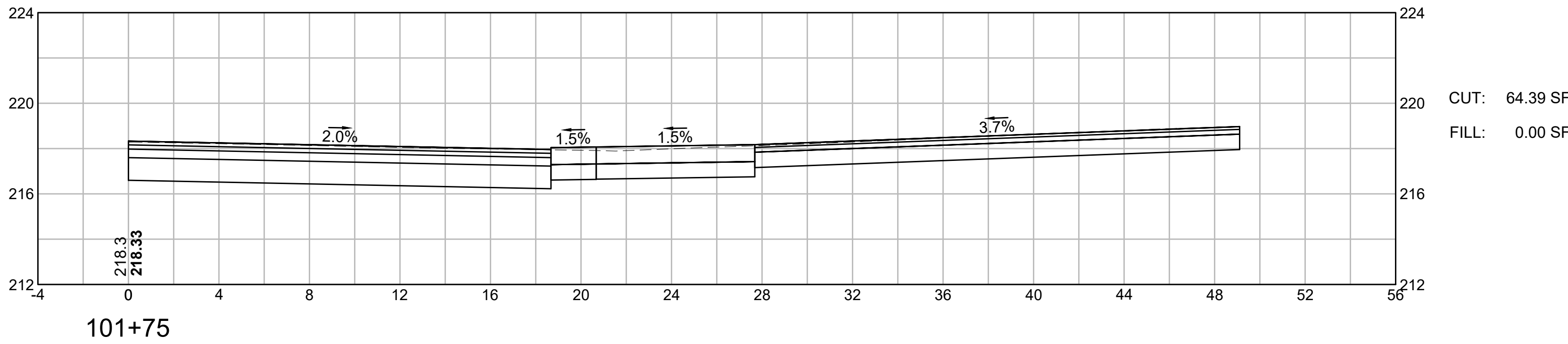
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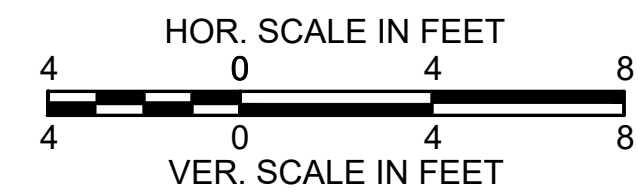
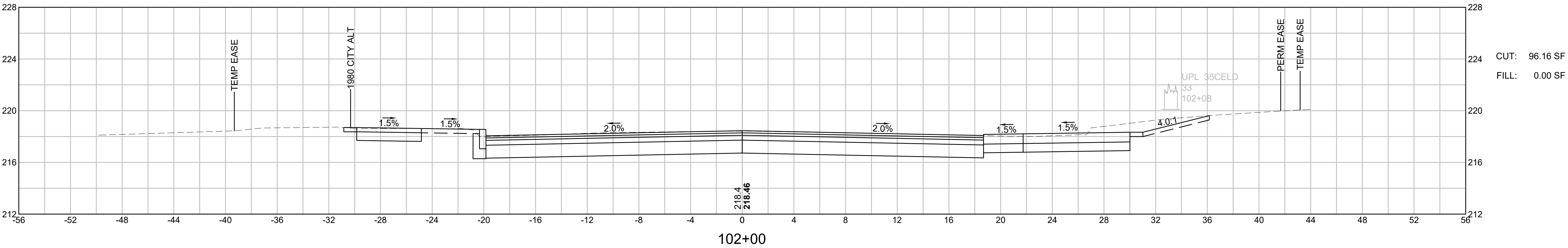
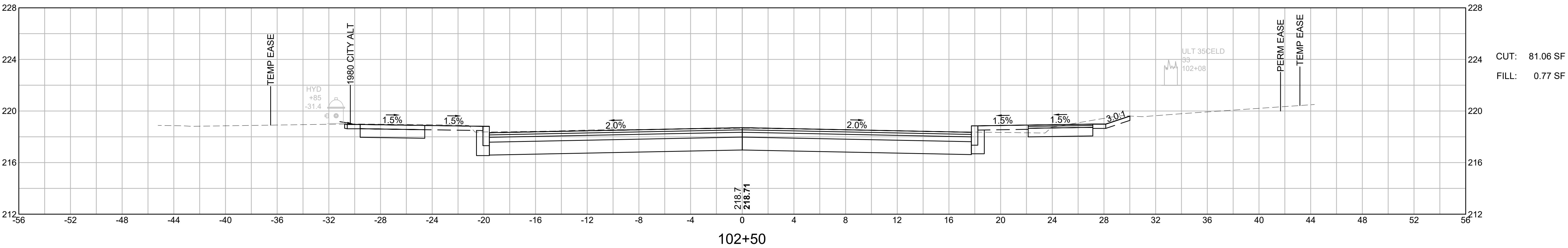


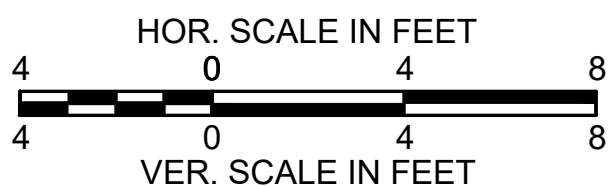
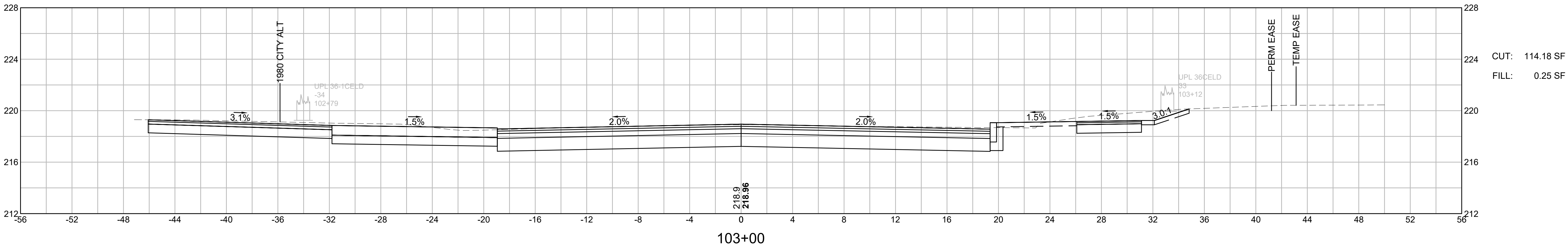
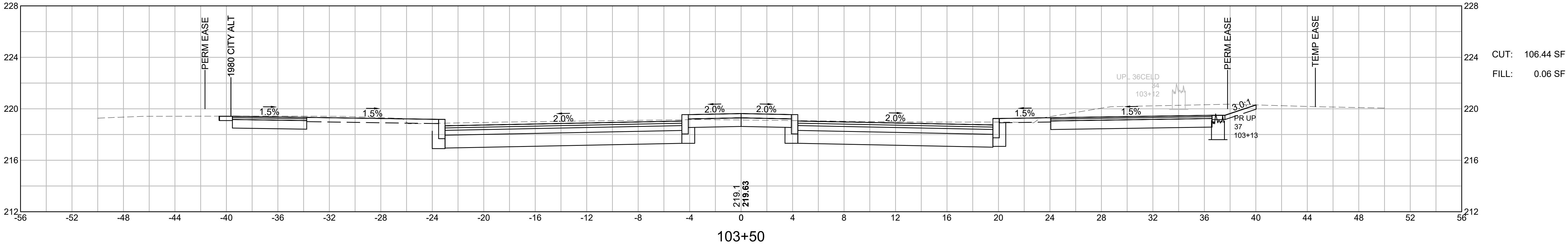
NOTE
ALL EXISTING ASPHALT SHALL BE STRIPPED AND REMOVED PRIOR TO TILLING. ASPHALT SHALL NOT BE MIXED WITH THE SUBBASE.

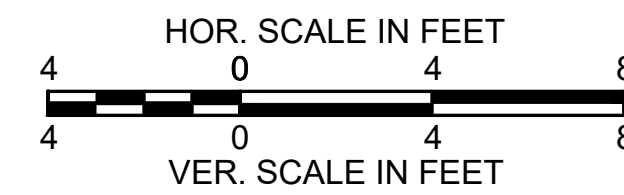
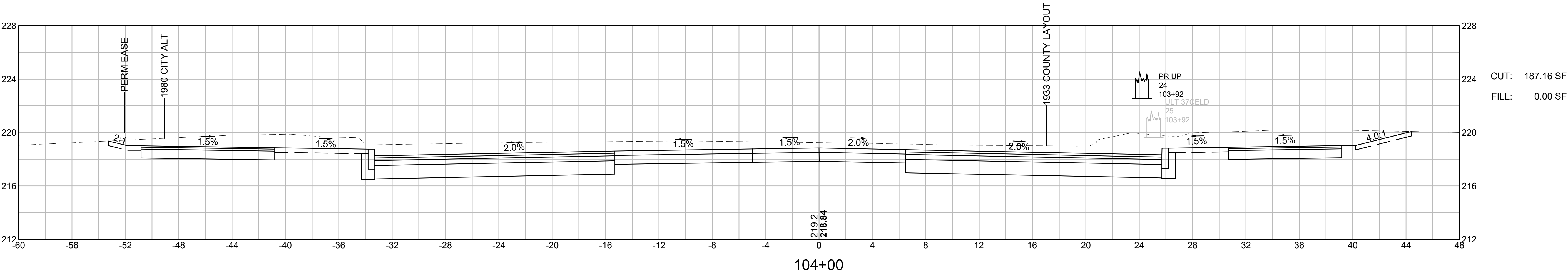
PLANTING BED IN FORMER PAVED AREAS

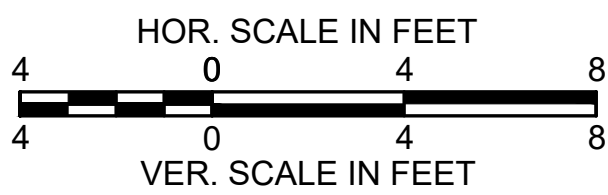
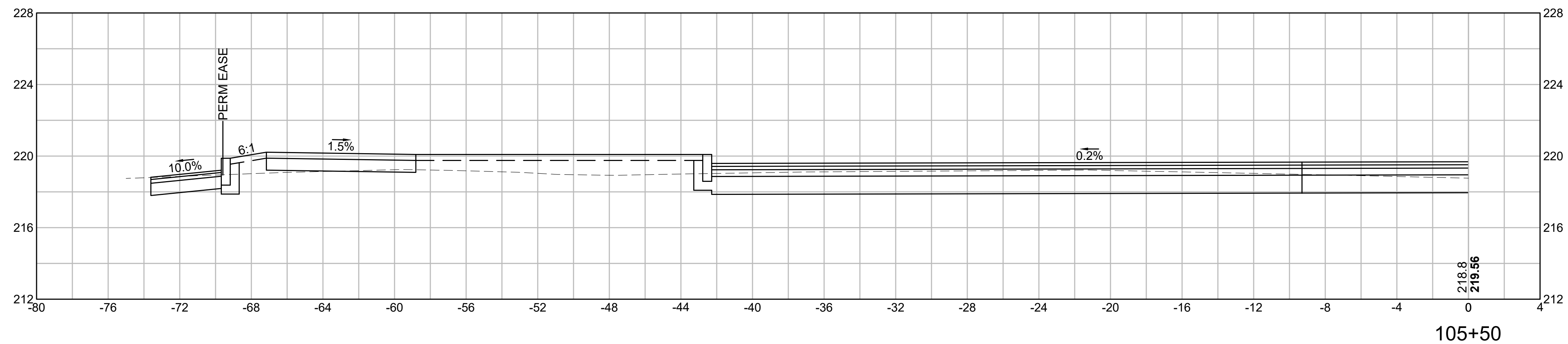
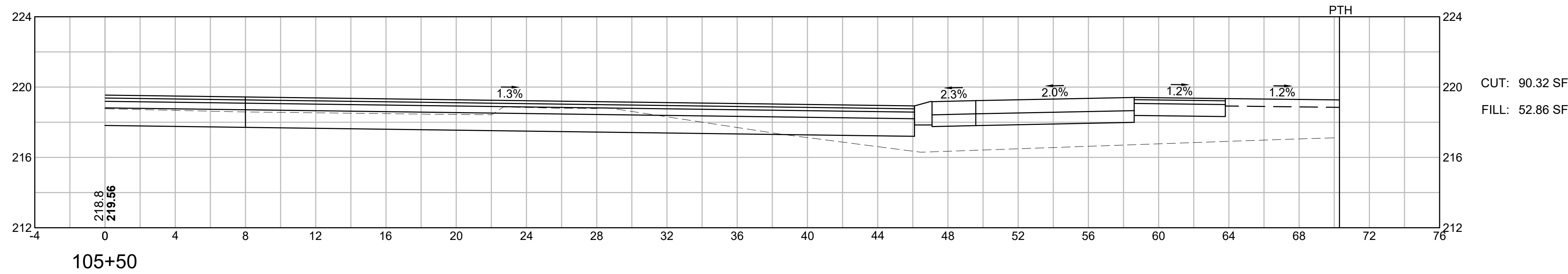
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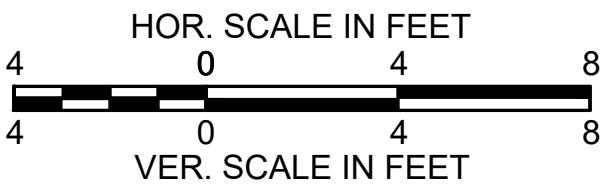
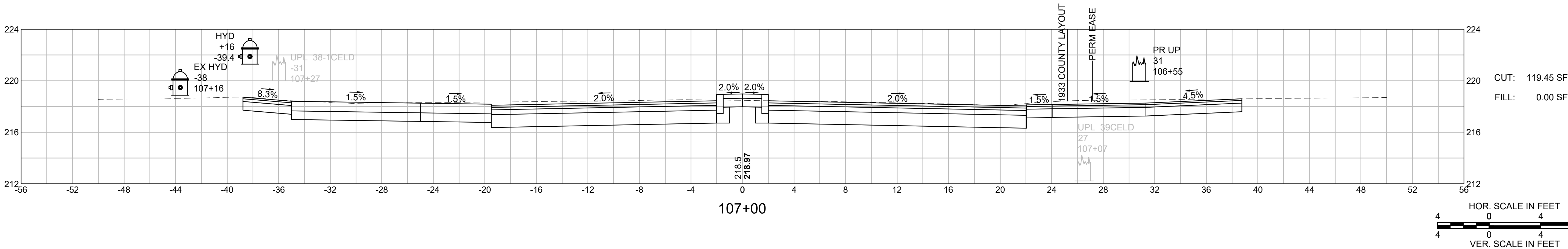
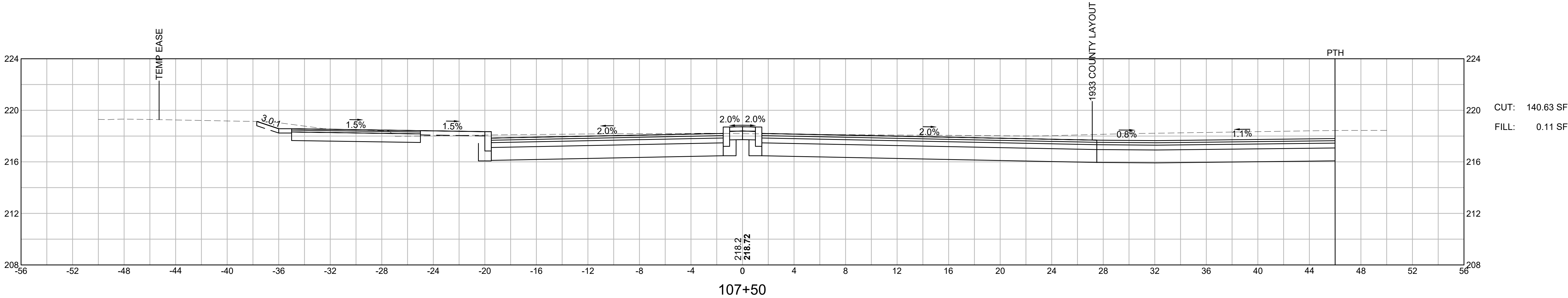
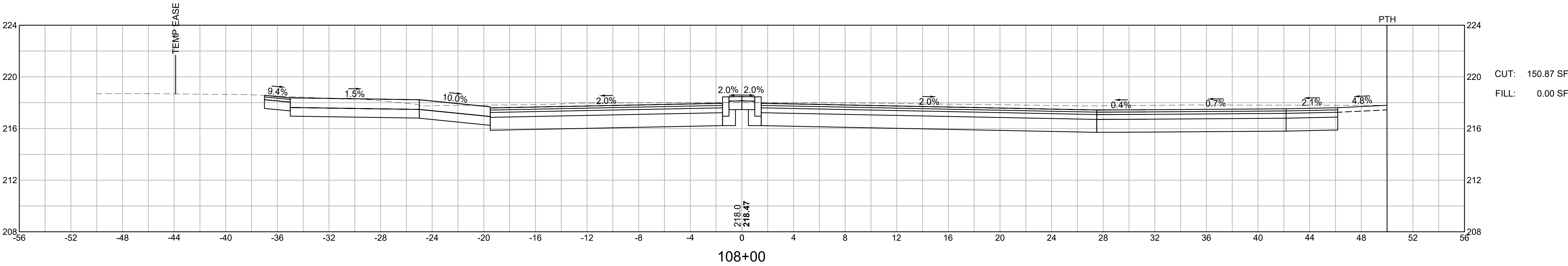










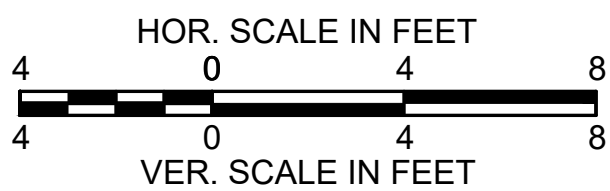
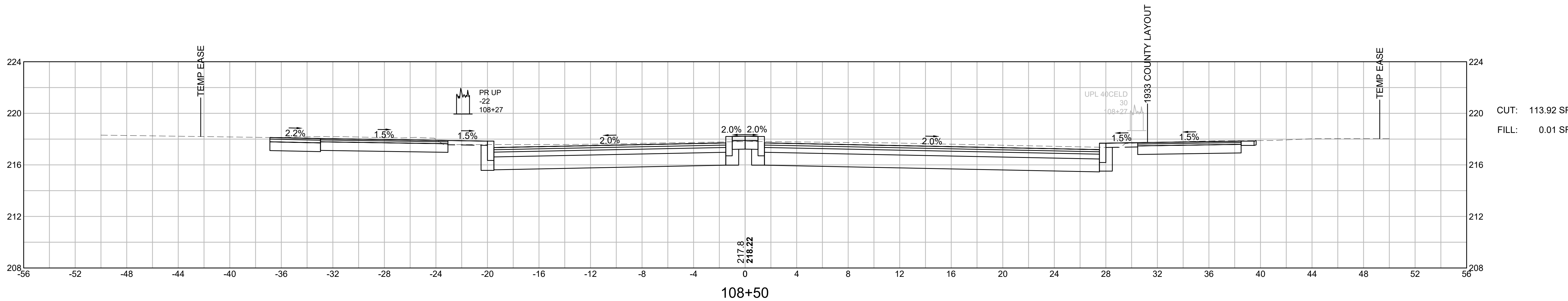
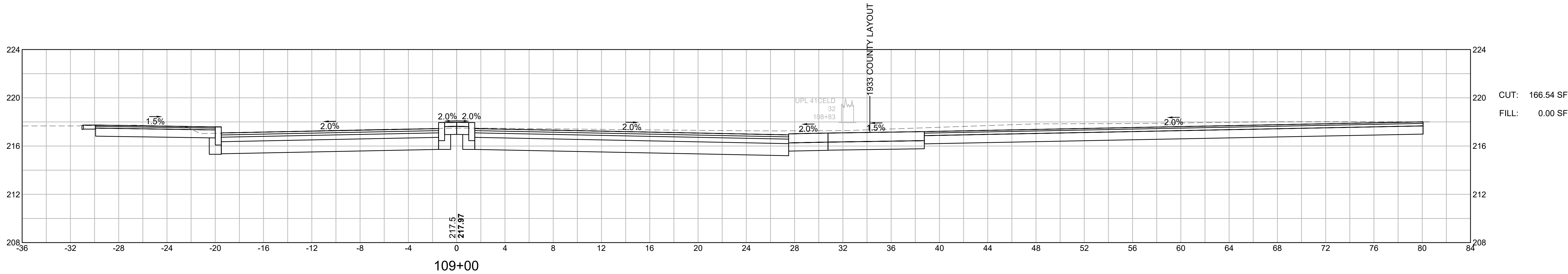
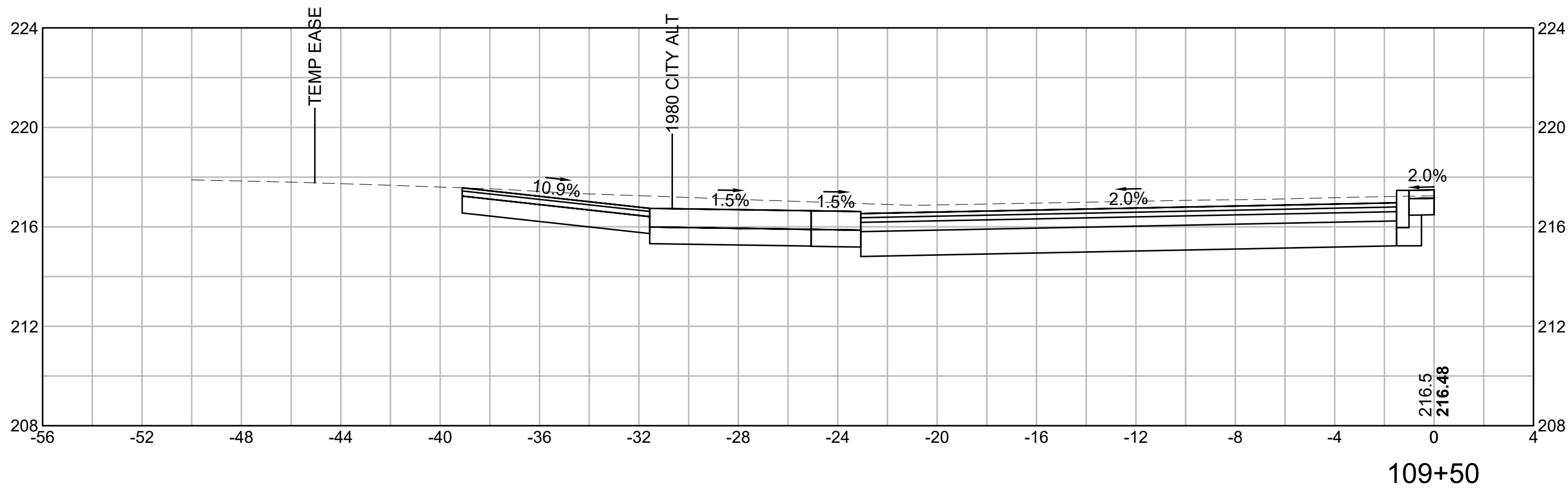


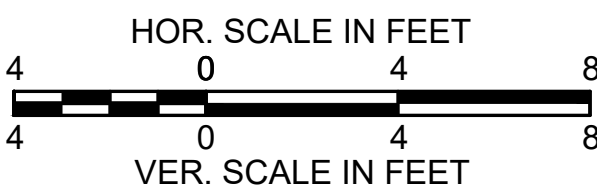
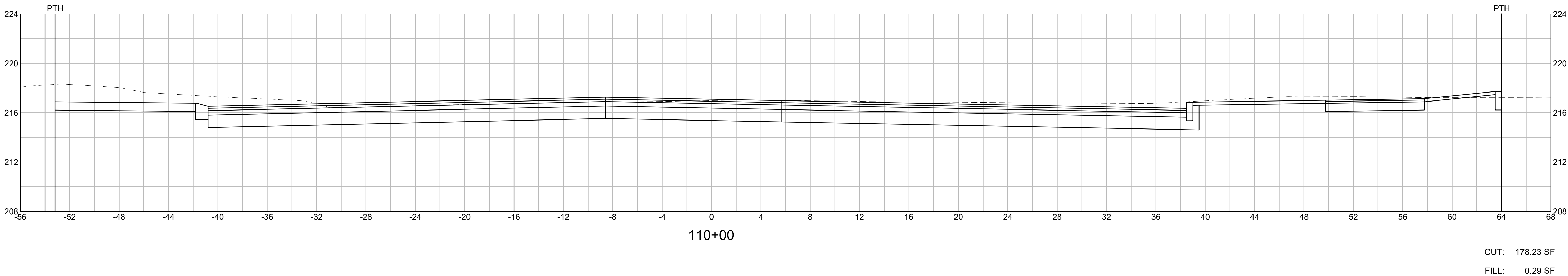
CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

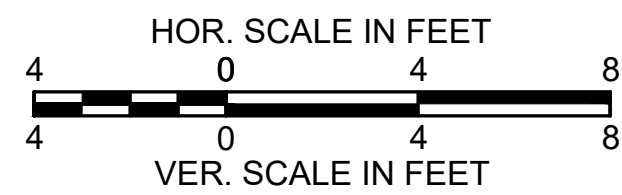
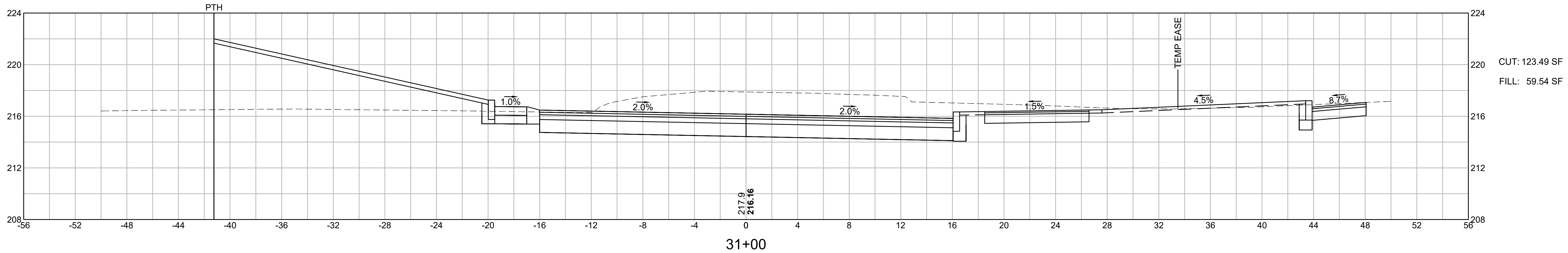
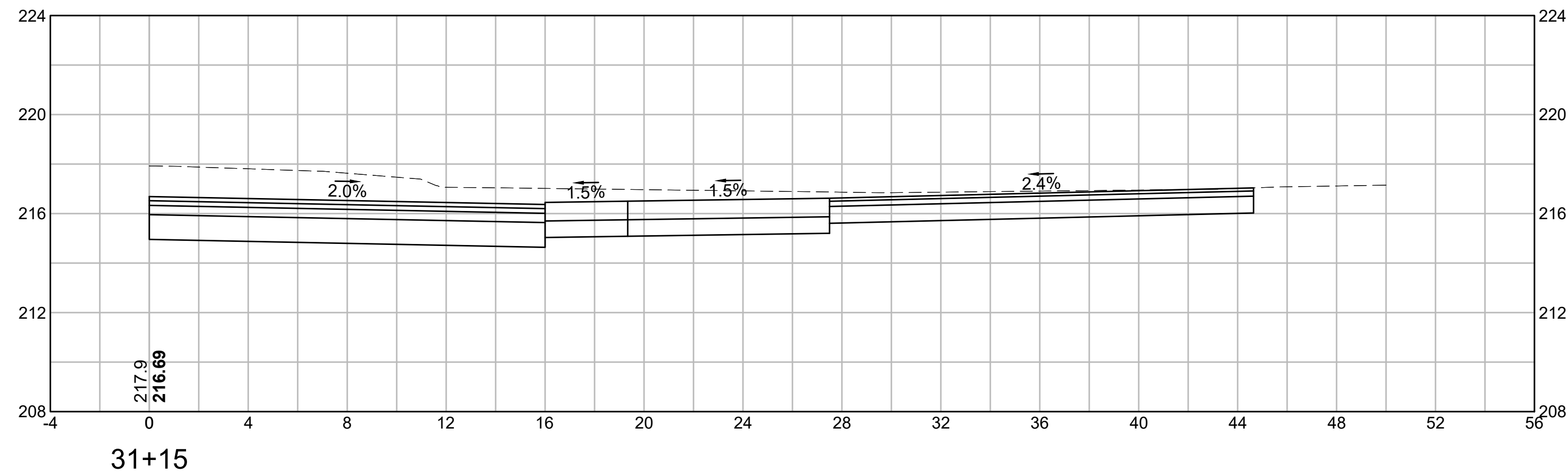
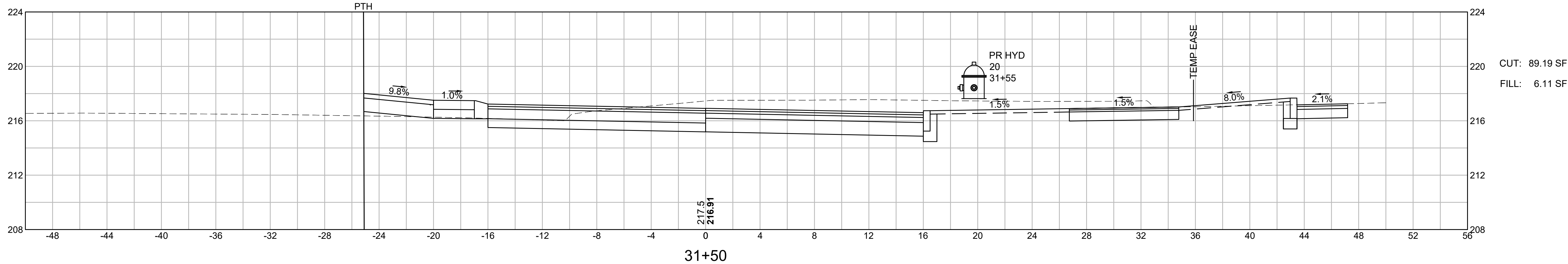
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	104	135

PROJECT FILE NO. 609061

MONTGOMERY STREET





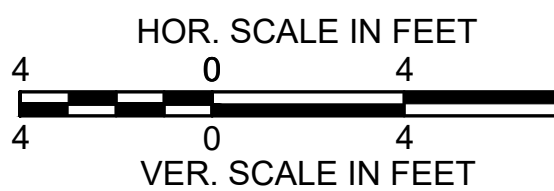
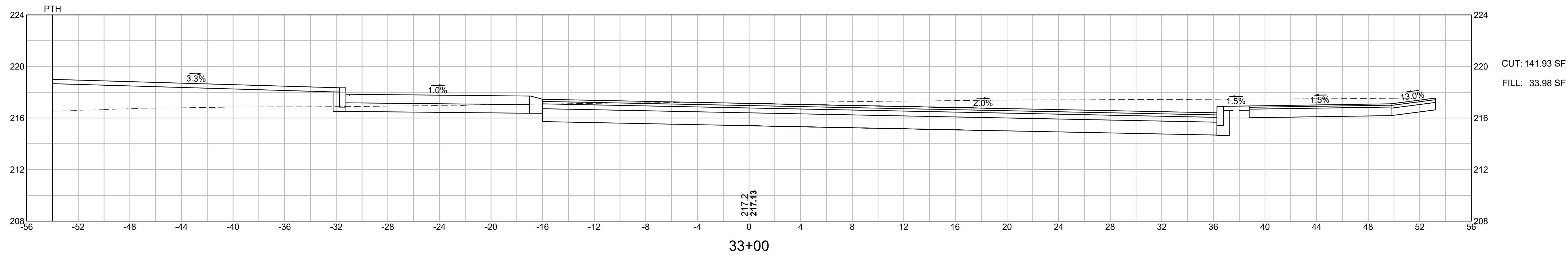


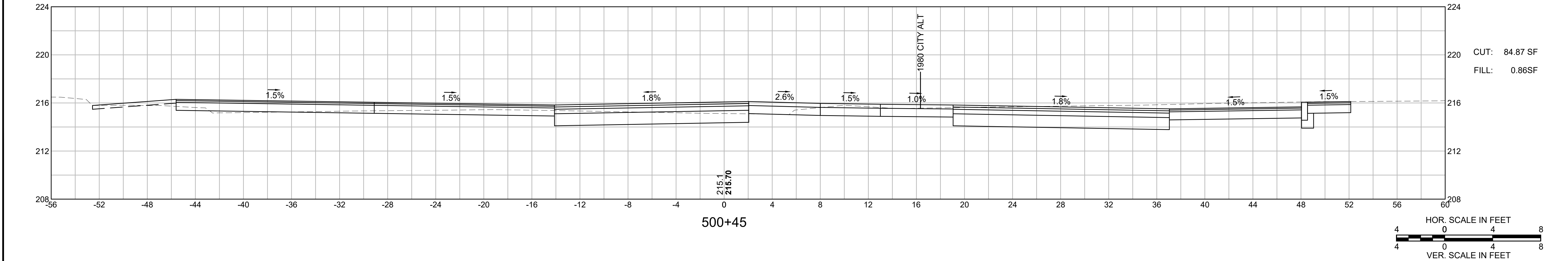
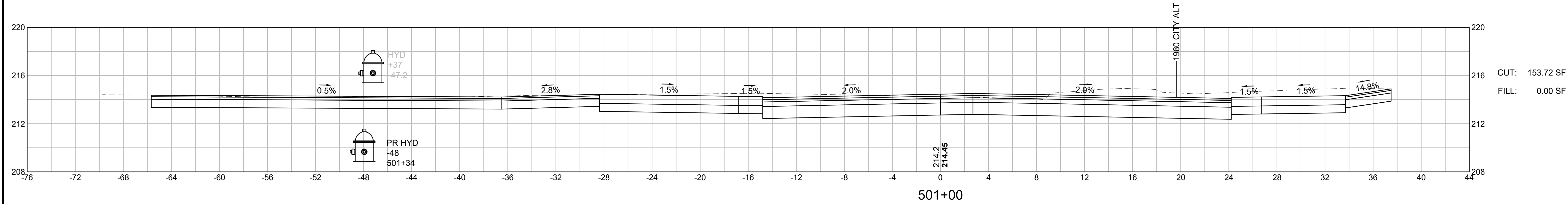
CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

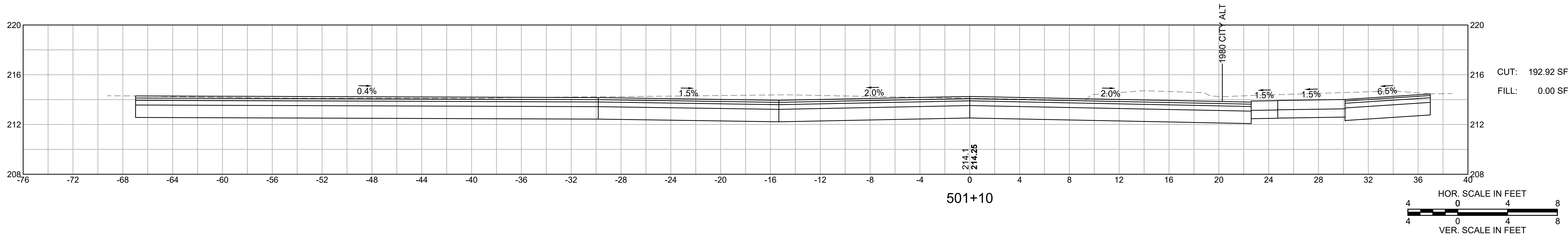
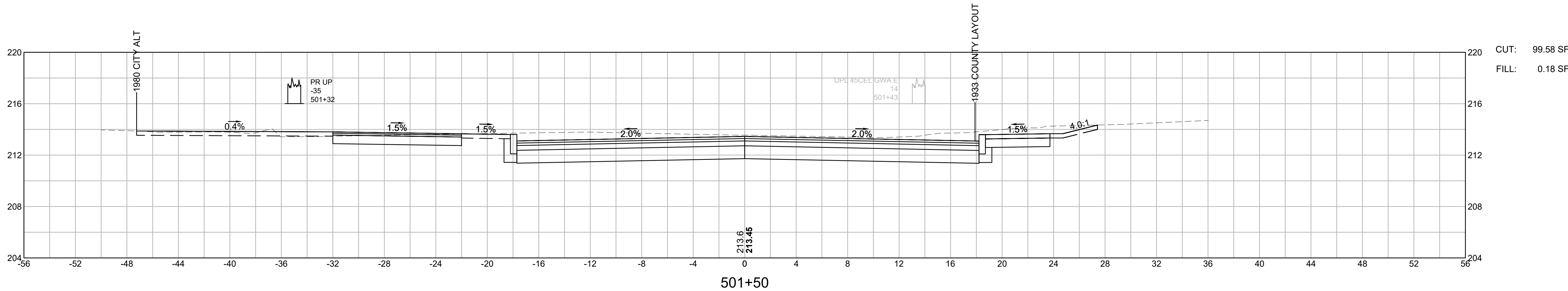
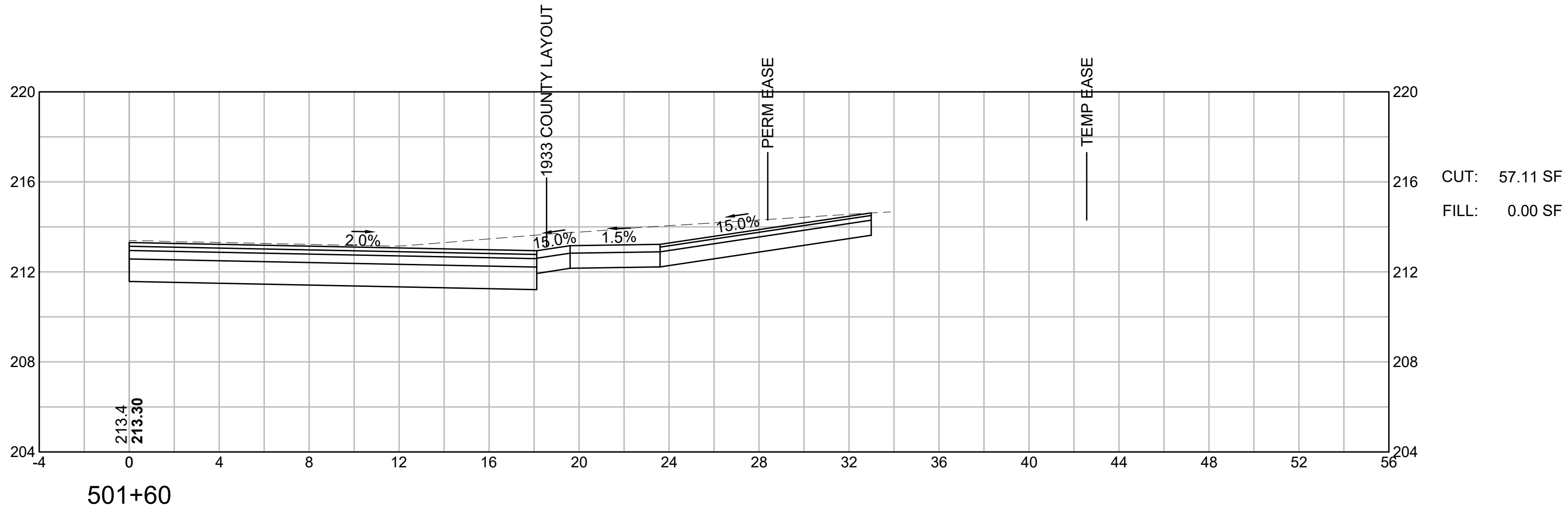
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MASS.	STP/HPP-0032(051)X	109	135

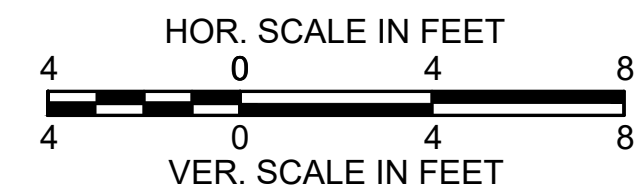
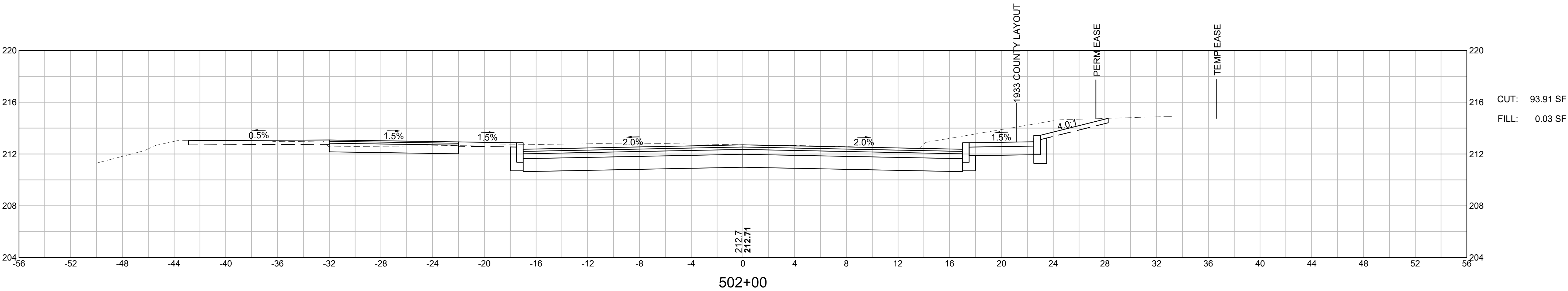
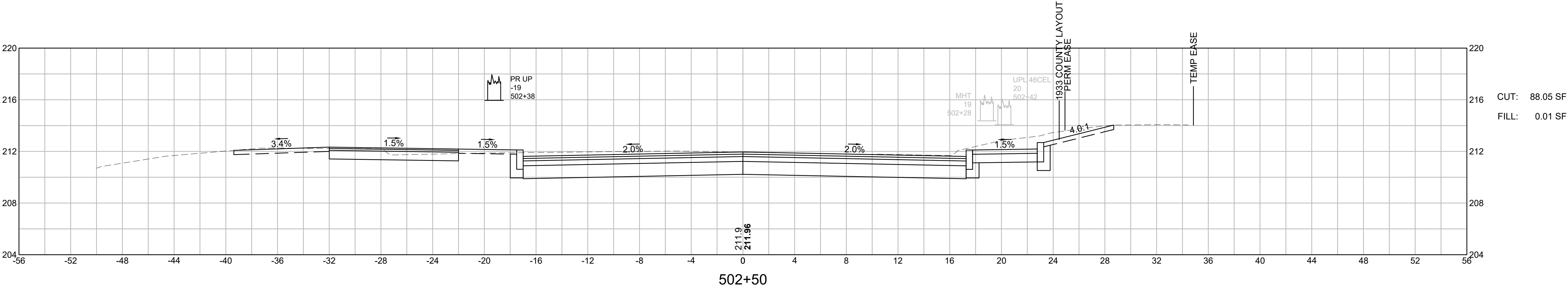
PROJECT FILE NO. 609061

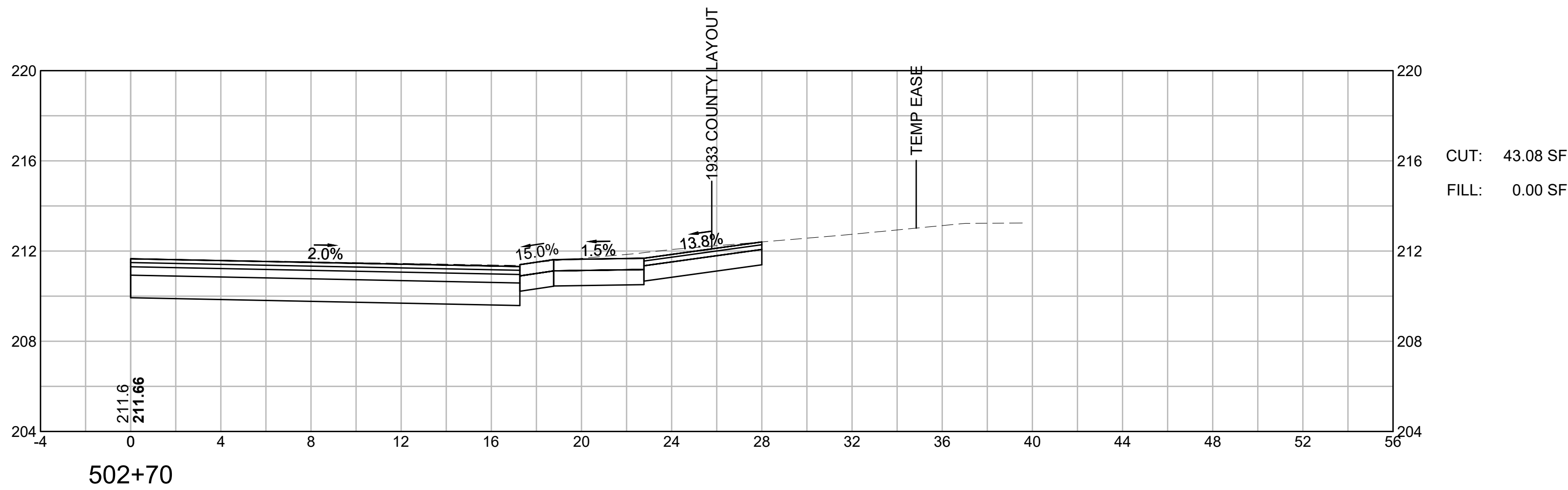
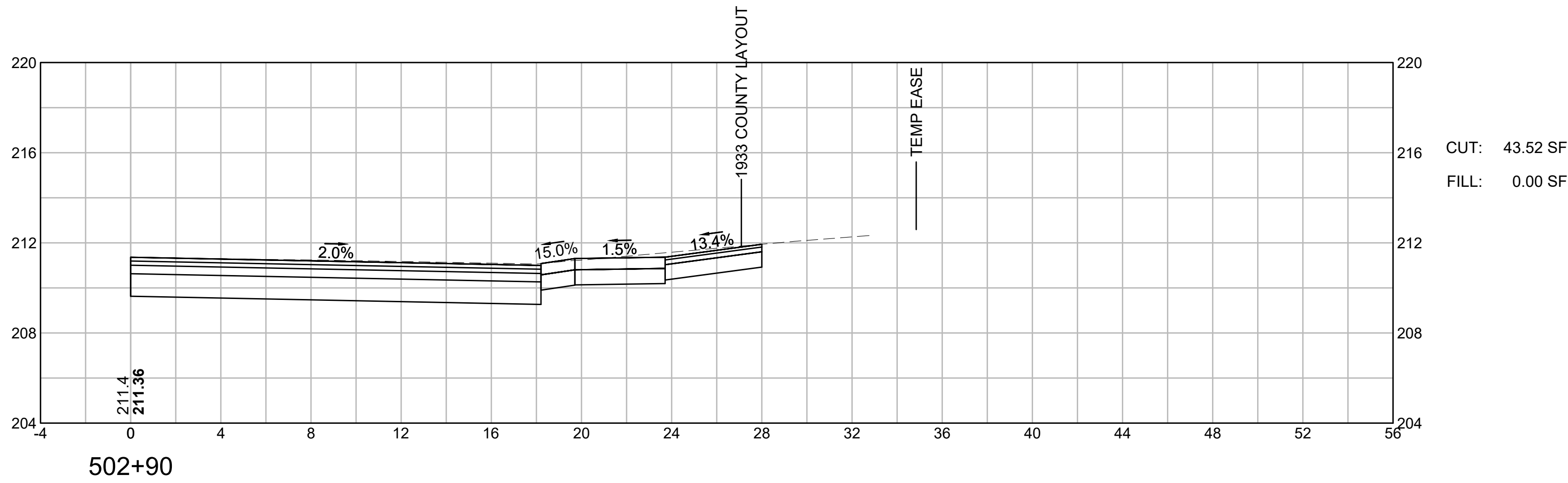
MONTGOMERY STREET

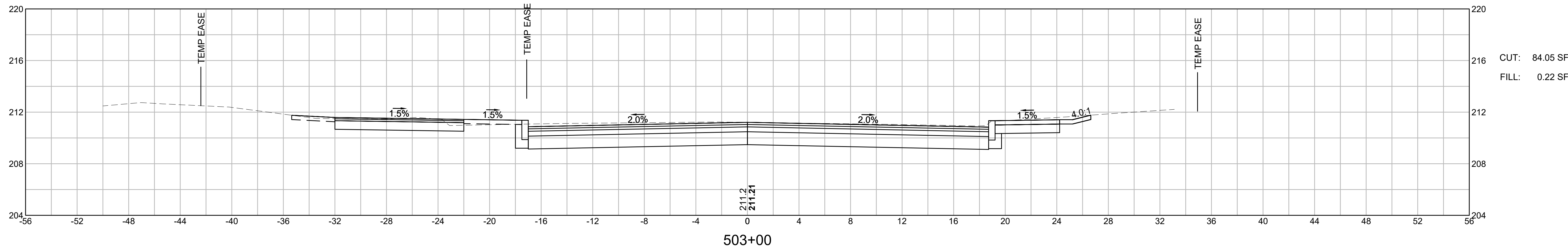
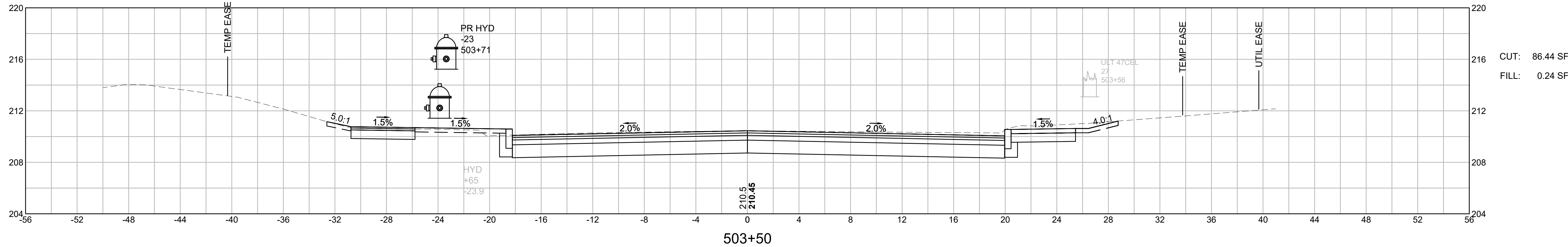


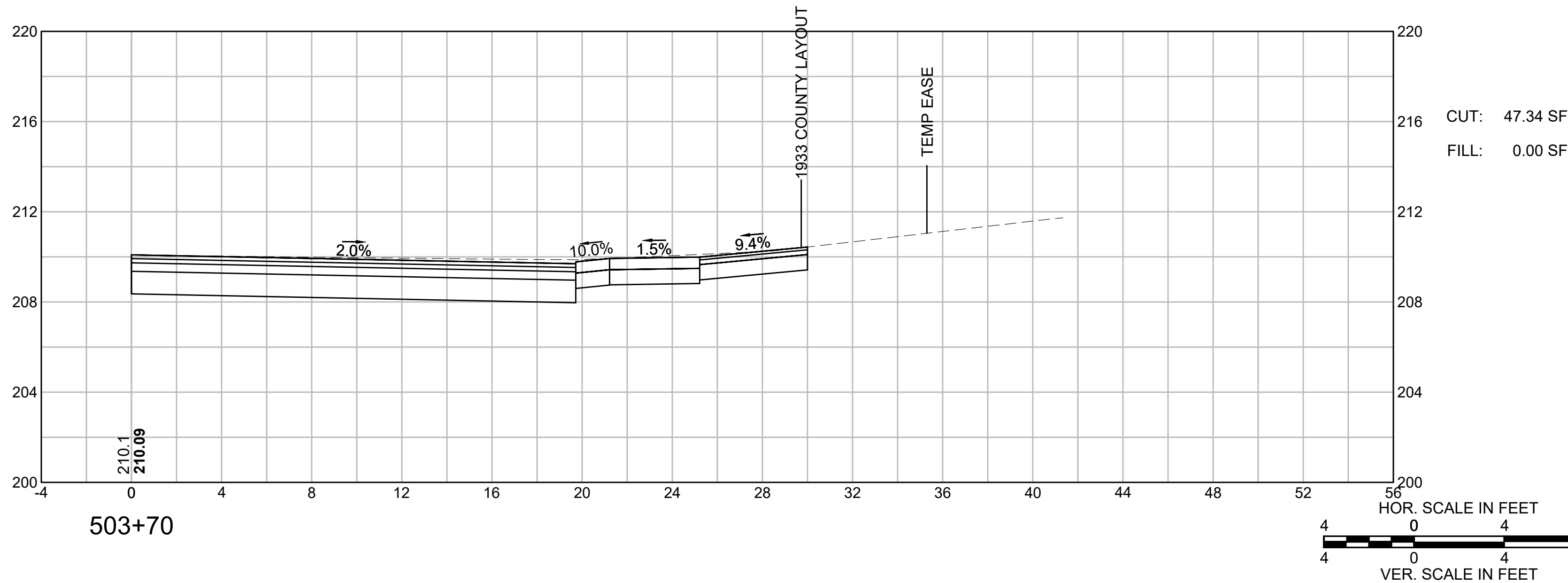
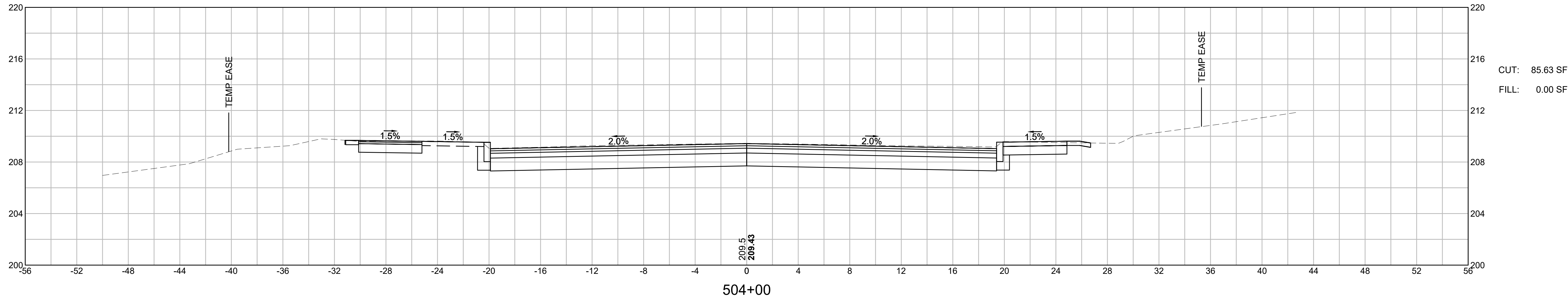
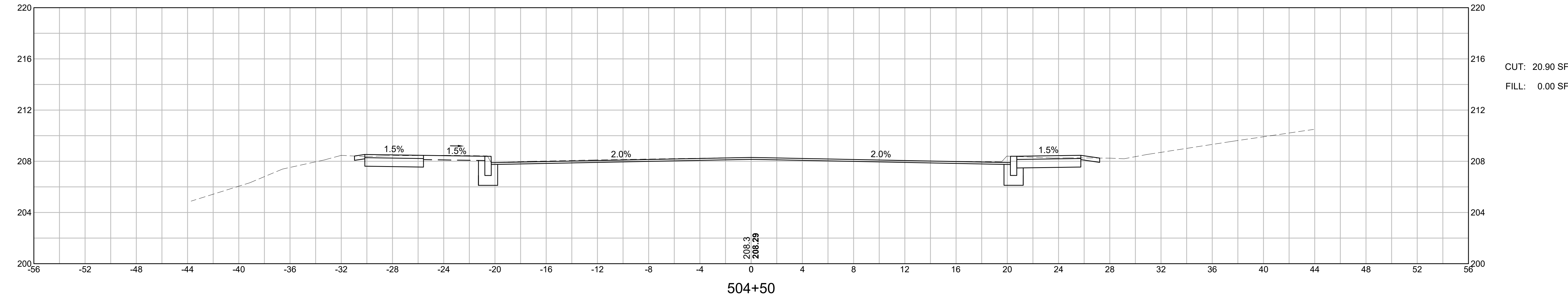


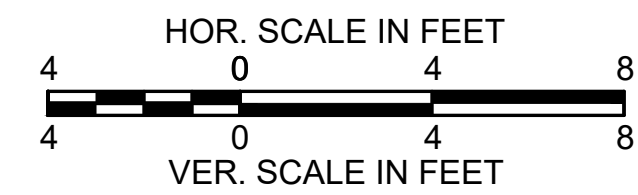
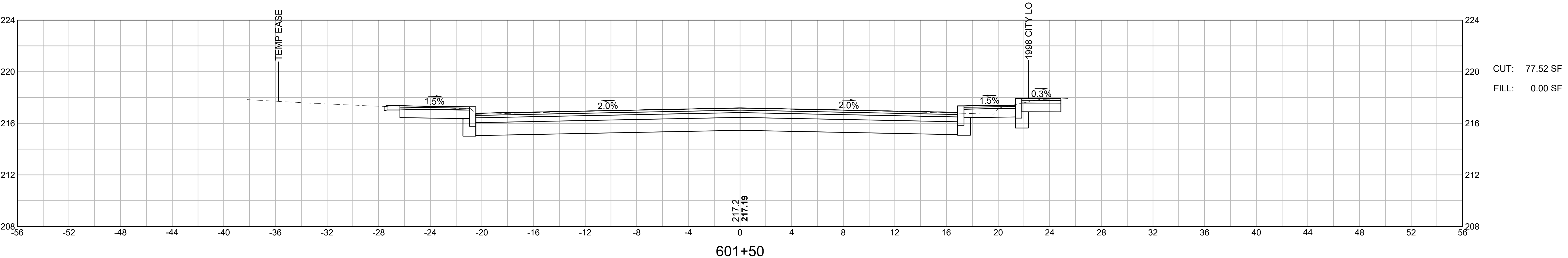
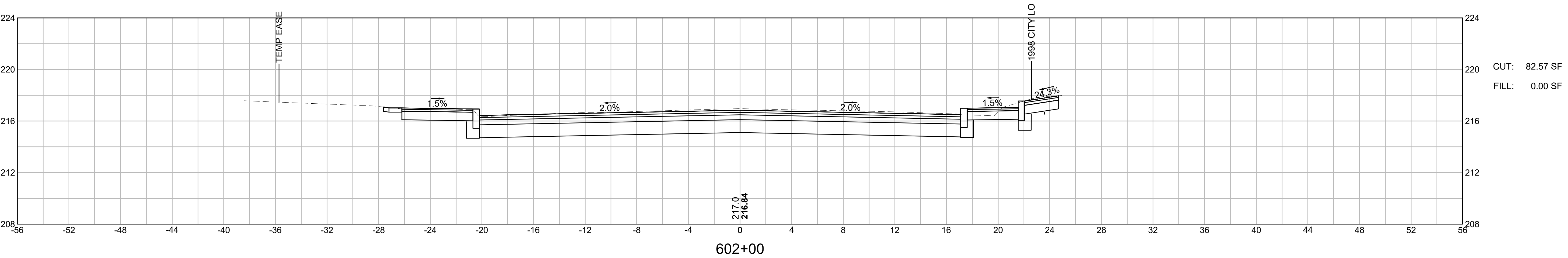








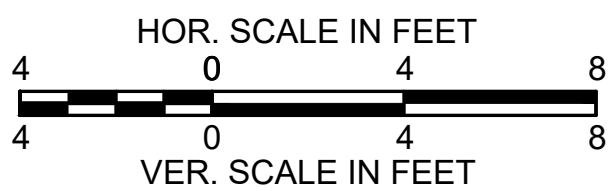
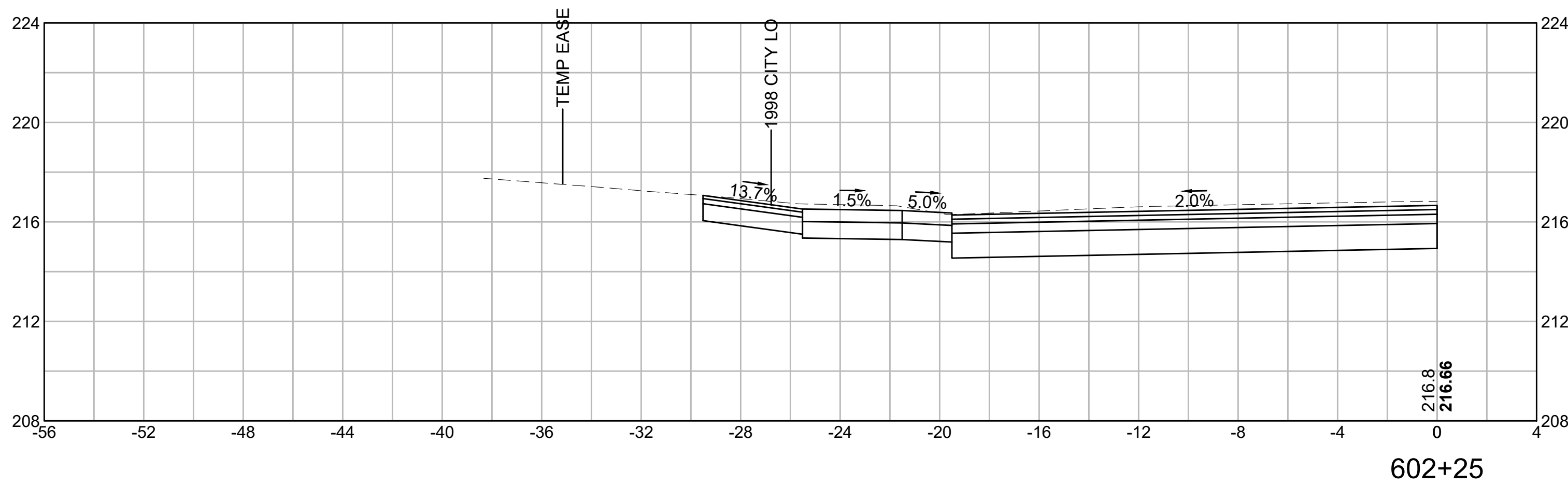
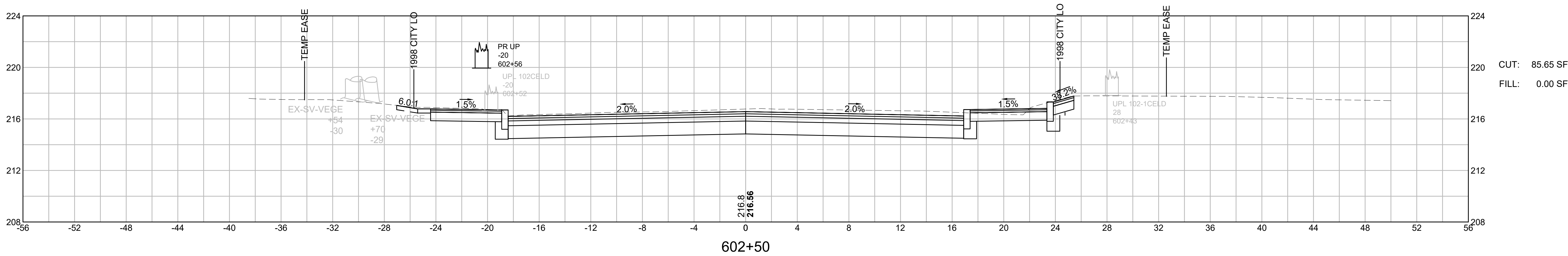


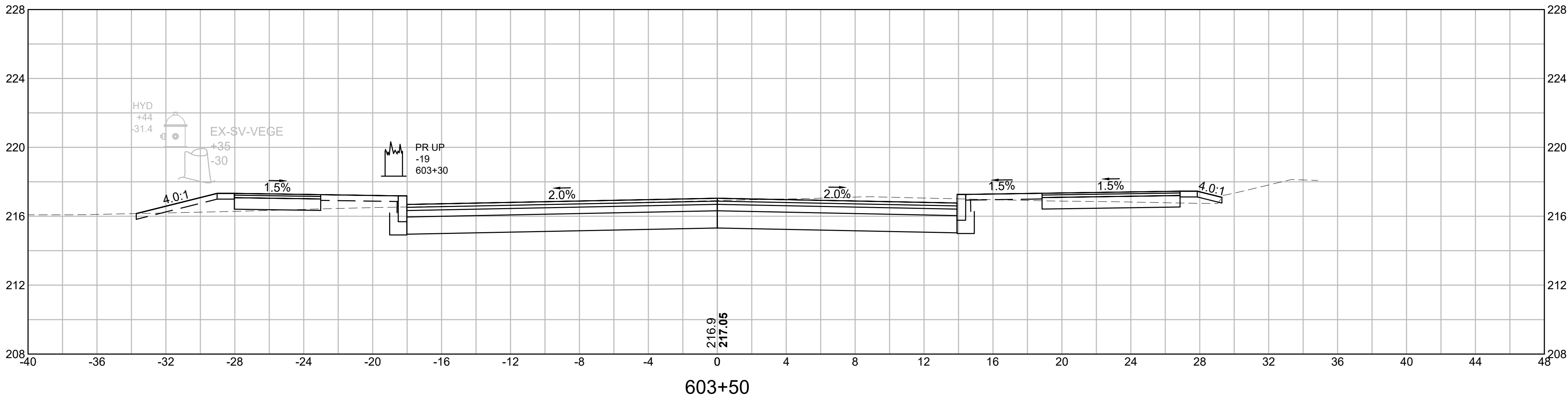


CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

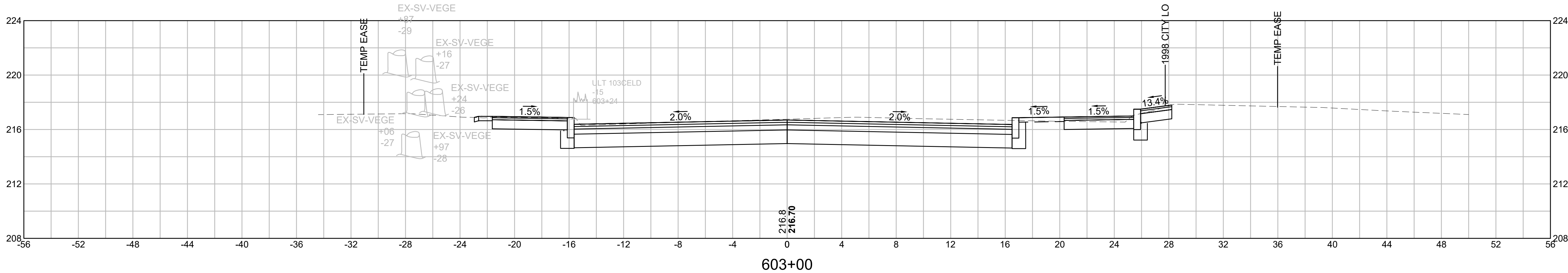
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	117	135
PROJECT FILE NO. 609061			

GRANBY ROAD

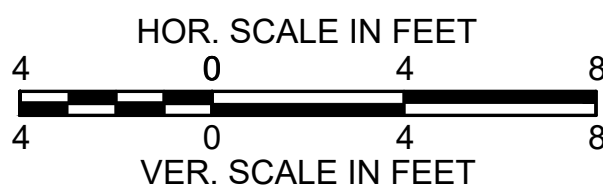




CUT: 61.13 SF
FILL: 4.55 SF



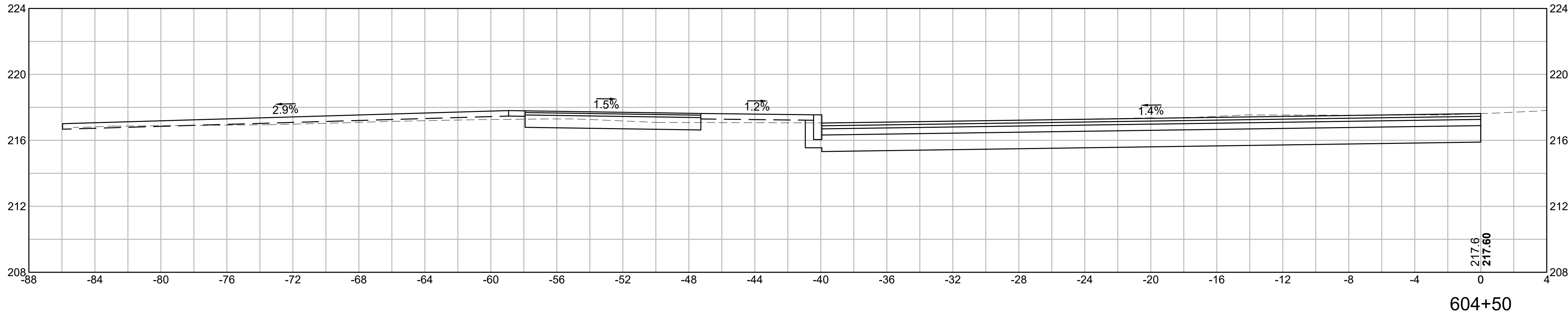
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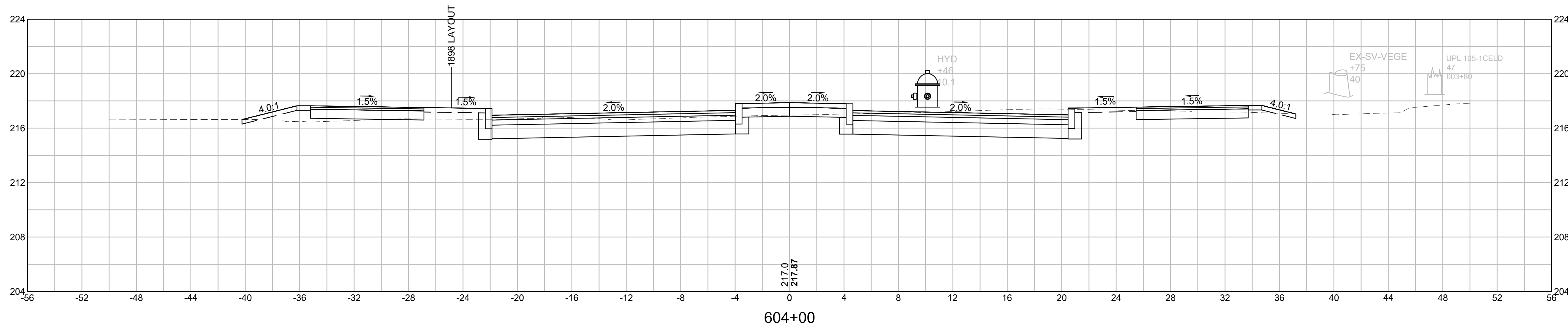
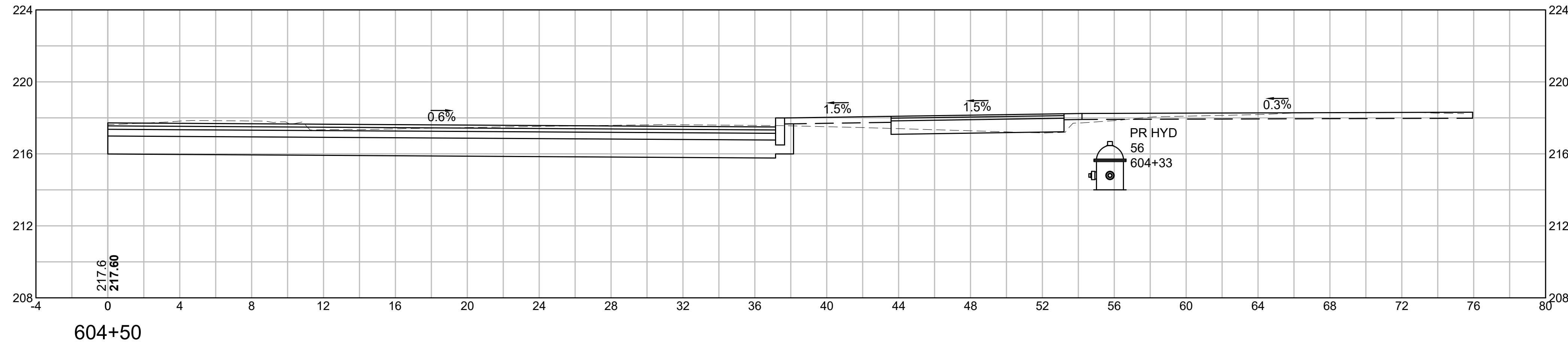
CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	119	135
PROJECT FILE NO. 609061			

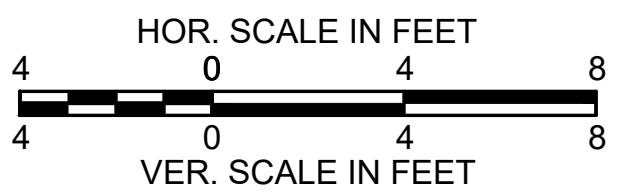
GRANBY ROAD



CUT: 147.42 SF
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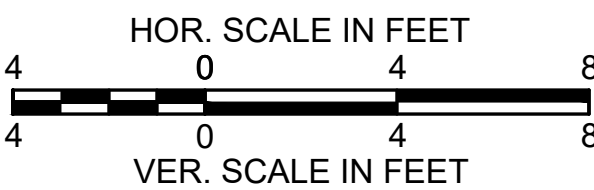
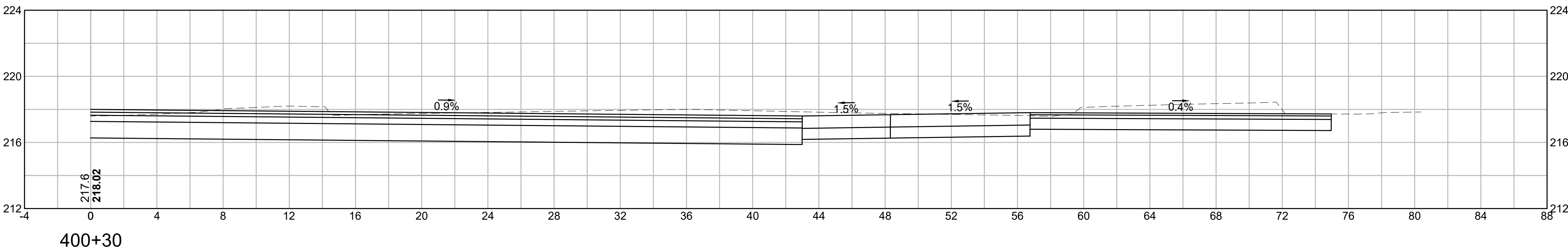
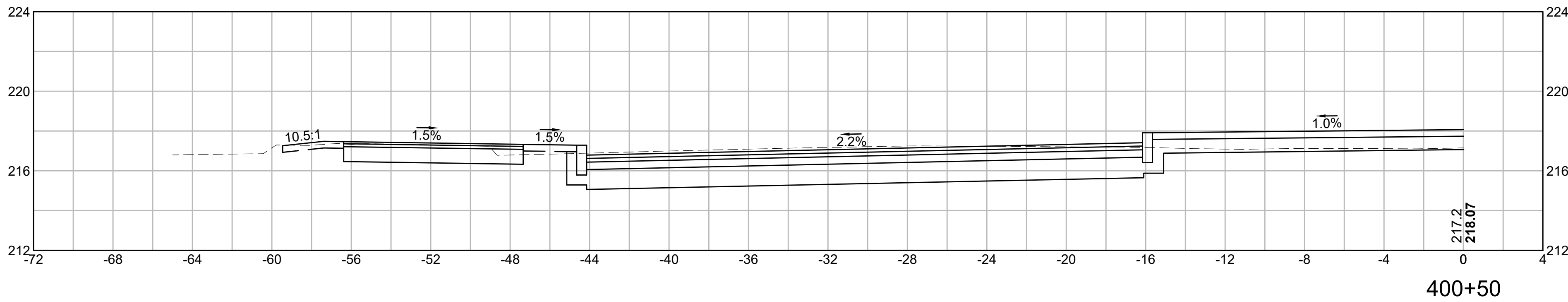
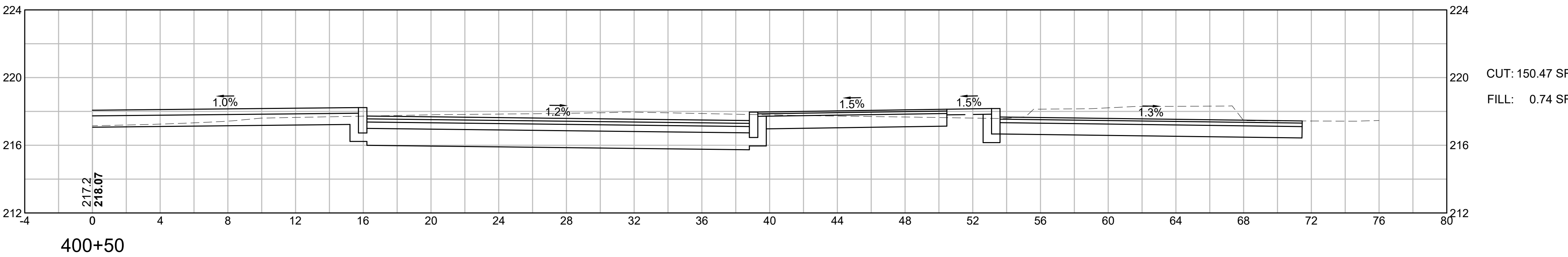
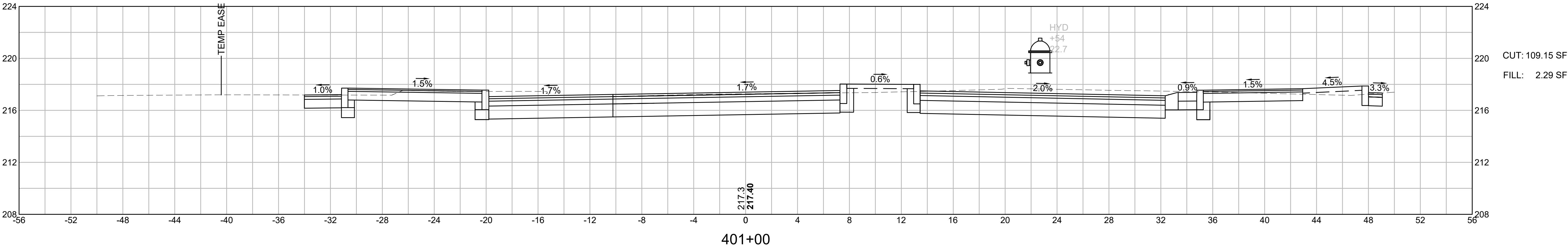
CUT: 46.86 SF
FILL: 2.90 SF



CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	120	135
PROJECT FILE NO. 609061			

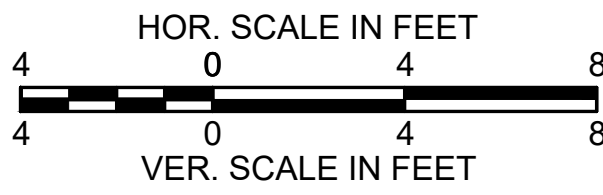
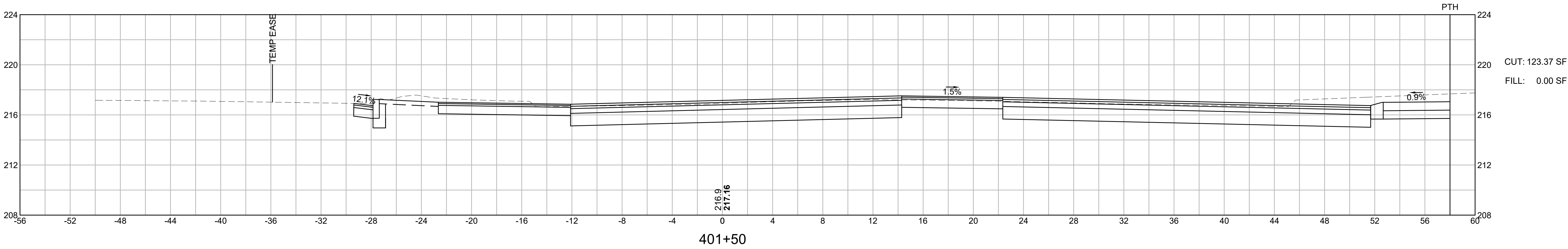
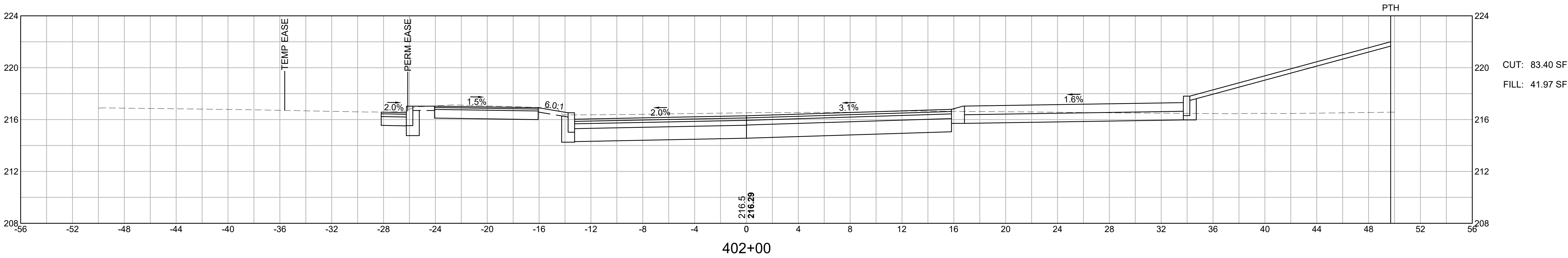
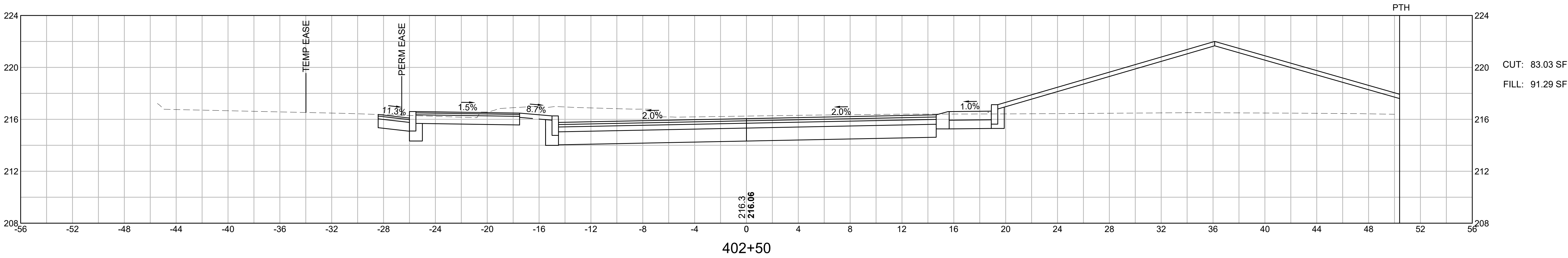
GRANBY ROAD



CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	121	135
PROJECT FILE NO. 609061			

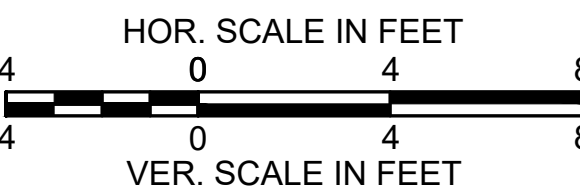
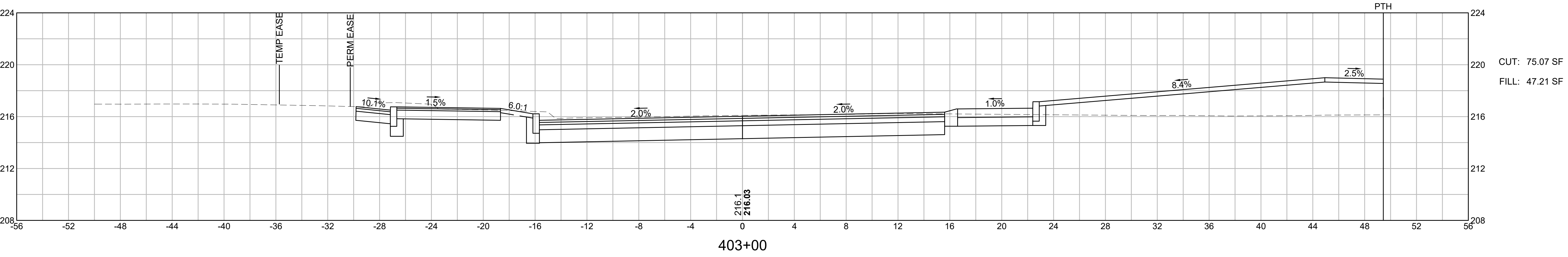
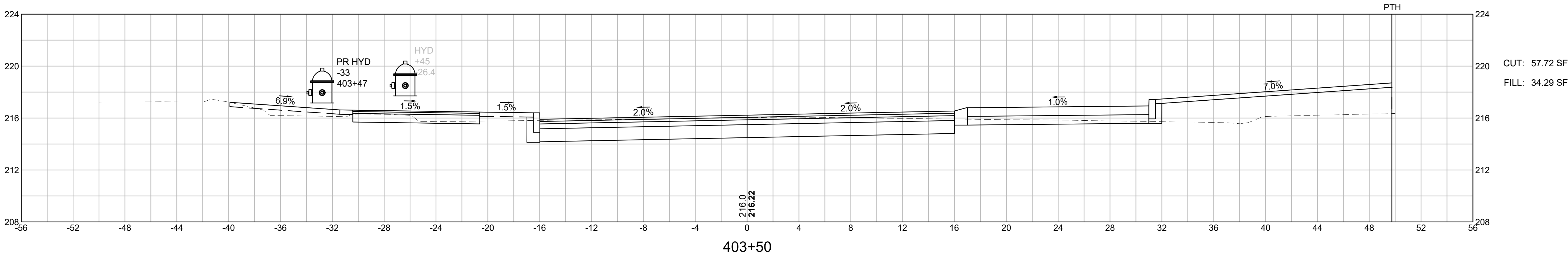
GRANBY ROAD

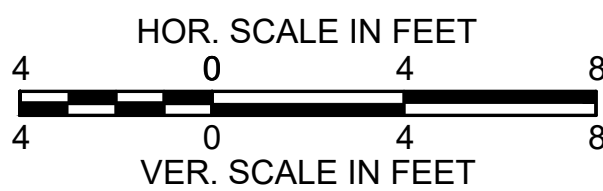
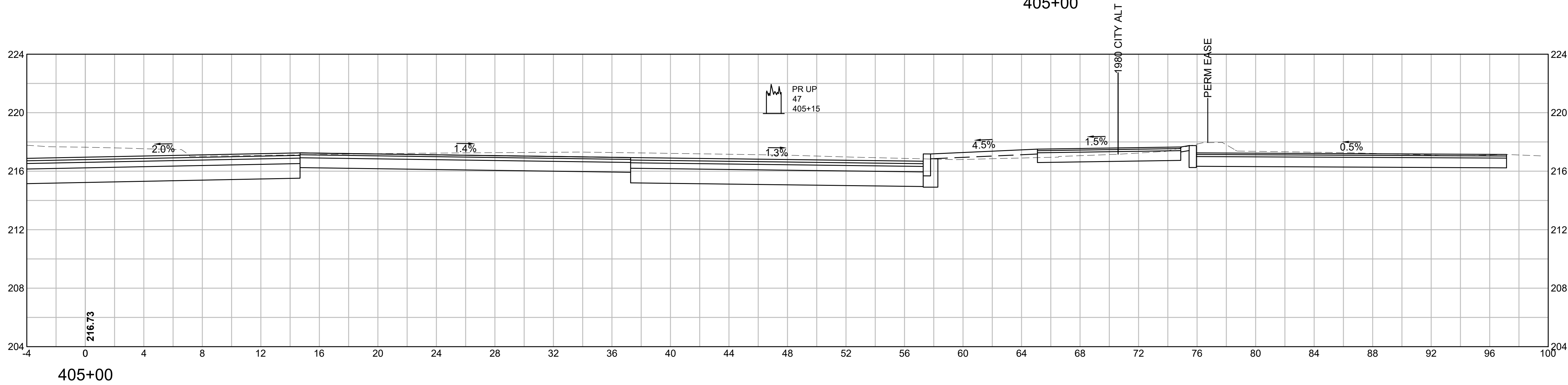
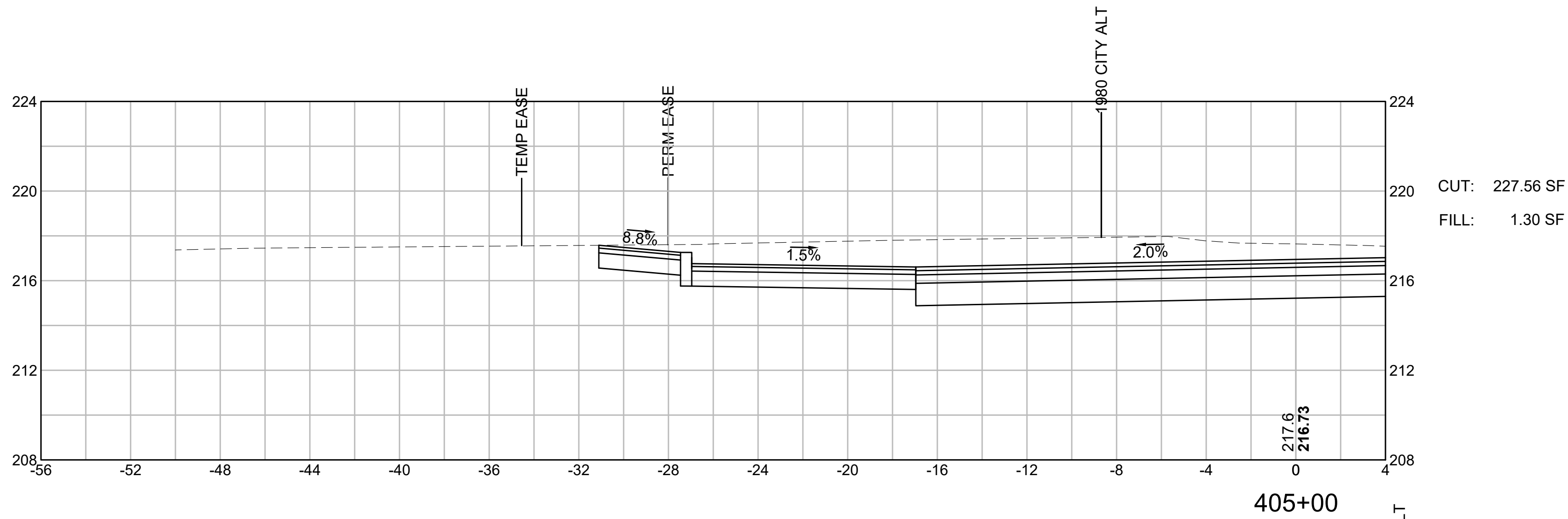


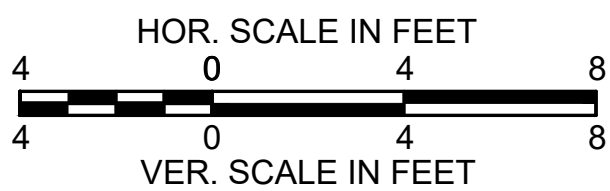
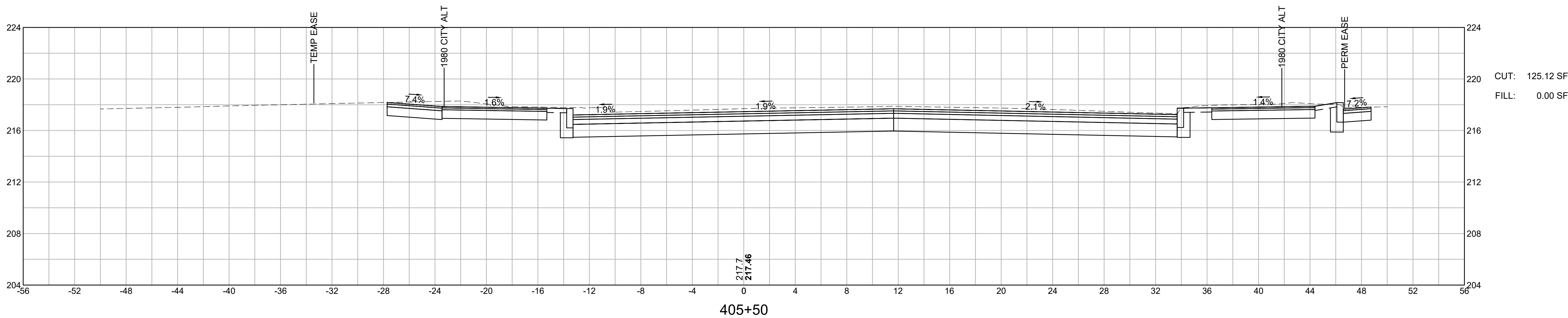
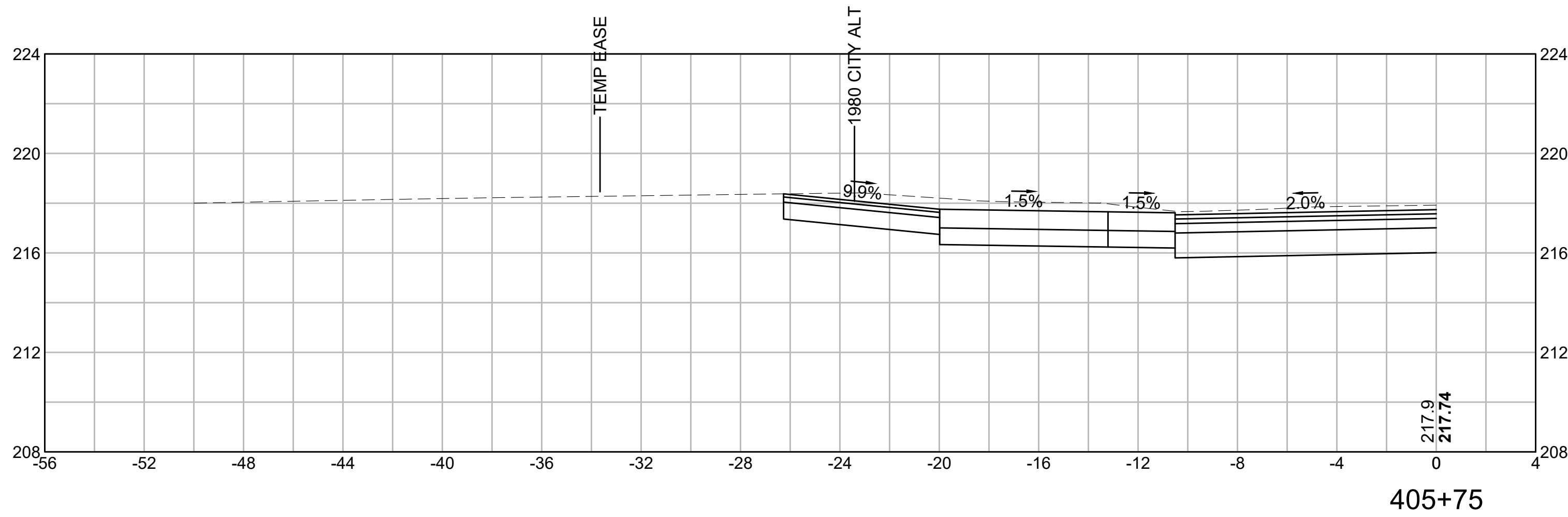
CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

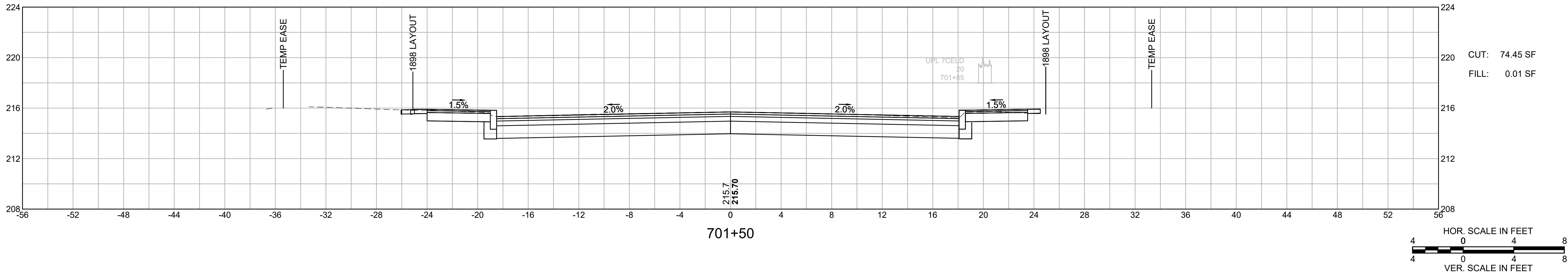
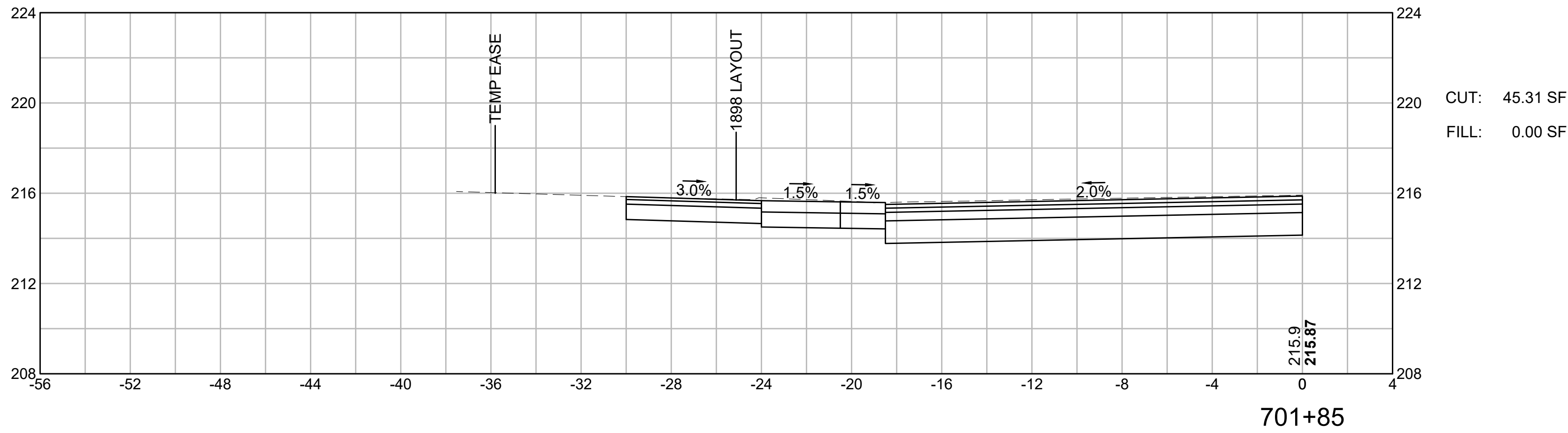
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	122	135
PROJECT FILE NO. 609061			

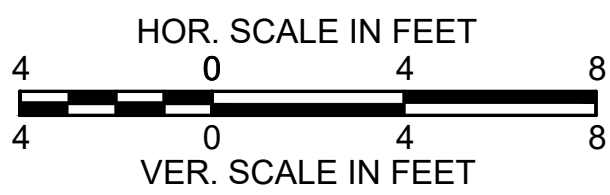
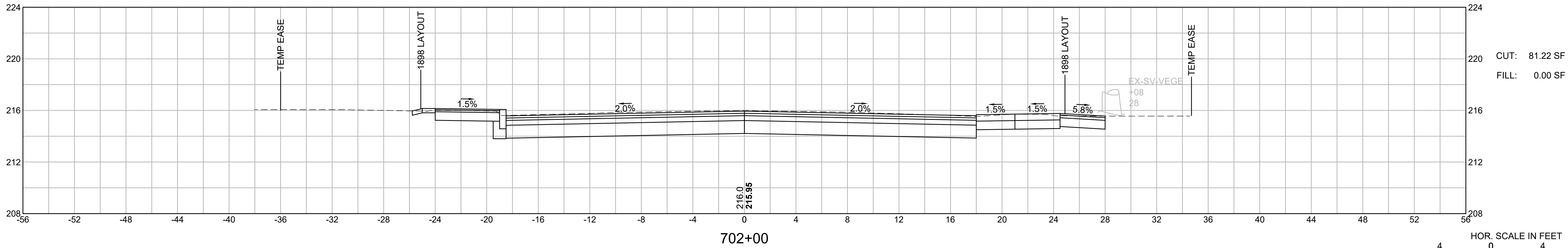
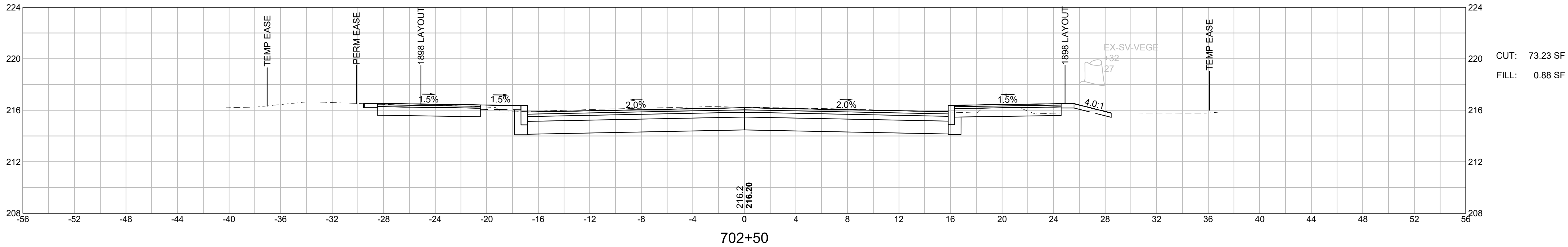
GRANBY ROAD

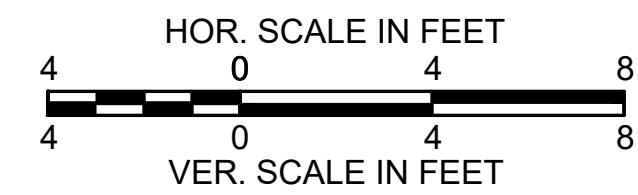
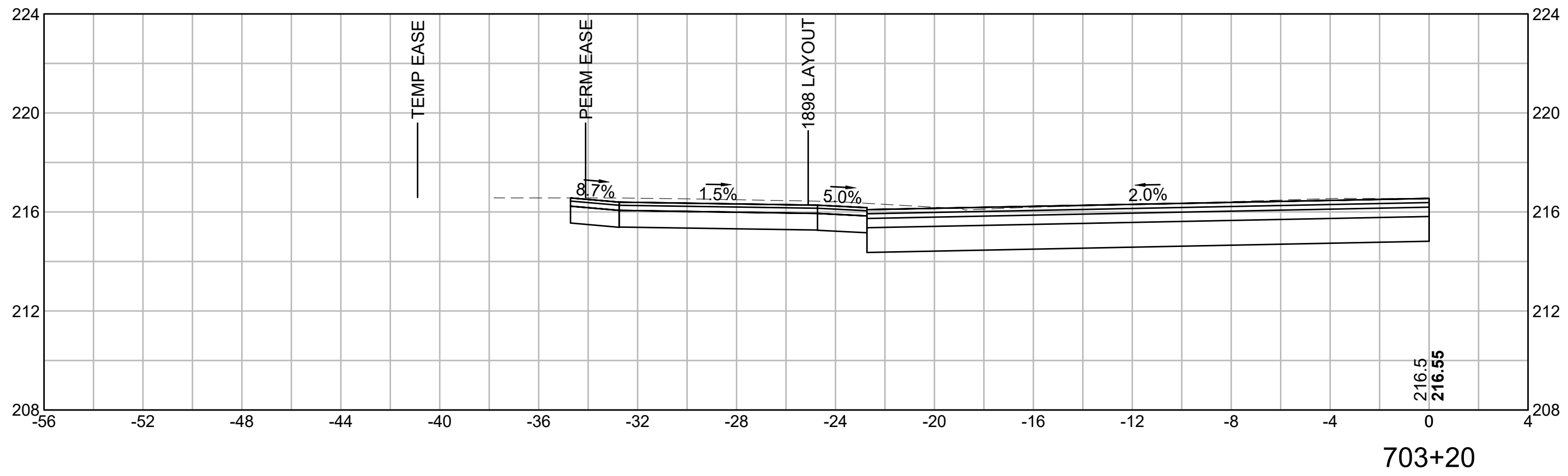
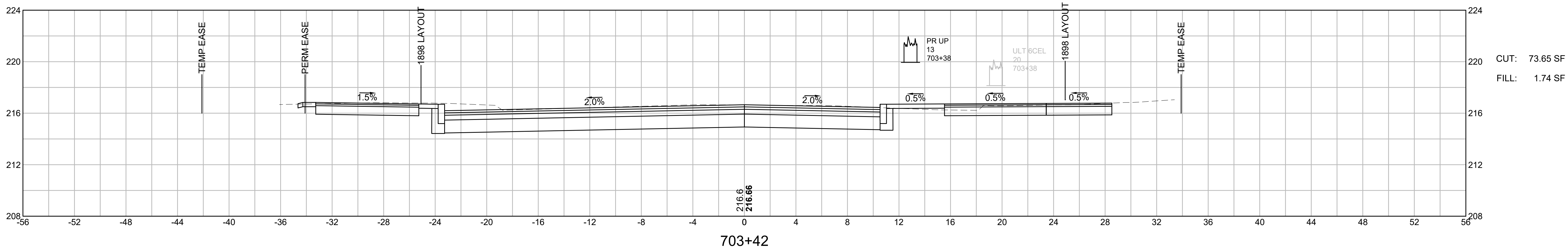


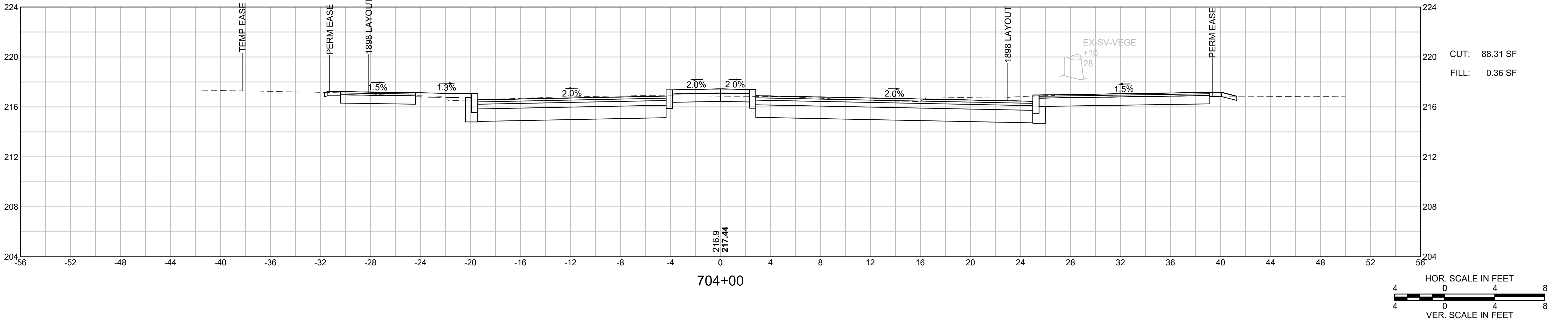
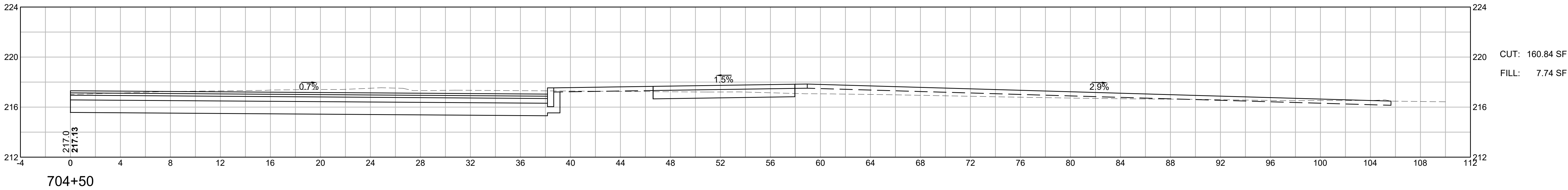
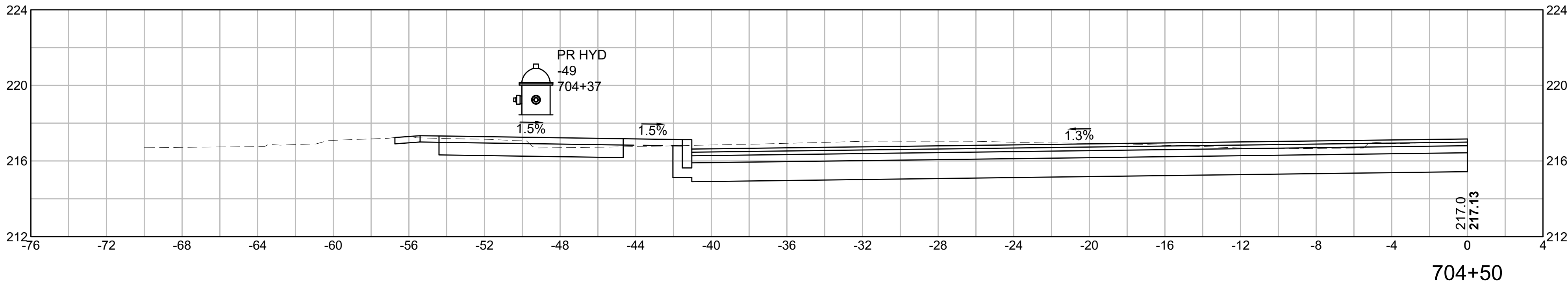






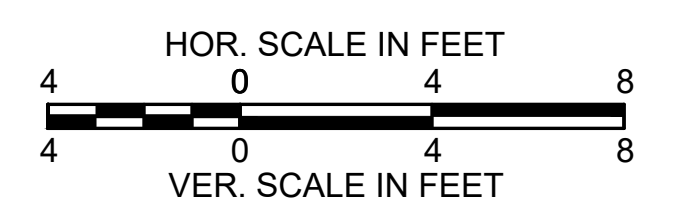
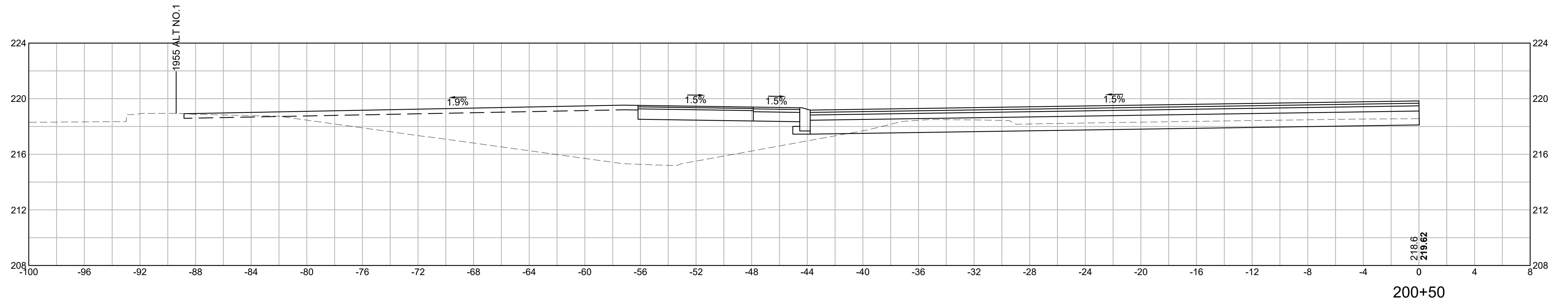






STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	132	135
PROJECT FILE NO. 609061			

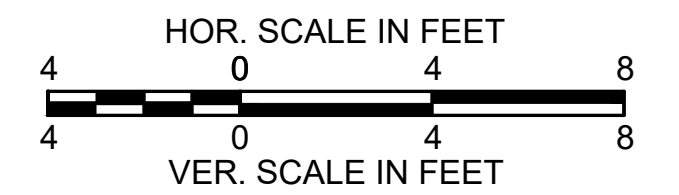
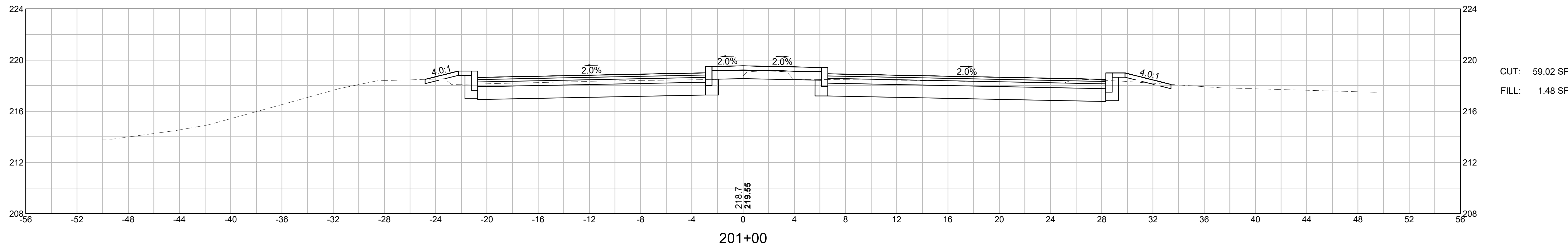
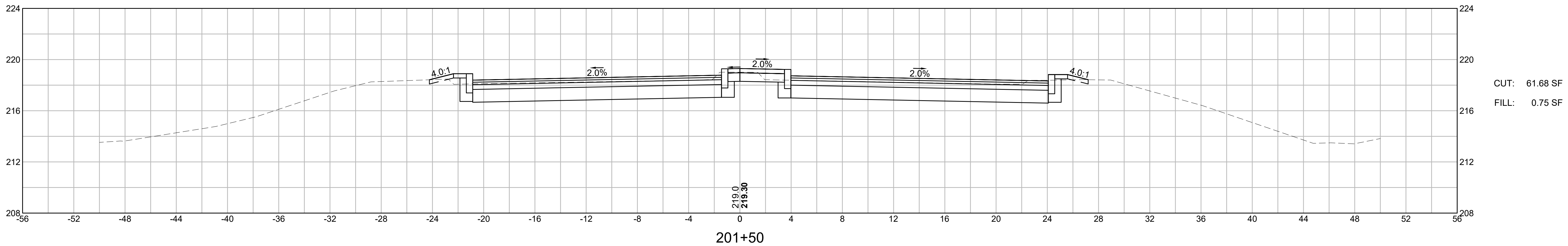
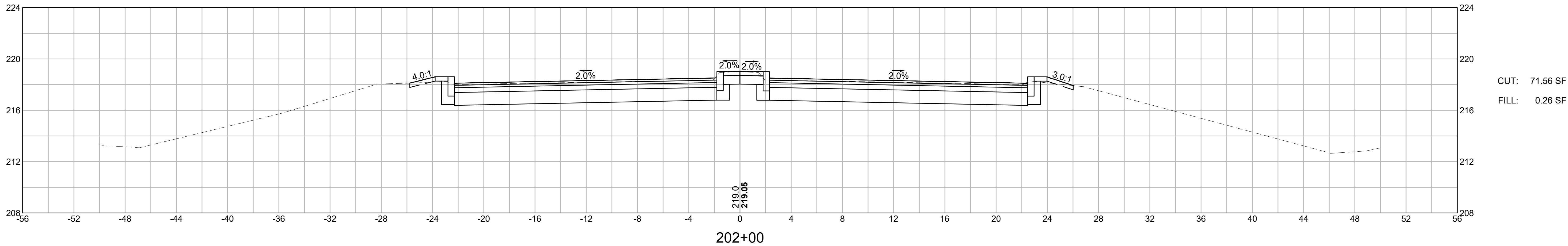
CUT: 96.18 SF
FILL: 82.60 SF



CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	133	135
PROJECT FILE NO. 609061			

MASSPIKE



CHICOPEE
MONTGOMERY GRANBY MCKINSTRY

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MASS.	STP/HPP-0032(051)X	134	135
PROJECT FILE NO. 609061			

SHOPPING PLAZA

