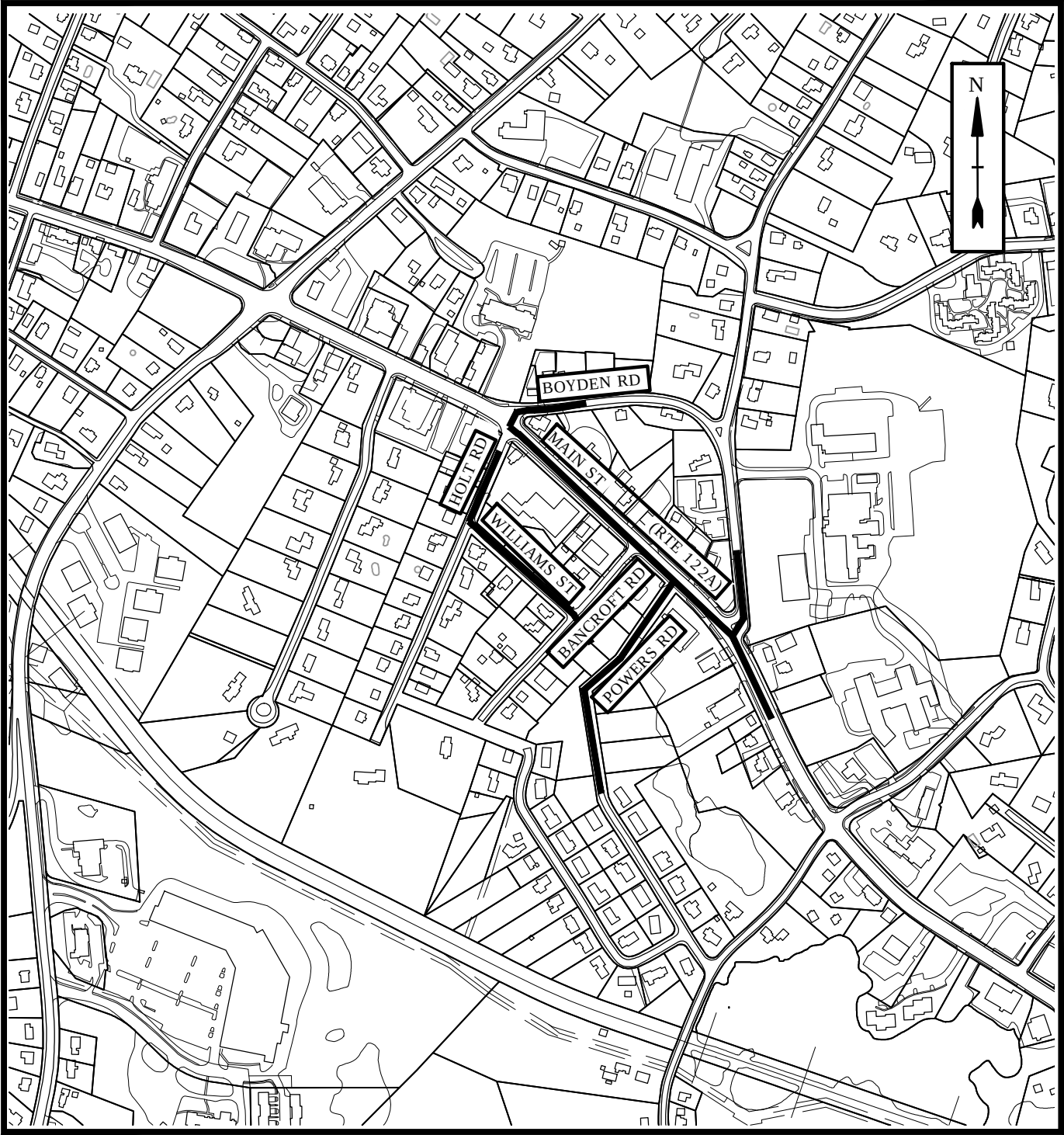


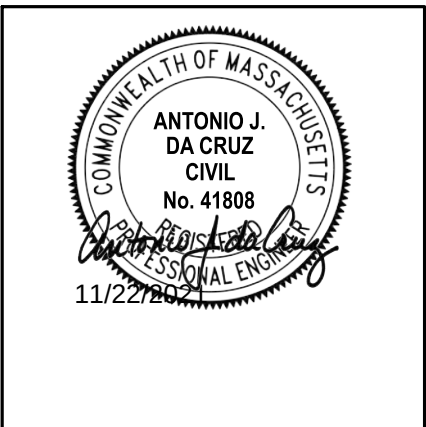
TOWN OF HOLDEN
MAIN STREET/ROUTE 122A
DRAINAGE IMPROVEMENTS
HOLDEN, MASSACHUSETTS
CONSTRUCTION DRAWINGS

LIST OF DRAWINGS		
DRAWING NO.	DRAWING TITLE	SHEET NO.
G-001	COVER SHEET	1
G-002	LEGEND AND ABBREVIATIONS	2
G-003	GENERAL NOTES	3
C-100	KEY PLAN	4
C-101	BOYDEN ROAD (0+00 TO 4+00) PLAN AND PROFILE	5
C-102	MAIN STREET (0+00 TO 5+00) PLAN AND PROFILE	6
C-103	MAIN STREET (5+00 TO 10+25) PLAN AND PROFILE	7
C-104	BOYDEN ROAD (12+00 TO 15+00) PLAN AND PROFILE	8
C-105	MAIN STREET (10+25 TO 14+00) PLAN AND PROFILE	9
C-106A	POWERS ROAD OUTLET 3 (0+00 TO 3+50) PLAN AND PROFILE	10
C-106	POWERS ROAD (0+00 TO 5+00) PLAN AND PROFILE	11
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C-108	HOLT ROAD WILLIAMS ST. (0+00 TO 1+50) PLAN AND PROFILE	13
C-109	WILLIAMS STREET (1+50 TO 6+85) PLAN AND PROFILE	14
C-501	CONSTRUCTION DETAILS - 1 OF 5	15
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C-503	CONSTRUCTION DETAILS - 3 OF 5	17
C-504	CONSTRUCTION DETAILS - 4 OF 5	18
C-505	CONSTRUCTION DETAILS - 5 OF 5	19
T-100	TRAFFIC CONTROL DETAILS	20

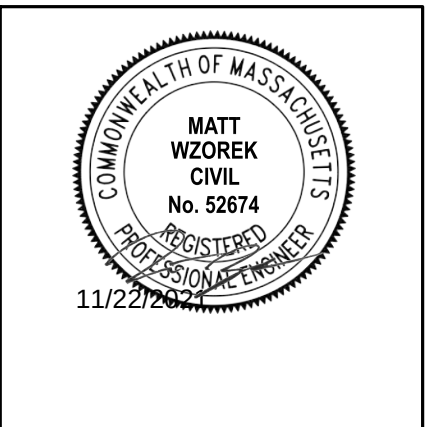


LOCATION MAP
SCALE: 1" = 500'

PREPARED BY:
Tighe&Bond
www.tighebond.com



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PREPARED FOR:
TOWN OF HOLDEN, MASSACHUSETTS

DIRECTOR OF PUBLIC WORKS
JOHN R. WOODSMALL III, PE

TOWN MANAGER
PETER LUKES

CONSTRUCTION DRAWINGS
COMPLETE SET 20 SHEETS

LEGEND

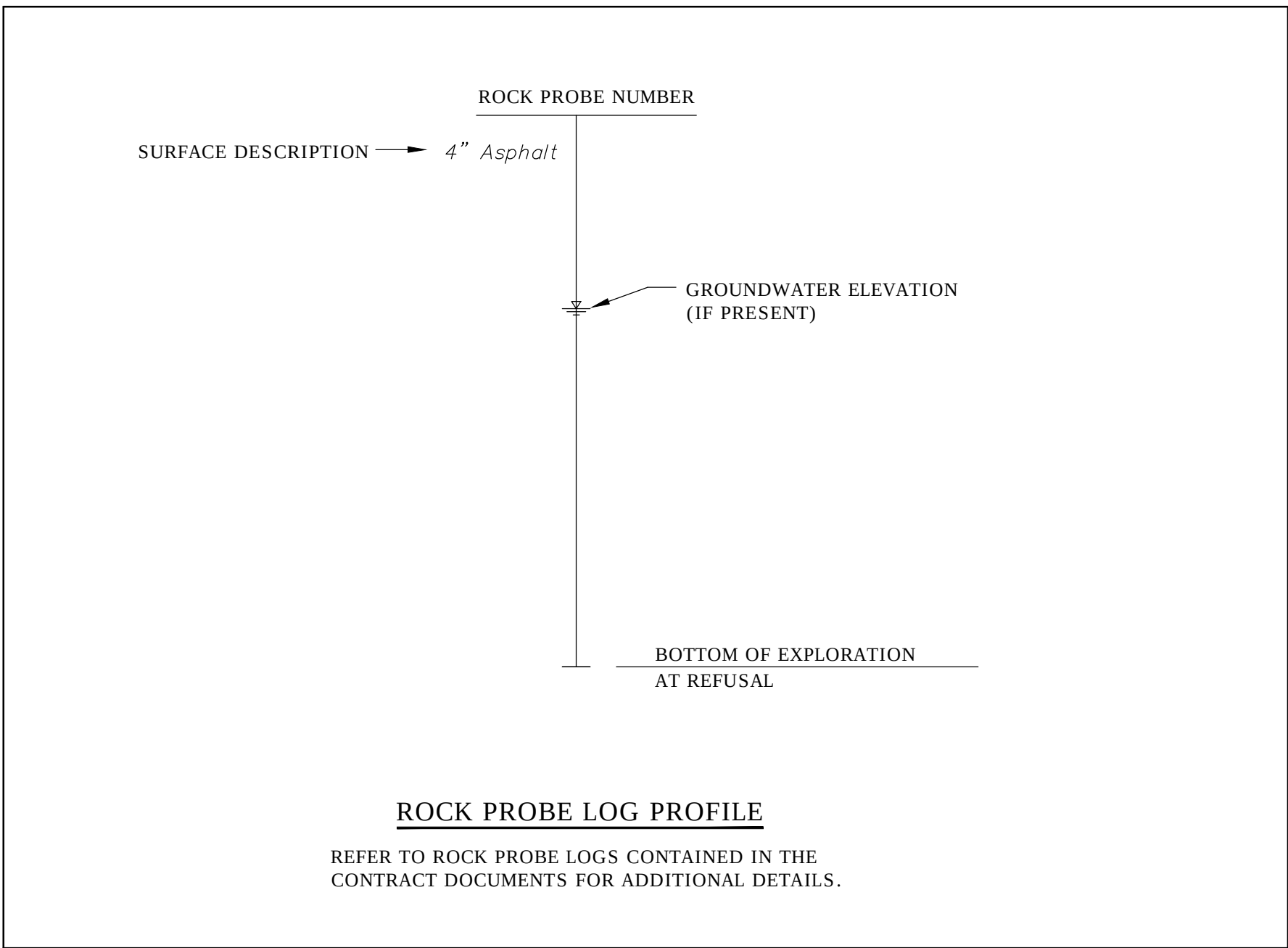
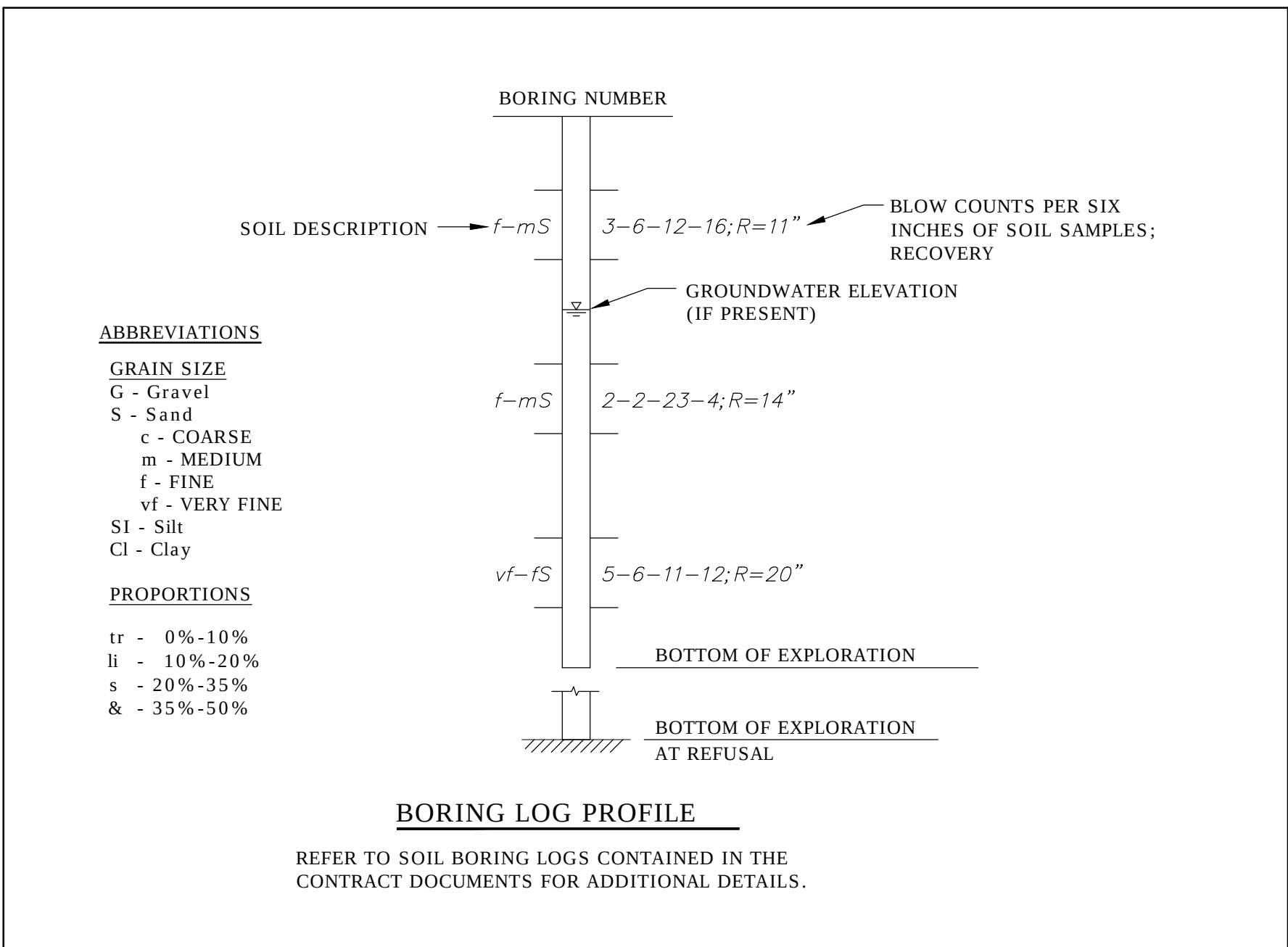
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ABBREVIATIONS

ABDN('D)	ABANDON(ED)
AC	ASBESTOS CEMENT PIPE
BC	BITUMINOUS CURB
BCC	BITUMINOUS CONC CURB
BCW	BITUMINOUS CONC WALK
BIT	BITUMINOUS
BL	BASELINE
BLDG	BUILDING
BND	BOUND
BOC	BOTTOM OF CURB
BOT	BOTTOM
BS	BOTTOM OF STREET
BT	BOTTOM OF WALL
CATV	CABLE TELEVISION
CB	CATCH BASIN
CC	CONCRETE CURB
CEM	CEMENT
CI	CAST IRON PIPE
CL	CENTERLINE
CLF	CHAIN LINK FENCE
CO	CLEAN OUT
CONC	CONCRETE
CPP	CORRUGATED
CY	POLYETHYLENE PIPE
DH	CUBIC YARD
DI	DRILL HOLE
DI	DUCTILE IRON PIPE
DIA	DIAMETER
DMH	DRAIN MANHOLE
E	EAST
EF	EACH FACE
EG	EXISTING GRADE
EL/ELEV	ELEVATION
ELEC	ELECTRIC
EMH	ELECTRIC MANHOLE
EOG	EDGE OF GRAVEL
EOP	EDGE OF PAVEMENT
EW	EACH WAY
EXIST	EXISTING
FES	FLARED END SECTION
FF	FINISH FLOOR
FM	FORCE MAIN
G	GAS
GG	GAS GATE
GRAN	GRANITE
HC	HANDICAP
HDPE	HIGH DENSITY
	POLYETHYLENE
HH	HANDHOLE
HMA	HOT MIX ASPHALT
HYD	HYDRANT
IN	INCHES
INV	INVERT
IP	IRON PIN
L	LENGTH OF CURB
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
MJ	MECHANICAL JOINT
M&S	MULCH & SHRUBS

ABBREVIATIONS CONT'D

N	NORTH
NITC	NOT IN THIS CONTRACT
NTS	NOT TO SCALE
N/A	NOT APPLICABLE
N/F	NOW OR FORMERLY
NVP	NO VISIBLE PIPES
OC	ON CENTER
OCS	OUTLET CONTROL STRUCTURE
OH	OVERHEAD
PB	PLANT BED
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND
PCPP	PERFORATED CORRUGATED POLYETHYLENE PIPE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PRC	POINT OF REVERSE CURVATURE
PROP	PROPOSED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYLCHLORIDE
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REC	RECORD
RET	RETAIN
REV	REVISION
ROW	RIGHT OF WAY
RT	RIGHT
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND REPLACE
R&S	REMOVE AND STACK
S	SOUTH
SAN	SANITARY
SCH	SCHEDULE
SF	SQUARE FOOT
SMH	SEWER MANHOLE
SS	SANITARY SEWER
STA	STATION
STL	STEEL
STRM	STORM
T	TOP
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB
TEL	TEL-DATA
TOW	TOP OF WATER
TP	TEST PIT
TS	TOP OF STEP
TW	TOP OF WALL
TP	TYPICAL
UP	UTILITY POLE
VGC	VERTICAL GRANITE CURB
W	WATER
WG	WATER GATE
WV	WATER VALVE
XFMR	TRANSFORMER



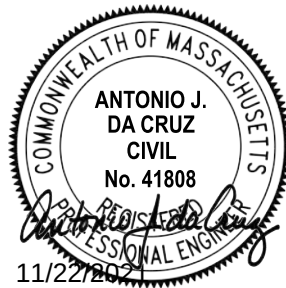
LEGEND

RESOURCE AREAS	
TOP OF BANK	
100-FOOT BUFFER ZONE	
25-FOOT NO DISTURBANCE AREA (LOCAL)	
WETLAND FLAG	
200-FOOT DCR JURISDICTIONAL AREA	
BUFFER ZONE	
400-FOOT DCR JURISDICTIONAL AREA	
BUFFER ZONE	

LEGEND

DEMOLITION / GEOTECHNICAL	
EROSION CONTROL BARRIER	
UTILITY TO BE ABANDONED	
UTILITY TO BE DEMOLISHED	
ITEM TO BE DEMOLISHED	
SURFACE RESTORATION AREA	
TEST PIT	
BORING	
ROCK PROBE	

Tighe&Bond
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Main Street/ Route 122A Drainage Improvements

Town of Holden

Holden, MA

[illegible]

MARK	DATE	DESCRIPTION
PROJECT NO:	H1536-019	
DATE:	06/2021	
FILE:	H1536-019_G-Lgnd.dwg	
DRAWN BY:	ELD	
CHECKED:	MPW	
APPROVED:	AJD	

LEGEND AND ABBREVIATIONS

SCALE: AS SHOWN

G-002
SHEET 2 OF 20

Last Saved: 11/17/2021 1:02pm By: SOrturk
Plotted On: Nov 17, 2021 - 1:02pm
Tighe & Bond - 14111516 - Holden Projects - Task 019 - Main St Drainage Improvements (Drawings - Figures/AutoCAD) Sheet Construction Town of Holden H1536-019 G-Notes.dwg

BASE PLAN NOTES

- THE EXISTING CONDITIONS INFORMATION SHOWN ON THE DRAWINGS IS BASED ON THE FOLLOWING:
 - SURVEY DRAWINGS PROVIDED BY FELDMAN LAND SURVEYORS TITLED PARTIAL EXISTING CONDITIONS AND DATED MARCH 15, 2021 AND MARCH 19, 2021.
 - RECORD DRAWINGS PROVIDED BY THE TOWN OF HOLDEN INCLUDING PLAN OF DRAINAGE SYSTEM HOLT. RD. TO BANCROFT ROAD DATED 4-19-73, SEWER LOCATION STUDIES HOLDEN DIST. HOSPITAL AND HIGH SCHOOL PLAN AND PROFILE DATED 11-21-1966, STORMWATER MANAGEMENT REPORT PROPOSED MEDICAL BUILDING REPORT DATED 1/9/12, AND SERVICE CARDS FOR #1059-1063 MAIN STREET.
 - FIELD INVESTIGATIONS PERFORMED BY TIGHE & BOND IN AUGUST 2019, JUNE 2020, AND SEPTEMBER 2020
 - GIS INFORMATION DATED OCTOBER 31, 2019
 - THE RESOURCE AREA BOUNDARIES DEPICTED ON THE DRAWINGS WERE DELINEATED BY TIGHE & BOND, INC. ON MAY 12, 2020 AND NOVEMBER 10, 2020.
- PROPERTY LINES SHOWN ON THE DRAWINGS FOR ALL STREETS EXCLUDING POWERS ROAD ARE APPROXIMATE AND ARE NOT BASED ON PLAN RESEARCH. POWERS ROAD LINES ARE BASED ON SURVEY BY FELDMAN LAND SURVEYORS TITLED PARTIAL EXISTING CONDITIONS AND DATED MARCH 15, 2021 AND MARCH 19, 2021.
- UTILITY LOCATIONS SHOWN WERE PLOTTED FROM INFORMATION SUPPLIED BY RESPECTIVE UTILITY COMPANIES AND DATA OBTAINED FROM FIELD SURVEYS AND AS BUILT DRAWINGS. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION SHOWN ON THESE DRAWINGS IS NOT GUARANTEED. DETERMINE THE LOCATIONS AND ELEVATIONS OF ALL UTILITIES WHICH MAY AFFECT CONSTRUCTION OPERATIONS.
- SUB-SURFACE EXPLORATIONS WERE PERFORMED BY MARTIN GEO-ENVIRONMENTAL, LLC ON NOVEMBER 1, 2018, JUNE 4, 2020, AND DECEMBER 4, 2020. BORING LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND BORING INFORMATION IS NOT GUARANTEED IN ANY WAY TO REPRESENT EXISTING CONDITIONS. BORING LOGS ARE INCLUDED IN THE PROJECT MANUAL FOR THE CONTRACTORS INFORMATION ONLY.
- THE DRAWINGS ARE BASED ON THE FOLLOWING DATUMS: HORIZONTAL (NAD83) ; VERTICAL (NAVD88)
- THE EXISTING CONDITIONS SHOWN ARE APPROXIMATE. FIELD VERIFY EXISTING CONDITIONS.

GENERAL NOTES

- NOTIFY DIGSAFE AT 1-888-344-7233 AND OTHER UTILITY OWNERS IN THE AREA NOT ON THE DIGSAFE LIST AT LEAST 72 HOURS PRIOR TO ANY DIGGING, TRENCHING, ROCK REMOVAL, DEMOLITION, BORING, BACKFILLING, GRADING, LANDSCAPING, OR ANY OTHER EARTH MOVING OPERATIONS.
- LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. IN ADDITION, SOME UTILITIES MAY NOT BE SHOWN. DETERMINE THE EXACT LOCATION OF UTILITIES BY TEST PIT OR OTHER METHODS, AS NECESSARY TO PREVENT DAMAGE TO UTILITIES AND/OR INTERRUPTIONS IN UTILITY SERVICE. PERFORM TEST PIT EXCAVATIONS AND OTHER INVESTIGATIONS TO LOCATE UTILITIES, AND PROVIDE THIS INFORMATION TO THE ENGINEER, PRIOR TO CONSTRUCTING THE PROPOSED IMPROVEMENTS. LOCATE ALL EXISTING UTILITIES TO BE CROSSED BY HAND EXCAVATION.
- NOT ALL OF THE UTILITY SERVICES TO BUILDINGS ARE SHOWN. THE CONTRACTOR SHALL ANTICIPATE THAT EACH PROPERTY HAS SERVICE CONNECTIONS FOR THE VARIOUS UTILITIES.
- BOLD TEXT AND LINES INDICATE PROPOSED WORK. LIGHT TEXT AND LINES INDICATE APPROXIMATE EXISTING CONDITIONS.
- TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES, LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM TIGHE & BOND.
- EXCAVATE ADDITIONAL TEST PITS TO LOCATE EXISTING UTILITIES AS DIRECTED OR APPROVED BY THE ENGINEER.
- NOTIFY THE ENGINEER OF ANY UTILITIES IDENTIFIED DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE DRAWINGS OR THAT DIFFER IN SIZE OR MATERIAL.
- THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY; COORDINATION WITH THE OWNER, ALL SUBCONTRACTORS, AND WITH OTHER CONTRACTORS WORKING WITHIN THE LIMITS OF WORK, THE MEANS AND METHODS OF CONSTRUCTING THE PROPOSED WORK.
- OBTAIN, PAY FOR AND COMPLY WITH PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK. ARRANGE AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE JURISDICTIONAL AUTHORITIES.
- SHORE UTILITY TRENCHES WHERE FIELD CONDITIONS DICTATE AND/OR WHERE REQUIRED BY LOCAL, STATE AND FEDERAL HEALTH AND SAFETY CODES.
- FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. IF FIELD CONDITIONS ARE OBSERVED THAT VARY SIGNIFICANTLY FROM THOSE SHOWN ON THE DRAWINGS, IMMEDIATELY NOTIFY THE ENGINEER IN WRITING FOR RESOLUTION OF THE CONFLICTING INFORMATION.
- PROTECT AND MAINTAIN ALL UTILITIES IN THE AREAS UNDER CONSTRUCTION DURING THE WORK. LEAVE ALL PIPES AND STRUCTURES WITHIN THE LIMITS OF THE CONTRACT IN A CLEAN AND OPERABLE CONDITION AT THE COMPLETION OF THE WORK. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SAND AND SILT FROM DISTURBED AREAS FROM ENTERING THE DRAINAGE SYSTEM.
- NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICT, ERROR, AMBIGUITY, OR DISCREPANCY WITH THE PLANS OR BETWEEN THE PLANS AND ANY APPLICABLE LAW, REGULATION, CODE, STANDARD SPECIFICATION, OR MANUFACTURER'S INSTRUCTIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR SUPPORT OF EXISTING UTILITIES AND REPAIR OR REPLACEMENT COSTS OF UTILITIES DAMAGED DURING CONSTRUCTION, WHETHER ABOVE OR BELOW GRADE. REPLACE DAMAGED UTILITIES IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER AND AT NO COST TO THE PROPERTY OWNER.
- TAKE NECESSARY MEASURES AND PROVIDE CONTINUOUS BARRIERS OF SUFFICIENT TYPE, SIZE, AND STRENGTH TO PREVENT ACCESS TO ALL WORK AND STAGING AREAS AT THE COMPLETION OF EACH DAYS WORK.
- NO OPEN TRENCHES WILL BE ALLOWED OVER NIGHT. THE USE OF ROAD PLATES TO PROTECT THE EXCAVATION WILL BE CONSIDERED UPON REQUEST, BUT BACKFILLING IS PREFERRED.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY TRAFFIC CONTROL/SAFETY DEVICES TO ENSURE SAFE VEHICULAR AND PEDESTRIAN ACCESS THROUGH THE WORK AREA, OR FOR SAFELY IMPLEMENTING DETOURS AROUND THE WORK AREA. PERFORM TRAFFIC CONTROL IN ACCORDANCE WITH THE CONTRACTOR'S APPROVED TRAFFIC CONTROL PLAN.
- MAINTAIN EMERGENCY ACCESS TO ALL PROPERTIES WITHIN THE PROJECT AREA AT ALL TIMES DURING CONSTRUCTION.
- WHEN WORKING IN THE ROAD, PROVIDE THE OWNER AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES A DETAILED PLAN OF APPROACH INDICATING METHODS OF PROPOSED TRAFFIC ROUTING ON A DAILY BASIS. PROVIDE COORDINATION TO ENSURE COMMUNICATION AND COORDINATION BETWEEN THE OWNER, CONTRACTOR AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES THROUGHOUT THE CONSTRUCTION PERIOD.
- REMOVE AND DISPOSE OF ALL CONSTRUCTION-RELATED WASTE MATERIALS AND DEBRIS IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS.
- THE TERM "DEMOLISH" USED ON THE DRAWINGS MEANS TO REMOVE AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
- THE TERM "ABANDON" USED ON THE DRAWINGS MEANS TO LEAVE IN PLACE AND TAKE APPROPRIATE MEASURES TO DECOMMISSION AS SPECIFIED OR NOTED ON THE DRAWINGS.
- ALL PROPOSED WORK MAY BE ADJUSTED IN THE FIELD BY THE OWNER'S PROJECT REPRESENTATIVE TO MEET EXISTING CONDITIONS.

COORDINATION NOTES

- MASSDOT WORK INCLUDES DMH P20 AND ALL WORK SOUTHWEST TOWARDS DMH P20 & SOUTH TOWARDS DMH P18. ONCE DMH P20 IS INSTALLED, TOWN WORK CAN COMMENCE OUT OF DMH P20 TOWARDS DMH P21.
- MASSDOT WORK TO INCLUDE DMH P24 AND ALL WORK TOWARDS DMH P23 & DMH E28. ONCE DMH P24 IS IN PLACE TOWN WORK CAN BE CONDUCTED COMING OUT OF DMH P24 TOWARDS DMH P25.

PLANTING NOTES

- REMOVE ALL DEAD MATERIAL PRIOR TO TRANSPLANT
- DISTURB AS LITTLE OF ROOT SYSTEM AS POSSIBLE. DO NOT EXCAVATE WITHIN THE DRIPLINE OF PLANT
- DO NOT SHAKE SOIL OFF THE ROOT SYSTEM
- SET PLANT LEVEL IN NEW HOLE, AND TO THE SO SAME DEPTH IT WAS PREVIOUSLY
- WATER SHRUB DEEPLY, IMMEDIATELY AFTER TRANSPLANT, AND TWICE A WEEK (DEPENDING ON WEATHER) THEREAFTER

EROSION CONTROL AND RESOURCE AREA PROTECTION NOTES

- WETLAND RESOURCE AREAS WERE DELINEATED BY TIGHE & BOND, INC. ON MAY 12, 2020 AND NOVEMBER 10, 2020.
- PROVIDE ALL EROSION CONTROL MEASURES SHOWN, SPECIFIED, REQUIRED BY PERMIT, AND/OR REQUIRED BY THE ENGINEER PRIOR TO ANY CONSTRUCTION OR IMMEDIATELY UPON REQUEST. MAINTAIN SUCH CONTROL MEASURES UNTIL FINAL SURFACE TREATMENTS ARE IN PLACE AND/OR UNTIL PERMANENT VEGETATION IS ESTABLISHED. INSPECT AFTER EACH RAINSTORM AND DURING MAJOR STORM EVENTS TO CONFIRM THAT ALL SEDIMENTATION AND EROSION CONTROL MEASURES REQUIRED ARE IN PLACE AND EFFECTIVE.
- PRIOR TO STARTING WORK, CLEARLY STAKE WORK LIMITS. DO NOT DISTURB VEGETATION AND TOPSOIL BEYOND THE PROPOSED LIMITS. COORDINATE WITH THE ENGINEER FOR LOCATIONS OF TEMPORARY STOCKPILING OF TOPSOIL DURING CONSTRUCTION.
- INSTALL SILT SACKS OR OTHER APPROVED SEDIMENTATION BARRIERS IN/AT ALL CATCH BASINS IN THE PROJECT AREA.
- COMPACT, STABILIZE, AND LOAM AND SEED SIDE SLOPES, SHOULDER AREAS AND DISTURBED VEGETATED AREAS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AS REQUIRED BY PERMITS. GRADE SIDE SLOPES, SHOULDER AREAS AND DISTURBED VEGETATED AREAS TO A MAXIMUM SLOPE OF 3 HORIZONTAL TO 1 VERTICAL (3H:1V), WHERE POSSIBLE. PROVIDE BIODEGRADABLE EROSION CONTROL BLANKETS TO PREVENT EROSION WHERE SLOPES ARE STEEPER THAN 3H:1V.
- SETTLE OR FILTER ALL SILT-LADEN WATER FROM DEWATERING ACTIVITIES IN A SEDIMENTATION OR FILTER BAG TO REMOVE SEDIMENTS AND TURBIDITY PRIOR TO RELEASE USING A SEDIMENTATION OR FILTER BAG LOCATED DOWN-GRADIENT OF THE DEWATERED AREA.
- REMOVE AND PROPERLY DISPOSE OF SILT TRAPPED AT BARRIERS IN UPLAND AREAS OUTSIDE BUFFER ZONES. REMOVE MATERIALS DEPOSITED IN ANY TEMPORARY SETTLING BASINS AT THE COMPLETION OF THE PROJECT. RESTORE ALL DISTURBED AREAS TO THEIR PRECONSTRUCTION CONDITION.
- SWEEP, COLLECT, REMOVE AND DISPOSE OF ANY SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS AT THE END OF EACH DAY.
- LOAM AND SEED ALL DISTURBED VEGETATED AREAS TO ESTABLISH COVER AND STABILIZATION AS SOON AS POSSIBLE FOLLOWING DISTURBANCE.
- MAINTAIN AN ADDITIONAL SUPPLY OF EROSION CONTROL MEASURES ON-SITE FOR EMERGENCY REPAIRS.
- STORE FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS IN A SECONDARY CONTAINER AND REMOVE TO A SECURE LOCKED AND COVERED AREA DURING NON-WORK HOURS.
- PROVIDE A SUPPLY OF ABSORBENT SPILL RESPONSE MATERIALS SUCH AS BOOMS, BLANKETS, AND OIL ABSORBENT MATERIALS AT THE CONSTRUCTION SITE AT ALL TIMES TO CLEAN UP POTENTIAL SPILLS OF HAZARDOUS MATERIALS. IMMEDIATELY REPORT SPILLS OF HAZARDOUS MATERIALS TO THE STATE ENVIRONMENTAL AGENCY AND THE MUNICIPALITY WHERE THE WORK IS OCCURRING.
- CONTAINMENT/CLEANUP OF SAW-CUTTING DEBRIS NEEDS TO OCCUR BEFORE ANY RAINFALL AND AT THE END OF EVERY DAY OF CUTTING TO PREVENT TRANSPORT INTO THE BROOK/WETLANDS.
- CONTRACTOR SHALL IMMEDIATELY CEASE OPERATIONS THAT ARE CAUSING ANY VISIBLE TURBIDITY IN A WETLAND OR BROOK; AND TAKE IMMEDIATE ACTIONS TO STOP THE DISCHARGE AND PREVENT ANY FURTHER POLLUTANT RELEASES.
- CONTRACTOR IS REQUIRED TO SUBMIT THEIR CONTROL OF WATER PLAN TO DCR FOR APPROVAL BEFORE BEGINNING WORK. DEWATERING DISCHARGES WITHIN 200' OF A TRIBUTARY TO A SURFACE WATER SUPPLY (ZONE A) ARE PROHIBITED BY DEP WITHOUT PRIOR APPROVAL FROM THE WATER SUPPLIER (DCR). THIS SETBACK IS REDUCED TO 50' WHERE THE DISCHARGE IS SHOWN TO BE ADEQUATELY TREATED AND DIRECTED THROUGH A STABLE BUFFER STRIP OF VEGETATION. LOCATIONS MUST BE APPROVED BY DCR.

SURFACE RESTORATION NOTES

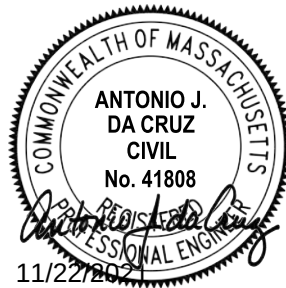
- ALL PAVEMENT DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- PROVIDE SITE GRADING AT HANDICAPPED RAMPS, SIDEWALKS, AND BUILDING ENTRANCES THAT IS CONSISTENT WITH THE RELEVANT ACCESS REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT (ABA), THE AMERICANS WITH DISABILITIES ACT (ADA), AND MA ARCHITECTURAL ACCESS BOARD REQUIREMENTS (AAB). SMALL CHANGES IN GRADE OVER RELATIVELY SHORT DISTANCES (E.G. AT PARKING SPACES, ACCESSIBLE ROUTES, AND RAMPS) MIGHT NOT BE CLEARLY DEPICTED WITHIN THE CONTOUR INTERVAL SHOWN. COMPLY WITH THE CRITERIA IN THESE STANDARDS. SELECT MAXIMUM SLOPE CRITERIA ARE REPRODUCED BELOW:
 - ACCESSIBLE PARKING STALL AND PASSENGER LOADING ZONE (ANY DIRECTION) SLOPE < 2.0%
 - LONGITUDINAL SLOPE ALONG ACCESSIBLE ROUTES < 5.0%
 - CROSS SLOPE ALONG ACCESSIBLE ROUTES < 2.0%
- PROTECT PROJECT FEATURES (E.G., WALLS, FENCES, MAIL BOXES, SIGNS, SIDEWALKS, CURBING, STAIRS, WALKWAYS, TREES, ETC.) FROM DAMAGE DURING CONSTRUCTION, INCLUDING PROVIDING TEMPORARY SUPPORTS, WHEN APPROPRIATE.
- IF REMOVAL OF PROJECT FEATURES IS REQUIRED IN ORDER TO PERFORM THE PROPOSED WORK, REMOVE THOSE SITE FEATURES ONLY UPON APPROVAL OF ENGINEER. REPLACE ALL REMOVED PROJECT FEATURES; NEW ITEMS SHALL BE EQUAL OR BETTER IN QUALITY AND CONDITION TO THE ITEMS REMOVED.
- EXISTING SURVEY MONUMENTS DISTURBED BY THE CONTRACTOR SHALL BE REPLACED BY A LAND SURVEYOR LICENSED IN THE STATE IN WHICH THE WORK IS PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
- COORDINATE THE ADJUSTMENT OF EXISTING UTILITY STRUCTURES WITH EACH RESPONSIBLE UTILITY OWNER PRIOR TO RECONSTRUCTION AND/OR PAVING OPERATIONS. RAISE ALL STRUCTURES TO FINISHED GRADES PRIOR TO THE END OF THE CONSTRUCTION SEASON AND PRIOR TO FINISHED PAVING.
- REPAIR DISTURBED PAVED SURFACES AT THE END OF EACH WORK WEEK, UNLESS OTHERWISE APPROVED/REQUIRED BY THE OWNER.
- PLACE TEMPORARY BITUMINOUS CONCRETE PAVEMENT AT DISTURBED PORTLAND CEMENT CONCRETE SIDEWALKS AND DRIVEWAYS AT THE END OF EACH WORK WEEK, UNLESS OTHERWISE APPROVED/REQUIRED BY THE OWNER.
- IF EXISTING MAGNETIC OR TRAFFIC LOOP DETECTORS ARE REMOVED IN THE COURSE OF EXCAVATION, REPLACE WITH NEW TRAFFIC LOOP DETECTORS IN ACCORDANCE WITH TOWN OF HOLDEN OR MASSDOT STANDARDS AND THE CONTRACT DOCUMENTS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- TRANSFER ALL TEMPORARY BENCHMARKS, AS NECESSARY.
- ACCOMMODATE PEDESTRIAN TRAFFIC WHERE A SIDEWALK IS TO BE CLOSED FOR SAFETY. "SIDEWALK CLOSED HERE" SIGNS SHALL BE USED AT THE NEAREST SAFE INTERSECTION. SEE TRAFFIC CONTROL DETAILS FOR SIGN INFORMATION.
- RESTORE ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE PAYLINE LIMITS TO ORIGINAL CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
- REGRADE ALL UNPAVED AREAS DISTURBED BY THE WORK AS REQUIRED. REPAIR/REPLACE PAVED SURFACES DISTURBED BY THE WORK IN-KIND, UNLESS OTHERWISE NOTED. RESTORE SURFACES TO EXISTING OR PROPOSED CONDITIONS AS INDICATED ON THE DRAWINGS.
- PROVIDE A SMOOTH, FLUSH TRANSITION BETWEEN ALL NEW AND EXISTING PAVEMENTS AND WALKING SURFACES.

STORMWATER SYSTEM IMPROVEMENTS NOTES

- NEW STORM DRAIN SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE OWNER'S STANDARDS, AS SPECIFIED, AND AS SHOWN ON THE DRAWINGS.
- HORIZONTAL AND VERTICAL LOCATION OF STORM DRAIN MAY BE MODIFIED TO FIT EXISTING FIELD CONDITIONS, UPON APPROVAL OF THE ENGINEER.
- DISTANCES AND SLOPES OF PROPOSED SANITARY SEWERS/STORM DRAINS ARE BASED ON DISTANCES FROM CENTERLINE TO CENTERLINE OF STRUCTURES.
- DELIVER EXISTING FRAMES, COVERS AND GRATES OF STRUCTURES TO BE REMOVED TO THE DEPARTMENT OF PUBLIC WORKS YARD OR OTHER LOCATION DESIGNATED BY THE OWNER.
- MAINTAIN OPERATION OF DRAINAGE SYSTEM DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE OPERATION TO PASS A 10-YEAR STORM EVENT. PROVIDE BYPASS PUMPING OF DRAINAGE FLOWS AND/OR TEMPORARY CONNECTIONS, AS NECESSARY.
- WHERE A PROPOSED UTILITY CROSSES AN EXISTING ASBESTOS CEMENT (AC) WATER MAIN, REPLACE THE AC WATER MAIN AT THE CROSSING AND 10 FEET ON EACH SIDE OF THE CROSSING WITH NEW DI PIPE. HANDLE, REMOVE, TRANSPORT AND DISPOSE OF AC PIPE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

UTILITY CONTACTS

GAS	EVERSOURCE	JEFFREY CANTARA, 781-441-8439
ELECTRIC	HOLDEN MUNICIPAL LIGHT DEPARTMENT	JANE PARENTEAU, 508-210-5400
CABLE	CHARTER	DAVID POPLAWSKI, 774-823-3214 (x76051)
WATER-SEWER	HOLDEN DPW DIRECTOR	JOHN WOODSMALL, 508-210-5550
WATER-SEWER	HOLDEN WATER-SEWER SUPERINTENDENT	RYAN MOURADIAN, 508-210-5550
DRAIN	MASSDOT	THOMAS EMERICK, 508-929-3919
TELEPHONE	VERIZON	KAREN MEALEY, 774-409-3160



Main Street/
Route 122A
Drainage
Improvements

Town of Holden

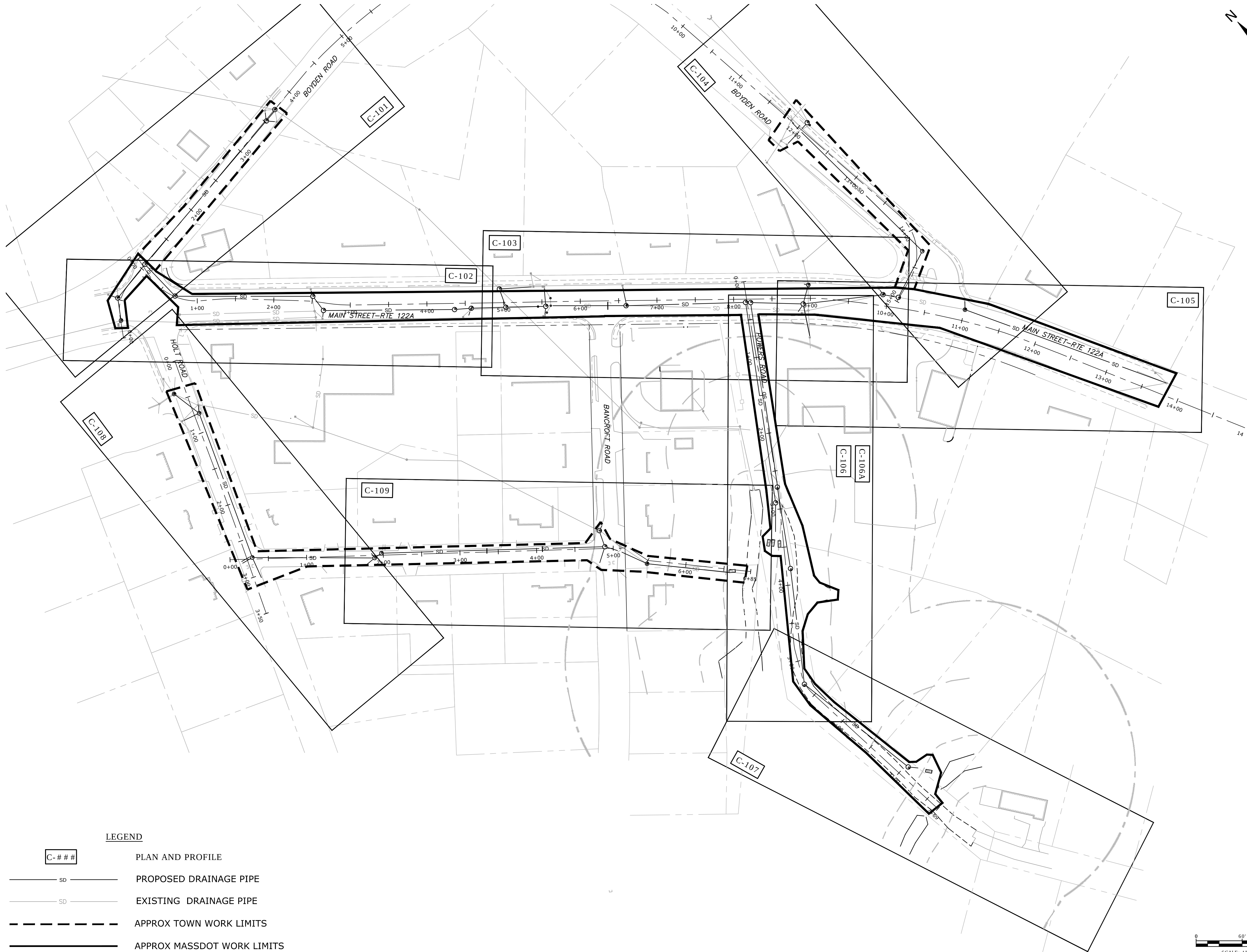
Holden, MA

MARK	DATE	DESCRIPTION
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DATE:		06/2021
FILE:		H1536-019_G-Notes.dwg
DRAWN BY:		ELD
CHECKED:		MPW
APPROVED:		AJD

GENERAL NOTES

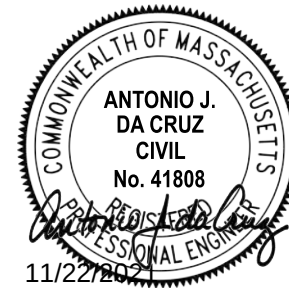
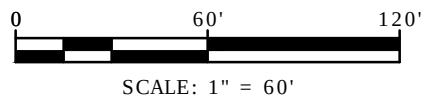
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Plotted On: Nov 17, 2021 - 1:03pm By: SOrturk
Tighe & Bond - J:\H1536-Holden Projects\Task 019 - Main St Drainage Improvements\Drawings - Figures\AutoCAD\Sheet Construction\Town of Holden\H1536-019_G-KeyPlan.dwg



LEGEND

- | | |
|------------------|----------------------------|
| <div>C-###</div> | PLAN AND PROFILE |
| <div>SD</div> | PROPOSED DRAINAGE PIPE |
| <div>SD</div> | EXISTING DRAINAGE PIPE |
| <div>---</div> | APPROX TOWN WORK LIMITS |
| <div>---</div> | APPROX MASSDOT WORK LIMITS |



Main Street/
Route 122A
Drainage
Improvements

Town of Holden

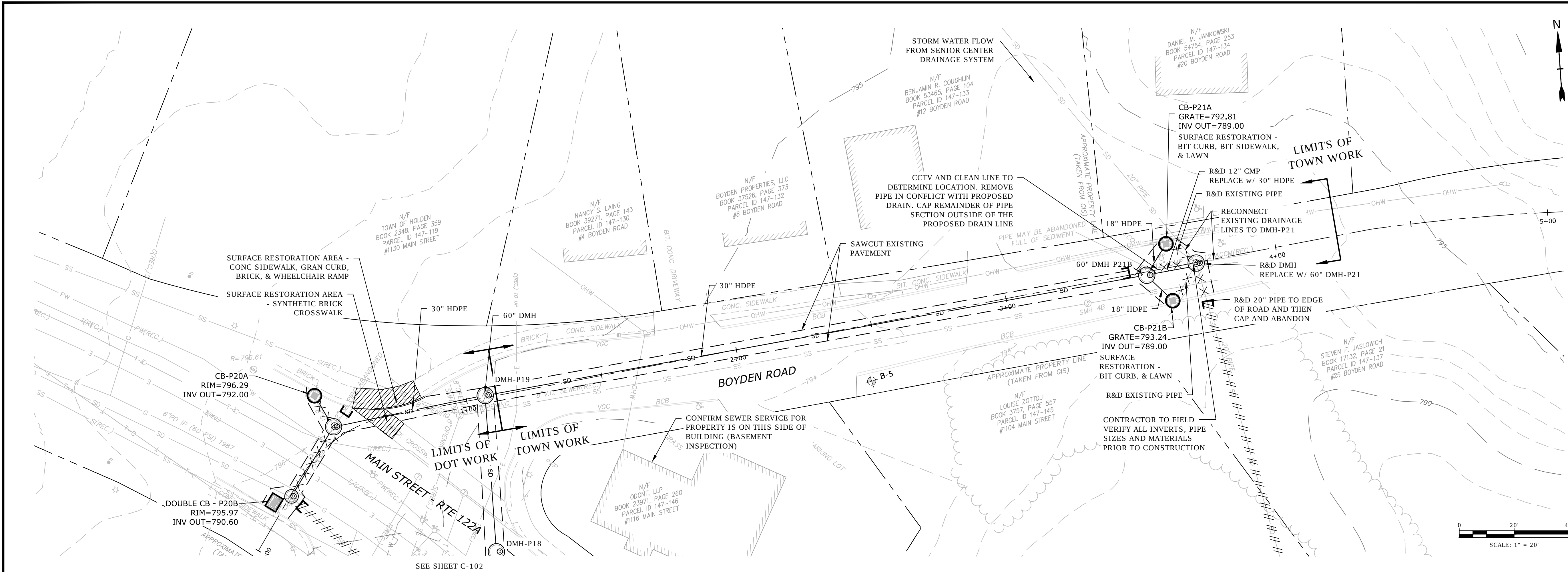
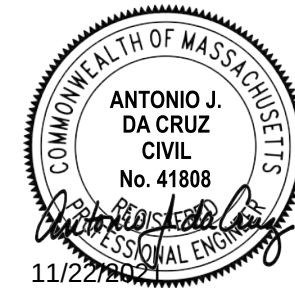
Holden, MA

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DATE:		06/2021
FILE:		H1536-019_G-KeyPlan.dwg
DRAWN BY:		ELD
CHECKED:		MPW
APPROVED:		AJD

KEY PLAN

SCALE: 1" = 60'

C-100
SHEET 4 OF 20



Main Street/ Route 122A Drainage Improvements

Town of Holden

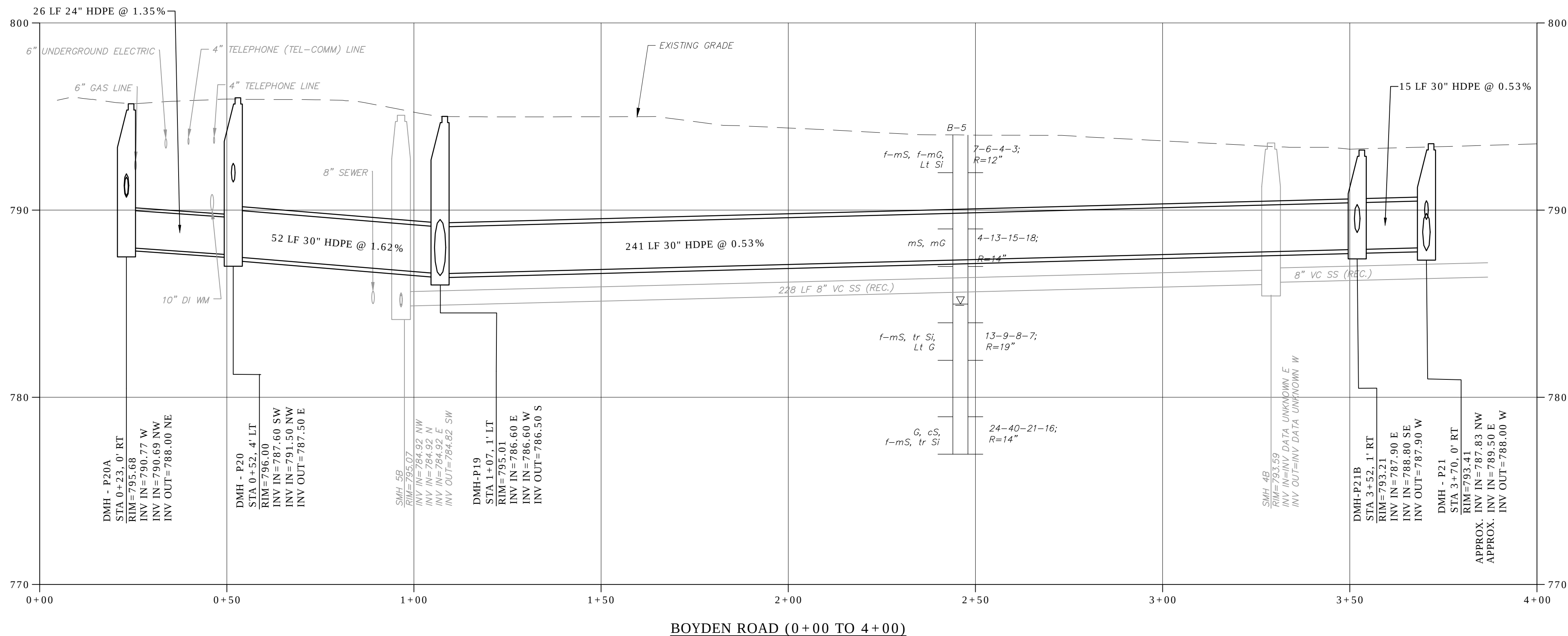
Holden, MA

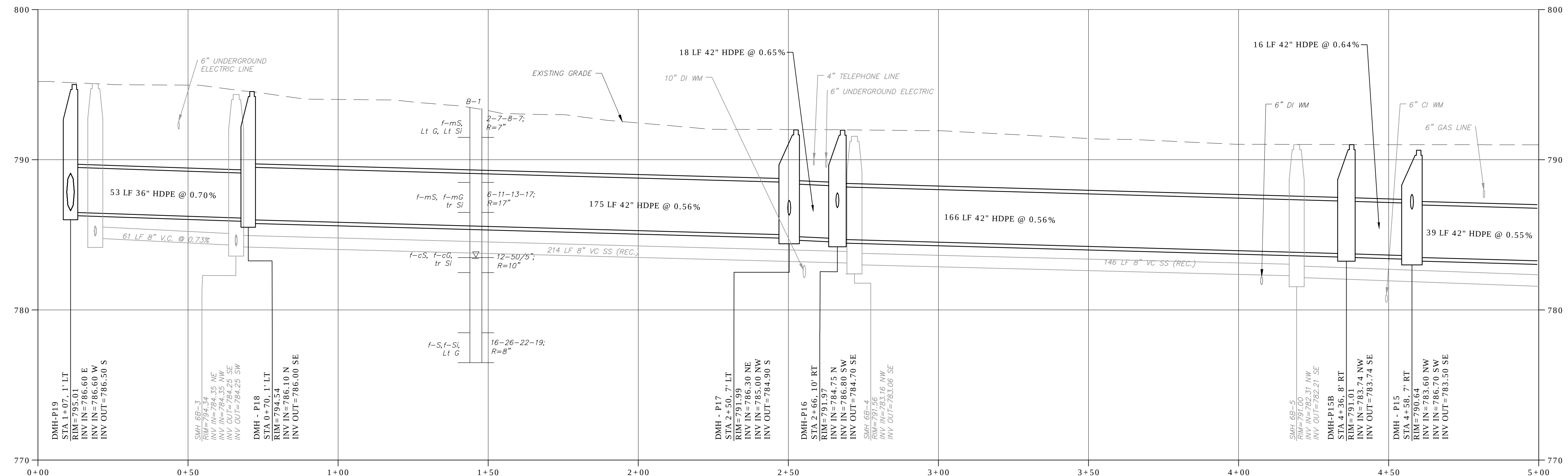
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DATE:	06/2021	
FILE:	H1536-019_C-PlanProfile.dwg	
DRAWN BY:	ELD	
CHECKED:	MPW	
APPROVED:	AJD	

BOYDEN ROAD
(0+00 TO 4+00)
PLAN AND PROFILE

SCALE: HORIZ 1"=20'; VERT 1"=4'

C-101
SHEET 5 OF 20



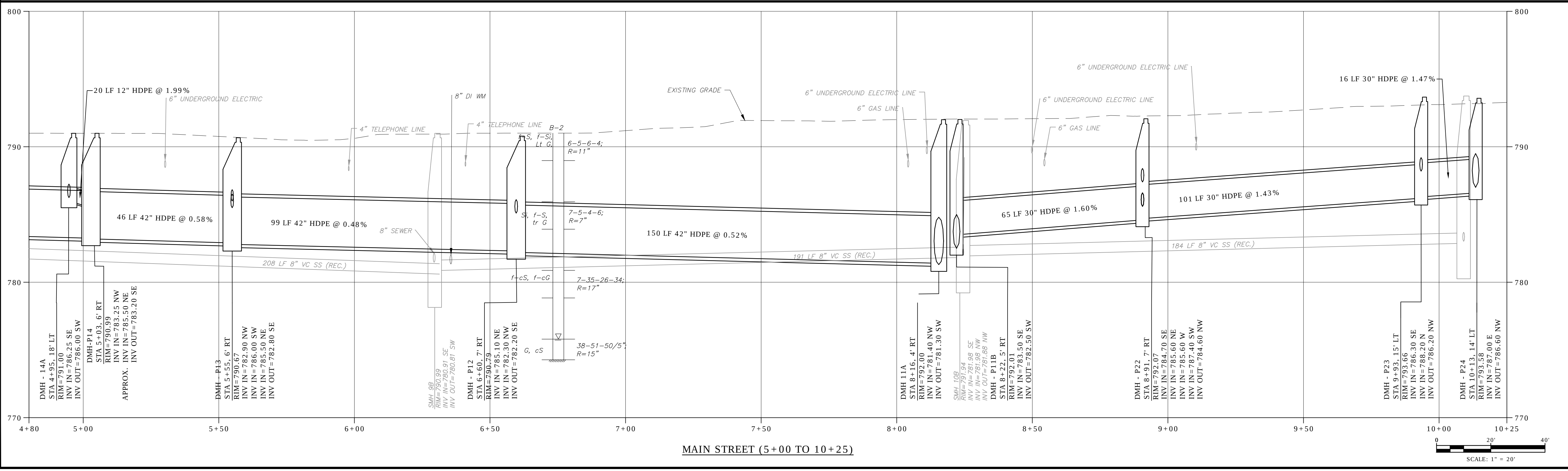
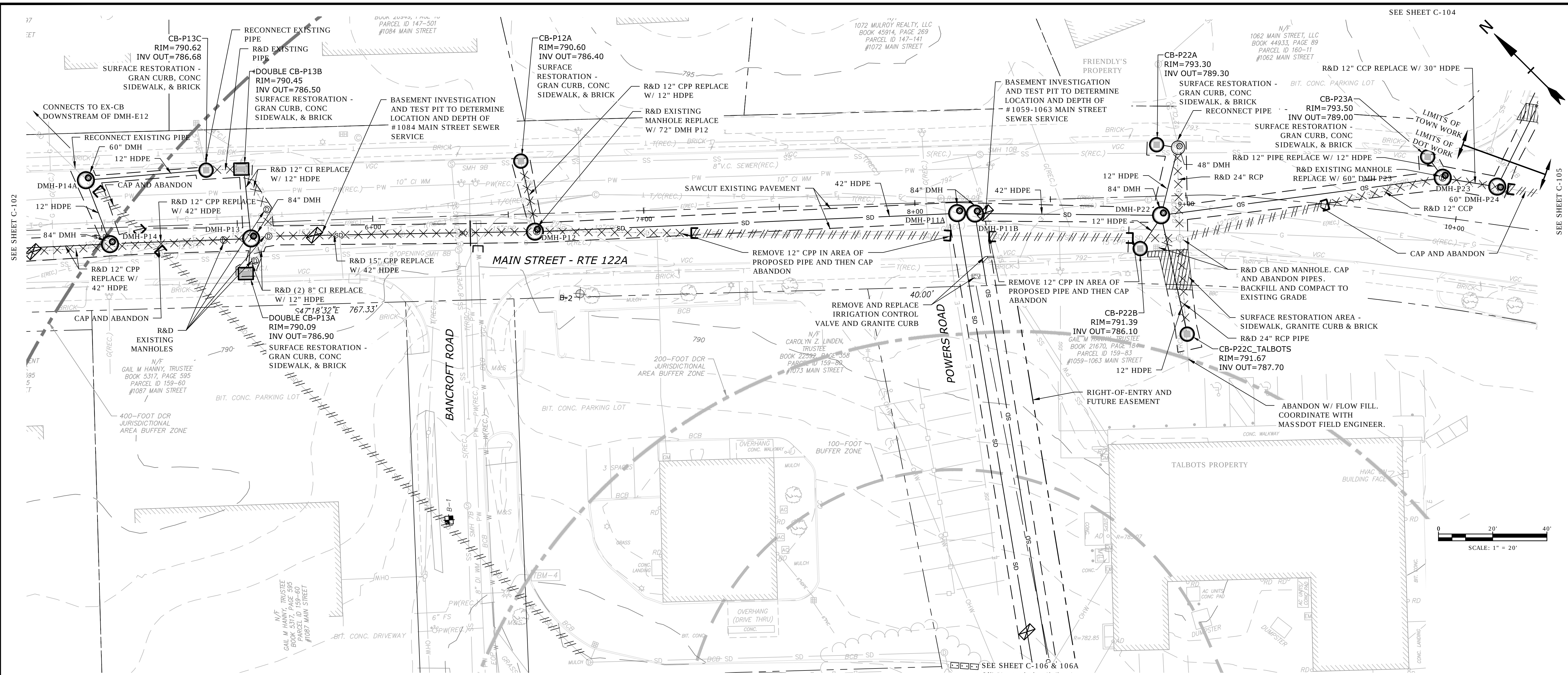


Holden, MA

MAIN STREET
(0+00 TO 5+00)
PLAN AND PROFILE

SCALE: HORIZ 1"=20'; VERT 1"=4'

Last Saved: 11/17/2021
Plotted On: Nov 17, 2021 - 1:56pm By: S0turk
Tighe & Bond - H1536-019 - Main St Drainage Improvements Drawings - Figures (AutoCAD) Sheet Construction Town of Holden H1536-019 C-PlanProfile.dwg



Tighe&Bond

www.tighebond.com

COMMONWEALTH OF MASSACHUSETTS

MATT WZOREK

CIVIL

No. 52674

REGISTERED PROFESSIONAL ENGINEER

11/22/2021

COMMONWEALTH OF MASSACHUSETTS

ANTONIO J. DA CRUZ

CIVIL

No. 41808

REGISTERED PROFESSIONAL ENGINEER

11/22/2021

Main Street/
Route 122A
Drainage
Improvements

Town of Holden

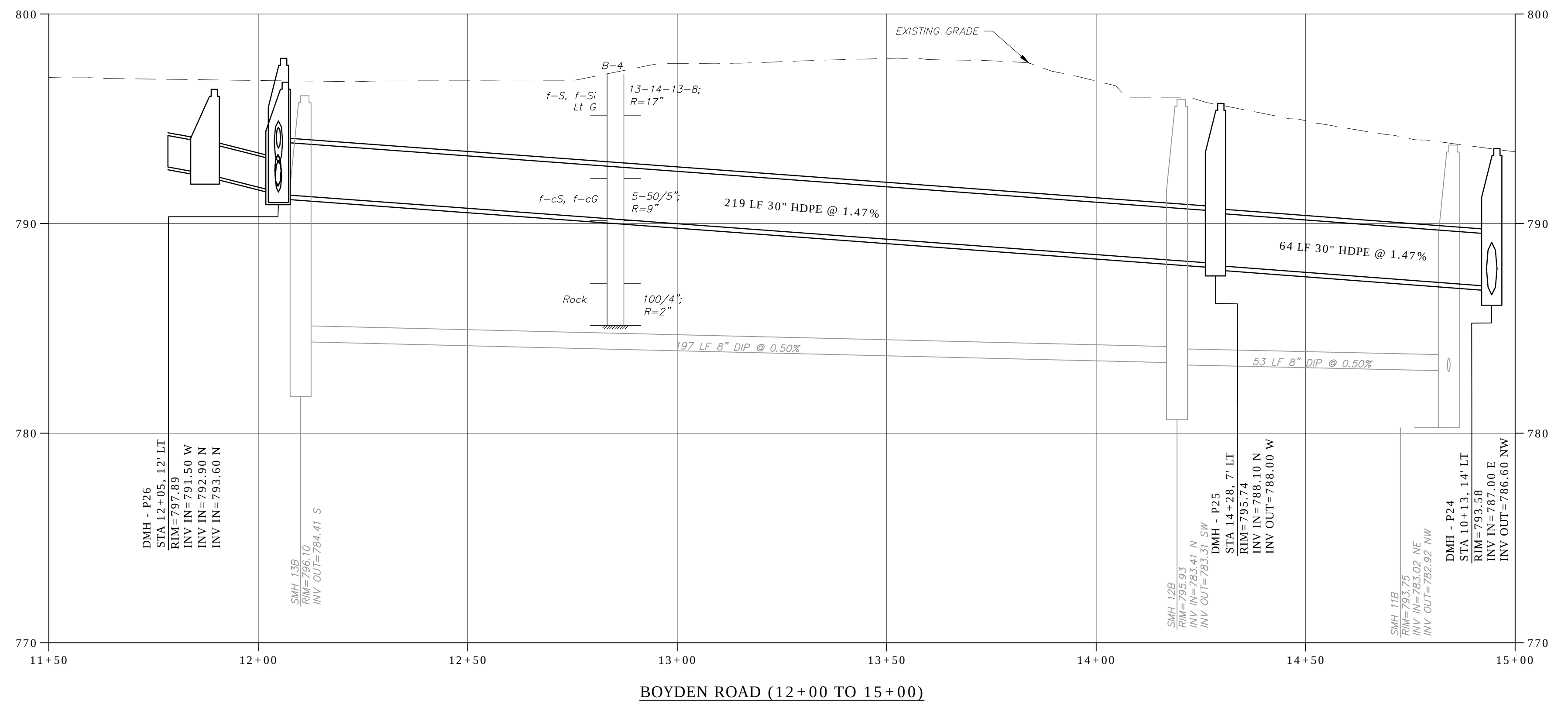
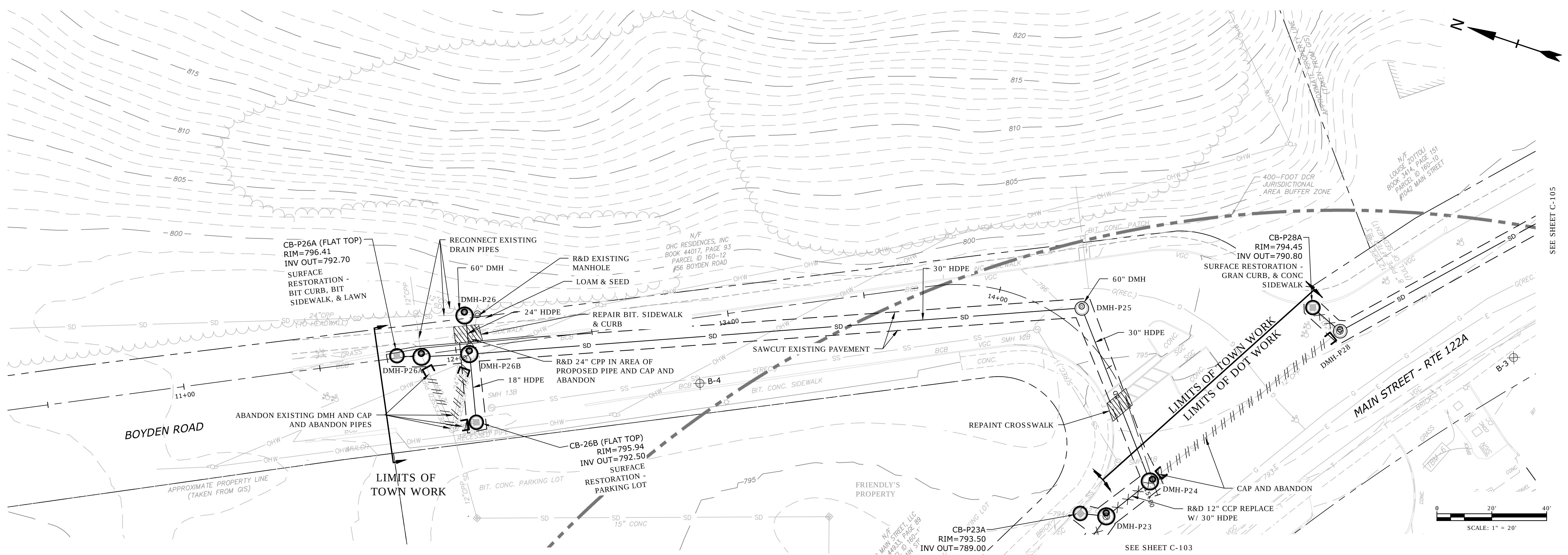
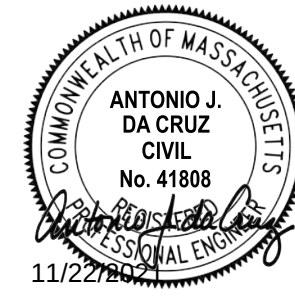
Holden, MA

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DATE:	06/2021	
FILE:	H1536-019_C-PlanProfile.dwg	
DRAWN BY:	ELD	
CHECKED:	MPW	
APPROVED:	AJD	

MAIN STREET
(5+00 TO 10+25)
PLAN AND PROFILE

SCALE: HORIZ 1"=20'; VERT 1"=4'

C-103
SHEET 7 OF 20



Main Street/
Route 122A
Drainage
Improvements

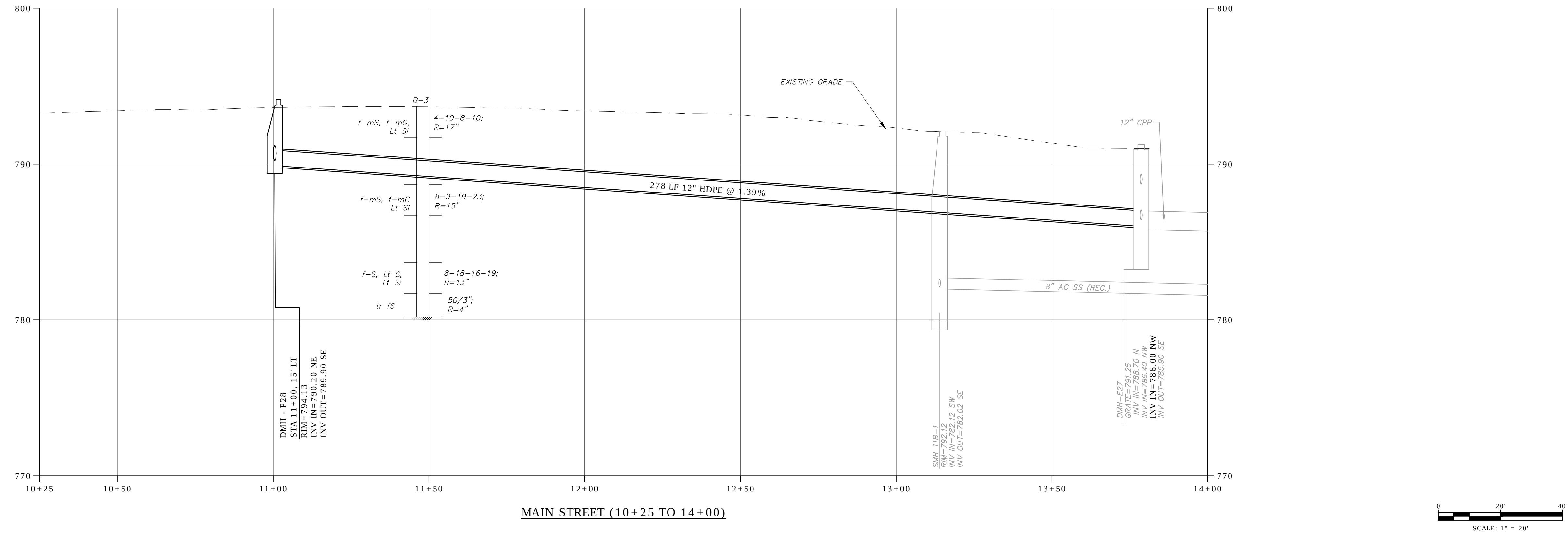
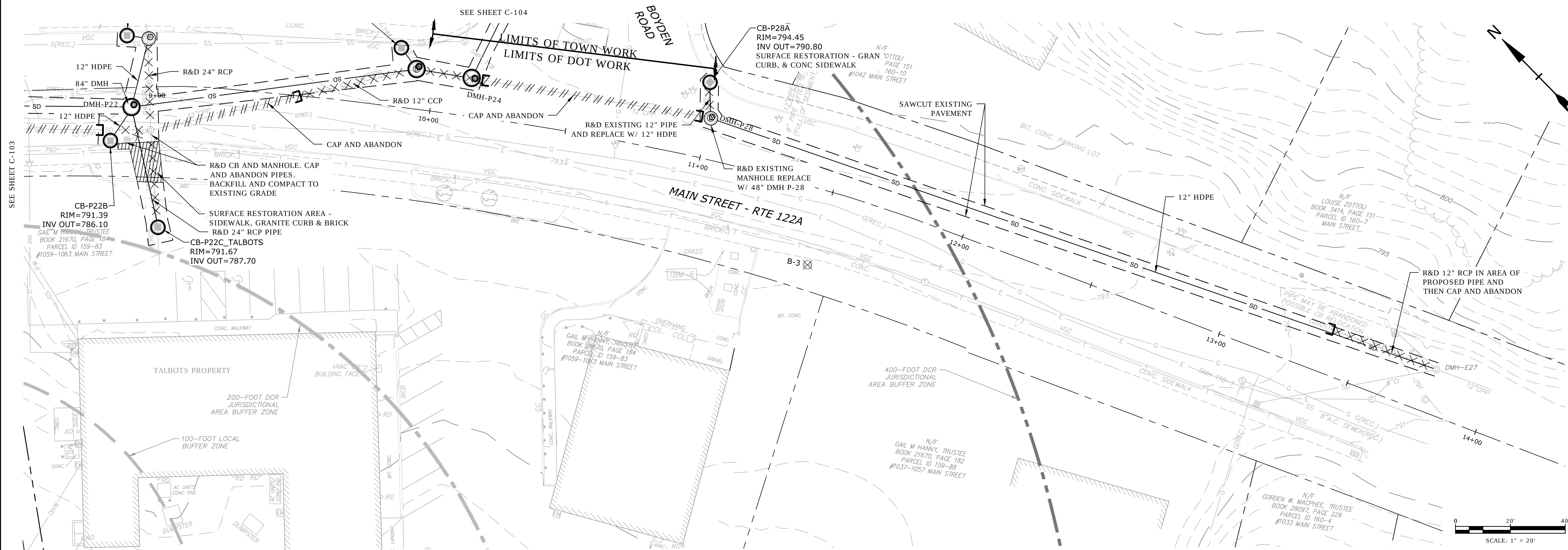
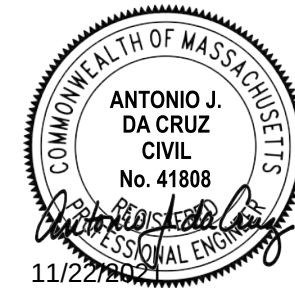
Town of Holden

Holden, MA

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DATE:	06/2021	
FILE:	H1536-019_C-PlanProfile.dwg	
DRAWN BY:	ELD	
CHECKED:	MPW	
APPROVED:	AJD	

BOYDEN ROAD
(12+00 TO 15+00)
PLAN AND PROFILE

SCALE: HORIZ 1"=20'; VERT 1"=4'



Main Street/ Route 122A Drainage Improvements

Town of Holden

Holden, MA

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CHECKED:	MPW	
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MAIN STREET
(10+25 TO 14+00)
PLAN AND PROFILE
SCALE: HORIZ 1"=20'; VERT 1"=4'

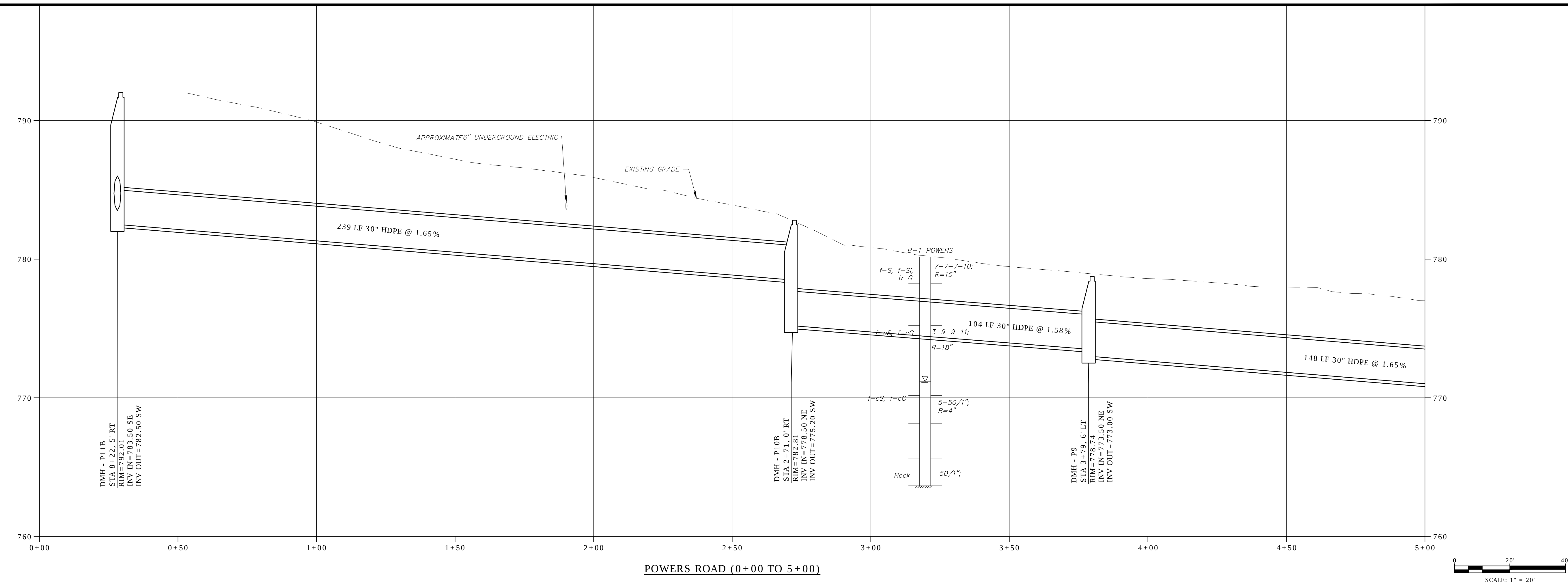
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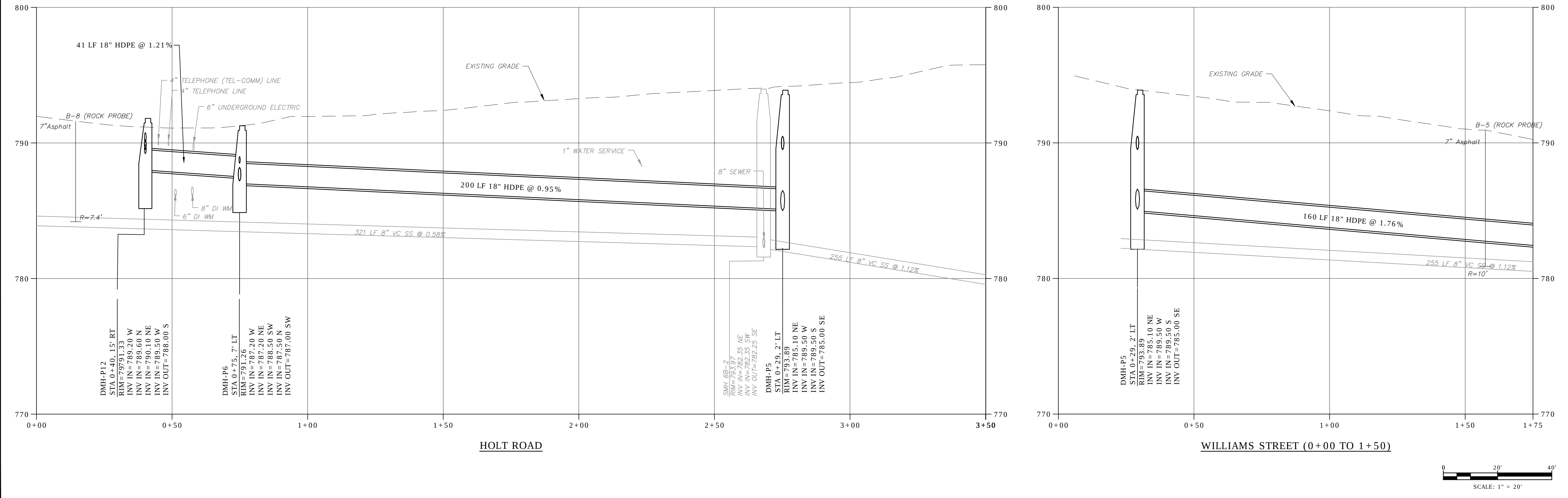
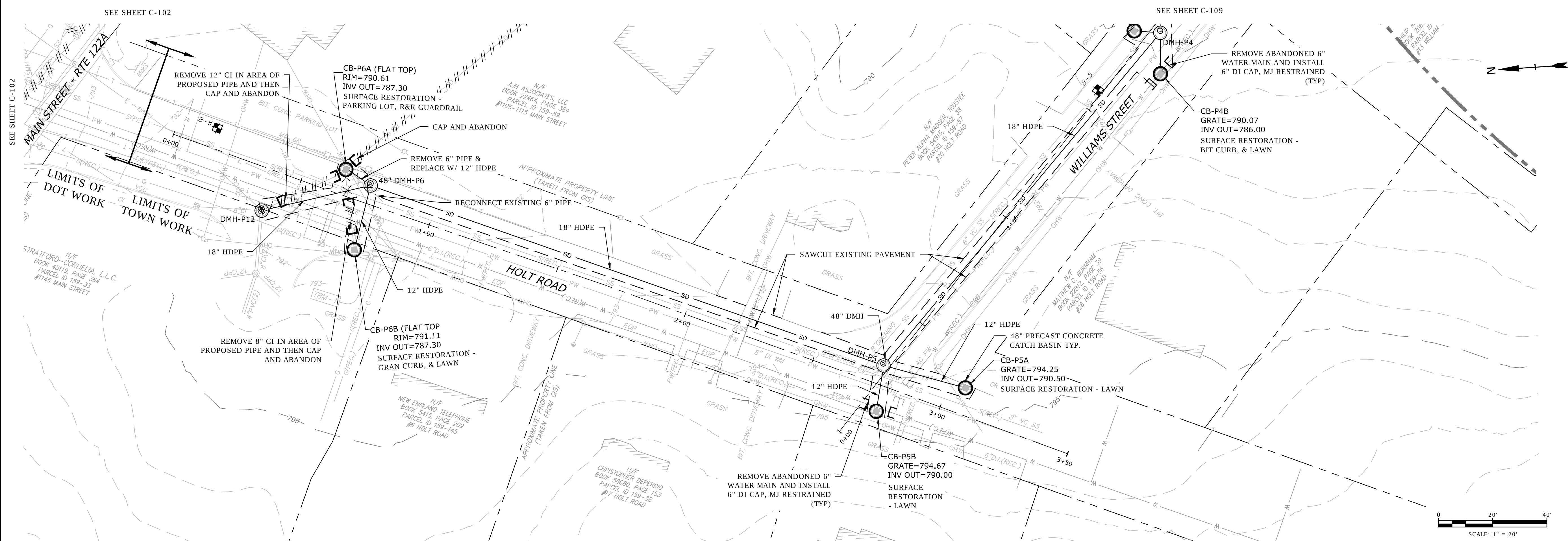
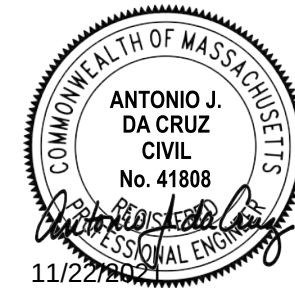
C-106A
SHEET 10 OF 20

1. SIGNS INDICATING "BUSINESS OPEN DURING CONSTRUCTION" AND ANY SIGNAGE RELATED TO TRAFFIC FLOW SHALL BE PROVIDED BY THE CONTRACTOR.
2. CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 30 DAYS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF BUSINESS ACCESS, SUCH AS PIPE INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
3. TEST PIT TO DETERMINE DEPTH OF EXISTING ROOF DRAIN. ADJUST ROOF DRAIN AS REQUIRED AND ALLOW PROPER DRAINAGE.

Last Saved: 11/17/2021
 Plotted On: Nov 17, 2021 1:57pm By: Sotzrurk
 Figure & Bond: I:\H1536 Holden Projects\Task 019 - Main St Drainage Improvements\Drawings - Figures\AutoCAD Sheet\Construction\Town of Holden H1536-019 - C-PlanProfile.dwg



C-106
SHEET 11 OF 20

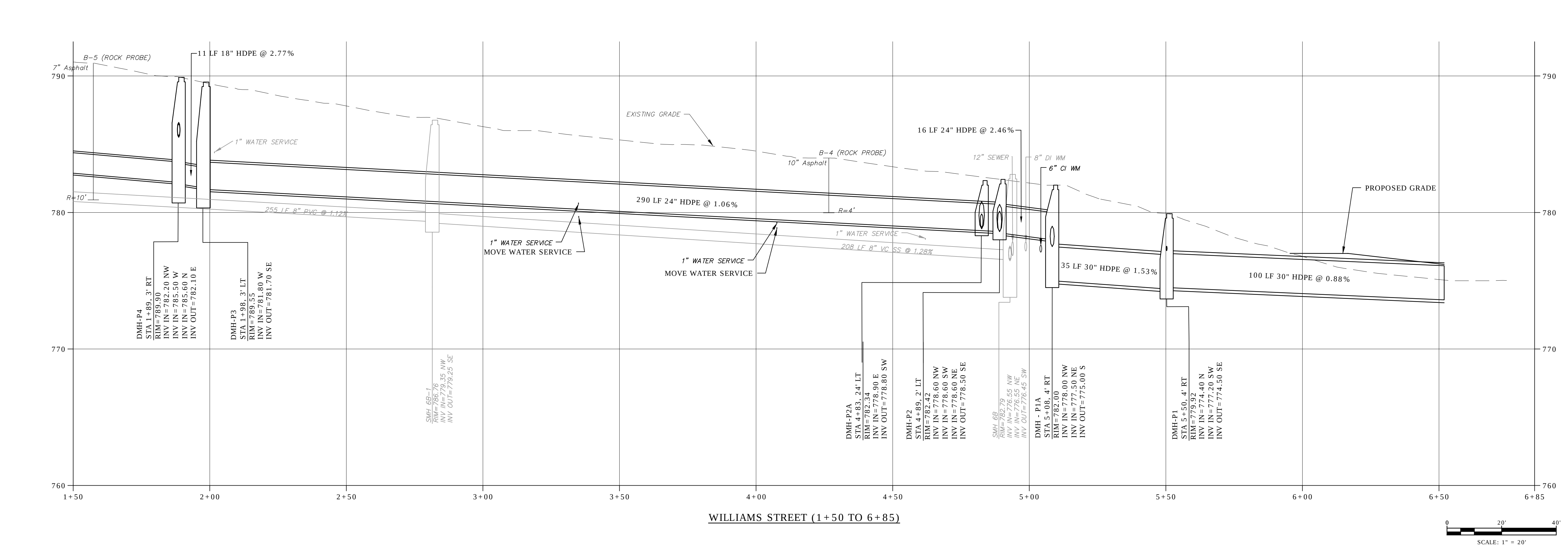


Main Street/ Route 122A Drainage Improvements

Town of Holden

Holden, MA

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DATE:	06/2021	
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DRAWN BY:	ELD	
CHECKED:	MPW	
APPROVED:	AJD	
HOLT ROAD WILLIAMS ST.(0+00 TO 1+50) PLAN AND PROFILE		
SCALE: HORIZ 1"=20'; VERT 1"=4'		
C-108 SHEET 13 OF 20		

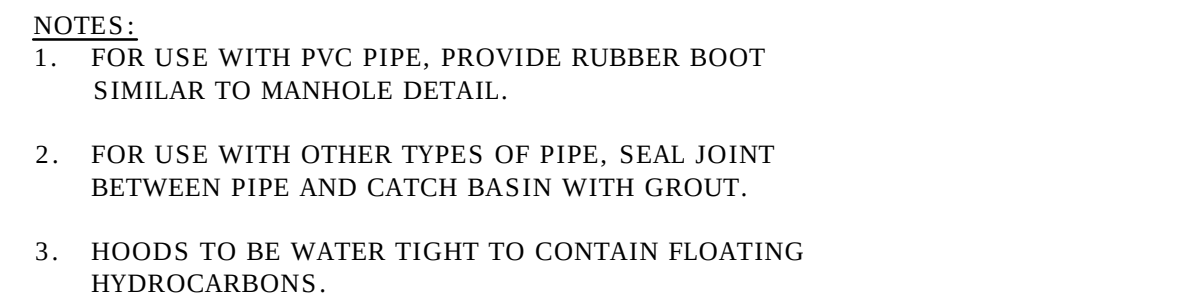


Holden, MA

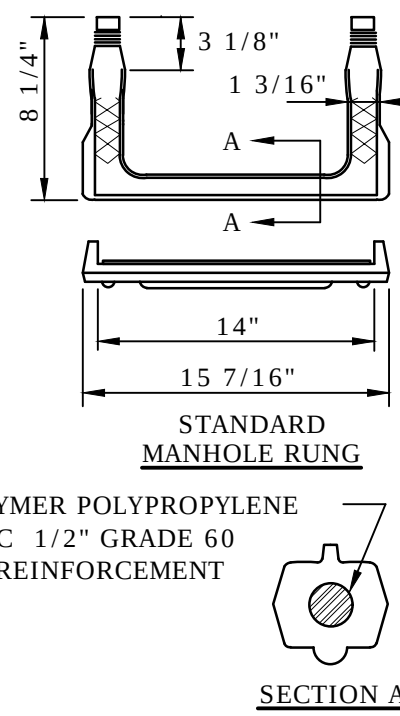
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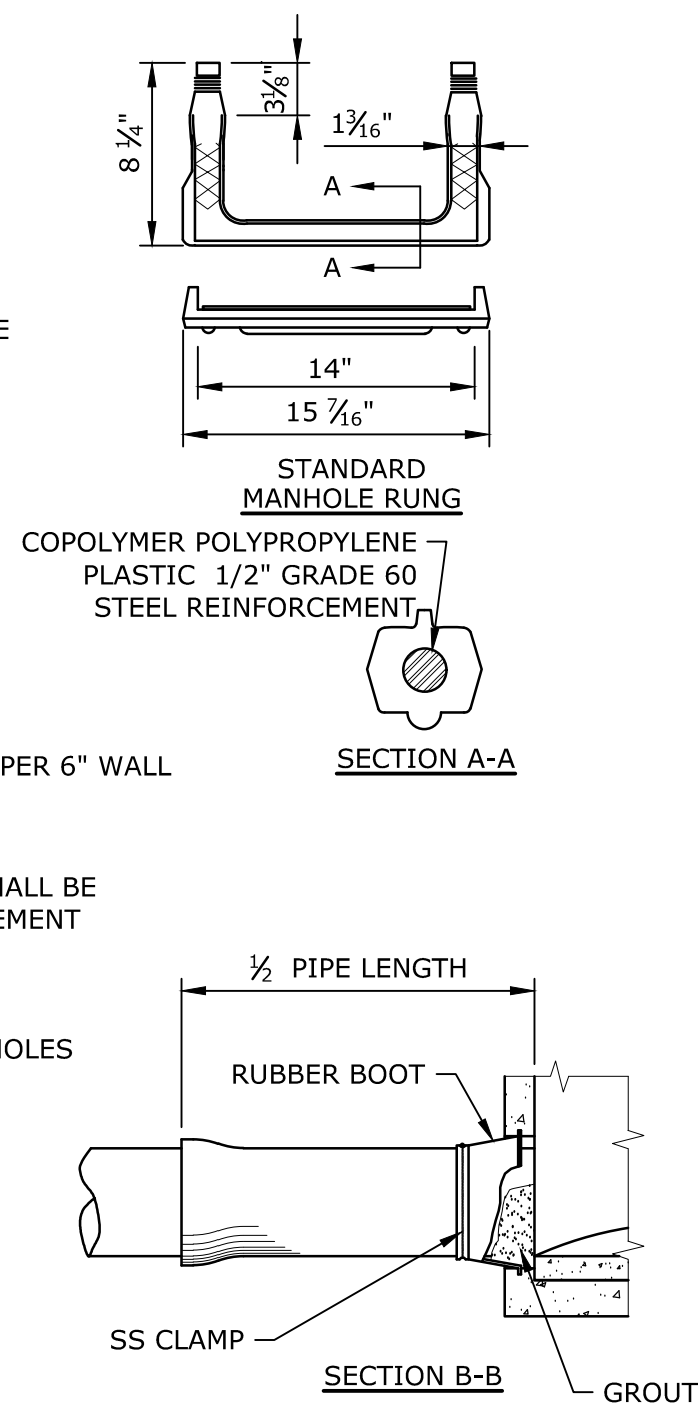
C-109
SHEET 14 OF 20



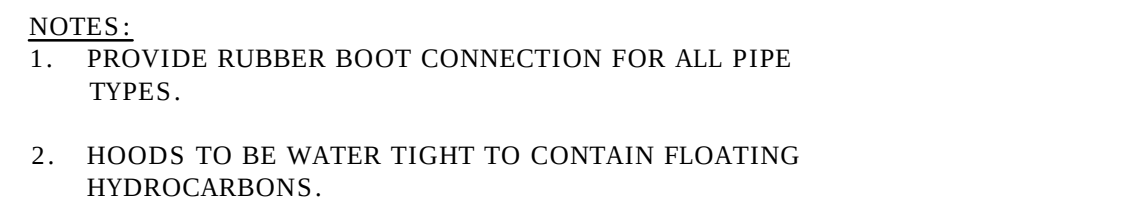
PRECAST CONCRETE CATCH BASIN
NO SCALE



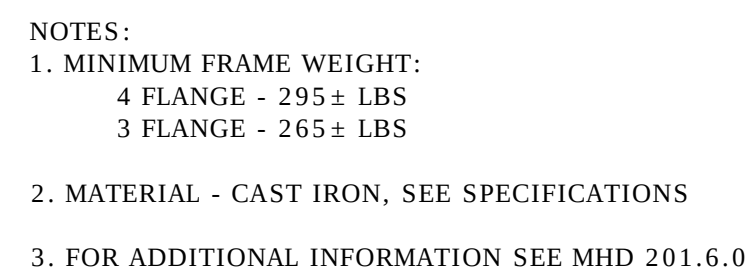
48" PRECAST DRAIN MANHOLE
NO SCALE



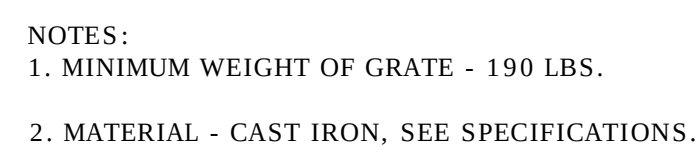
60" PRECAST DRAIN MANHOLE
NO SCALE



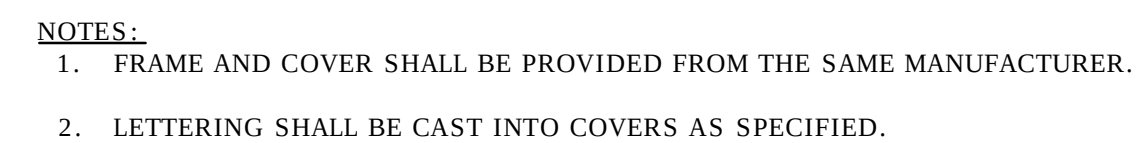
PRECAST CONCRETE CATCH BASIN (FLAT TOP)
NO SCALE



CATCH BASIN FRAME
NO SCALE



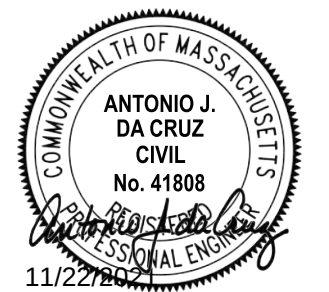
CATCH BASIN GRATE
NO SCALE



MANHOLE FRAME & COVER
NO SCALE



STANDARD MANHOLE COVER
MINIMUM WEIGHT: 200 LBS.



C-501
SHEET 15 OF 20

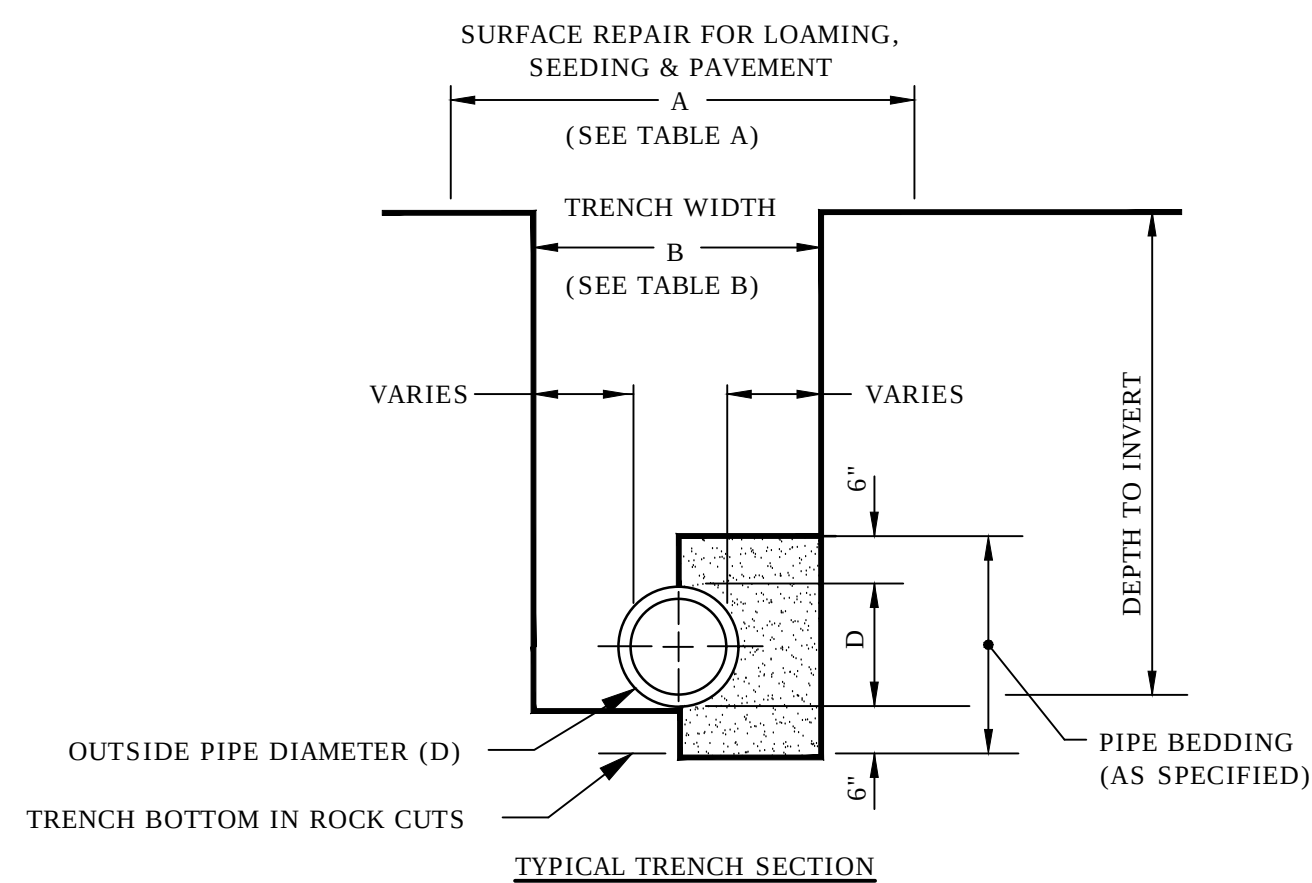
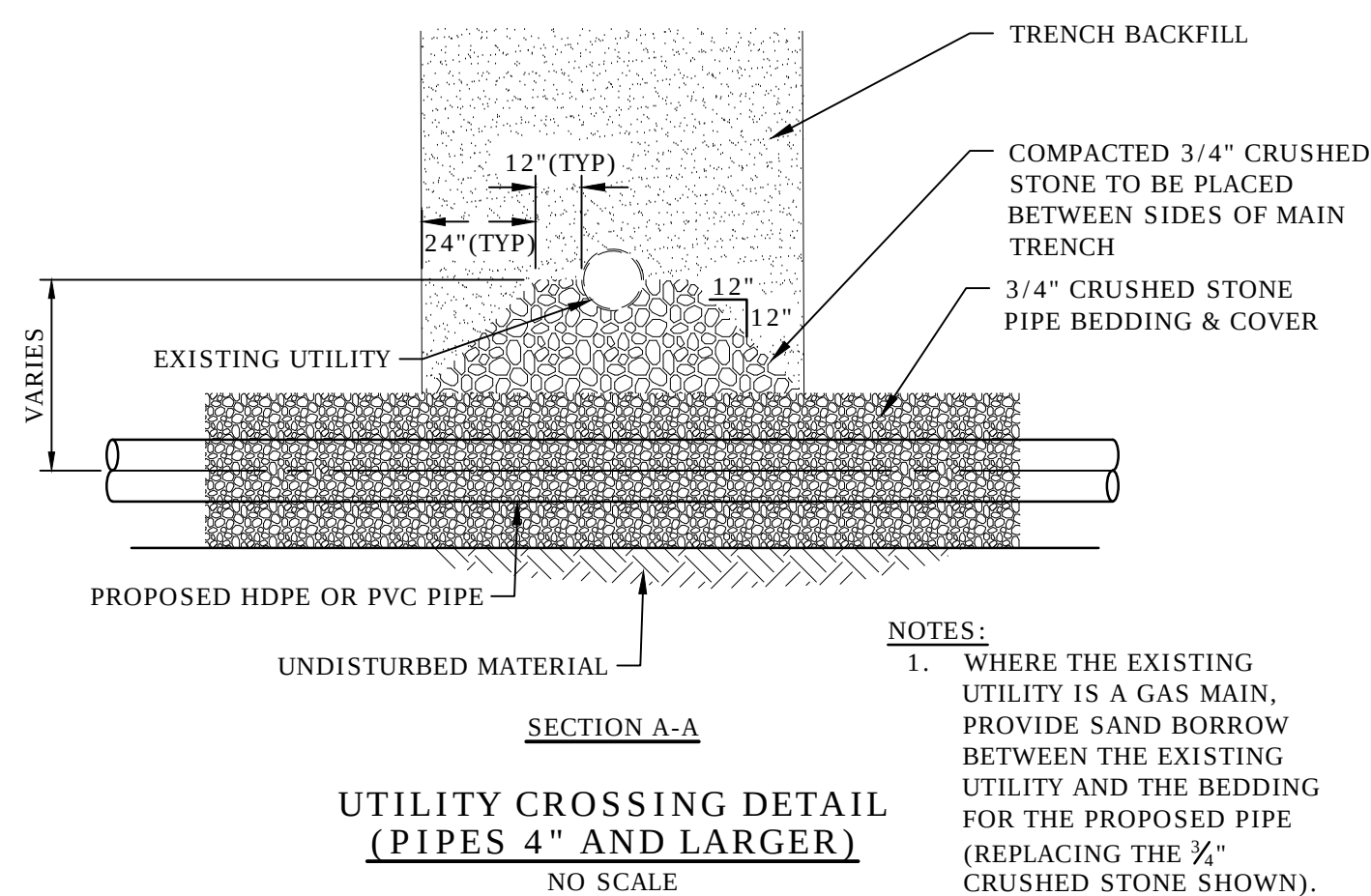
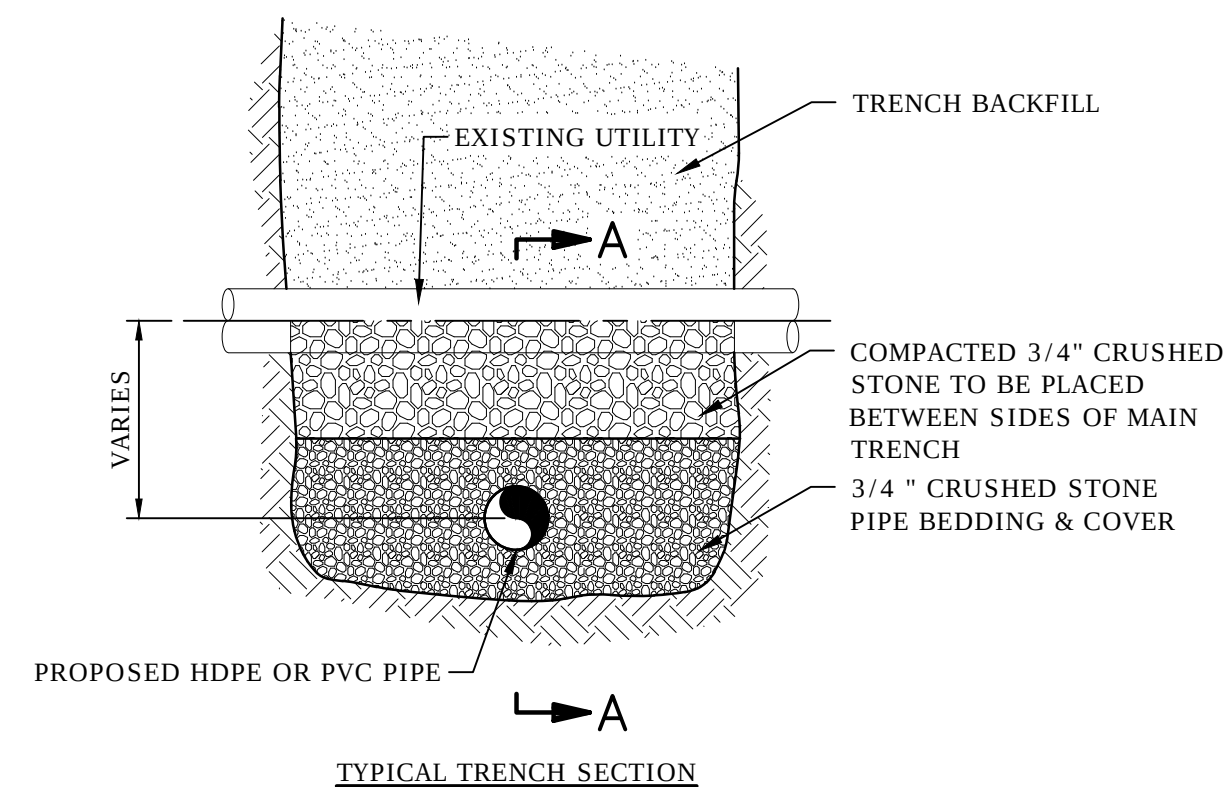
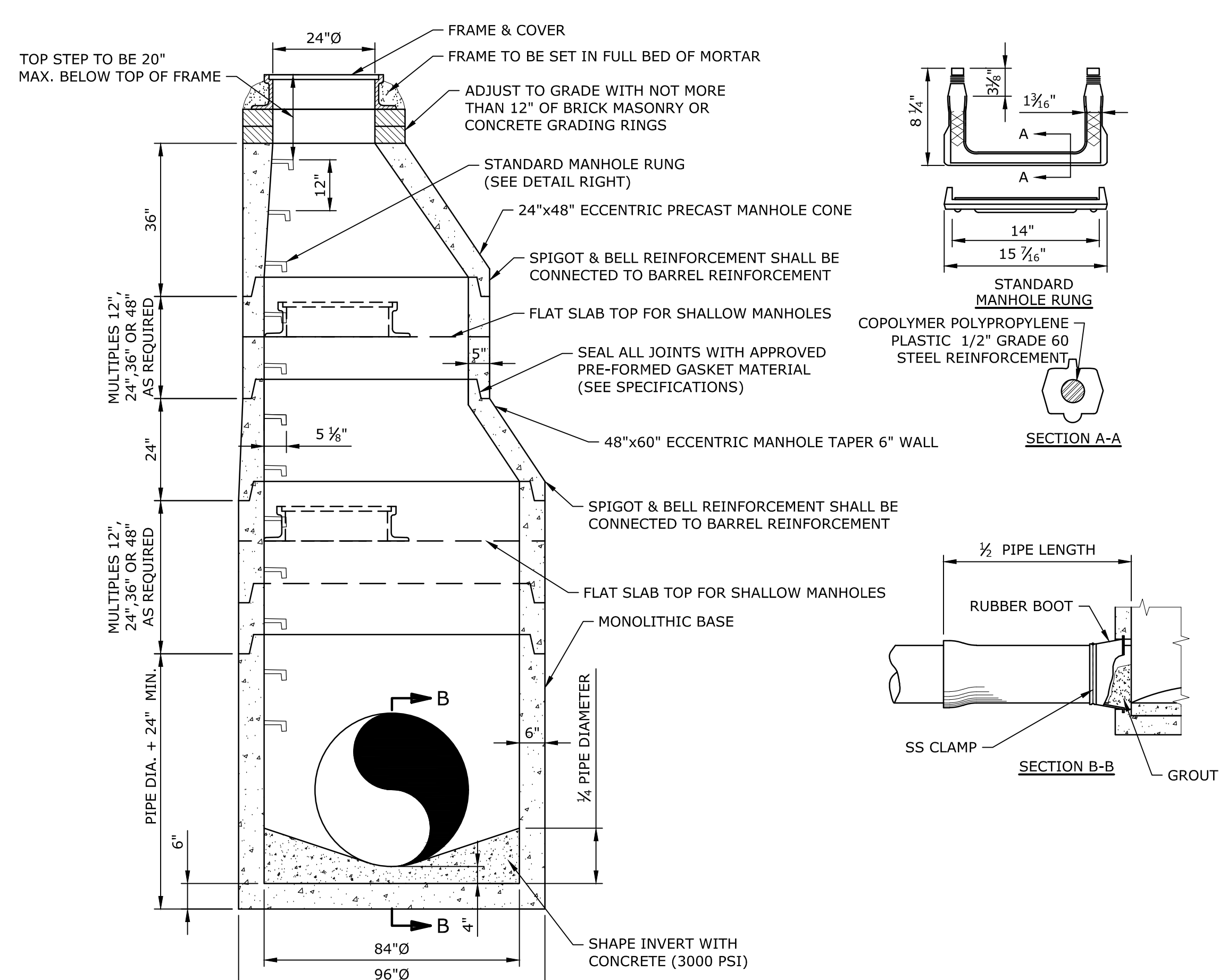
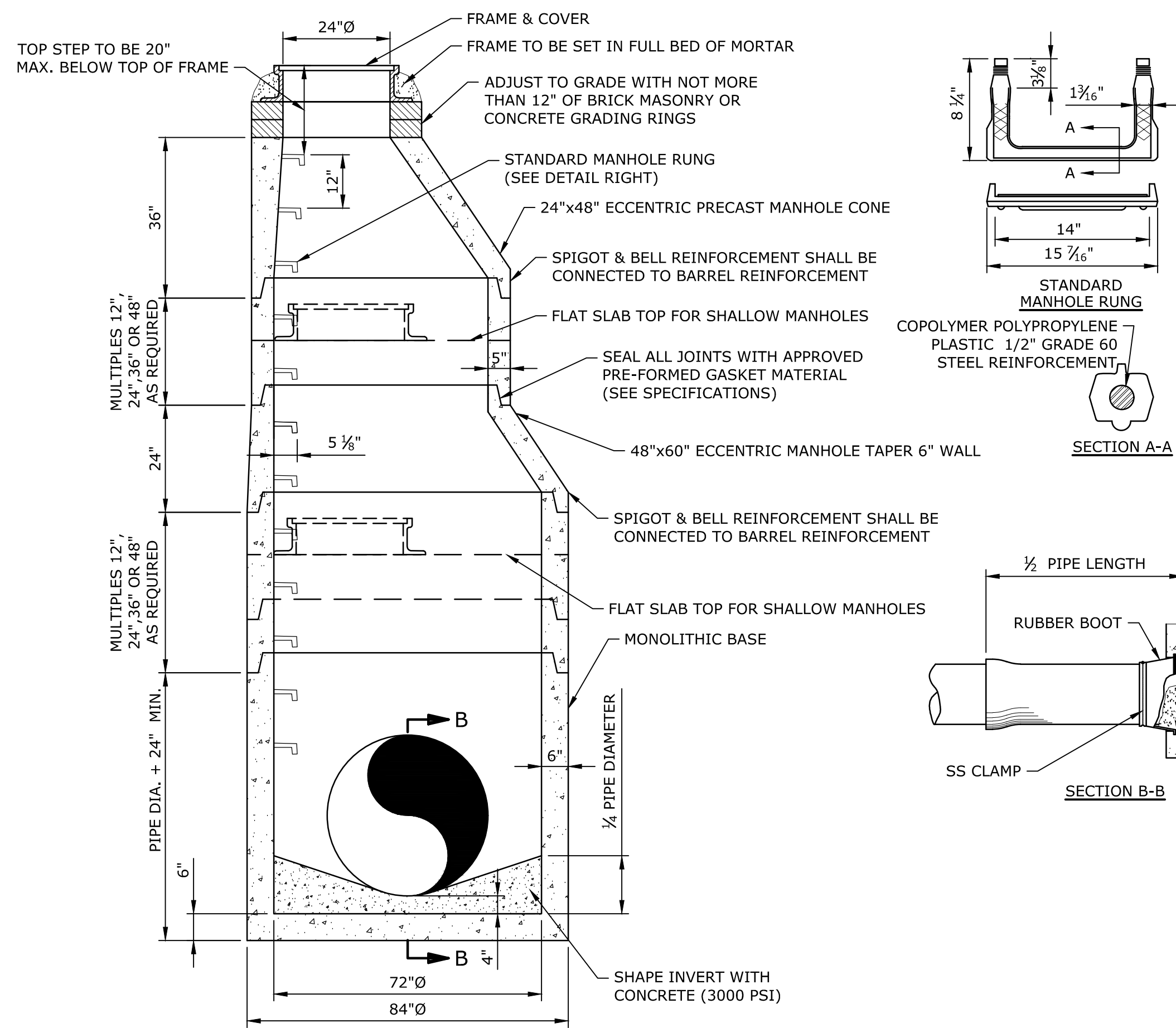
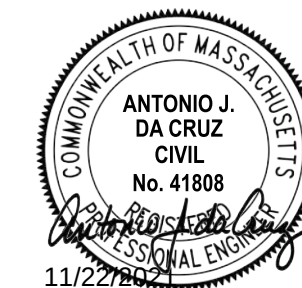
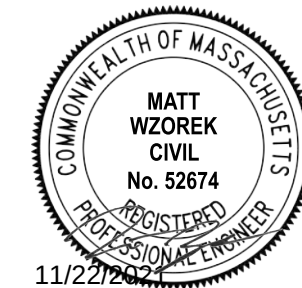
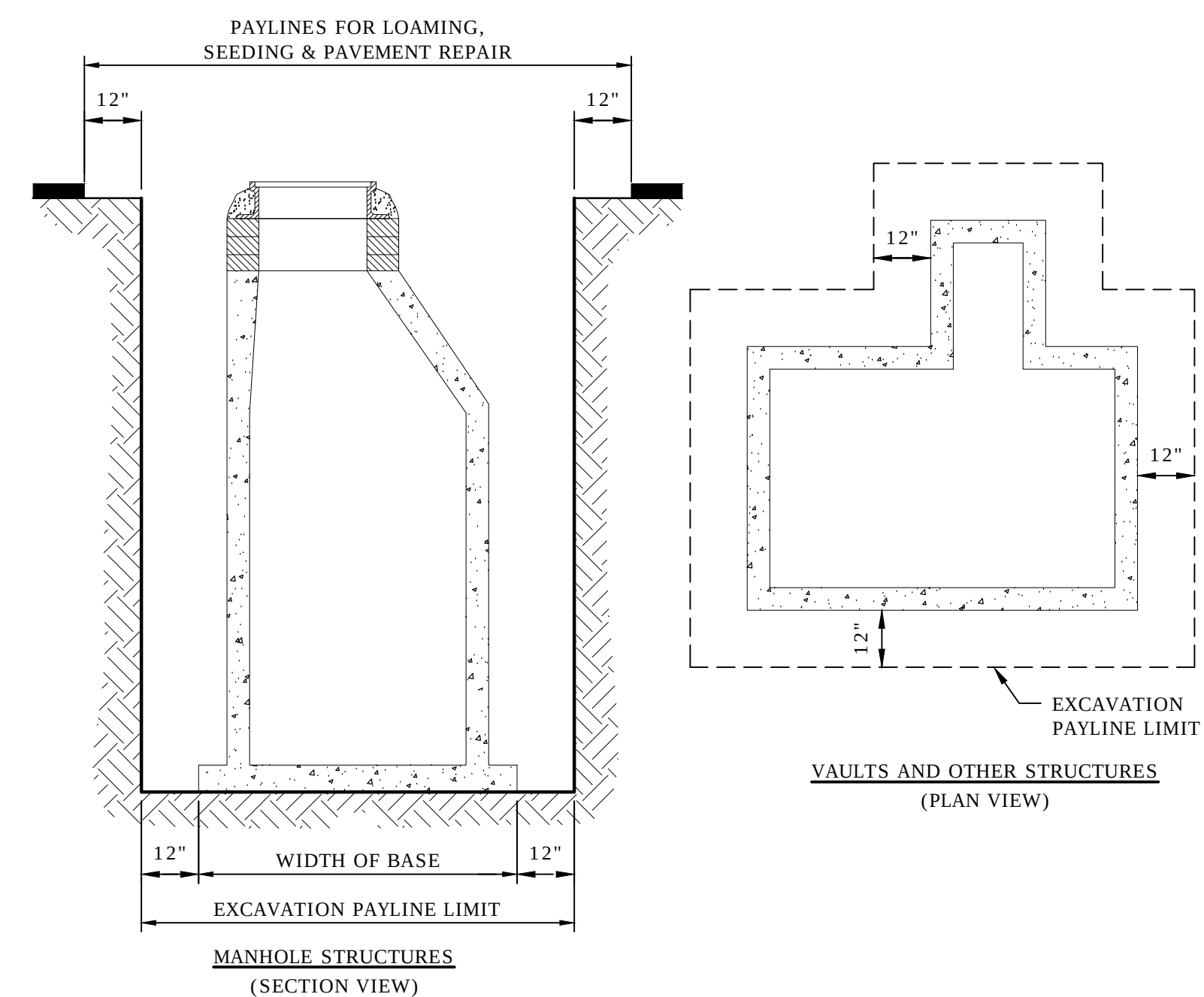


TABLE A - MAXIMUM SURFACE REPAIR PAY WIDTHS (SEE NOTE 1)			
OUTSIDE PIPE DIAMETER 0 - 24"		OUTSIDE PIPE DIAMETER GREATER THAN 24"	
TEMPORARY REPAIR (3)	PERMANENT REPAIR (4)	TEMPORARY REPAIR (3)	PERMANENT REPAIR (4)
6'-6" MAX.	8'-6" MAX.	D + 4'-0" MAX.	D + 6'-0" MAX.

TABLE B - MAXIMUM TRENCH EXCAVATION PAY WIDTHS (SEE NOTE 1)	
OUTSIDE PIPE DIAMETER 0 - 24"	OUTSIDE PIPE DIAMETER GREATER THAN 24"
5'-0"	D + 3'-0"

- NOTE:**
1. THE PAYLINE DIMENSIONS SHOWN REPRESENT THE MAXIMUM PAYLINE LIMITS TO BE PAID. WHEN THE ACTUAL SURFACE REPAIR OR TRENCH WIDTH IS LESS, THE ACTUAL WIDTH SHALL BE PAID FOR AT THE APPLICABLE UNIT PRICE.
 2. TRENCH SURFACE REPAIR WIDTH FOR STREETS WHICH INCLUDE FULL WIDTH OVERLAY OR GRAVEL SURFACE SHALL BE 6'-6" MAX, FOR PIPES $\leq 24"$.
 3. INCLUDES TEMPORARY PAVEMENT PATCHES FOR SIDEWALKS AND DRIVEWAYS.
 4. INCLUDES PERMANENT REPAIRS FOR DRIVEWAYS, SIDEWALKS, LAWN AREAS (LOAM & SEED), BERMS, ROADWAYS AND CURBS.

TRENCH EXCAVATION AND SURFACE REPAIR PAYLINES
NO SCALE



Main Street/ Route 122A Drainage Improvements

Town of Holden

Holden, MA

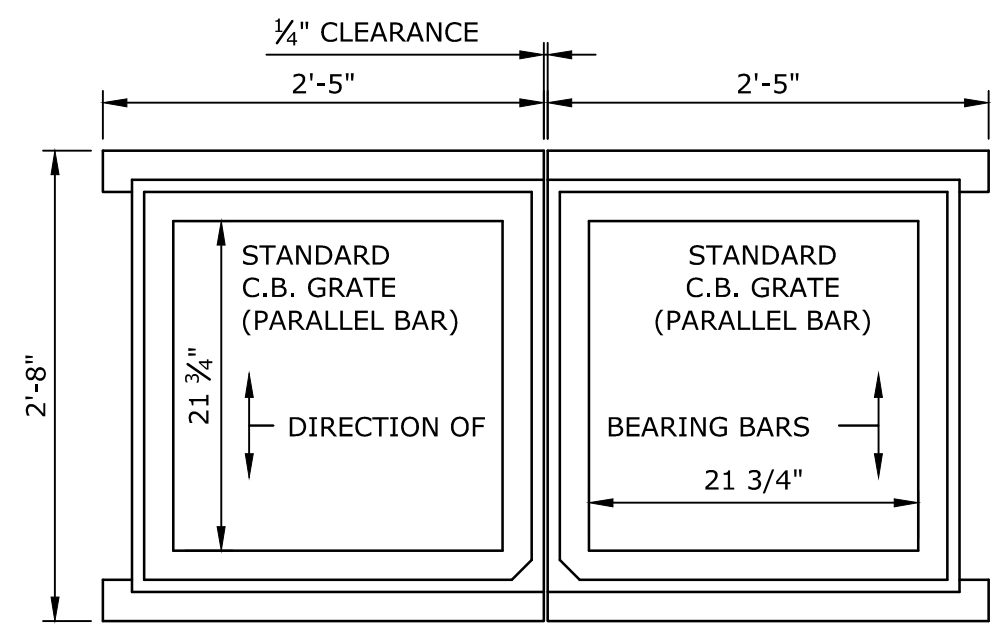
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APPROVED:	AJD	

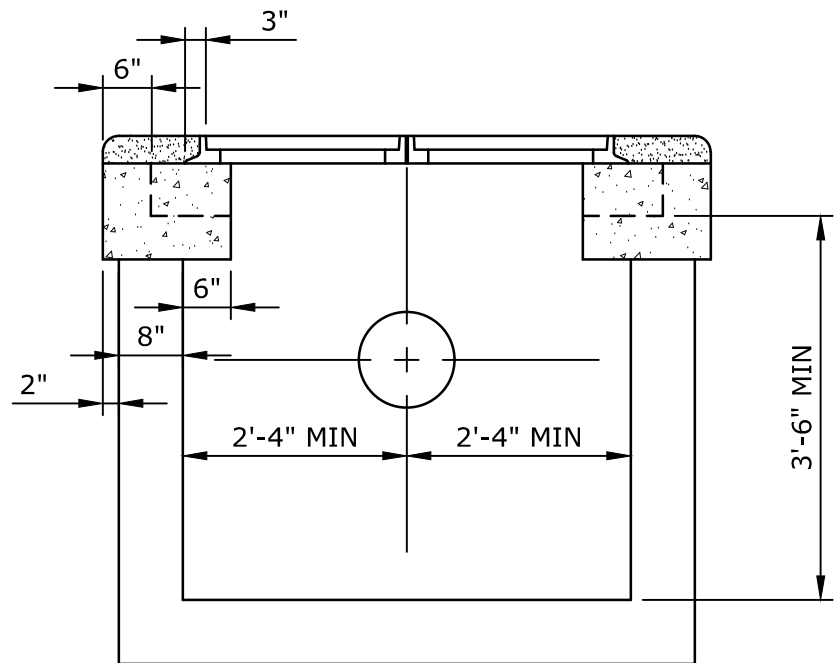
CONSTRUCTION DETAILS
2 OF 5

SCALE: AS SHOWN

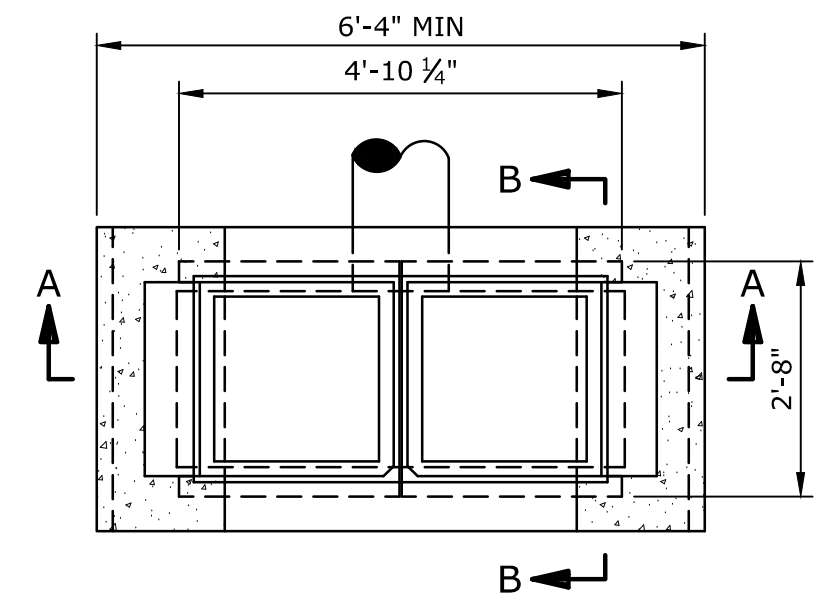
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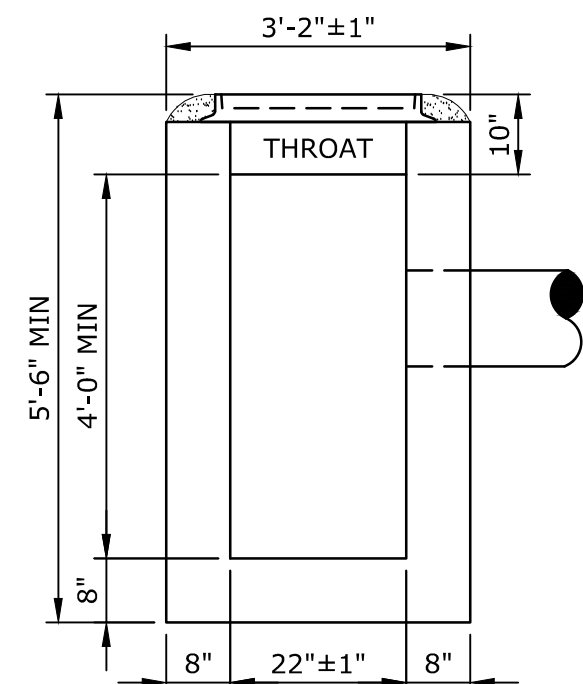
2-3 FLANGE 4" C.I. FRAMES
EXCESS FLANGE AREA TO BE REMOVED



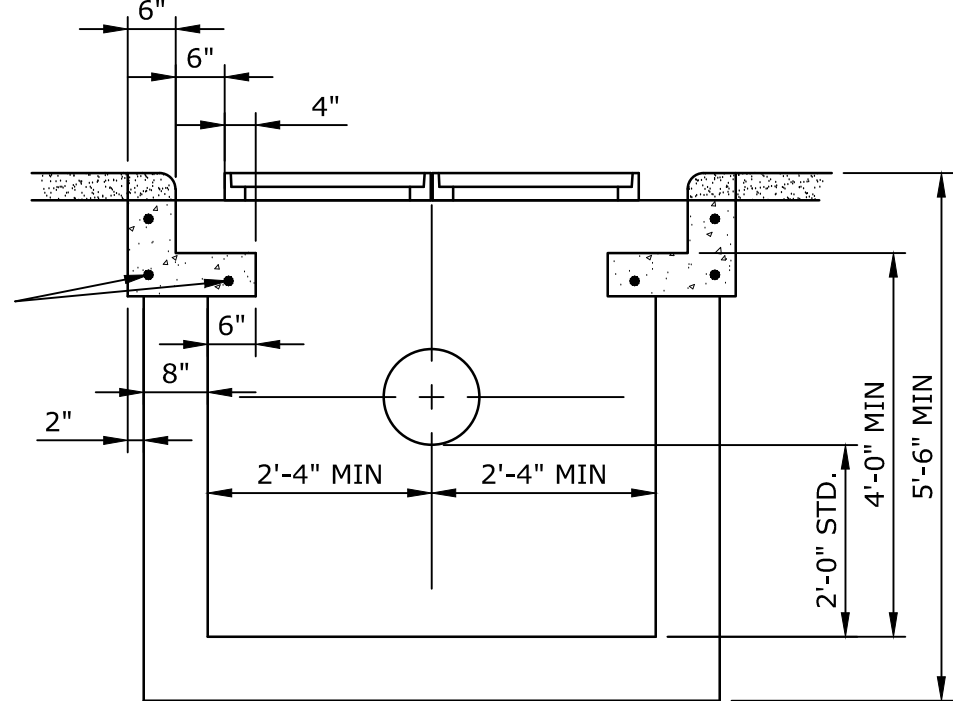
ELEVATION



PLAN

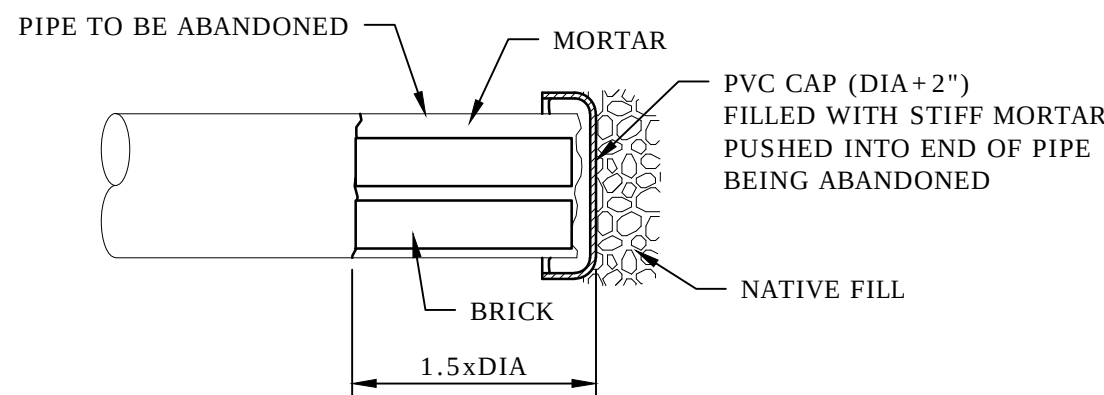


SECTION B-B

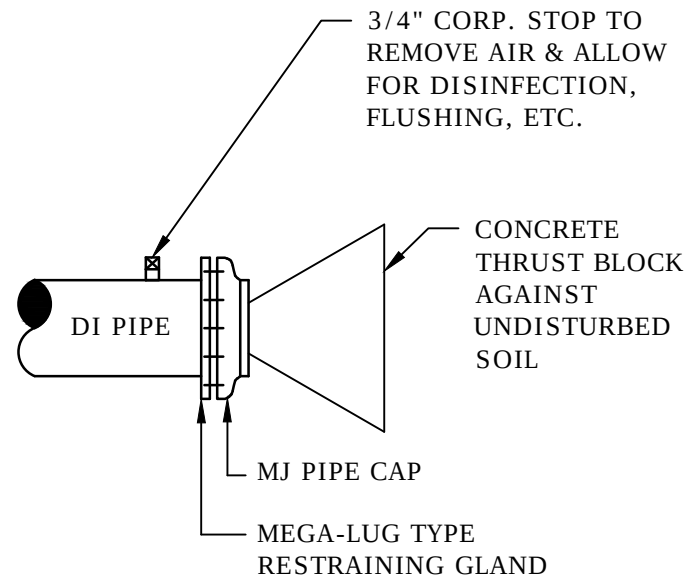


SECTION A-A

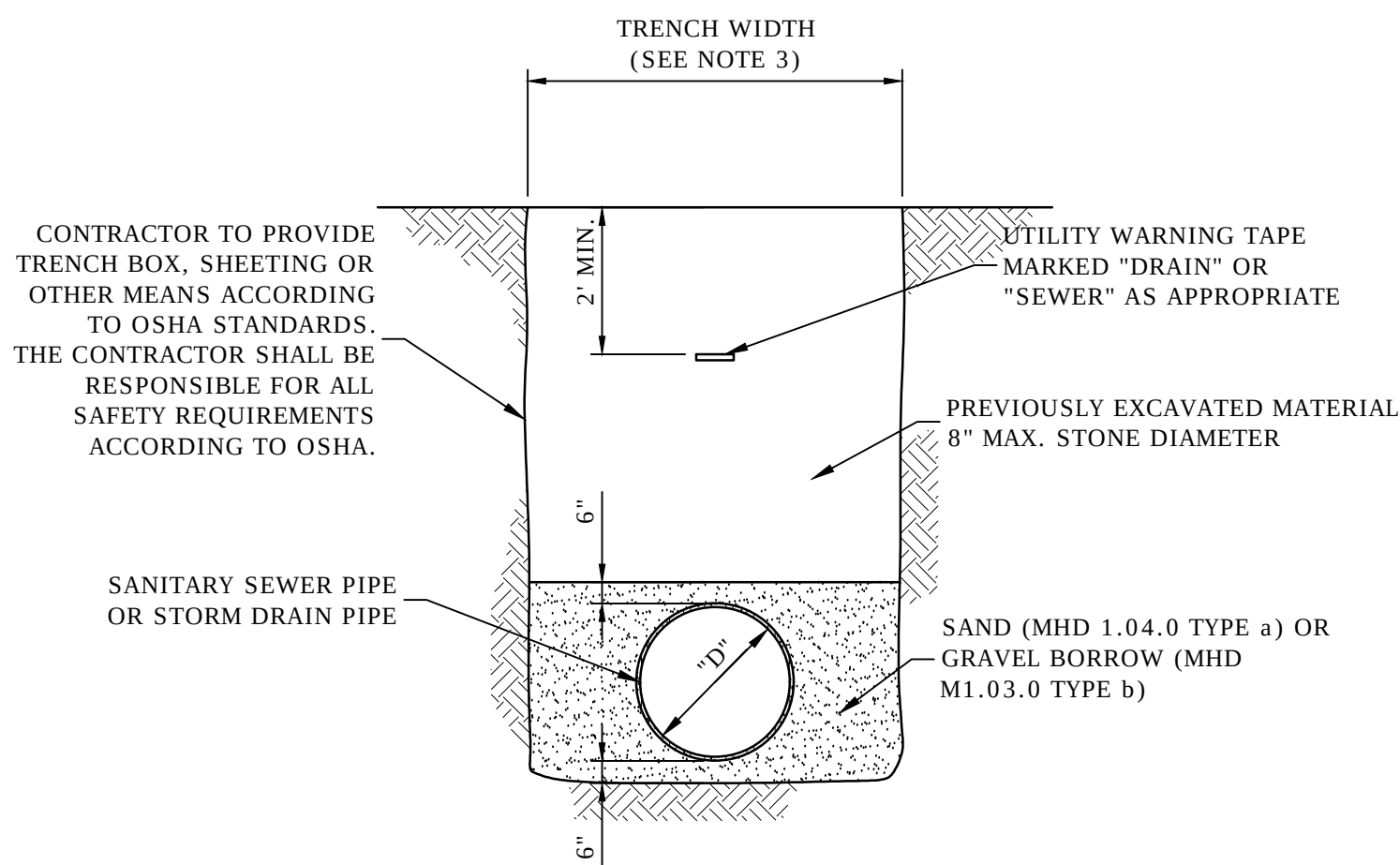
DOUBLE PRECAST CONCRETE CATCH BASIN
NO SCALE



PIPE ABANDONMENT
NO SCALE



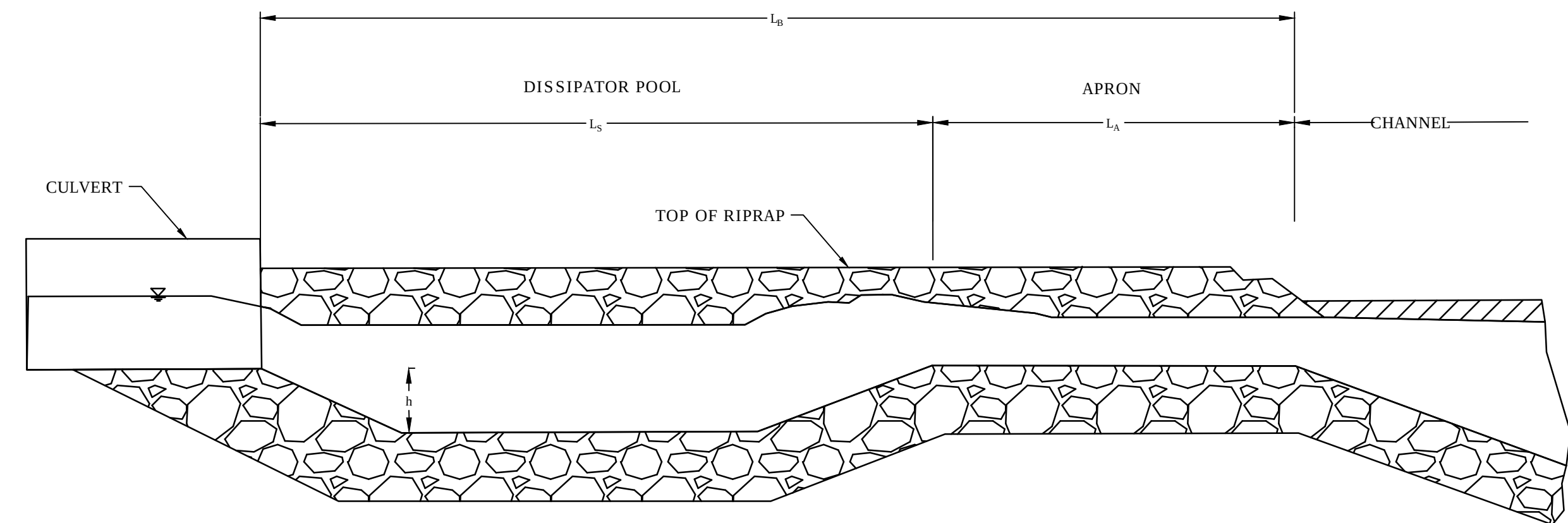
DI WATER MAIN CAPPING DETAIL
NO SCALE



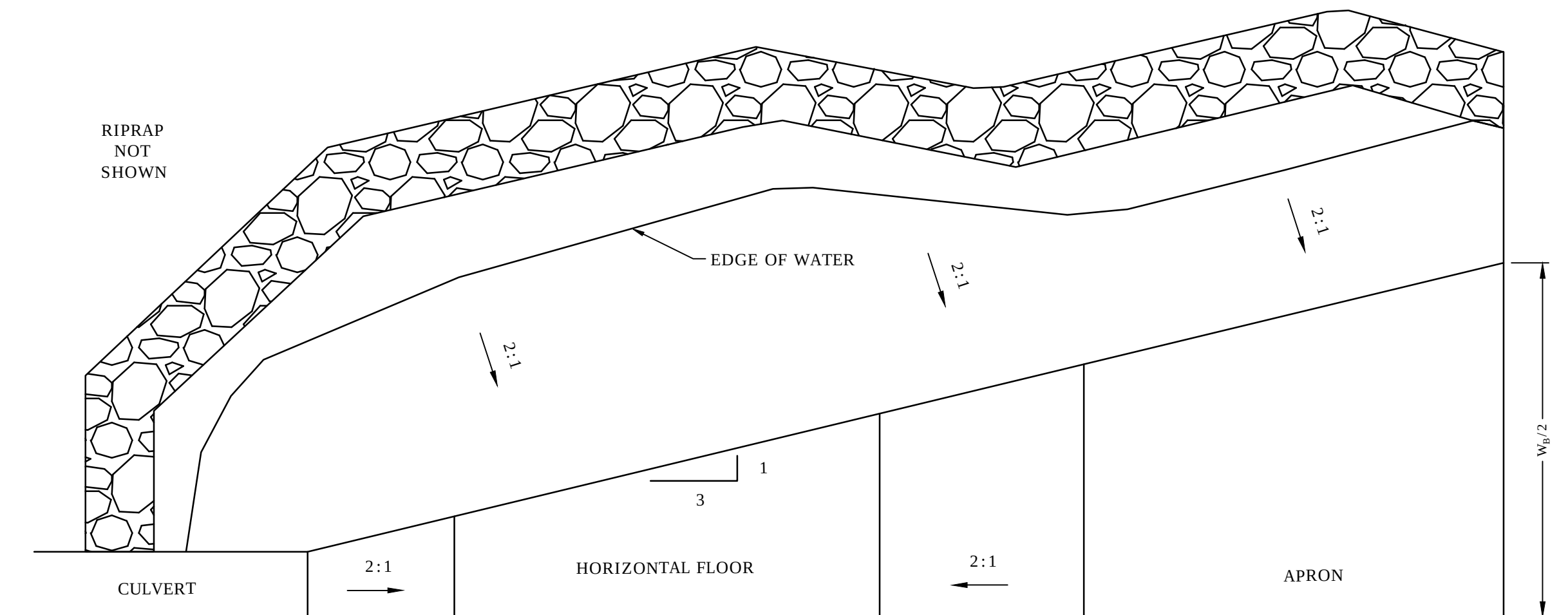
NOTES:

1. COMPACT ALL BACKFILL MATERIAL WITH VIBRATORY PLATE EQUIPMENT (MINIMUM TWO PASSES) TO A MINIMUM DENSITY OF 95 PERCENT OF THE STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D698.
2. PLACE BACKFILL MATERIAL IN MAXIMUM ONE FOOT LIFTS.
3. FOR PIPES LESS THAN 24" IN DIAMETER THE TRENCH WIDTH SHALL BE 5.0'. FOR PIPES 24" IN DIAMETER AND GREATER, TRENCH WIDTH SHALL BE THE PIPE DIAMETER + 3.0'.

TYPICAL DRAIN LINE AND
SEWER TRENCH SECTION
NO SCALE



PROFILE



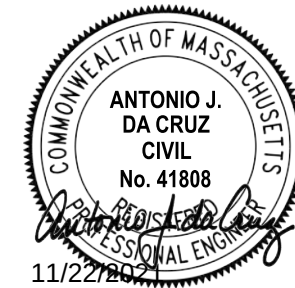
HALF PLAN

	FES-1	FES-2	FES-3
L _S	15.4'	15.9'	17.0'
L _A	7.7'	8.0'	8.5'
L _B	23.0'	23.9'	25.4'
W _B	9.2'	9.2'	9.2'
D ₅₀	4"	6"	6"
h	1.5'	1.6'	1.7'

D₅₀ DENOTES AVERAGE STONE DIAMETER

NOTE: STONE SHOULD BE WASHED AND FREE OF FINES.

SCOUR HOLE
NO SCALE



Main Street/
Route 122A
Drainage
Improvements

Town of Holden

Holden, MA

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CHECKED:	MPW	
APPROVED:	AJD	

CONSTRUCTION DETAILS -
3 OF 5

SCALE: AS SHOWN

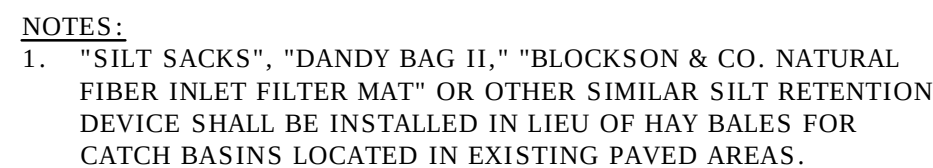
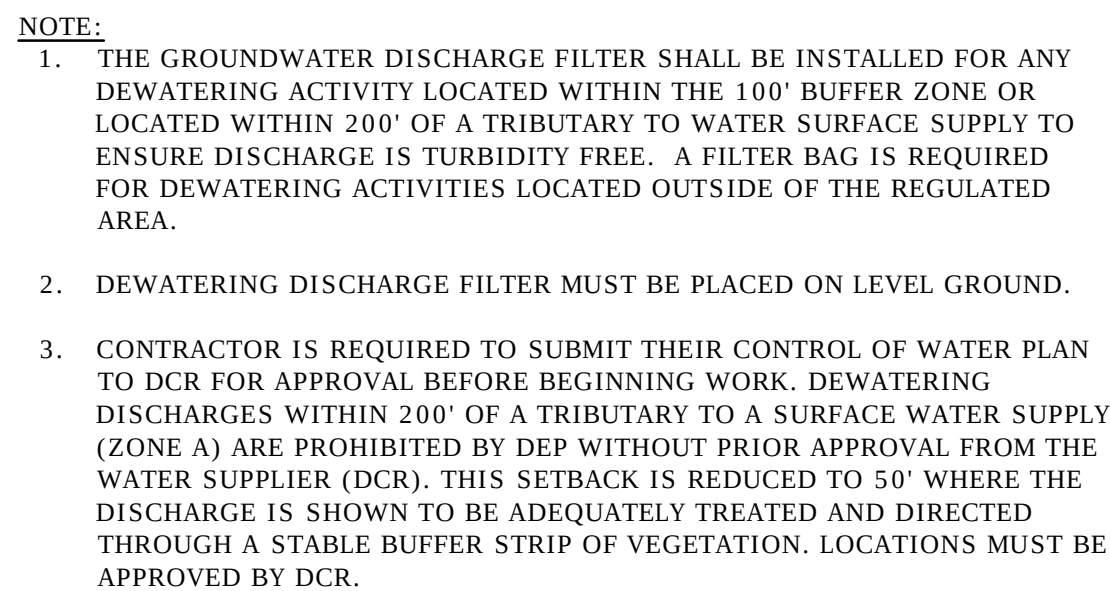
Town of Holden

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CHECKED:	MPW	
APPROVED:	AJD	

SCALE: AS SHOWN

C-505
SHEET 19 OF 20



SILTSACK MANUFACTURED BY:
ATLANTIC CONSTRUCTION FABRICS, INC.
1801-A WILLIS ROAD
RICHMOND, VIRGINIA 23237



1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR HAYBALES, THEN STABILIZED WITH VEGETATION OR COVERED.
4. LOCATE STOCKPILES OUTSIDE OF 50' BUFFER ZONE IN UPGRADE AREAS OF SUBPHASES SO STORMWATER FLOWS AWAY AND/OR AROUND STOCKPILE TO THE MAXIMUM EXTENT POSSIBLE.

TEMPORARY SOIL STOCKPILING
NO SCALE



1. EROSION CONTROL BLANKET TO BE INSTALLED VERTICALLY DOWNSLOPE.
2. STAKES/STAPLES TO BE PLACED NO MORE THAN 3 FT APART VERTICALLY AND 1 FT APART HORIZONTALLY.
3. SLOPE SURFACE TO BE FREE OF STICKS, ROCKS, AND OTHER OBSTRUCTIONS.
4. BLANKETS TO BE ROLLED OUT LOOSELY AND STAKED/STAPLED TO MAINTAIN DIRECT SOIL CONTACT. DO NOT STRETCH THE BLANKETS.
5. STAKES AND STAPLES MUST NOT IMPACT CAP.

EROSION CONTROL BLANKET
NO SCALE



1. CONTRACTOR TO USE HOLDEN DPW STANDARD CROSS WALK STENCIL.

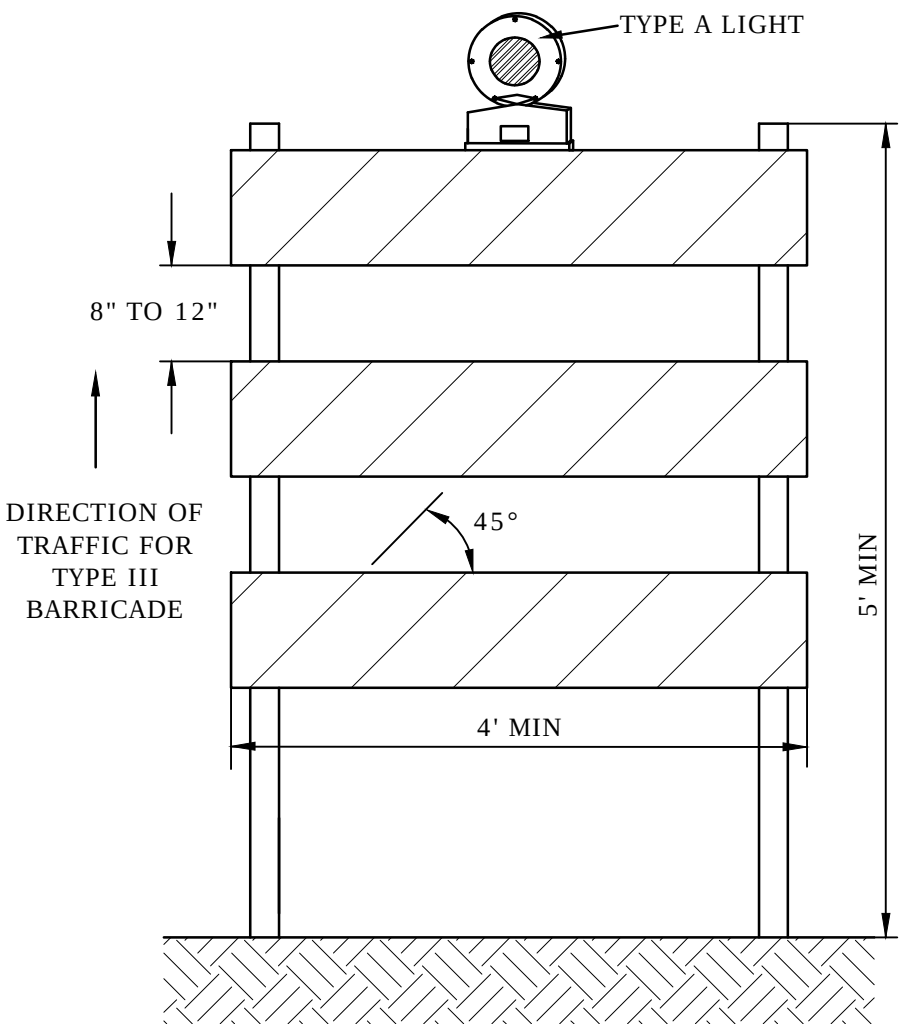
CROSSWALK STRIPING
SURFACE RESTORATION
NO SCALE



Last Saved: 11/17/2021 11:17:20am By: S02urk
Plotted On: Nov 17, 2021 1:10:09pm By: S02urk
Tighe & Bond 244441246 Holden Project Task 019 - Main St Drainage Improvements (Drawings - Figures) AutoCAD Sheet Construction Town of Holden 011356-019 TCP.dwg

GENERAL NOTES:

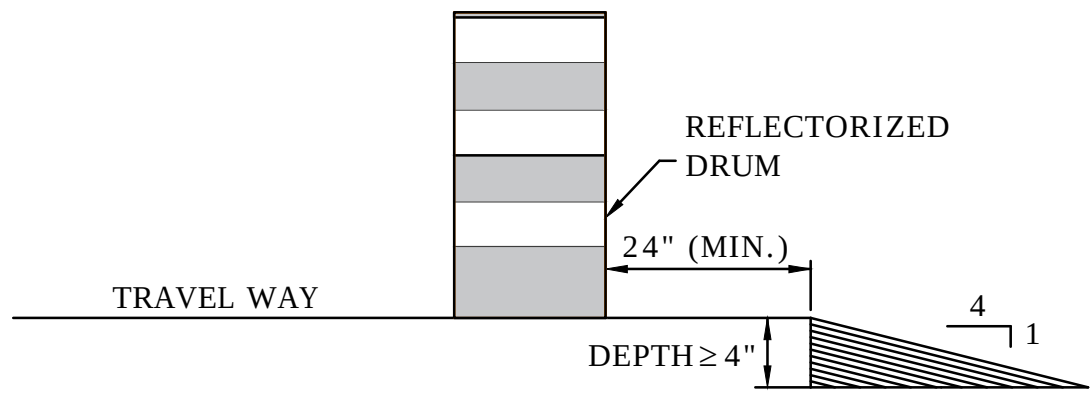
- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
- THE FIRST FIVE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.



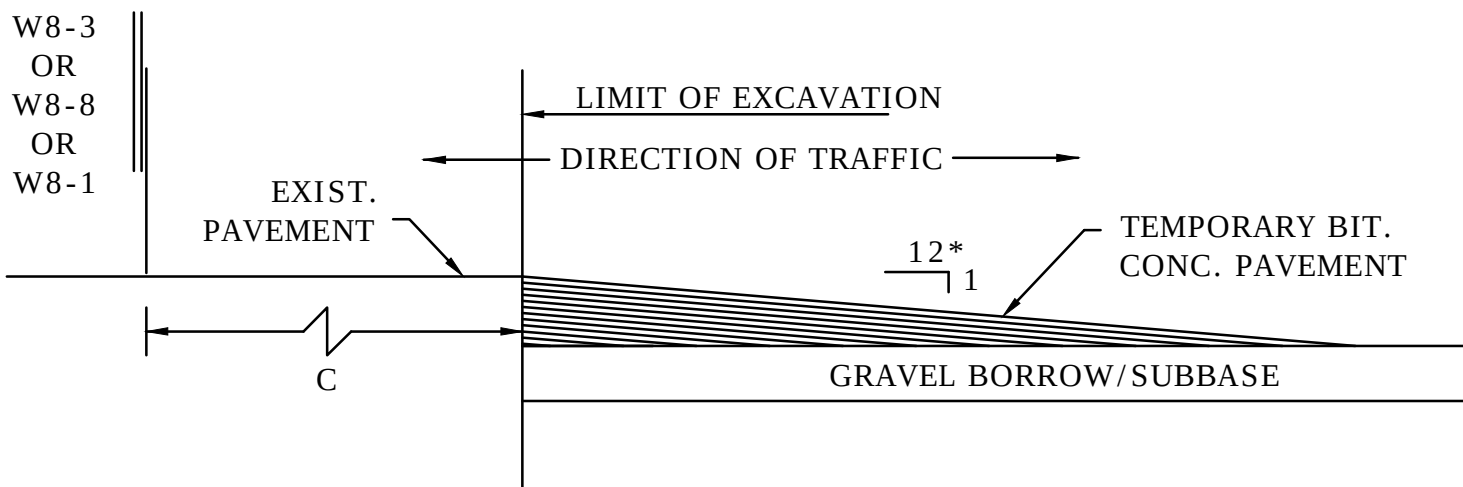
TYPE III
CONSTRUCTION BARRICADE
NO SCALE

NOTES:

- CONSTRUCTION BARRICADES SHALL CONFORM TO THE REQUIREMENTS OF THE NCHRP REPORT 350 (TL-3) AND THE LATEST EDITION OF THE MUTCD.
- MARKINGS FOR BARRICADE RAILS SHALL BE ALTERNATE ORANGE WHITE STRIPES SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS. 6" WIDE STRIPES SHALL BE USED.
- THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.

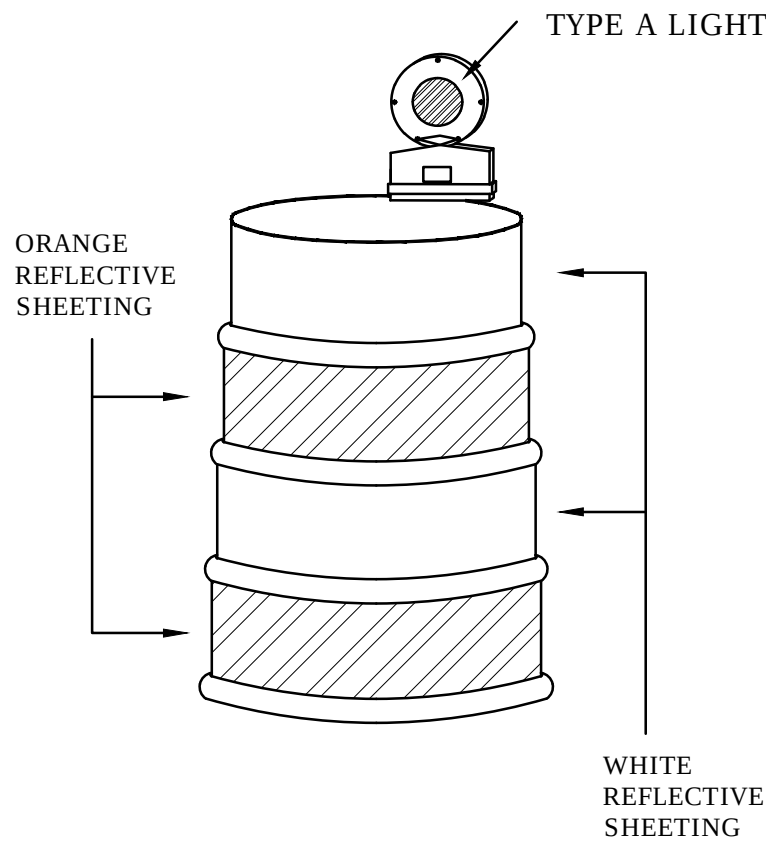


LATERAL DROP-OFF DETAIL
NO SCALE



LONGITUDINAL DROP-OFF DETAIL
NO SCALE

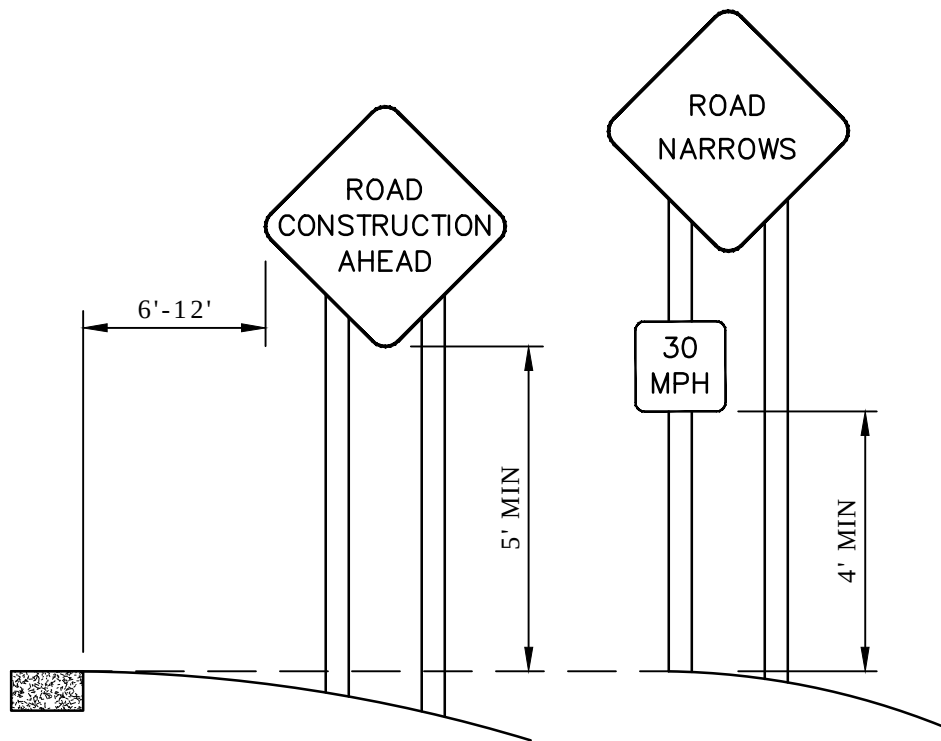
* - INCREASE SLOPE RATIO FOR HIGHER SPEEDS
LATERAL AND LONGITUDINAL DROP-OFF DETAILS
NO SCALE



PLASTIC DRUMS
NO SCALE

NOTES:

- DRUM DESIGN AND APPLICATION SHALL BE AS PER THE CURRENT EDITION OF THE MUTCD.
- DRUMS SHALL BE APPROXIMATELY 36" IN HEIGHT, HAVING A MINIMUM WALL THICKNESS OF 3/32" AND A MINIMUM DIAMETER OF 18" REGARDLESS OF ORIENTATION.
- DRUM MATERIAL MUST BE APPROVED UV RESISTANT, LOW DENSITY, IMPACT RESISTANT, LINEAR POLYETHYLENE (OR APPROVED EQUIVALENT).
- SHEETING SHALL BE APPROVED ORANGE AND WHITE TYPE IV REFLECTORIZED SHEETING CONFORMING TO MASSDOT M9.30.0 SPECIFICATIONS.
- ALL DRUMS SHALL BE WELL MAINTAINED INCLUDING REMOVAL OF DUST OR ROAD FILM, SO AS NOT TO REDUCE REFLECTIVE EFFICIENCY. WHEN A DRUM LOSES TARGET VALUE IT SHALL BE REPLACED.
- STORE UNUSED DRUMS IN ONE LOCATION, AWAY FROM ALL TRAFFIC, OR REMOVE FROM SITE ENTIRELY.



TYPICAL INSTALLATION
OF PROJECT SIGNS
NO SCALE

FORMULAS FOR DETERMINING TAPER LENGTHS

SPEED LIMIT (S)	TAPER LENGTH (L) FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

WHERE:

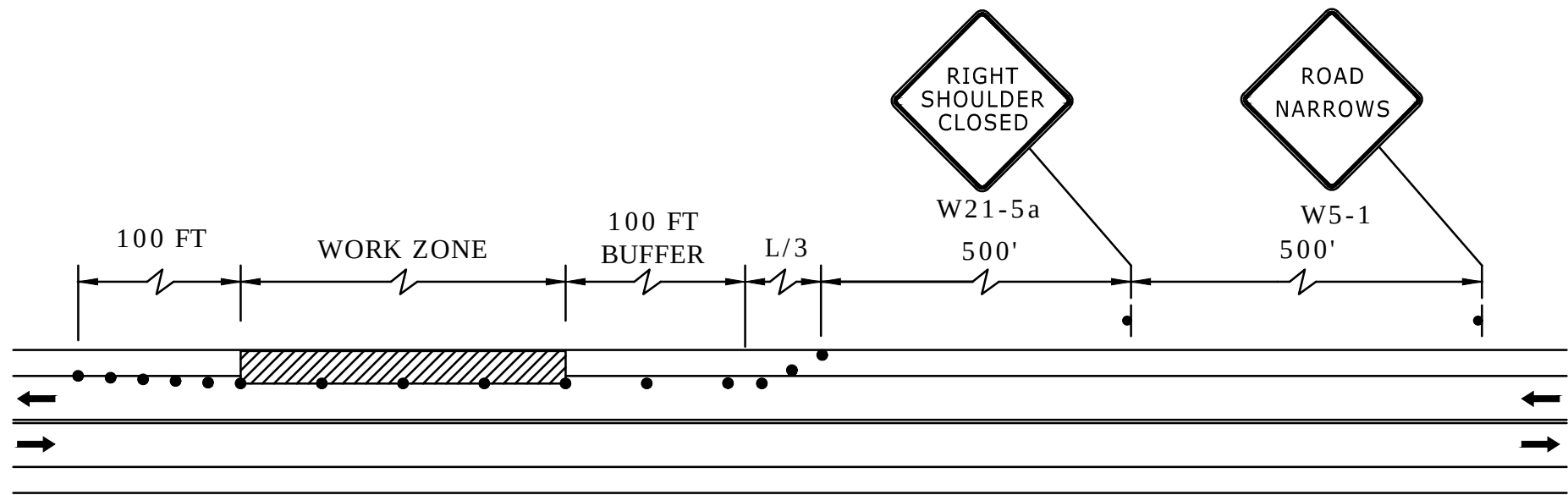
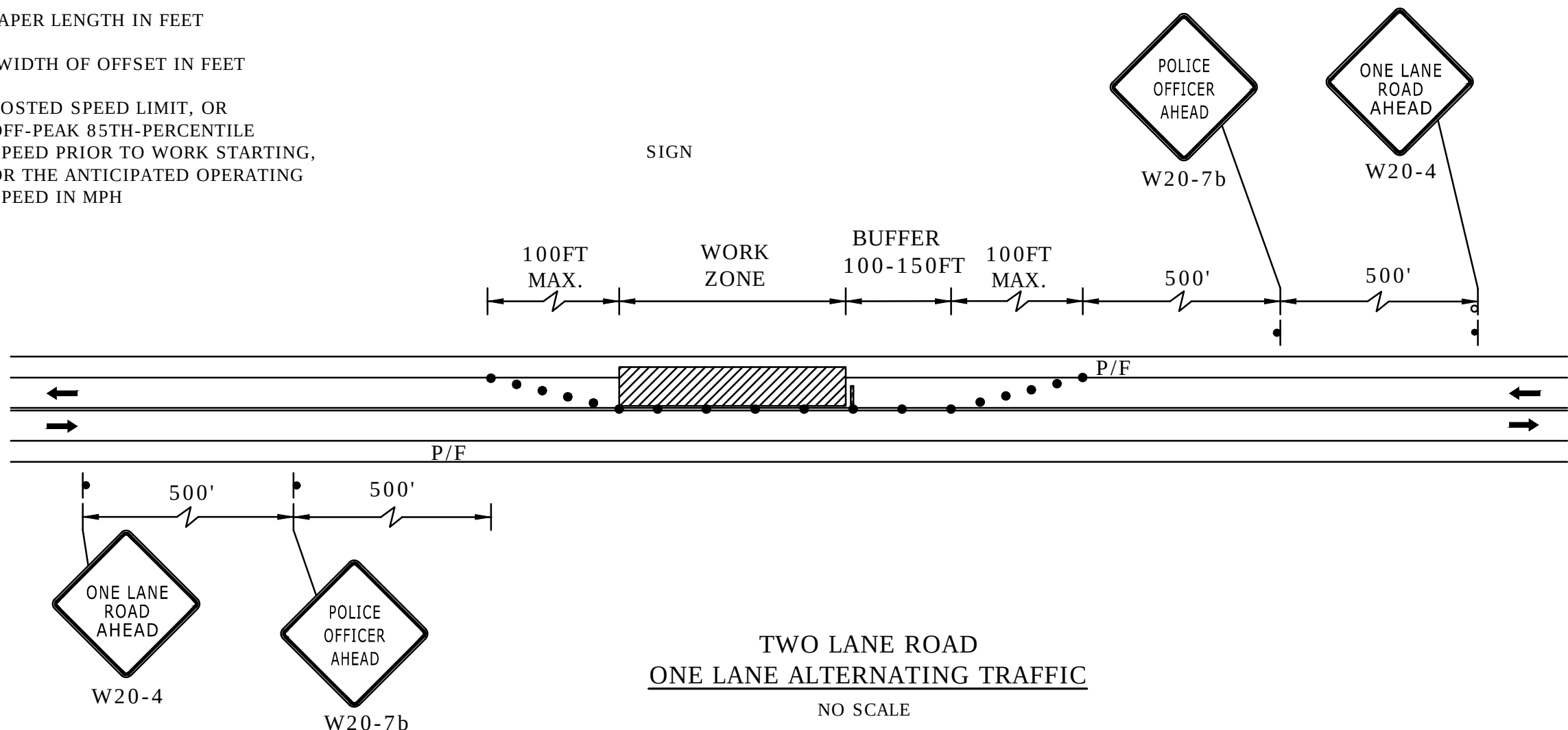
L = TAPER LENGTH IN FEET

W = WIDTH OF OFFSET IN FEET

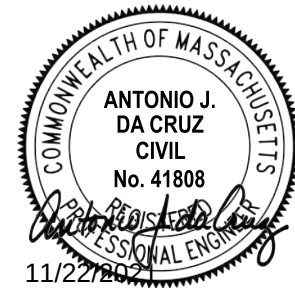
S = POSTED SPEED LIMIT, OR
OFF-PEAK 85TH-PERCENTILE
SPEED PRIOR TO WORK STARTING,
OR THE ANTICIPATED OPERATING
SPEED IN MPH

LEGEND

- REFLECTORIZED PLASTIC DRUM OR 36" CONE
- P/F POLICE/FLAGGER DETAIL
- WORK ZONE
- SIGN
- DIRECTION OF TRAFFIC



TWO LANE ROAD
SHOULDER CLOSED
NO SCALE



Main Street/
Route 122A
Drainage
Improvements

Town of Holden

Holden, MA

MARK	DATE	DESCRIPTION

PROJECT NO:	H1536-019
DATE:	06/2021
FILE:	H1536-019_TCP.dwg
DRAWN BY:	ELD
CHECKED:	MPW
APPROVED:	AJD

TRAFFIC CONTROL PLAN

SCALE: NO SCALE