

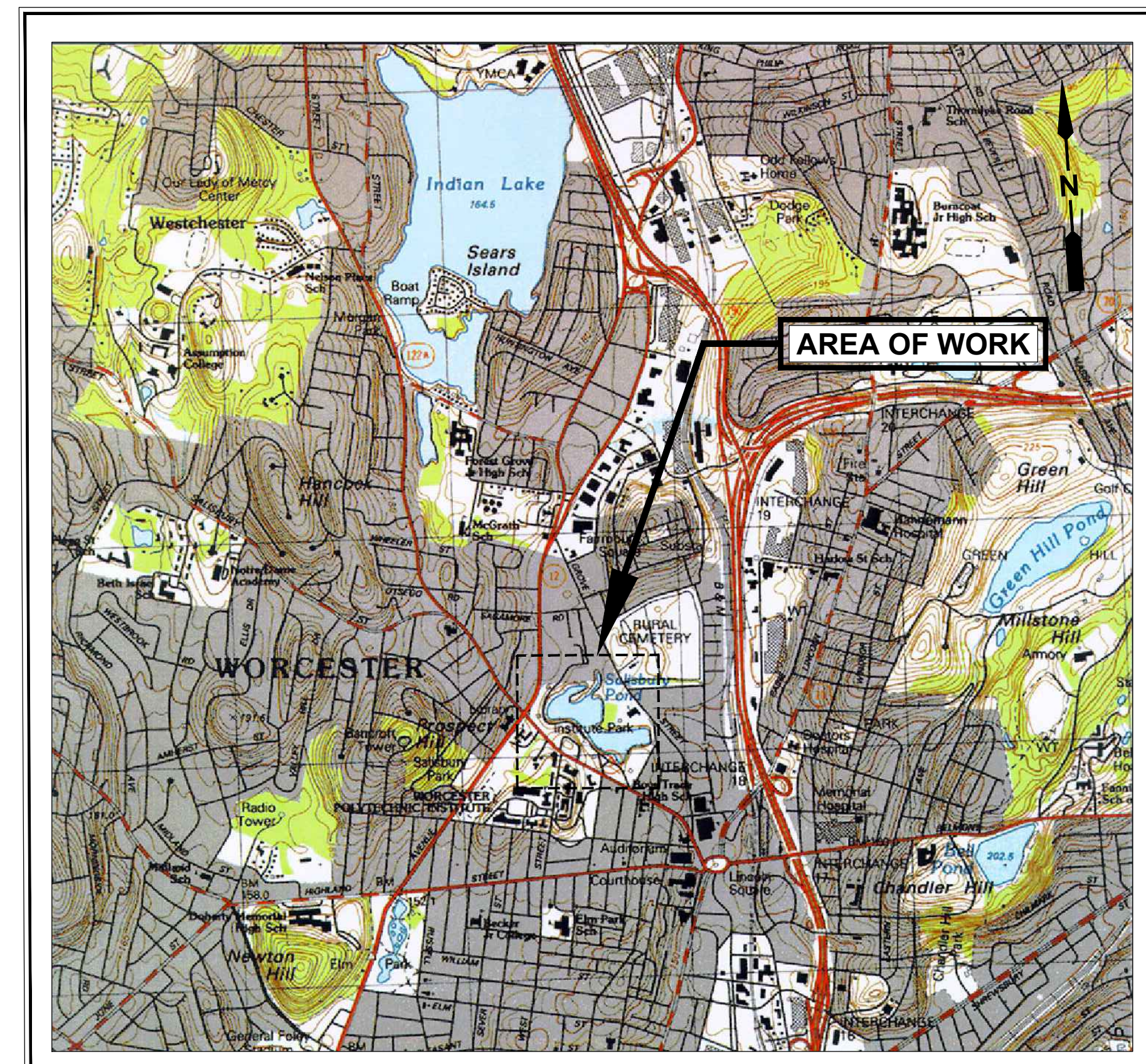
SALISBURY POND WATER QUALITY IMPROVEMENTS

INSTITUTE PARK CITY OF WORCESTER, MASSACHUSETTS JULY 2023

DESIGN AND CONSTRUCTION DOCUMENTS

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SCALE IN FEET
1000 2000 3000
LOCATION PLAN

ERIC D. BATISTA
City Manager

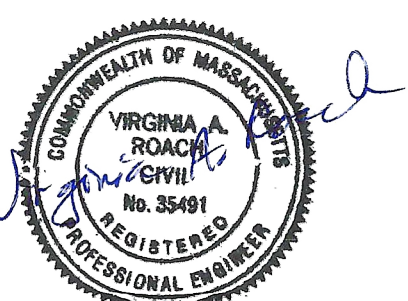
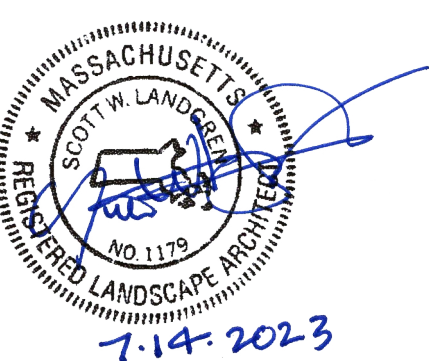
JAY J. FINK
Commissioner
Public Works & Parks

ROBERT C. ANTONELLI, JR.
Assistant Commissioner
Parks & Recreation

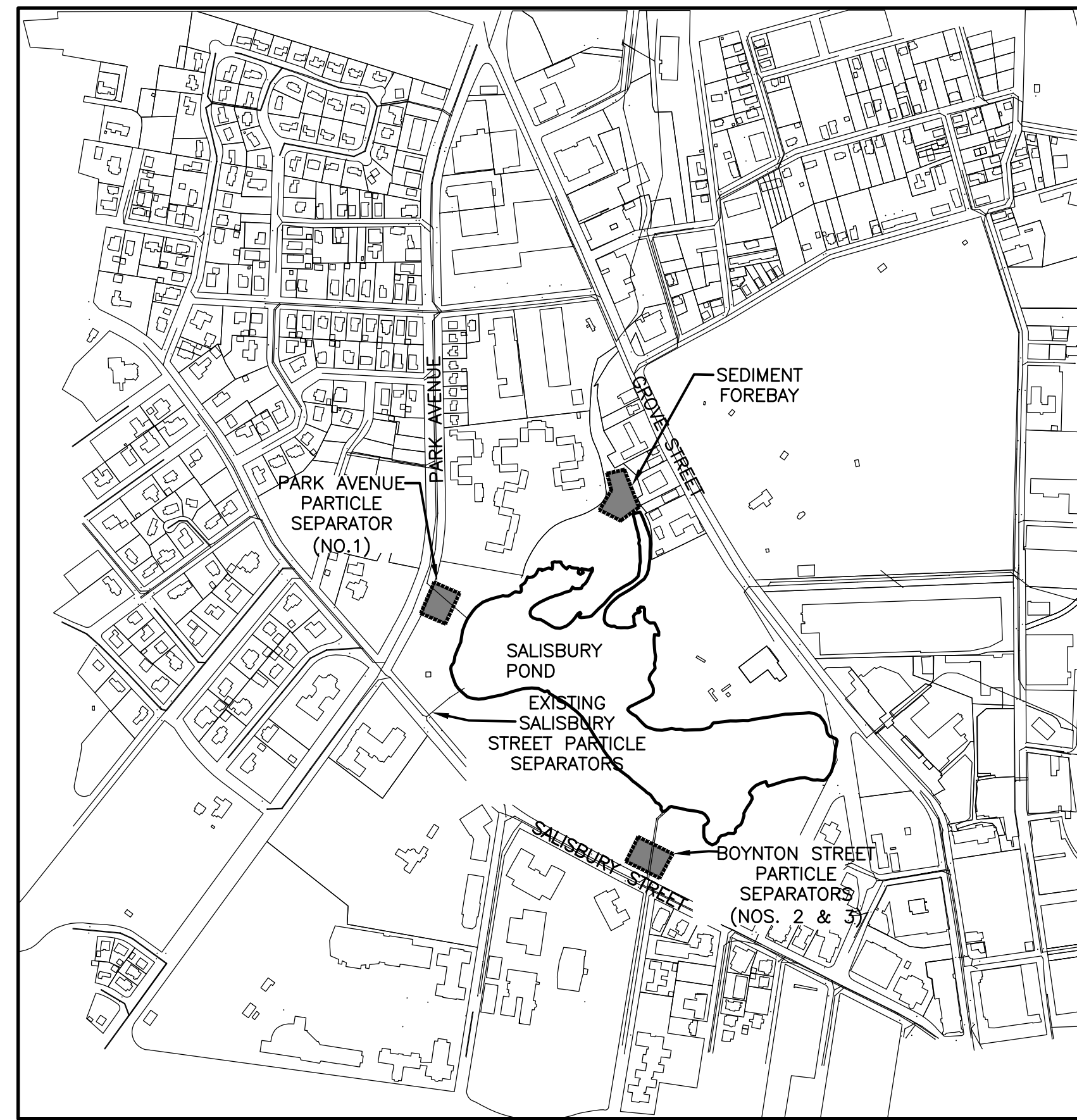
PLANS PREPARED BY:

**CDM
Smith**

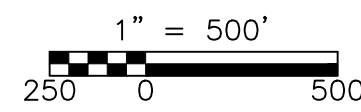
BOSTON, MASSACHUSETTS
JULY 2023



7-14-2023



KEY PLAN



SURVEY NOTES:

- SURVEY WAS PERFORMED ON NOVEMBER 16, 2022 BY FELDMAN GEOSPATIAL, 27 MECHANIC STREET, WORCESTER, MA 01608, (617)357-9740, WWW.FELDMANSURVEYORS.COM. FILE NUMBER 2201243-EC.
- BENCH MARK INFORMATION:
ELEVATIONS WERE OBTAINED BY GPS OBSERVATIONS ON NOVEMBER 14, 2022.
BENCHMARK USED:
TBM-A: X CUT ON BONNET BOLT ON TOP OF FIRE HYDRANT ON THE SOUTHWESTERLY CORNER OF SALISBURY STREET AND BOYNTON STREET.
ELEVATION = 503.46
TEMPORARY BENCH MARKS SET:
TBM-1: MAG NAIL SET IN THE BITUMINOUS CONCRETE WALKWAY EASTERLY OF THE INSTITUTE PARK ENTRANCE ACROSS FROM THE SALISBURY STREET AND BOYNTON STREET INTERSECTION.
ELEVATION = 499.90
TBM-2: MAG NAIL SET IN THE CONCRETE SIDEWALK ON THE NORTH SIDE OF THE SALISBURY STREET AND BOYNTON STREET INTERSECTION, LYING ±14' TO THE WEST OF THE FIRE HYDRANT.
ELEVATION = 501.38
TBM-3: HUB AND TACK SET BEHIND THE CONCRETE SIDEWALK ON THE EASTERLY SIDE OF PARK AVENUE, APPROXIMATELY PERPENDICULAR WITH THE END OF THE CONCRETE LANE DIVIDER WITHIN PARK AVENUE.
ELEVATION = 507.59
TBM-4: HUB AND TACK SET IN THE FIELD ±16' TO THE WEST THE CONCRETE STEPS, AND ±16' SOUTH OF THE PARK ENTRYWAY ALONG RUMFORD AVENUE.
ELEVATION = 498.23
TBM-5: MAG NAIL SET IN THE BITUMINOUS CONCRETE WITHIN RUMFORD AVENUE.
ELEVATION = 499.90
TBM-6: MAG NAIL SET IN BITUMINOUS CONCRETE WITHIN RUMFORD AVE. ELEVATION = 500.51
- ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- CONTOUR INTERVAL EQUALS ONE (1) FOOT.
- BASE FLOOD ELEVATION (BFE) OF 492.0 FEET WAS BASED ON EFFECTIVE FLOOD INSURANCE STUDY FOR THE PROJECT AREA PUBLISHED BY FEMA.
- UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY. SUBSURFACE UTILITIES CANNOT BE VISIBLY VERIFIED. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL, TOLL FREE, THE DIG SAFE CALL CENTER AT 1-888-344-7233 SEVENTY-TWO HOURS PRIOR TO EXCAVATION.
- WETLAND DELINEATION SHOWN HEREON WAS FIELD-LOCATED BY FELDMAN GEOSPATIAL ON NOVEMBER 16, 2022.
- PROPERTY LINES ARE BASED ON ASSESSORS PLAN INFORMATION WITH THE EXCEPTION OF THE GROVE STREET PROPERTIES AT THE SEDIMENT FOREBAY SITE WHICH WERE SURVEYED BY FELDMAN GEOSPATIAL ON MAY 2, 2023.

GENERAL NOTES:

- NOTES PERTAINING TO NEW WORK ARE SHOWN THUS:
- EXACT LOCATION OF NEW PIPES, VALVES, FITTINGS, ETC. SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- THE CONTRACTOR SHALL HANDLE ALL DRAIN FLOWS.
- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION TO PREVENT DAMAGE TO ADJACENT PROPERTY. ALL AREAS AFFECTED BY THE CONTRACTOR'S WORK SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.
- ALL TREES SHALL REMAIN UNLESS OTHERWISE NOTED ON THE DRAWINGS. SEE SPECIFICATION SECTION 01110 FOR TREE PROTECTION REQUIREMENTS.
- THE CITY OF WORCESTER PARKS & RECREATION DEPARTMENT IS LOCATED AT 50 OFFICER MANNY FAMILIA WAY, WORCESTER, MA. 01605. PHONE: (508)799-1190
- "REMOVE AND REPLACE" MEANS THAT THE ITEM BEING REMOVED SHALL BE REPLACED WITH A NEW ITEM OF EQUAL QUALITY UNLESS OTHERWISE NOTED.
- THE PARTICLE SEPARATOR LAYOUTS PRESENTED ON THESE DRAWINGS ARE BASED ON GENERAL DIMENSIONS PROVIDED FOR VORTECHS STORMWATER TREATMENT SYSTEMS. THE ACTUAL LAYOUTS AND DIMENSIONS WILL VARY BASED ON THE FINAL SELECTION OF THE PARTICLE SEPARATORS AND THE APPROVED SHOP DRAWINGS. THE CONTRACTOR SHALL NOT COMMENCE ANY ACTIVITIES UNTIL SHOP DRAWINGS HAVE BEEN APPROVED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION.
- REFER TO THE PROJECT SPECIAL CONDITION- DEMOLITION, SITE EXCAVATION AND PREPARATION FOR PROTOCOL FOR HANDLING AND DISPOSAL OF WOOD-BASED MATERIALS WITHIN THE PROJECT AREA, RELATED TO THE ASIAN LONG-HORNED BEETLE INFESTATION.

EROSION AND SEDIMENT CONTROL NOTES:

- REFER TO ALL RELEVANT EROSION AND SEDIMENTATION CONTROL SPECIFICATIONS
- PRIOR TO ANY ACTIVITY ON THE SITE, THE CONTRACTOR SHALL PREPARE AND FILE SWPPP AND APPOINT A QUALIFIED INDIVIDUAL WHO SHALL BE RESPONSIBLE FOR MONITORING ALL ACTIVITIES TO PROVIDE ENVIRONMENTAL COMPLIANCE. THIS INDIVIDUAL SHALL INSPECT AND DIRECT THE MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROL MEASURES ON SITE AND SHALL SUBMIT PROGRESS/MONITORING REPORTS AS REQUESTED TO THE ENGINEER AND OWNER.
- APPROPRIATE EROSION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE BEGINNING OF ALL PHASES OF CONSTRUCTION, AND SHALL BE MAINTAINED DURING CONSTRUCTION. THE EROSION CONTROL DETAILS AND SPECIFICATIONS SHALL BE CONSIDERED THE MINIMUM STANDARDS REQUIRED FOR THIS PROJECT. ADDITIONAL OR MODIFIED EROSION CONTROL MEASURES MAY BE REQUIRED AT ANY TIME DURING CONSTRUCTION AT NO ADDITIONAL COST. THESE SHALL BE MAINTAINED UNTIL THEY ARE NO LONGER NEEDED, AT WHICH TIME THEY SHALL BE REMOVED.
- A STABILIZED CONSTRUCTION ENTRANCE, TRACKING PAD OR OTHER APPROVED STABILIZATION METHOD SHALL BE CONSTRUCTED AT ALL ENTRANCE / EXIT POINTS OF THE SITE TO REDUCE THE AMOUNT OF SOIL CARRIED ONTO IMPERVIOUS AREAS AND OFF SITE. PREVENT OFF-SITE VEHICLE TRACKING OF SEDIMENTS. ALL PAVED ROAD AND PATH SURFACES IN THE WORK AREA OR AFFECTED BY THE WORK SHALL BE SWEEPED ON A REGULAR BASIS AS DIRECTED BY THE ENGINEER OR OWNER.
- AN ADEQUATE STOCKPILE OF EROSION CONTROL MATERIALS SHALL BE ON SITE AT ALL TIMES IN AN EASILY ACCESSIBLE LOCATION FOR EMERGENCY OR ROUTINE REPLACEMENT AND SHALL INCLUDE MATERIALS TO REPAIR OR REPLACE STRAW WATTLES OR ANY OTHER DEVICES PLANNED FOR USE DURING CONSTRUCTION.
- THE AREA OF CONSTRUCTION SHALL REMAIN IN A STABLE CONDITION AT THE CLOSE OF EACH CONSTRUCTION DAY. EROSION CONTROLS WILL BE INSPECTED AT THIS TIME, AND REPAIRED, REINFORCED OR REPLACED AS NECESSARY.
- ONCE BEGUN, GRADING AND CONSTRUCTION SHALL CONTINUE IN AN EXPEDITIOUS MANNER TO MINIMIZE THE OPPORTUNITY FOR EROSION.
- SODDED AREAS AND SEEDING UNDERTAKEN AS SPECIFIED IN SECTION 02930 SHALL BE UNDERTAKEN IN THE SPRING, EARLY SUMMER OR EARLY FALL. WHEN SEEDING IS FOUND TO BE IMPRACTICAL, APPROPRIATE TEMPORARY STABILIZATION SHALL BE APPLIED. PERMANENT SEEDING MAY TAKE PLACE DURING THE SUMMER, ONLY IF PLANS PROVIDE FOR ADEQUATE MULCHING AND WATERING.
- THE OWNER RESERVES THE RIGHT TO IMPOSE ADDITIONAL CONDITIONS ON PORTIONS OF THIS PROJECT TO MITIGATE ANY IMPACTS WHICH COULD RESULT FROM SITE EROSION, OR ANY NOTICEABLE DEGRADATION OF SURFACE WATER QUALITY DISCHARGING FROM THE SITE.
- EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED BEFORE AND AFTER EACH PREDICTED STORM EVENT AND REPAIRED OR REPLACED AS NECESSARY. ANY ACCUMULATED SEDIMENT ADJACENT TO THE BARRIERS SHALL BE REMOVED. INSPECT INLET PROTECTION AND SEDIMENTATION BARRIERS WEEKLY AND AFTER ALL STORM EVENTS OF 1/2 INCH OR GREATER AND REPAIR AS NEEDED AND AS DIRECTED BY THE ENGINEER.
- ALL AREAS OUTSIDE THE LIMIT OF WORK SHALL BE PROTECTED AT ALL TIMES.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS OF REMOVAL.
- UPON COMPLETION OF CONSTRUCTION ACTIVITIES INSPECT AND CLEAN OUT DRAINAGE SYSTEMS TO THE SATISFACTION OF THE ENGINEER. ALL EXISTING PAVEMENT AND WALKWAYS TO BE PROTECTED THAT ARE DISTURBED BY THIS CONTRACT SHALL BE PROMPTLY REPAIRED IN A MANNER APPROVED BY ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS.
- UTILIZE BEST MANAGEMENT PRACTICES AND COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS AS RELATED TO SEDIMENT AND EROSION CONTROL. MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS SHALL BE FOLLOWED FOR ALL WORK.

NOTES FOR ENGINEER'S INSPECTION DURING CONSTRUCTION:

- THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH COMPLETE ACCESS TO THE EXISTING CULVERT FOR INSPECTION TO CONFIRM THE CONDITION OF THE CULVERT PRIOR TO CUTTING THE NEW OPENINGS. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED BY THE ENGINEER TO PERFORM THESE INSPECTIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, PROVIDING A CONFINED SPACE PERMIT, PROVIDING ACCESS INTO THE CULVERT, PROVIDING LIGHTING WITHIN THE CULVERT, AND ANY OTHER REQUIREMENTS NECESSARY FOR THE ENGINEER TO WORK SAFELY FOR AN EXTENDED PERIOD OF TIME. AS PART OF THE CONTRACTOR'S CONFINED SPACE PERMIT, THE CONTRACTOR SHALL CONFIRM THAT RESCUE SERVICES ARE WILLING AND ABLE TO ASSIST IN A CONFINED SPACE RESCUE IF NEEDED. THE CONTRACTOR SHALL ALSO PREPARE THE STRUCTURES FOR INSPECTION BY CLEANING ALL SURFACES. REMOVE ALL SEDIMENT, EFFLORESCENCE, DIRT, AND FOREIGN MATTER SO THE CONCRETE SURFACE IS FREE OF ALL LAITANCE BY POWER WASHING OR OTHER MEANS ACCEPTABLE TO THE ENGINEER, DISPOSE OF ALL SEDIMENT, AND DEWATER LOW SPOTS USING PUMPS SO NO STANDING WATER IS PRESENT. THE CONTRACTOR SHALL GIVE THE ENGINEER TWO WEEKS NOTICE WHEN THE STRUCTURES WILL BE CLEANED AND READY FOR THE INSPECTION.

**LEGEND
EXISTING**

	NORTH ARROW		B-3 BORING
	SEWER MANHOLE		SHRUB
	DRAIN MANHOLE		DECIDUOUS TREE
	ELECTRIC MANHOLE		CONIFEROUS TREE
	WATER MANHOLE	BC	BOTTOM OF CURB
	TELEPHONE MANHOLE	BIT	BITUMINOUS
	CABLE TELEVISION MANHOLE	BVW	BORDERING VEGETATED WETLANDS
	MANHOLE	CLF	CHAIN LINK FENCE
	HYDRANT	COBB.	COBBLESTONE
	GAS VALVE	CONC.	CONCRETE
	WATER VALVE	HR	HAND RAIL
	WATER SHUTOFF/WATER GATE	GRN	GRANITE
	GAS SHUTOFF/GAS GATE	I=	INVERT ELEVATION
	BOSTON WATER VALVE	INACC.	INACCESSIBLE
	CATCH BASIN	M&S	MULCH & SHRUBS
	ROUND CATCH BASIN	R=	RIM ELEVATION
	LIGHT POLE	TBM	TEMPORARY BENCH MARK
	WALK LIGHT	TC	TOP OF CURB
	ELECTRIC HANDHOLE	TOW	TOP OF WATER
	BOLLARD	TW	TOP OF WALL
	POST	VGC	VERTICAL GRANITE CURB
	SIGN	FGC	FLUSH GRANITE CURB
	CLEANOUT	WF#-#	WETLAND FLAG NUMBER
	WETLANDS	WIF	WROUGHT IRON FENCE
	TRANSFORMER	—D—	DRAIN
	ELECTRIC METER	—S—	SEWER
	GATE POST	—X—	X METAL FENCE
	CURB RETURN	—	WOOD FENCE
	WETLAND FLAG	—	WROUGHT IRON FENCE

ABBREVIATIONS

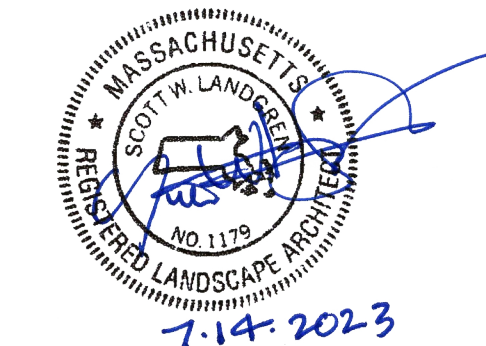
BC	BOTTOM OF CHANNEL
BIT	BITUMINOUS
CB	CATCH BASIN
CLF	CHAIN LINK FENCE
CONC	CONCRETE
CM	CORRUGATED METAL
DI	DUCTILE IRON
DMH	DRAIN MANHOLE
GV	GATE VALVE
HYD	HYDRANT
I OR INV EL	INVERT ELEVATION
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
NPV	NO PIPE VISIBLE
PVC	POLYVINYL CHLORIDE
P	PROTECT TREE
R	REMOVE TREE
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
S	SILL ELEVATION
SMH	SEWER MANHOLE
TD	TOP OF DECKING
TOD	TOP OF DIRT
VC	VITRIFIED CLAY
VCP	VITRIFIED CLAY PIPE
VGC	VERTICAL GRANITE CURB
WCR	WHEELCHAIR RAMP

ADD ALTERNATE NO. 1:

PARK AVENUE PARTICLE SEPARATOR: CONTRACTOR SHALL CONSTRUCT AND INSTALL PARTICLE SEPARATOR ON THE PARK AVENUE SIDE OF INSTITUTE PARK, INCLUDING NEW MANHOLES ON EXISTING DRAINS AND OTHER APPURTENANCES AS INDICATED IN PLANS AND SPECIFICATIONS. BASE BID: NO CHARGE

ADD ALTERNATE NO. 2:

BOYNTON STREET PARTICLE SEPARATORS: CONTRACTOR SHALL CONSTRUCT AND INSTALL TWO PARTICLE SEPARATORS IN INSTITUTE PARK NEAR BOYNTON STREET, INCLUDING NEW MANHOLES ON EXISTING DRAINS, NEW DRAINS AND OTHER APPURTENANCES AS INDICATED IN PLANS AND SPECIFICATIONS. BASE BID: NO CHARGE



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	N. WATKINS
DRAWN BY:	A. CARRANO
SHEET CHK'D BY:	V. ROACH
CROSS CHK'D BY:	S. LANDGREN
APPROVED BY:	V. ROACH
DATE:	JULY 2023

75 State Street
Boston, MA 02109
Tel: (617) 452-6000

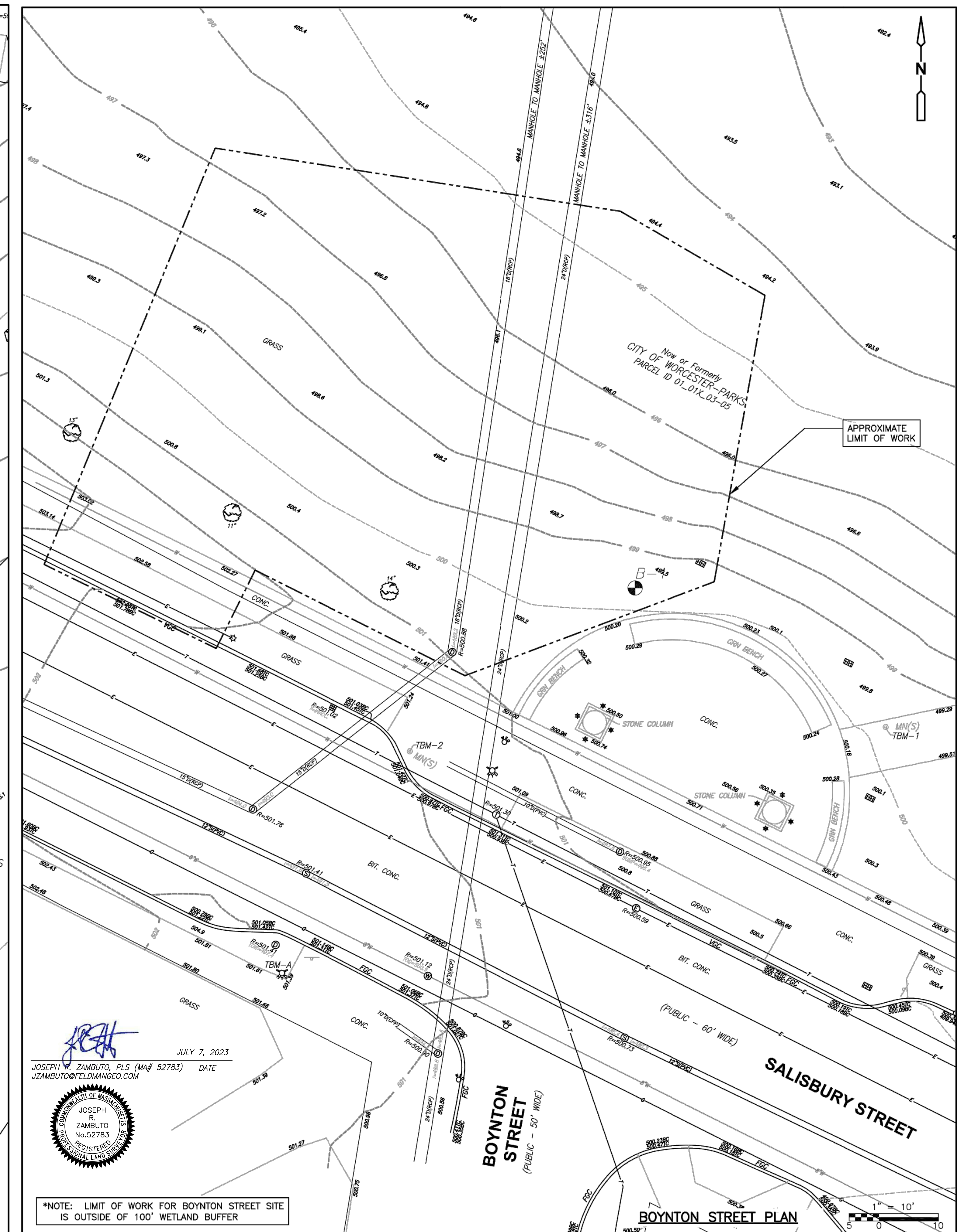
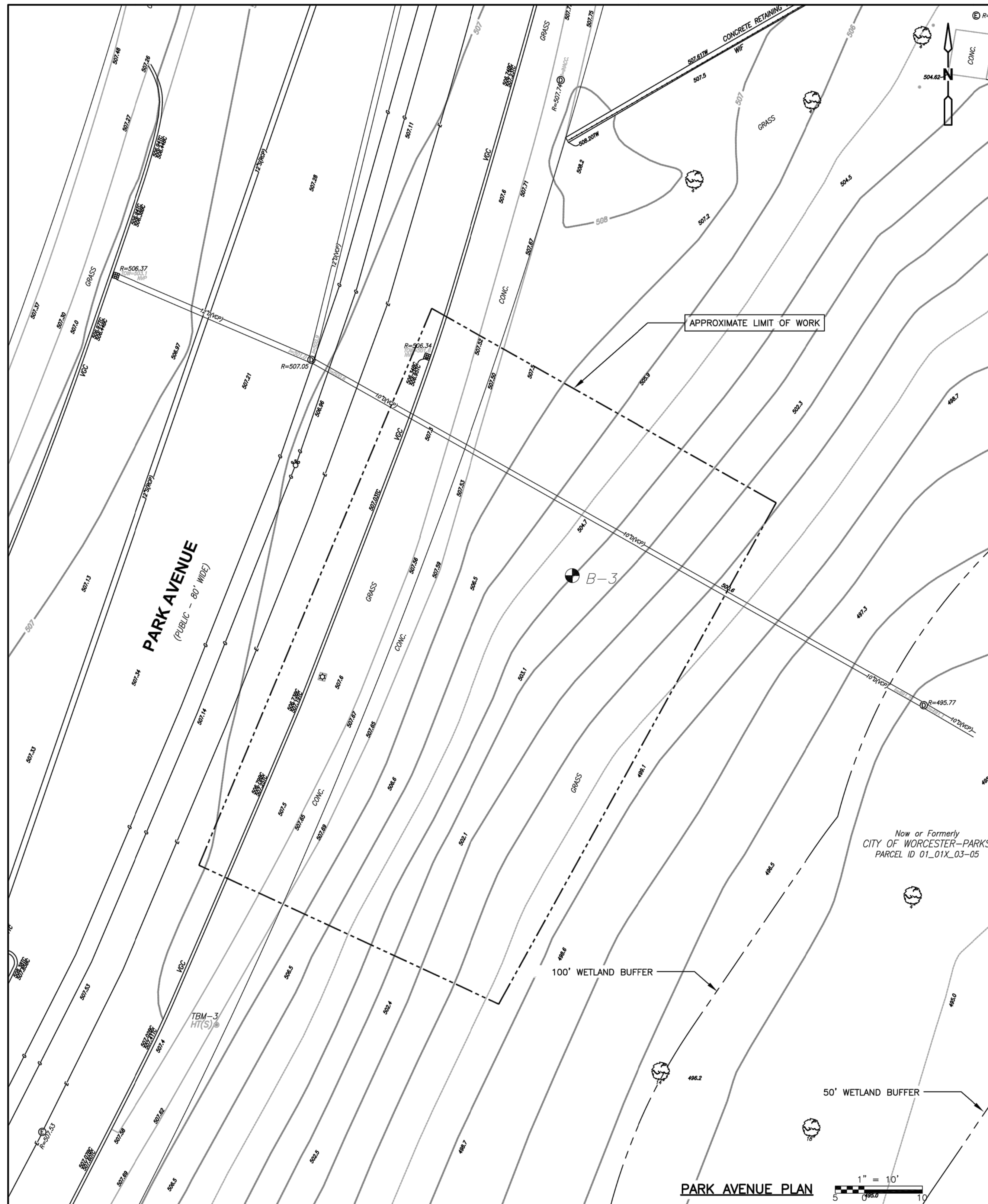
CITY OF WORCESTER, MASSACHUSETTS

SALISBURY POND WATER QUALITY IMPROVEMENTS

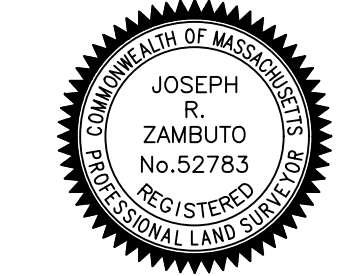
KEY PLAN, GENERAL NOTES AND LEGEND

PROJECT NO. 0198-277460
FILE NAME: GPL0002
SHEET NO.
G-1

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JOSEPH W. ZAMBITO, PLS (MA# 52783) DATE
JZAMBITO@FELDMANGE.CO



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: N. WATKINS
 DRAWN BY: A. CARRANO
 SHEET CHK'D BY: V. ROACH
 CROSS CHK'D BY: S. LANDOREN
 APPROVED BY: FELDMAN GEOSPATIAL
 DATE: JULY 2023

CDM Smith
 75 State Street
 Boston, MA 02109
 Tel: (617) 452-6000

CITY OF WORCESTER, MASSACHUSETTS
SALISBURY POND WATER QUALITY IMPROVEMENTS

EXISTING CONDITIONS PLANS
PARTICLE SEPARATORS

PROJECT NO. 0198-277460
 FILE NAME: EXSTPL001
 SHEET NO.
EX-1

JOSEPH R. ZAMBUTO, PLS (MA# 52783) DATE
 JZAMBUTO@FELDMAN.GEO.COM



100' WETLAND BUFFER
 50' WETLAND BUFFER
 30' WETLAND BUFFER
 15' WETLAND BUFFER
 EDGE OF BORDERING VEGETATED WETLAND
 BORDERING LAND SUBJECT TO FLOODING EL. 492.0

Now or Formerly
 WORCESTER POLYTECHNIC INSTITUTE
 BOOK 15608, PAGE 118
 PARCEL ID 01_01X_00002

RUMFORD AVE (PRIVATE)

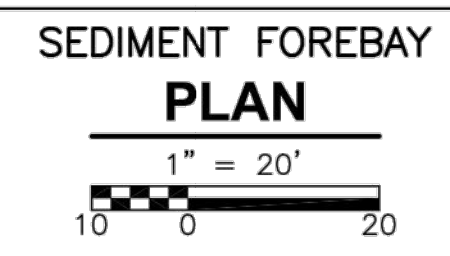
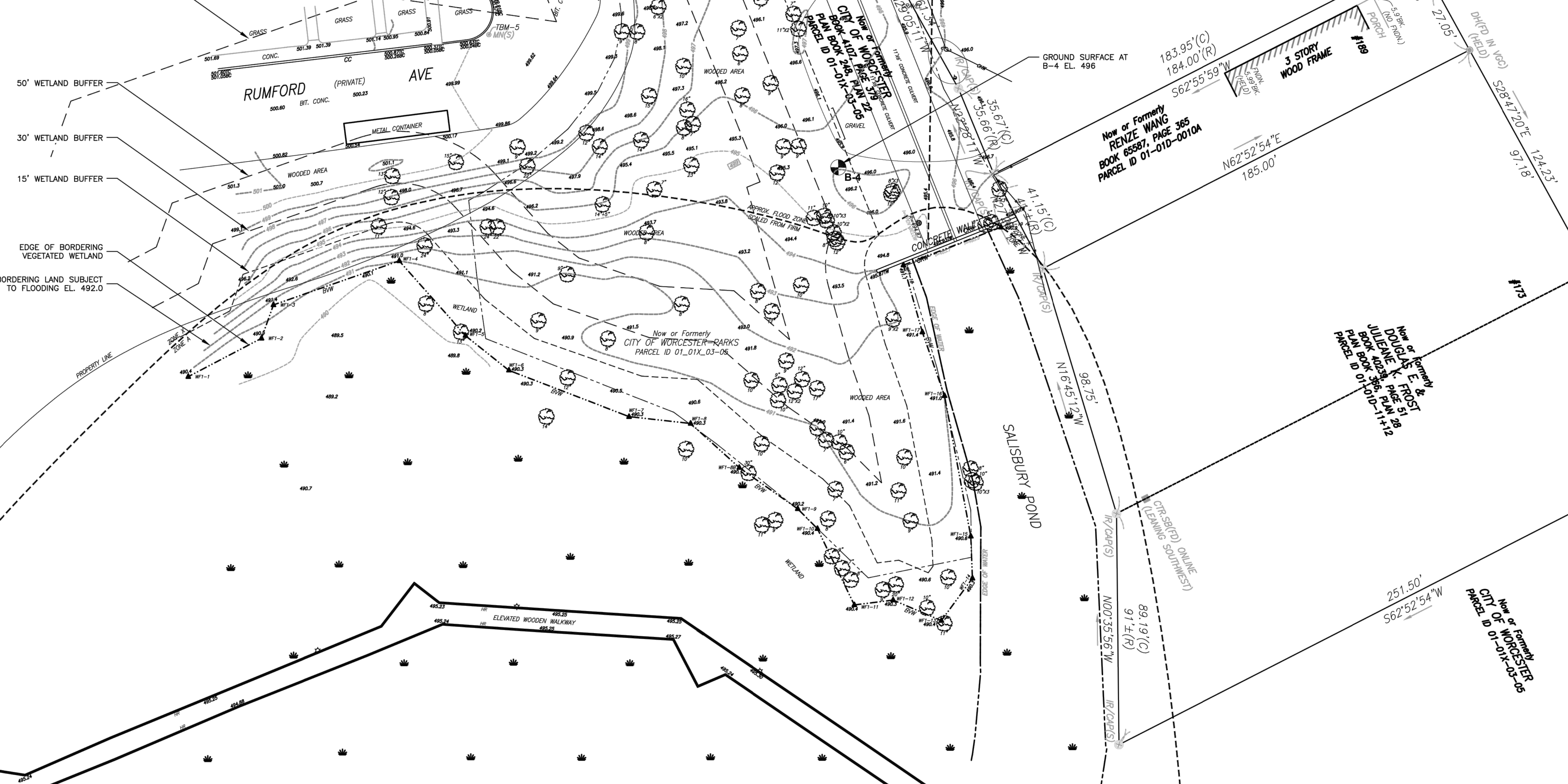
Now or Formerly
 CITY OF WORCESTER - RARKS
 PARCEL ID 01_01X_03-05

Now or Formerly
 INVESTMENTS
 PARCEL ID 01-01D-004-10

Now or Formerly
 RENZE WANG
 BOOK 65587, PAGE 365
 PARCEL ID 01-01D-0010A

Now or Formerly
 DOUGLAS & FLORES
 JULIENNE & PIERRE
 PARCEL ID 01-01X-111-1-2

Now or Formerly
 CITY OF WORCESTER
 PARCEL ID 01-01X-05-05



DESIGNED BY: N. WATKINS
 DRAWN BY: A. CARRANO
 SHEET CHK'D BY: V. ROACH
 CROSS CHK'D BY: S. LANDOREN
 APPROVED BY: FELDMAN GEOSPATIAL
 DATE: JULY 2023



CITY OF WORCESTER, MASSACHUSETTS
 SALISBURY POND WATER QUALITY IMPROVEMENTS

EXISTING CONDITIONS PLAN
 SEDIMENT FOREBAY



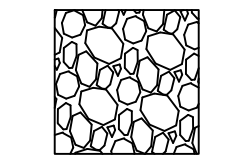

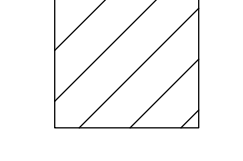

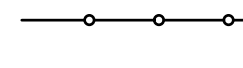

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 FILE NAME: EXSTPL002
 SHEET NO.
EX-2

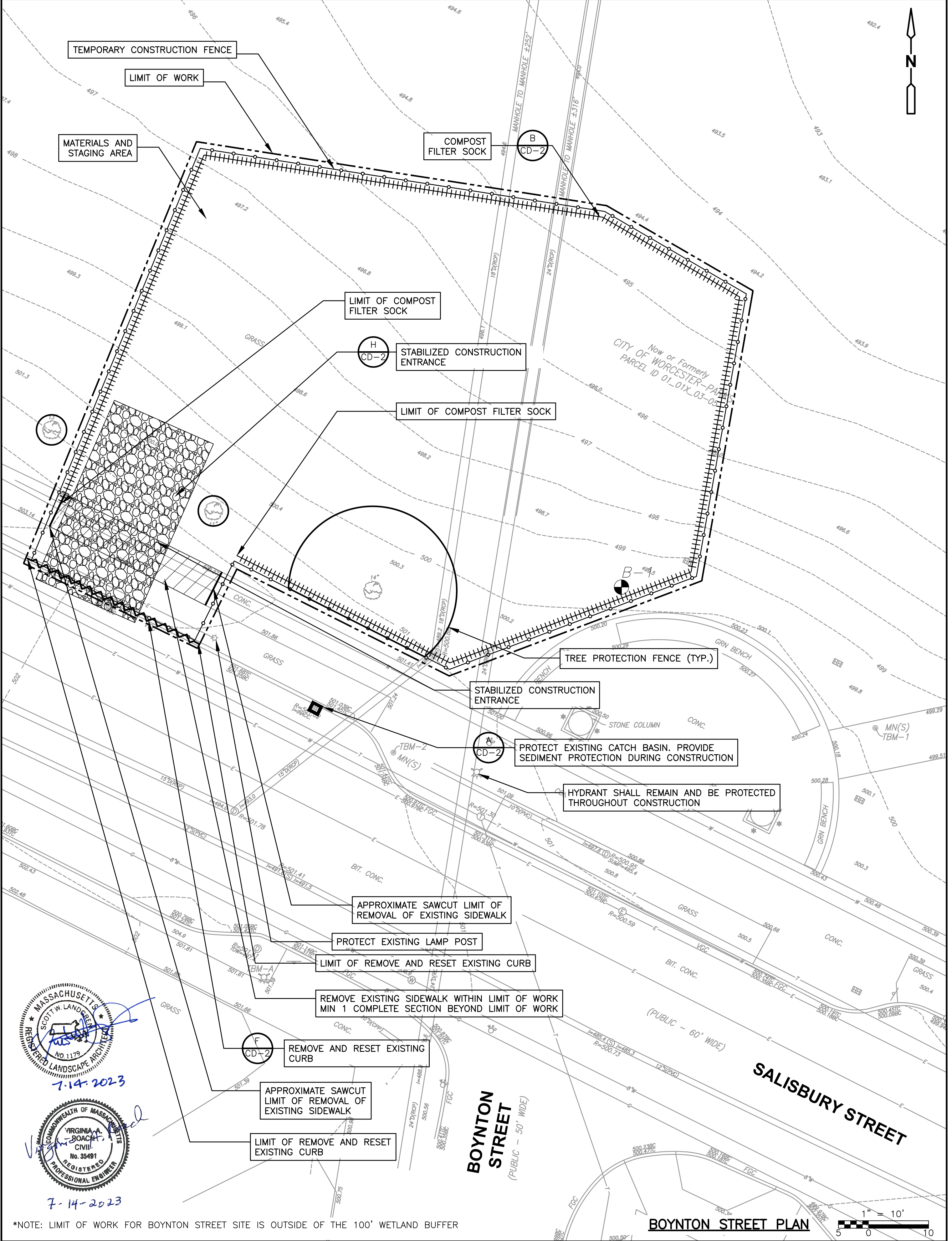
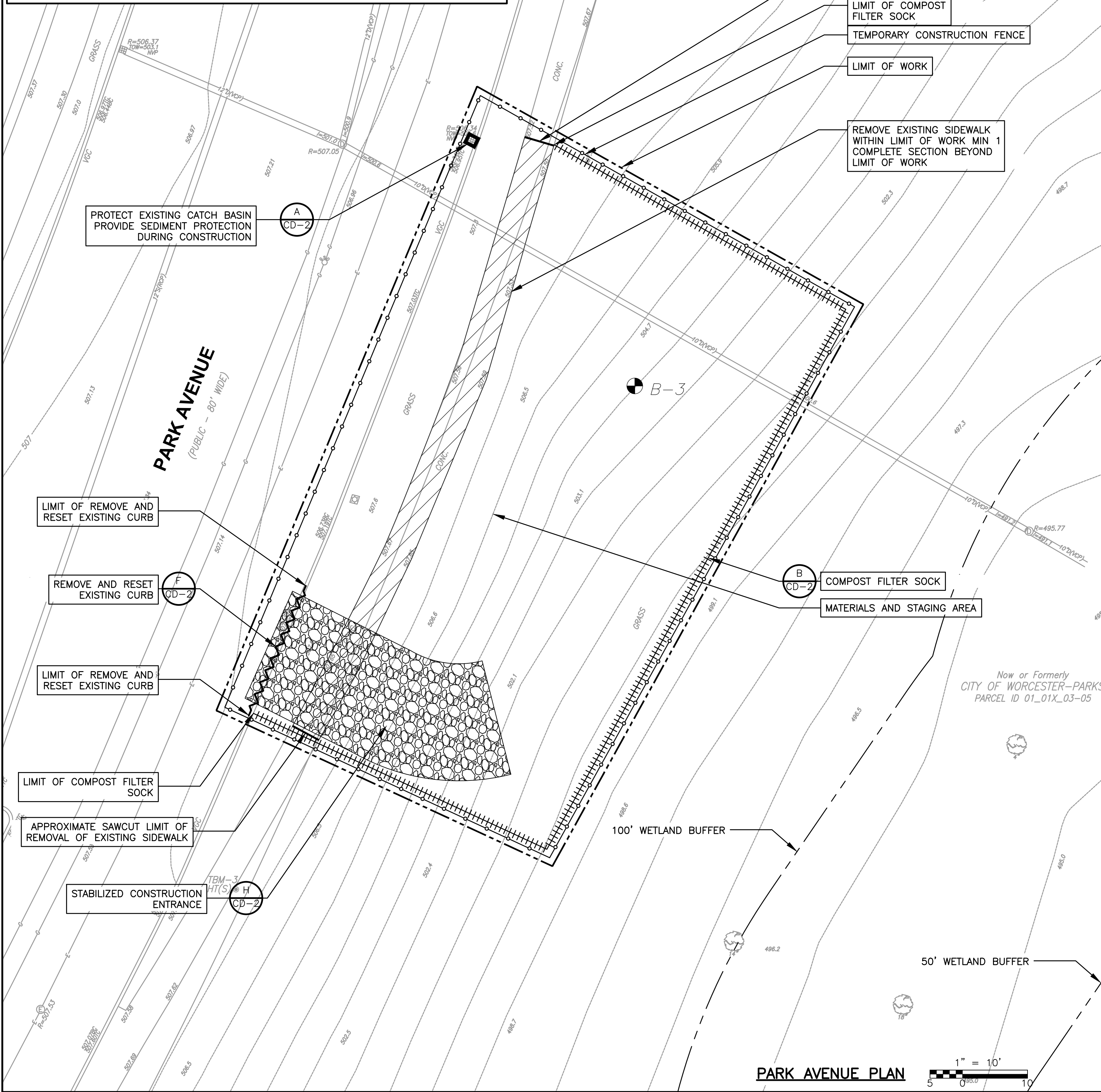
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REV. NO.	DATE	DRWN	CHKD	REMARKS

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LEGEND:

	LIMIT OF WORK		COMPOST FILTER SOCK
	STABILIZED CONSTRUCTION ENTRANCE		PROTECT CATCH BASIN
	REMOVE AND DISPOSE OF EXISTING SIDEWALK		TREE PROTECTION FENCE
	TEMPORARY CONSTRUCTION FENCE		REMOVE AND RESET EXISTING CURB



7-14-2023

7-14-2023

PROFESSIONAL ENGINEER

*NOTE: LIMIT OF WORK FOR BOYNTON STREET SITE IS OUTSIDE OF THE 100' WETLAND BUFFER

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: N. WATKINS
 DRAWN BY: A. CARRANO
 SHEET CHK'D BY: V. ROACH
 CROSS CHK'D BY: S. LANDGREN
 APPROVED BY: V. ROACH
 DATE: JULY 2023

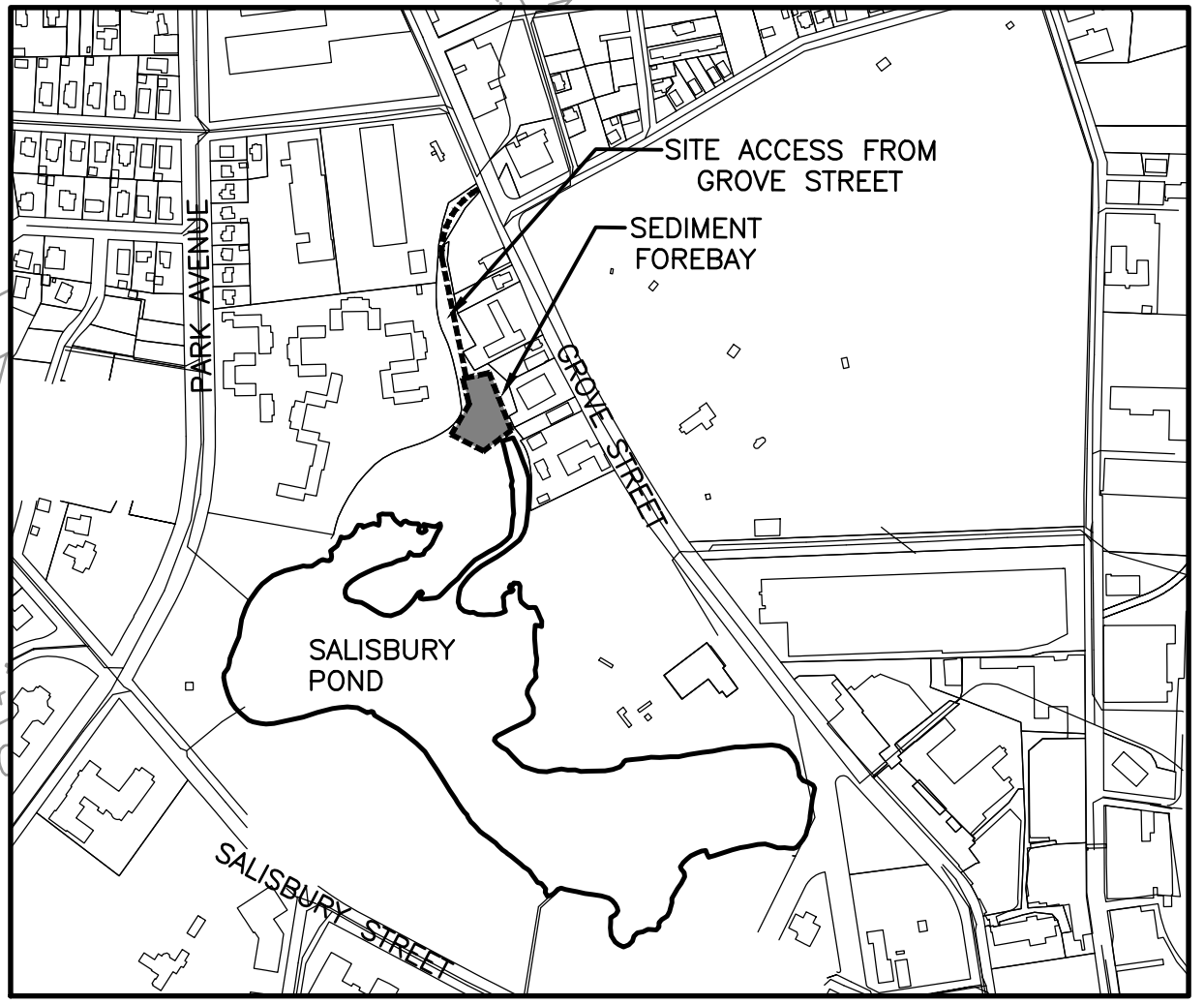
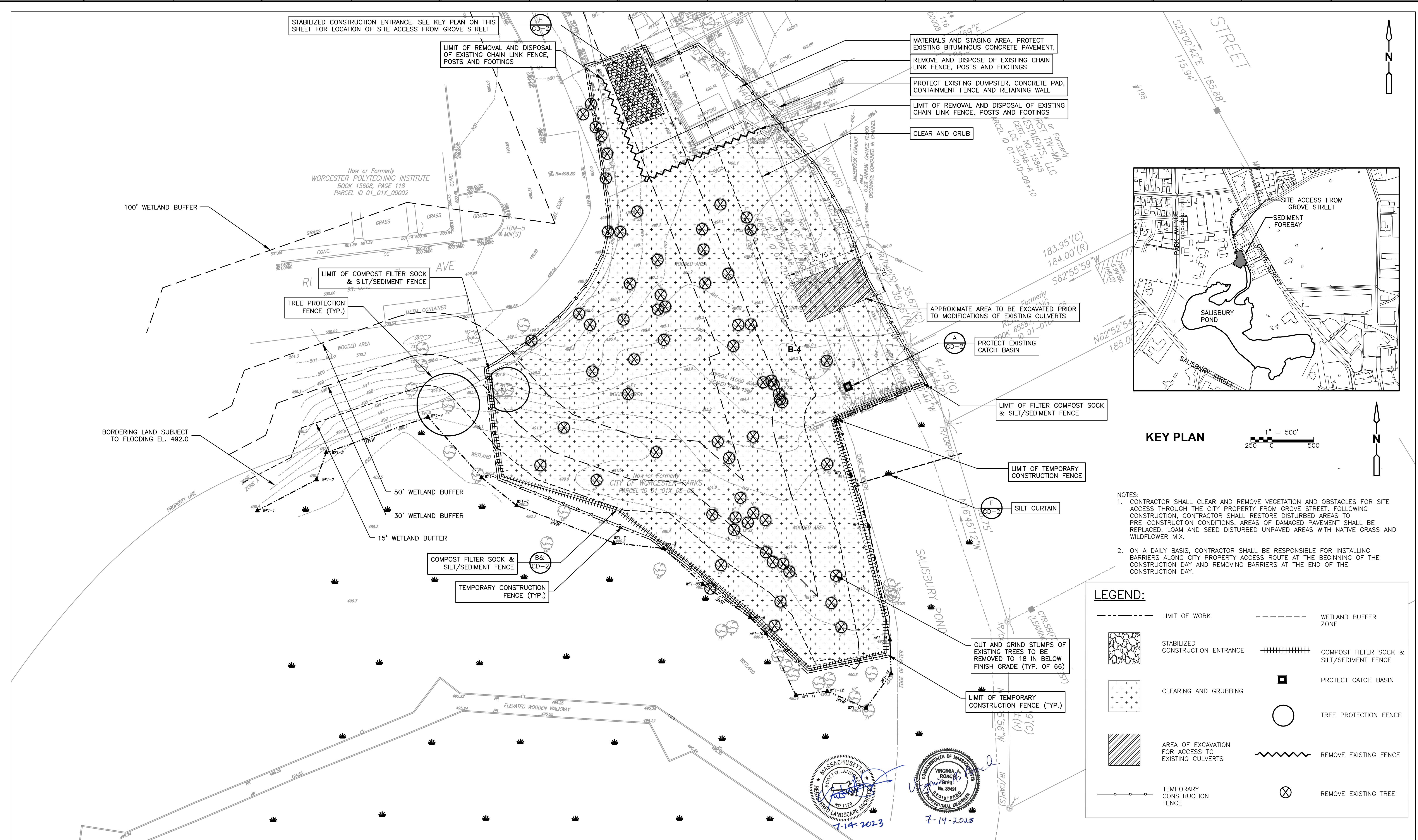


CITY OF WORCESTER, MASSACHUSETTS
 SALISBURY POND WATER QUALITY IMPROVEMENTS

REMOVALS AND EROSION CONTROL PLANS
 PARTICLE SEPARATORS

PROJECT NO. 0198-277460
 FILE NAME: EXSTPL003
 SHEET NO.
EX-3

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KEY PLAN
1" = 500'
250 0 500

- NOTES:**
- CONTRACTOR SHALL CLEAR AND REMOVE VEGETATION AND OBSTACLES FOR SITE ACCESS THROUGH THE CITY PROPERTY FROM GROVE STREET. FOLLOWING CONSTRUCTION, CONTRACTOR SHALL RESTORE DISTURBED AREAS TO PRE-CONSTRUCTION CONDITIONS. AREAS OF DAMAGED PAVEMENT SHALL BE REPLACED. LOAM AND SEED DISTURBED UNPAVED AREAS WITH NATIVE GRASS AND WILDFLOWER MIX.
 - ON A DAILY BASIS, CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING BARRIERS ALONG CITY PROPERTY ACCESS ROUTE AT THE BEGINNING OF THE CONSTRUCTION DAY AND REMOVING BARRIERS AT THE END OF THE CONSTRUCTION DAY.

LEGEND:

	LIMIT OF WORK		WETLAND BUFFER ZONE
	STABILIZED CONSTRUCTION ENTRANCE		COMPOST FILTER SOCK & SILT/SEDIMENT FENCE
	CLEARING AND GRUBBING		PROTECT CATCH BASIN
	AREA OF EXCAVATION FOR ACCESS TO EXISTING CULVERTS		TREE PROTECTION FENCE
	TEMPORARY CONSTRUCTION FENCE		REMOVE EXISTING FENCE
			REMOVE EXISTING TREE

MASSACHUSETTS
SCOTT W. LANDGREN
REGISTERED LANDSCAPE ARCHITECT
NO. 1179
7-14-2023

COMMONWEALTH OF MASSACHUSETTS
VIRGINIA A. ROACH
REGISTERED PROFESSIONAL ENGINEER
NO. 35491
7-14-2023

NOTE: SEE G-1 FOR EROSION AND SEDIMENT CONTROL NOTES

SEDIMENT FOREBAY PLAN
1" = 20'
10 0 20

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: N. WATKINS
DRAWN BY: A. CARRANO
SHEET CHK'D BY: V. ROACH
CROSS CHK'D BY: S. LANDGREN
APPROVED BY: V. ROACH
DATE: JULY 2023

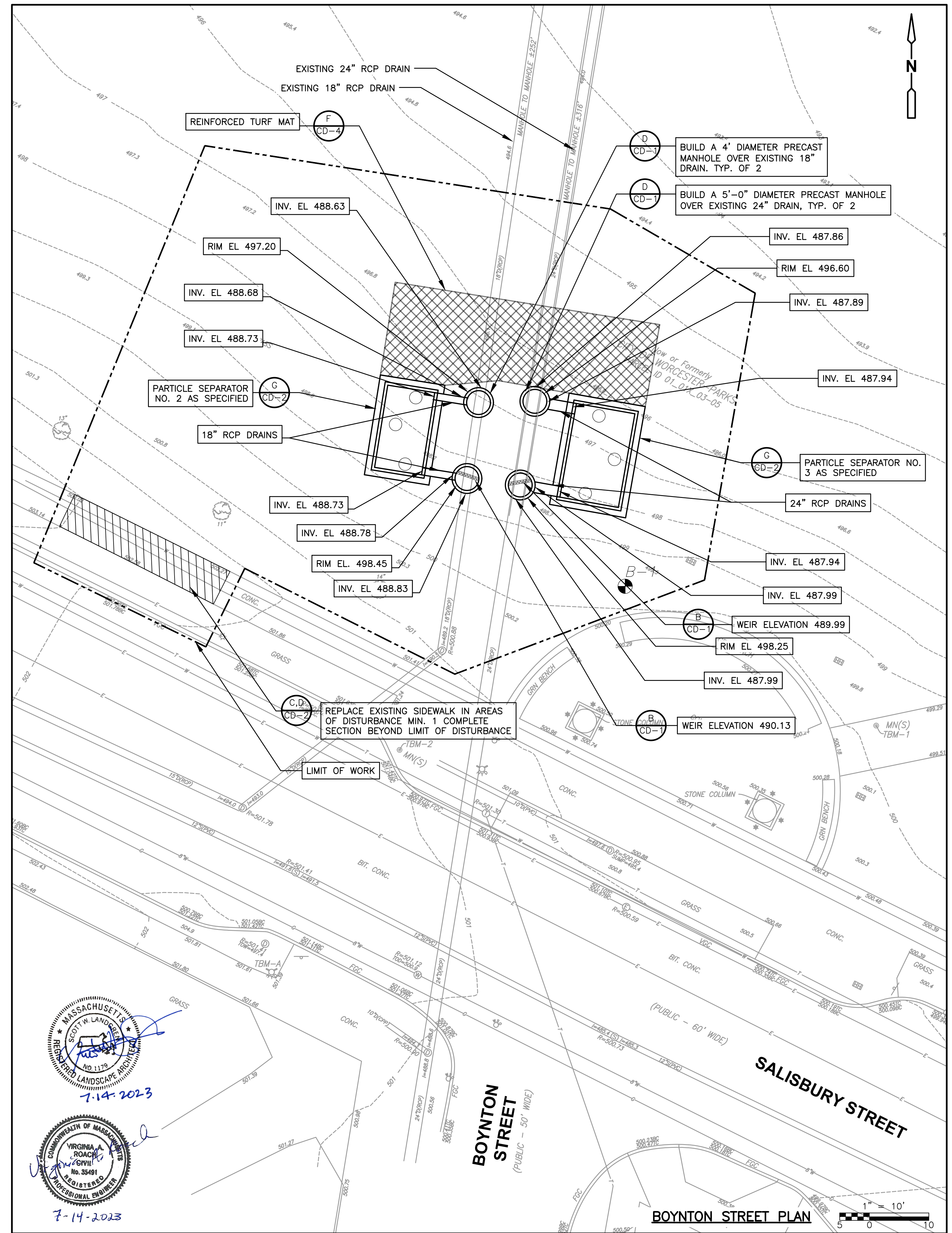
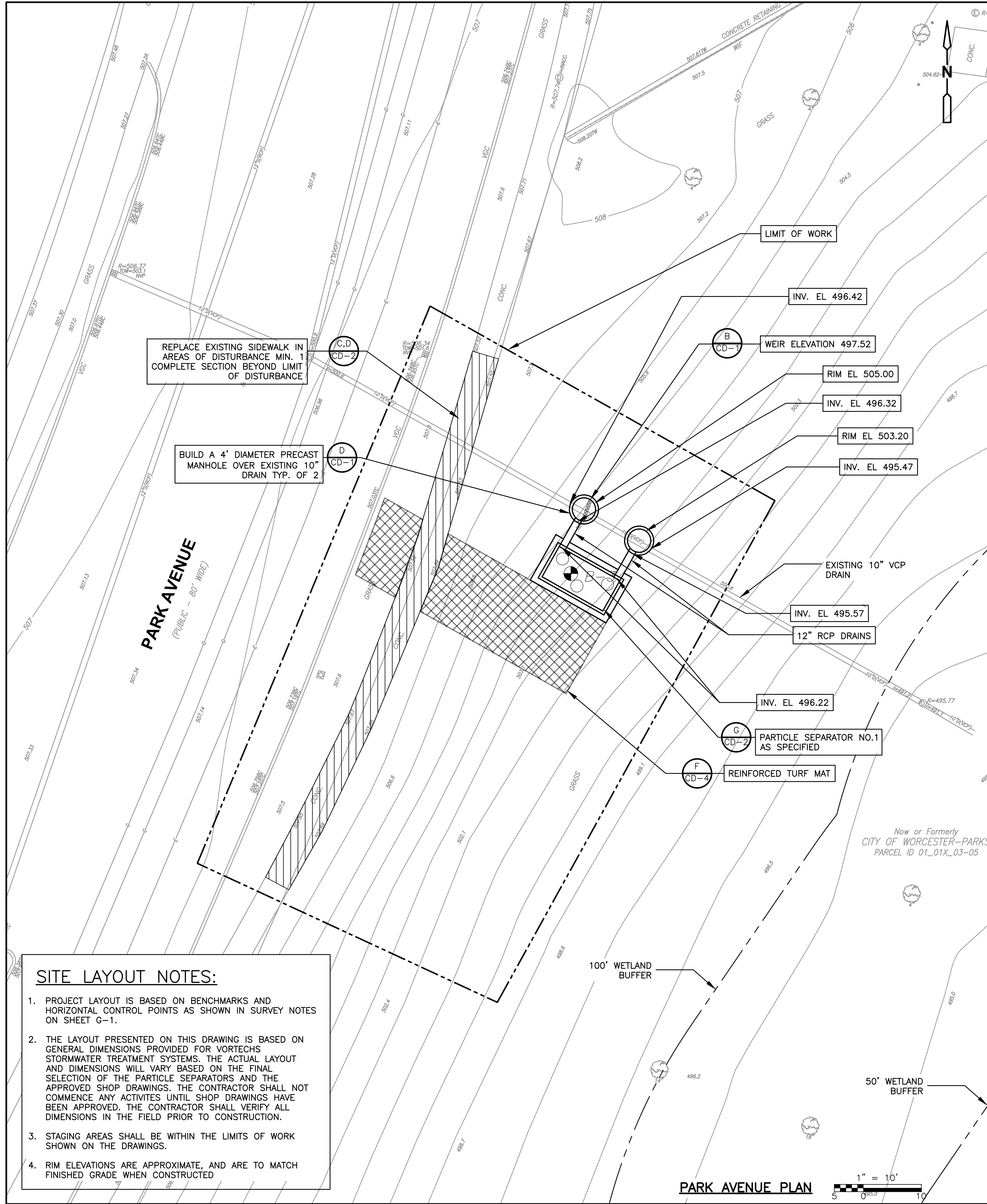
CDM Smith
75 State Street
Boston, MA 02109
Tel: (617) 452-6000

CITY OF WORCESTER, MASSACHUSETTS
SALISBURY POND WATER QUALITY IMPROVEMENTS

REMOVALS AND EROSION CONTROL PLAN
SEDIMENT FOREBAY

PROJECT NO. 0198-277460
FILE NAME: EXSTPL004
SHEET NO.
EX-4

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SITE LAYOUT NOTES:

- PROJECT LAYOUT IS BASED ON BENCHMARKS AND HORIZONTAL CONTROL POINTS AS SHOWN IN SURVEY NOTES ON SHEET G-1.
- THE LAYOUT PRESENTED ON THIS DRAWING IS BASED ON GENERAL DIMENSIONS PROVIDED FOR VORTECHS STORMWATER TREATMENT SYSTEMS. THE ACTUAL LAYOUT AND DIMENSIONS WILL VARY BASED ON THE FINAL SELECTION OF THE PARTICLE SEPARATORS AND THE APPROVED SHOP DRAWINGS. THE CONTRACTOR SHALL NOT COMMENCE ANY ACTIVITIES UNTIL SHOP DRAWINGS HAVE BEEN APPROVED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION.
- STAGING AREAS SHALL BE WITHIN THE LIMITS OF WORK SHOWN ON THE DRAWINGS.
- RIM ELEVATIONS ARE APPROXIMATE, AND ARE TO MATCH FINISHED GRADE WHEN CONSTRUCTED



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: N. WATKINS
 DRAWN BY: A. CARRANO
 SHEET CHK'D BY: V. ROACH
 CROSS CHK'D BY: S. LANDGREN
 APPROVED BY: V. ROACH
 DATE: JULY 2023



CITY OF WORCESTER, MASSACHUSETTS
SALISBURY POND WATER QUALITY IMPROVEMENTS

LAYOUT AND MATERIALS PLANS
PARTICLE SEPARATORS

PROJECT NO. 0198-277460
 FILE NAME: CSTPL001
 SHEET NO. **C-1**

CUT/ FILL CHART FOR BORDERING LAND SUBJECT TO FLOODING			
EL (FT)	CUT (CU FT)	FILL (CU FT)	NET LOSS/ GAIN (CU FT)
486	6437	0	6437 GAIN
487	8298	0	8298 GAIN
488	9920	0	9920 GAIN
489	11503	0	11503 GAIN
490	13173	0	13173 GAIN
491	14677	579	14098 GAIN
492	11205	948	10257 GAIN
TOTAL	75213	1527	73686 GAIN

LIMIT OF 6' HIGH BLACK VINYL CHAIN LINK FENCE AND 4' HIGH BLACK VINYL CHAIN LINK FENCE

100' WETLAND BUFFER

50' WETLAND BUFFER

30' WETLAND BUFFER

15' WETLAND BUFFER

EDGE OF BORDERING VEGETATED WETLAND

BORDERING LAND SUBJECT TO FLOODING EL. 492.00

Now or Formerly WORCESTER POLYTECHNIC INSTITUTE
BOOK 15608, PAGE 118
PARCEL ID 01_01X_00002

RUMFORD AVE (PRIVATE)

WETLAND AREA SEED MIX

4' HIGH BLACK VINYL CHAIN LINK FENCE

LIMIT OF ARTICULATED CONCRETE BLOCK MAT

ARTICULATED CONCRETE BLOCK MAT

NATIVE GRASS AND WILDFLOWER MIX

LIMIT OF 4' HIGH BLACK VINYL CHAIN LINK FENCE

ROCK CHECK DAM, TOP OF CHECK DAM EL. 490.4

RIVER ROCK

INTERPRETIVE SIGNAGE AS SPECIFIED

POTENTIAL DEWATERING SEDIMENTATION TANK LOCATION

WETLAND AREA SEED MIX

NATIVE GRASS AND WILDFLOWER MIX

6' HIGH BLACK VINYL CHAIN LINK FENCE

SLIDE GATE

INV EL. = 485.60

(2) WEIRS, TOP OF WEIRS EL. 487.93

BOX CULVERT AND HEADWALL

RIPRAP

TRANSITION BETWEEN RIPRAP AND ARTICULATED CONCRETE BLOCK MAT

BOTTOM EL. OF FOREBAY 485.50

EXISTING INV EL. = 485.90

5' WIDE BLACK VINYL CHAIN LINK FENCE GATE

EXISTING INV EL. = 485.70

LIMIT OF 6' HIGH BLACK VINYL CHAIN LINK FENCE

WETLAND AREA SEED MIX

NATIVE GRASS AND WILDFLOWER MIX

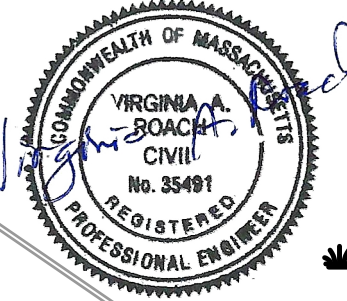
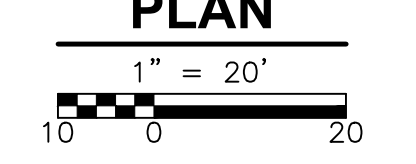
GRADING AND EXCAVATION NOTES:

- CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER OF ANY OBSTRUCTIONS ENCOUNTERED DURING EXCAVATION, PRIOR TO CONTINUING WITH CONSTRUCTION ACTIVITIES IN THE AREA WHERE AN OBSTRUCTION IS ENCOUNTERED.
- CONTRACTOR SHALL BE AWARE OF ALL EXISTING DRAIN AND PIPE STRUCTURES TO REMAIN AND WHETHER THEY ARE ABANDONED OR TO REMAIN IN USE. CONTRACTOR SHALL MAINTAIN DRAINAGE SYSTEM DURING CONSTRUCTION ACTIVITIES TO PROVIDE FUNCTION OF EXISTING SYSTEM AT ALL TIMES.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES OUTSIDE THE LIMIT OF WORK OR AREAS WITHIN LIMIT OF WORK NOT INTENDED TO BE MODIFIED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE IN MANNER APPROVED BY ENGINEER.
- NO SOIL SHALL BE REMOVED FROM THE SITE. EXISTING SOILS SHALL BE AMENDED FOR REUSE AS SPECIFIED.
- TO ESTABLISH PROPER GRADES, CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF GRADE STAKES. THE NUMBER AND LOCATION SHALL BE AS APPROVED BY THE ENGINEER. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR A FINAL FIELD CHECK OF FINISHED GRADES ACCEPTABLE TO THE OWNER AND THE ENGINEER PRIOR TO FINE GRADING ACTIVITIES.
- IF EXISTING TREES, UTILITIES, OR STRUCTURES IMPEDE EXCAVATION ACTIVITIES IN ANY MANNER, CONTRACTOR SHALL INFORM THE ENGINEER AND OWNER PRIOR TO CONTINUING WITH CONSTRUCTION ACTIVITIES.

LEGEND:

- LIMIT OF WORK
- - - WETLAND BUFFER ZONE
- [Pattern] RIPRAP
- [Pattern] ARTICULATED CONCRETE BLOCK MAT
- [Pattern] 4' AND 6' HIGH BLACK VINYL CHAIN LINK FENCE
- [Pattern] RIVER ROCK
- [Pattern] NATIVE GRASS AND WILDFLOWER MIX
- [Pattern] WETLAND AREA SEED MIX

SEDIMENT FOREBAY PLAN



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: N. WATKINS
 DRAWN BY: A. CARRANO
 SHEET CHK'D BY: V. ROACH
 CROSS CHK'D BY: S. LANDGREN
 APPROVED BY: V. ROACH
 DATE: JULY 2023



CITY OF WORCESTER, MASSACHUSETTS
SALISBURY POND WATER QUALITY IMPROVEMENTS

LAYOUT, MATERIALS AND GRADING PLAN
SEDIMENT FOREBAY

PROJECT NO. 0198-277460
 FILE NAME: CSTPL002
 SHEET NO.
C-2

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100' WETLAND BUFFER
50' WETLAND BUFFER
30' WETLAND BUFFER
15' WETLAND BUFFER
EDGE OF BORDERING VEGETATED WETLAND
BORDERING LAND SUBJECT TO FLOODING EL. 492.00

Now or Formerly
WORCESTER POLYTECHNIC INSTITUTE
BOOK 1560B, PAGE 118
PARCEL ID 01_01X_00002

RUMFORD AVE (PRIVATE)

NATIVE GRASS AND WILDFLOWER MIX

WETLAND AREA SEED MIX

NATIVE GRASS AND WILDFLOWER MIX

WETLAND AREA SEED MIX

Now or Formerly
DUGLAS E. FROST
DOUGLAS E. FROST
JULIE K. FROST
BOOK 40238, PAGE 51
PLAN BOOK 306, PLAN 11+2
PARCEL ID 01-01D-111+2

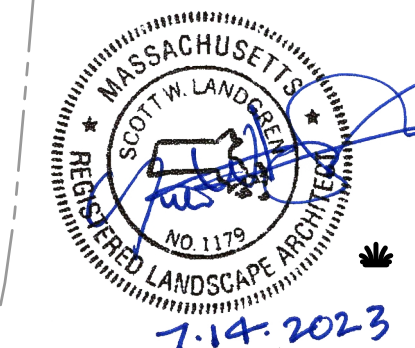
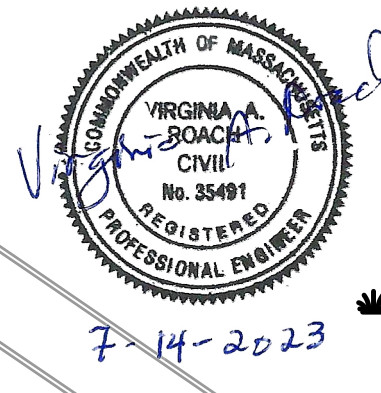
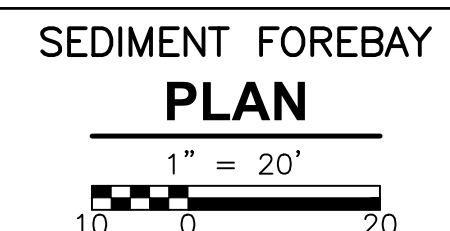
TREE LIST						
KEY	QUAN	BOTANICAL NAME	COMMON NAME	SIZE	COND	NOTES
AC	11	AMELANCHIER CANADENSIS	SERVICEBERRY	1.5"-2" CAL	B&B	
BL	4	BETULA LENTA	BLACK BIRCH	1.5"-2" CAL	B&B	
CC	2	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	1.5"-2" CAL	B&B	
QB	3	QUERCUS BICOLOR	SWAMP WHITE OAK	1.5"-2" CAL	B&B	

SHRUB LIST						
KEY	QUAN	BOTANICAL NAME	COMMON NAME	SIZE	COND	NOTES
CA	7	CORNUS AMOMUM	SILKY DOGWOOD	5 GAL	CONT.	
CO	10	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	5 GAL	CONT.	
IVN	8	ILEX VERTICILATA 'NANA' RED SPRITE	WINTERBERRY RED SPRITE	5 GAL	CONT.	
IVJ	2	ILEX VERTICILATA 'JIM DANDY'	WINTERBERRY JIM DANDY	5 GAL	CONT.	
MP	37	MYRICA PENNSYLVANICA	BAYBERRY	5 GAL	CONT.	
RV	22	ROSA VIRGINIANA	VIRGINIA ROSE	5 GAL	CONT.	

NOTE: SEE PLANTING DETAILS ON SHEET CD-4

LEGEND:

- LIMIT OF WORK
- WETLAND BUFFER ZONE
- 4' AND 6' HIGH BLACK VINYL CHAIN LINK FENCE
- ARTICULATED CONCRETE BLOCK MAT
- RIPRAP
- RIVER ROCK
- NATIVE GRASS AND WILDFLOWER MIX
- WETLAND AREA SEED MIX



CITY OF WORCESTER, MASSACHUSETTS
SALISBURY POND WATER QUALITY IMPROVEMENTS

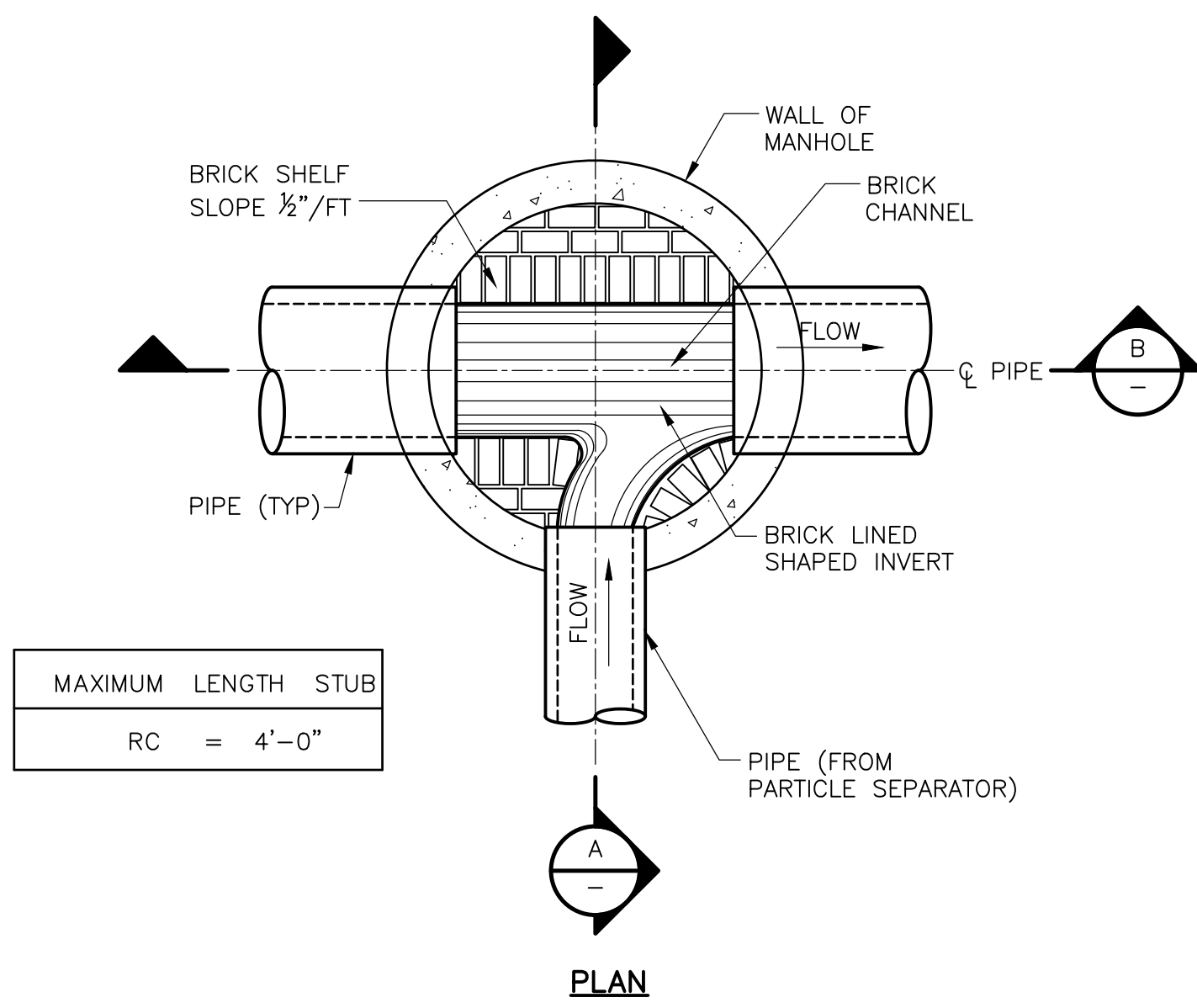
**PLANTING PLAN
SEDIMENT FOREBAY**

PROJECT NO. 0198-277460
FILE NAME: CSTPL003
SHEET NO.
C-3

REV. NO.	DATE	DRWN	CHKD	REMARKS

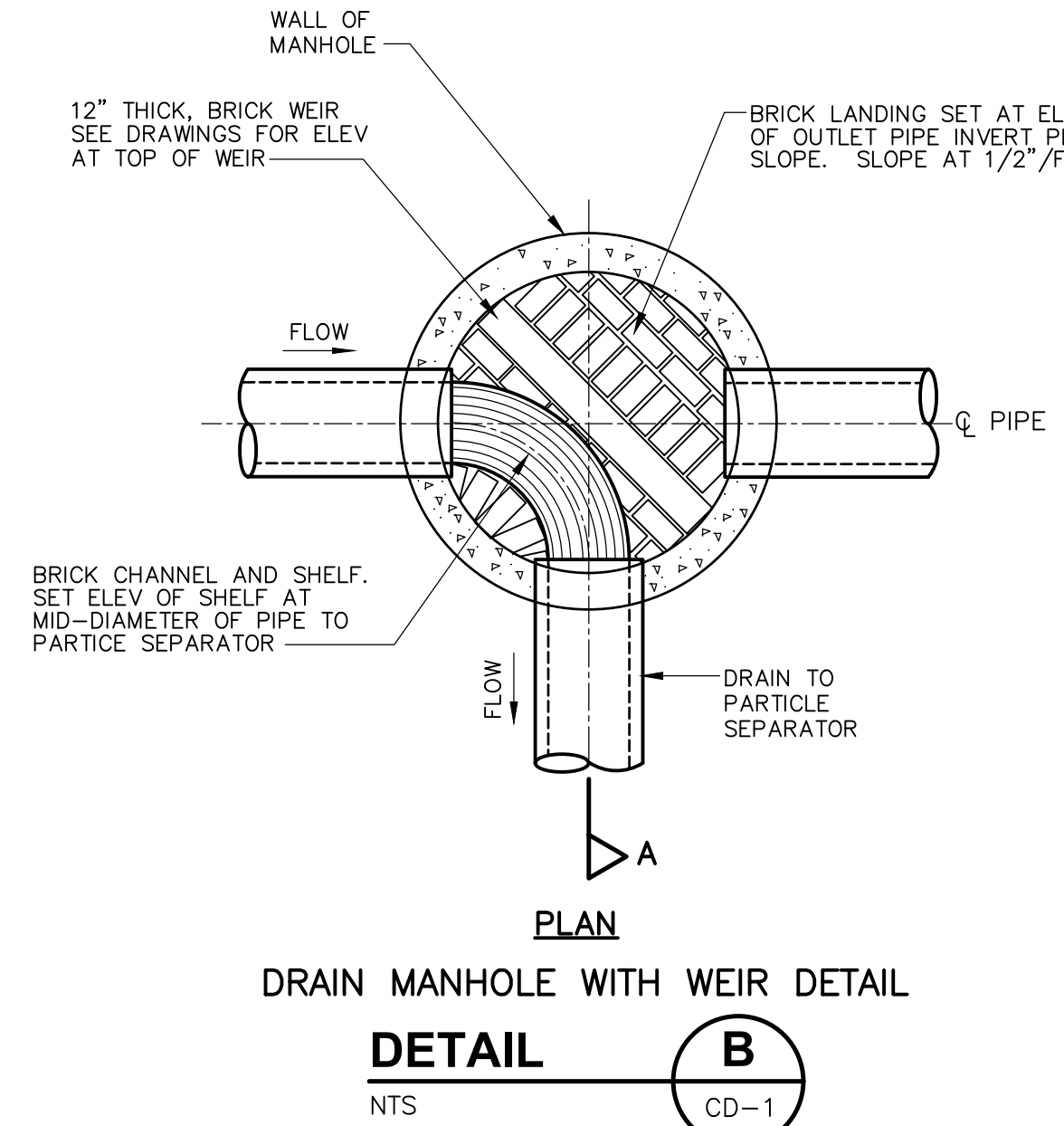
DESIGNED BY: A. CARRANO
DRAWN BY: A. CARRANO
SHEET CHK'D BY: V. ROACH
CROSS CHK'D BY: S. LANDGREN
APPROVED BY: V. ROACH
DATE: JULY 2023



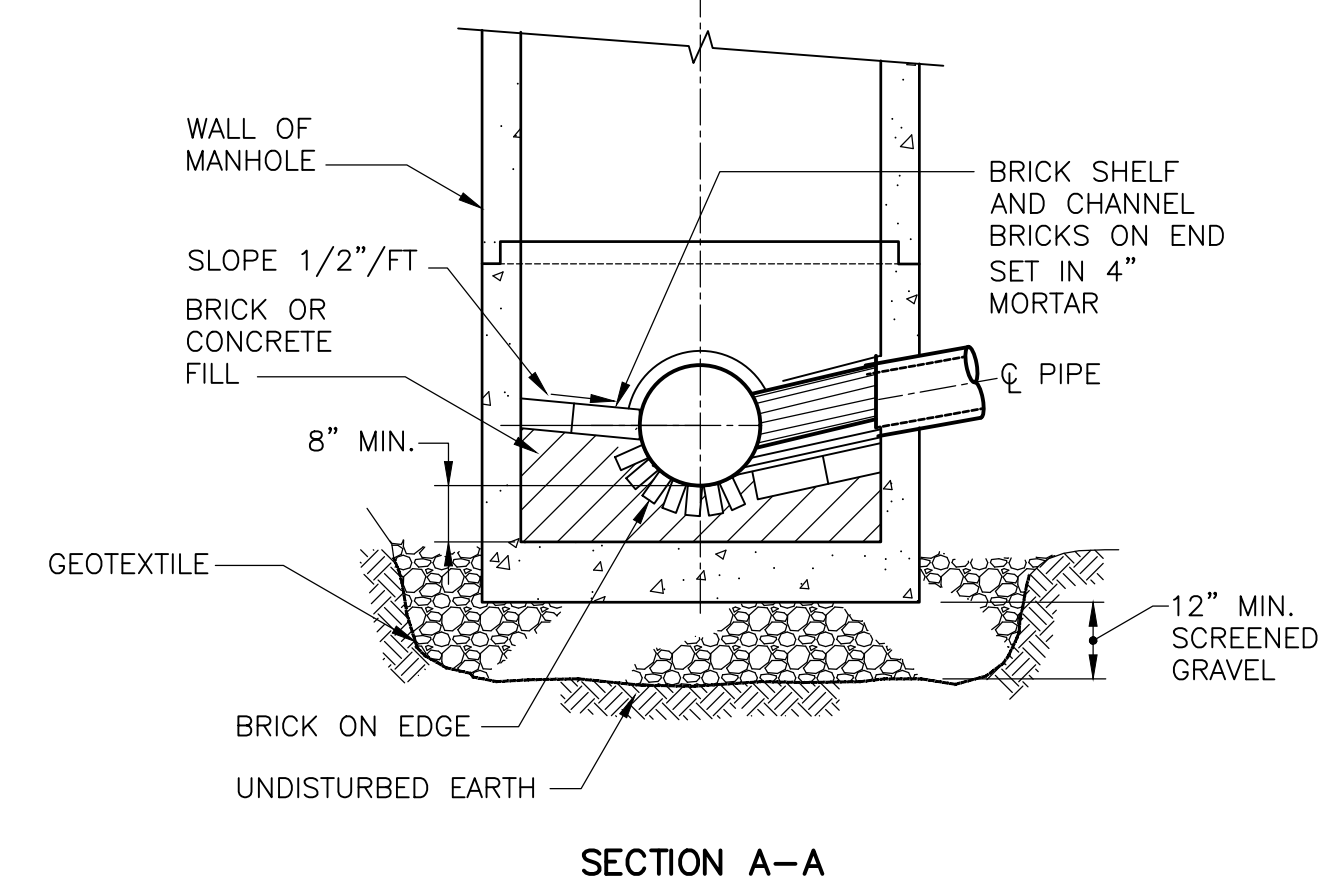


MAXIMUM LENGTH STUB
RC = 4'-0"

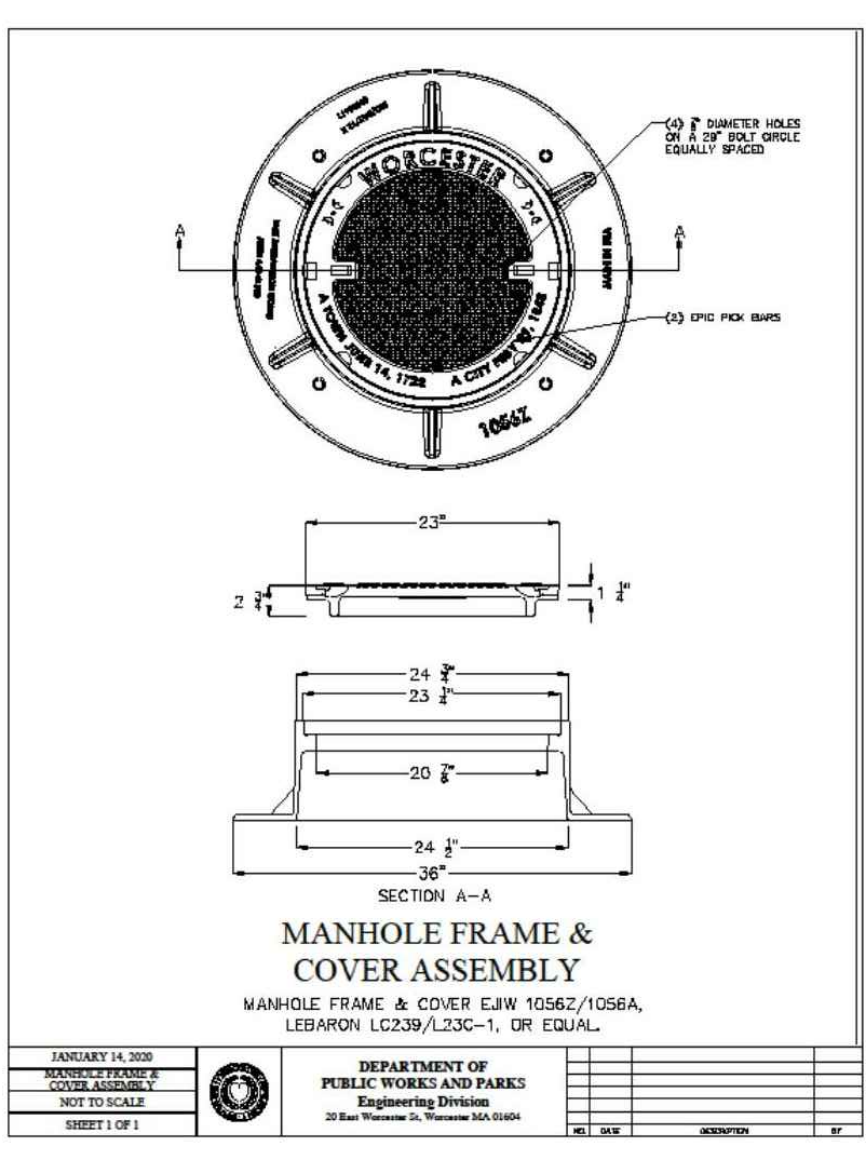
PLAN



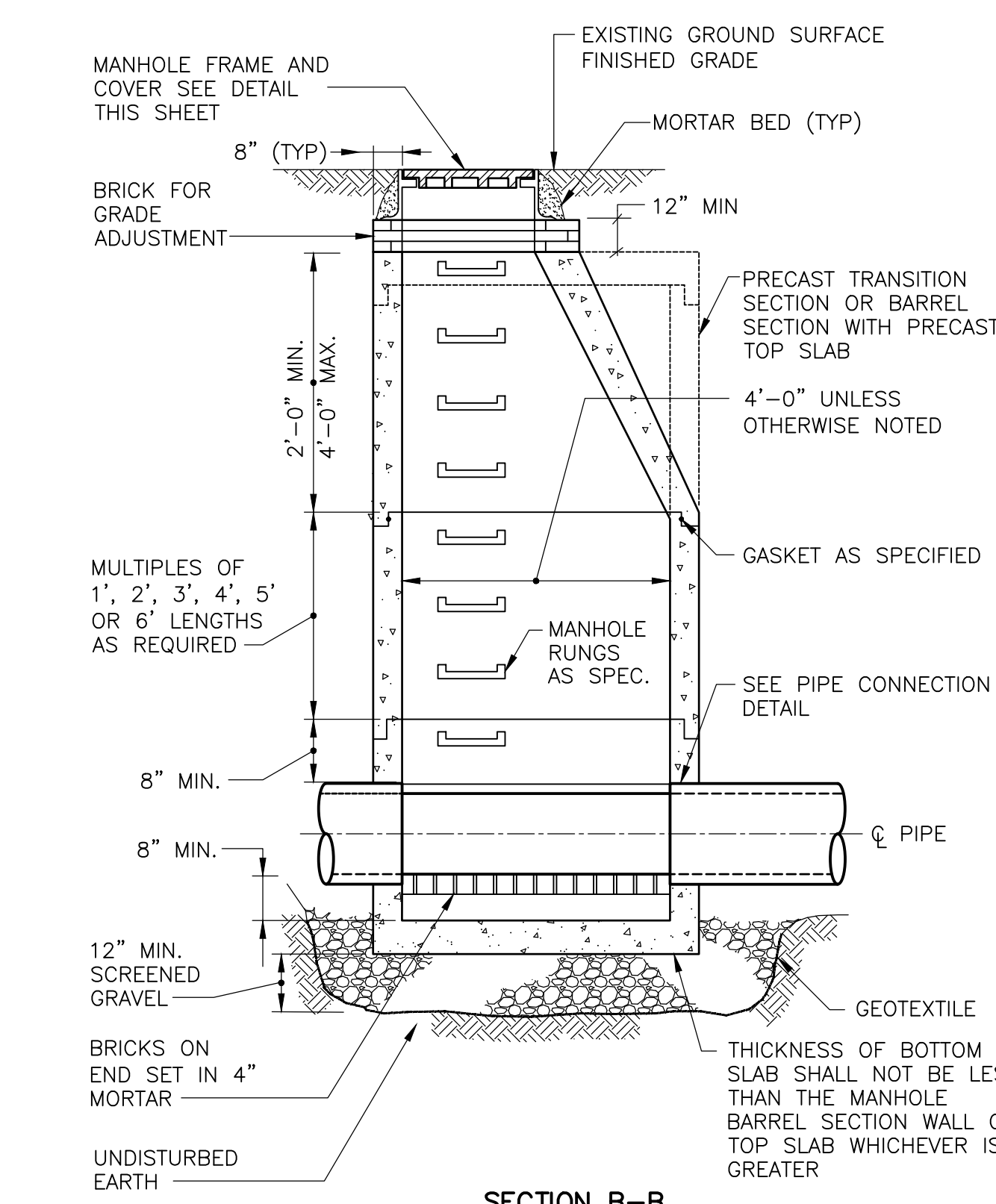
PLAN
DRAIN MANHOLE WITH WEIR DETAIL
DETAIL B
NTS CD-1



SECTION A-A

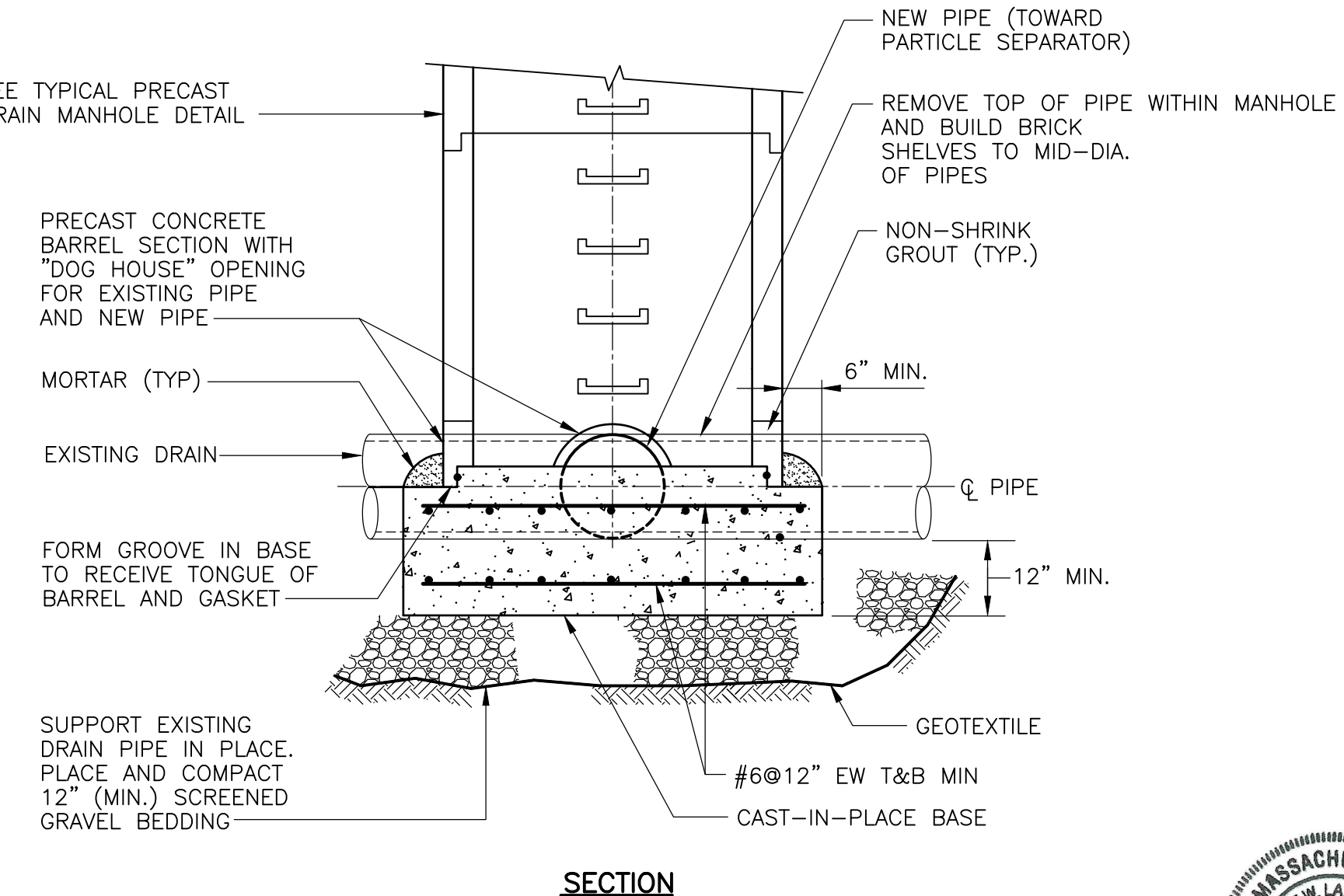


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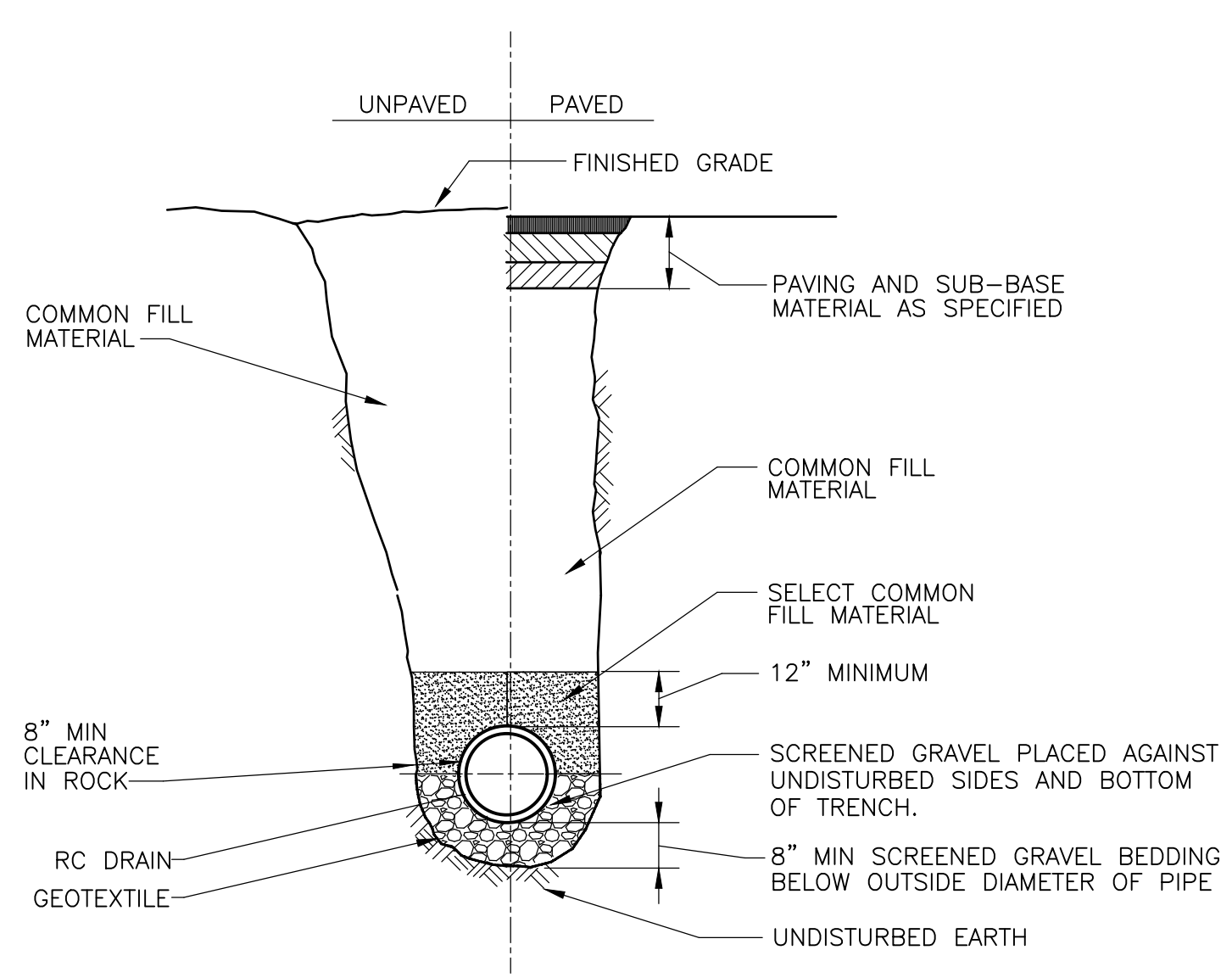
SECTION B-B

TYPICAL PRECAST DRAIN MANHOLE
DETAIL A
NTS CD-1



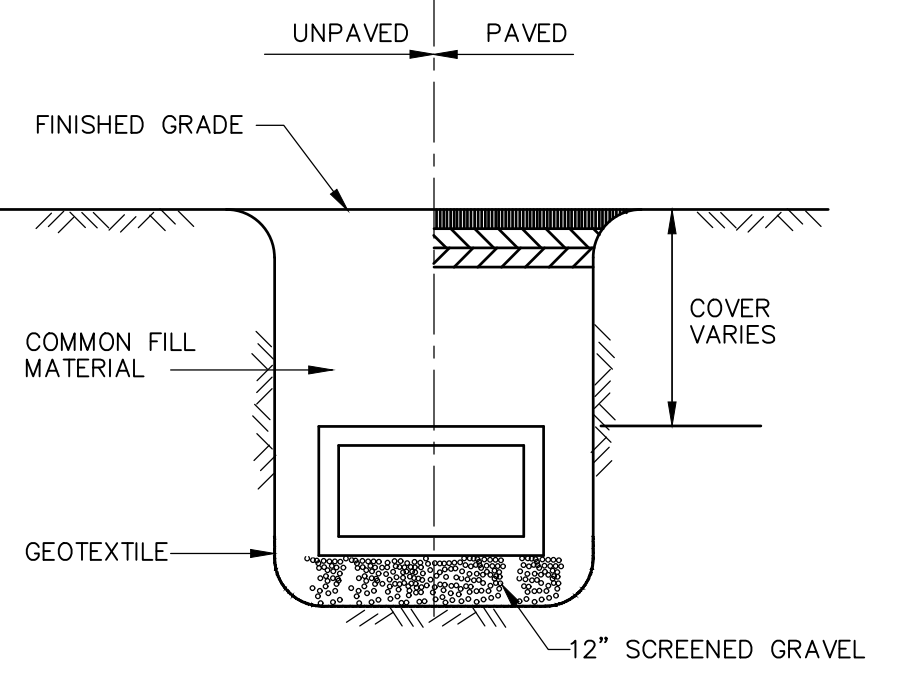
SECTION

NEW MANHOLE OVER EXISTING DRAIN PIPE DETAIL
DETAIL D
NTS CD-1

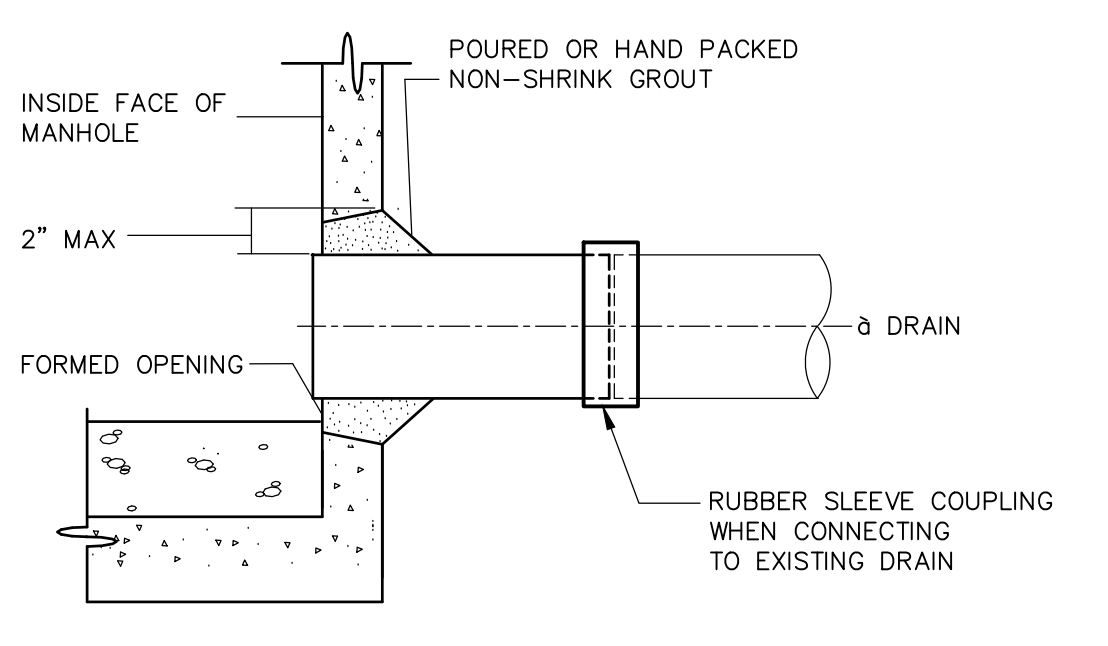


NOTE:
1. CRUSHED STONE MEETING M2.01.4 OR M2.01.5 OF THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES MAY BE SUBSTITUTED FOR SCREENED GRAVEL.

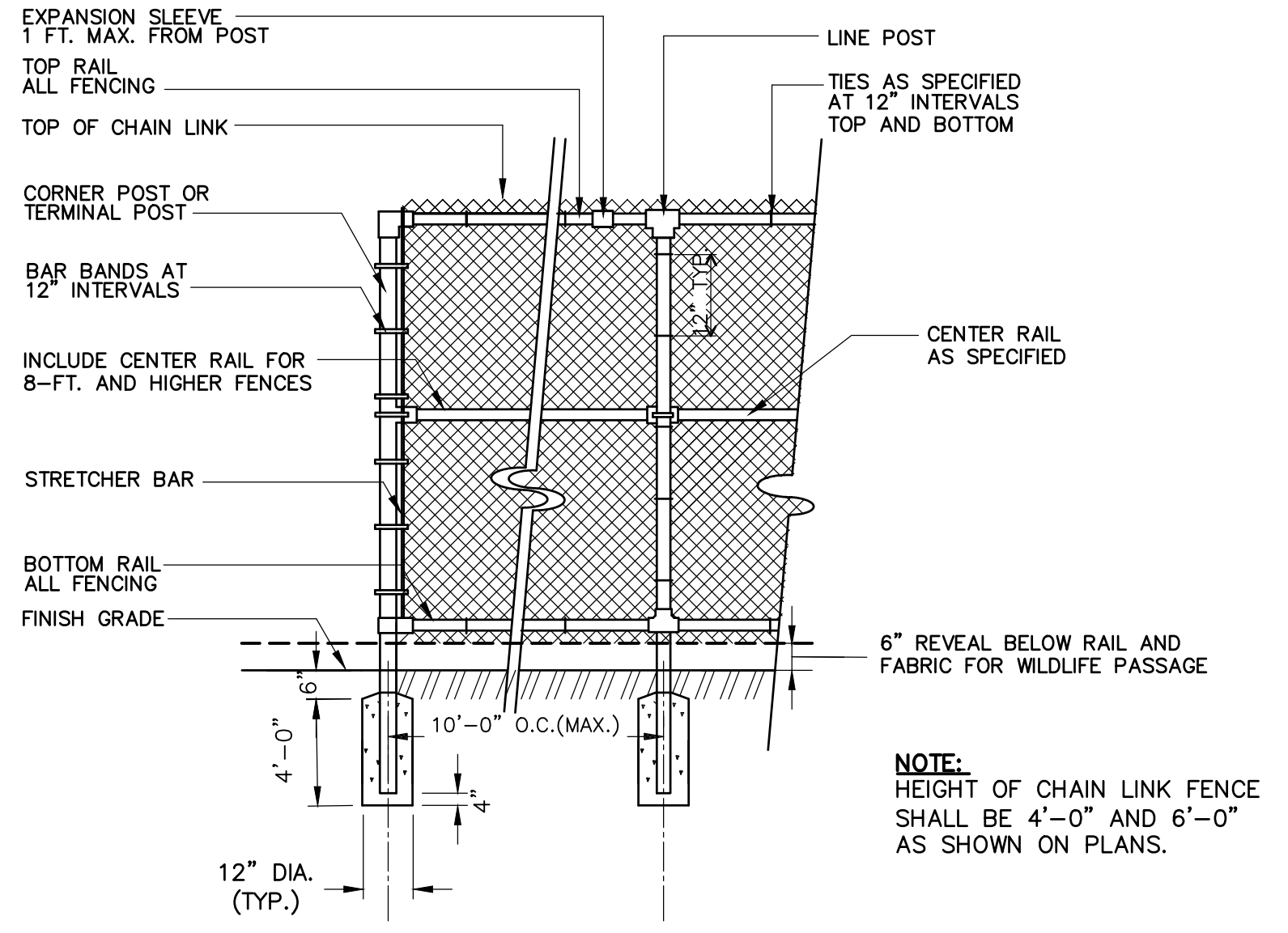
DRAIN PIPE TRENCH DETAIL
DETAIL E
NTS CD-1



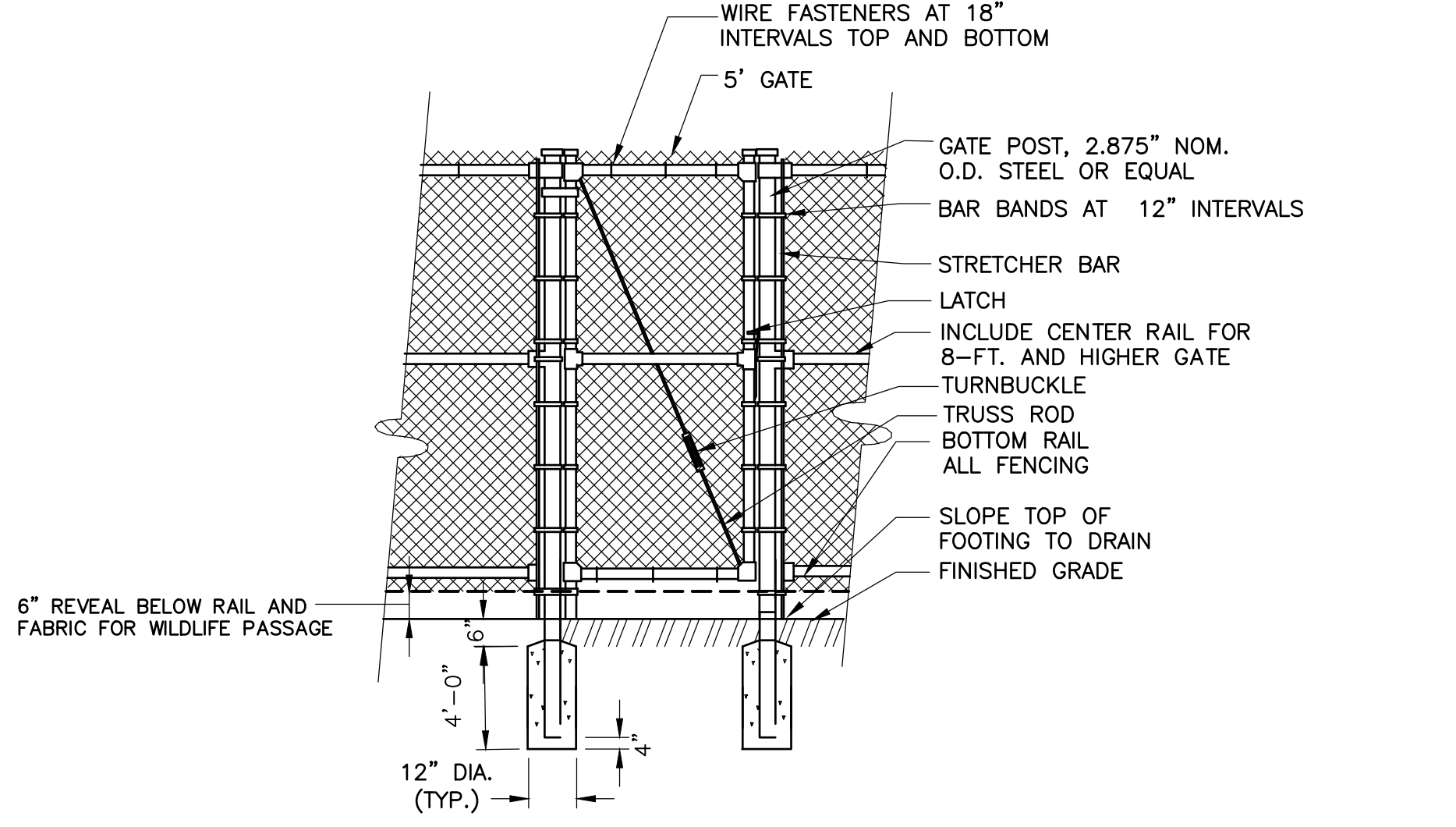
TYPICAL TRENCH DETAIL FOR BOX CULVERTS
DETAIL F
NTS CD-1



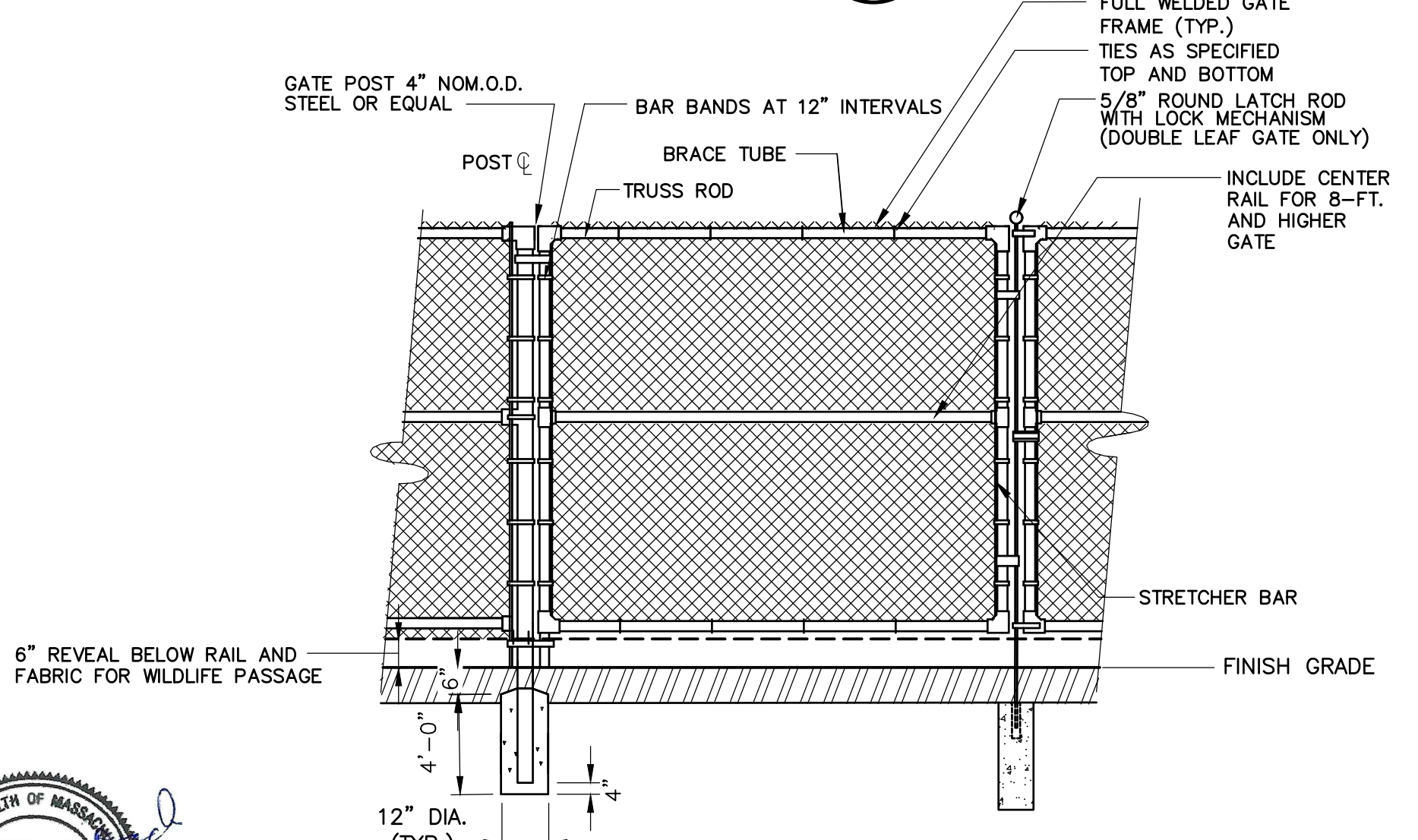
PIPE CONNECTION DETAIL (DRAIN MH)
DETAIL G
NTS CD-1



BLACK VINYL CHAIN LINK FENCE
DETAIL H
NTS CD-1



5' WIDE BLACK VINYL CHAIN LINK FENCE GATE
DETAIL I
NTS CD-1



12' WIDE DOUBLE SWING BLACK VINYL CHAIN LINK FENCE GATE
DETAIL J
NTS CD-1

XREFs: [C24x36H, 24x36PW, CDMS, CDMS_2436] Imprints: [CURB-P155, MANHOLE-P71, SWL 7-14-2023 Stamp, VAR 7-14-2023 Stamp, VAR 7-14-2023 Stamp, VAR 7-14-2023 Stamp]
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REV. NO.	DATE	DRWN	CHKD	REMARKS

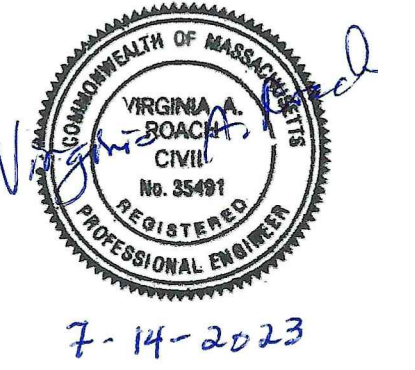
DESIGNED BY: N. WATKINS
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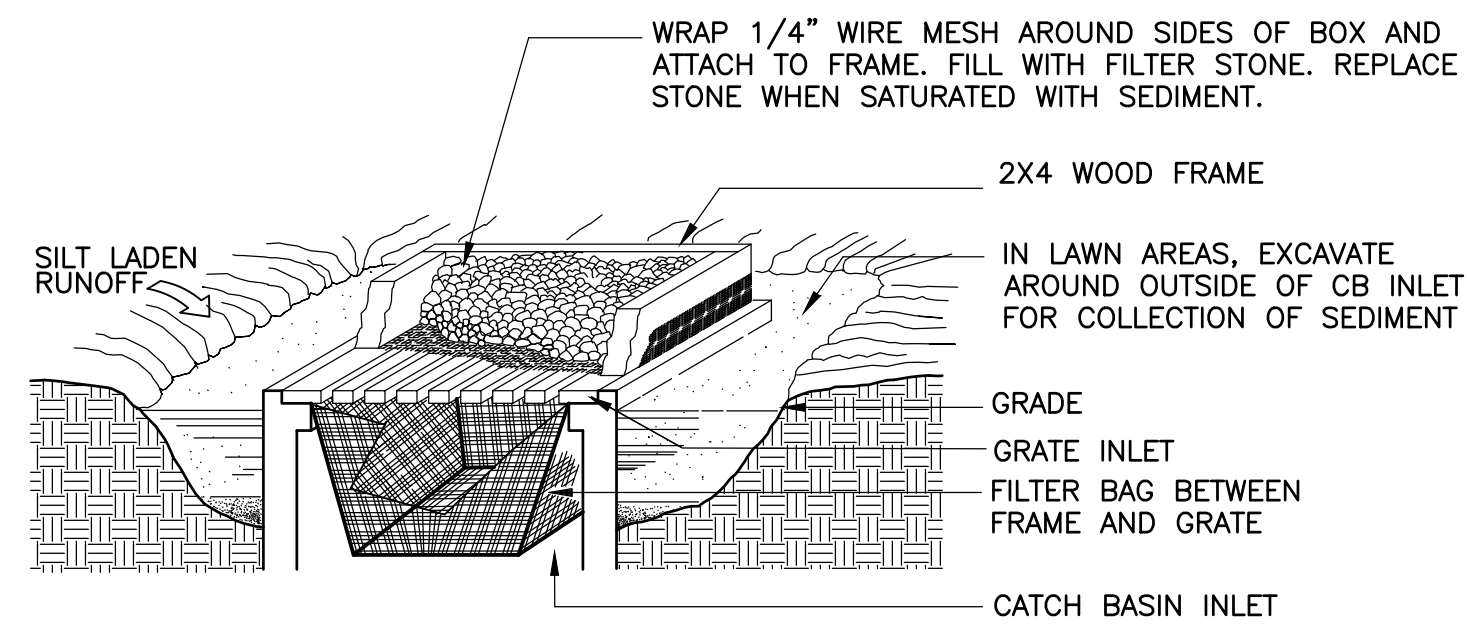
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CITY OF WORCESTER, MASSACHUSETTS
 SALISBURY POND WATER QUALITY IMPROVEMENTS

MISCELLANEOUS DETAILS I
 SHEET NO. CD-1

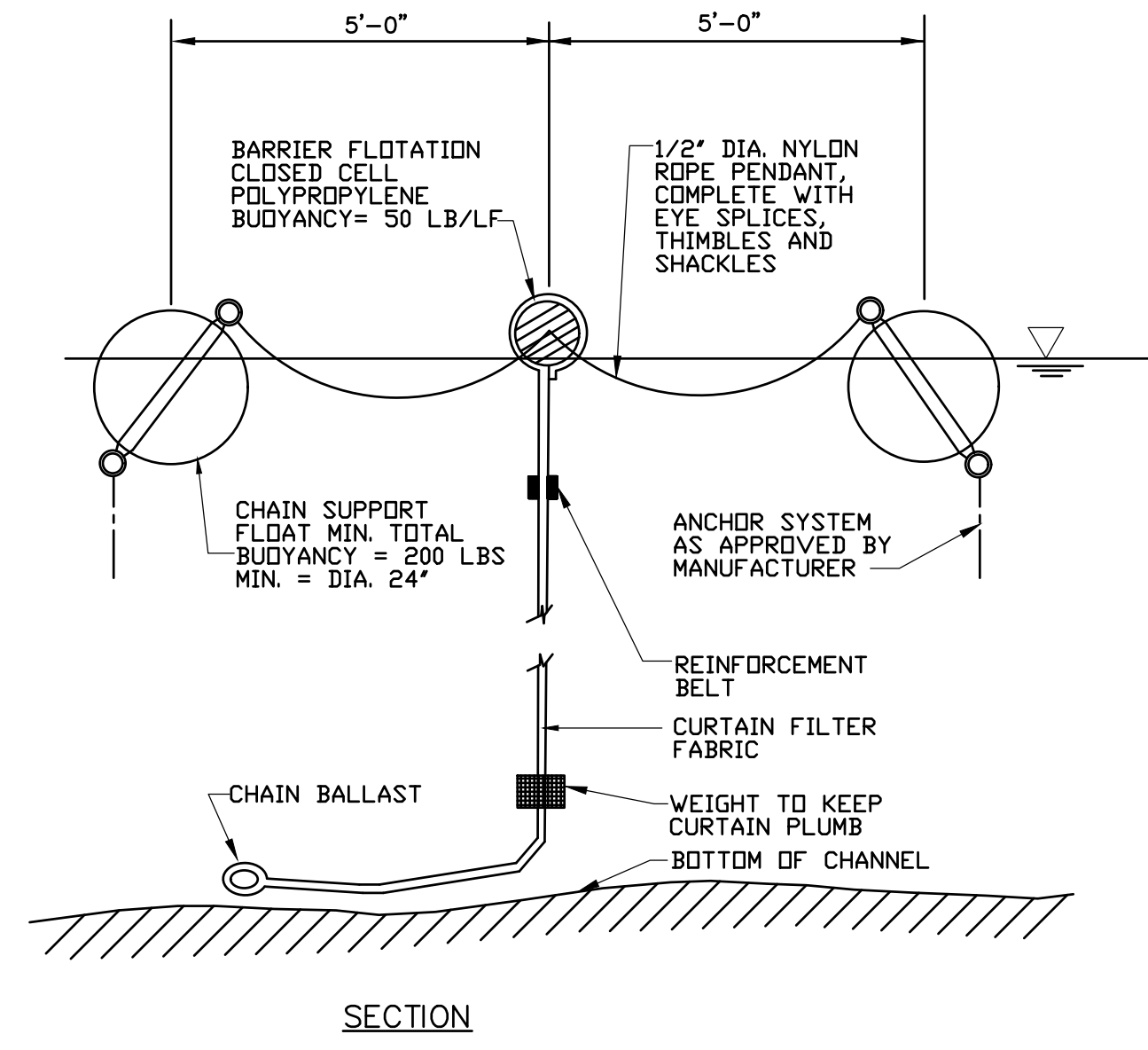
PROJECT NO. 0198-277460
 FILE NAME: CSDTD001
 SHEET NO. CD-1



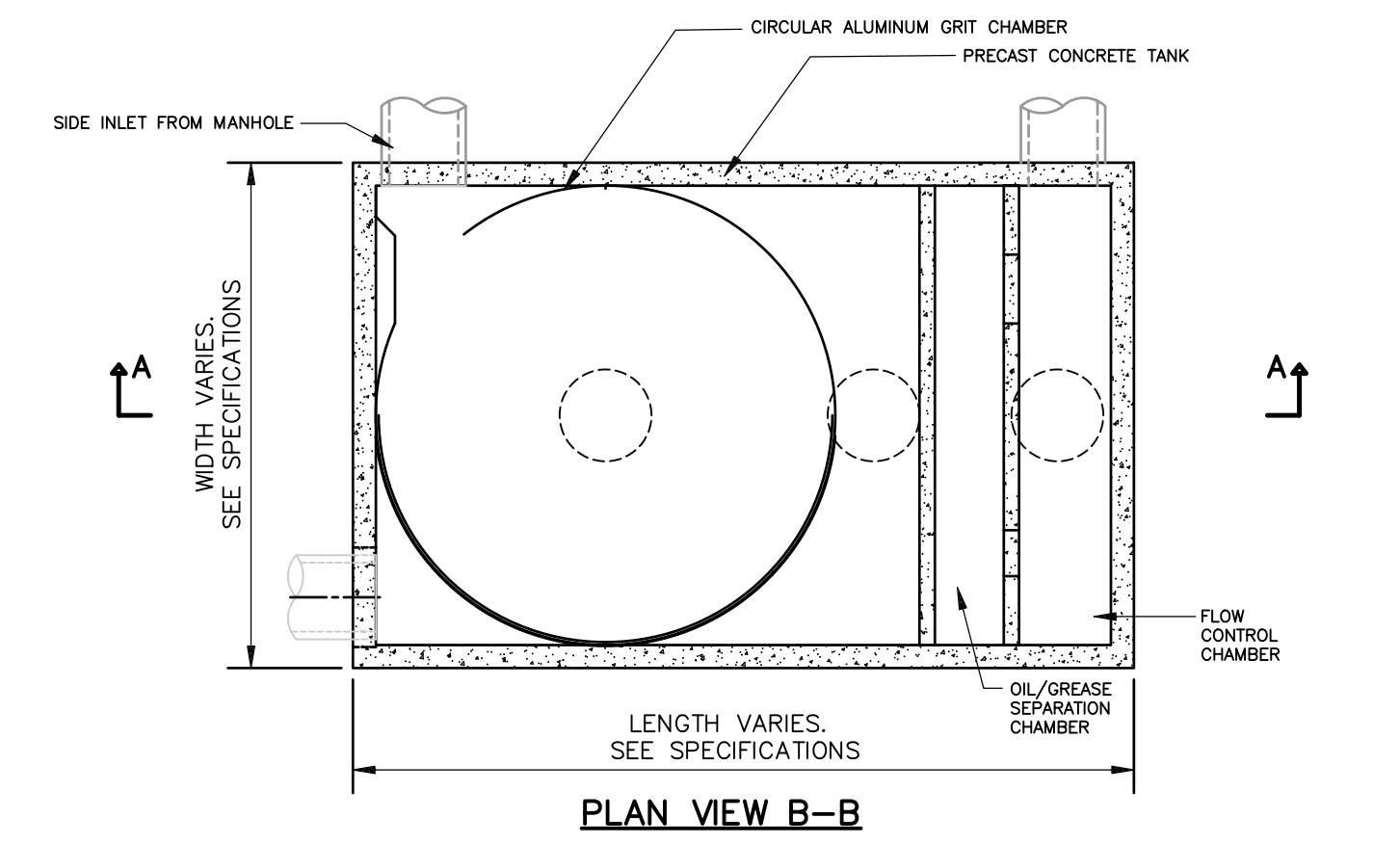


NOTE:
 1) IN LAWN AREAS, USE MESH, WOOD FRAME BOX, AND STONE FOR INLET PROTECTION (NO BAG)
 2) IN PAVED AREAS, USE FILTER BAG FOR INLET PROTECTION (NO MESH, BOX, OR STONE)

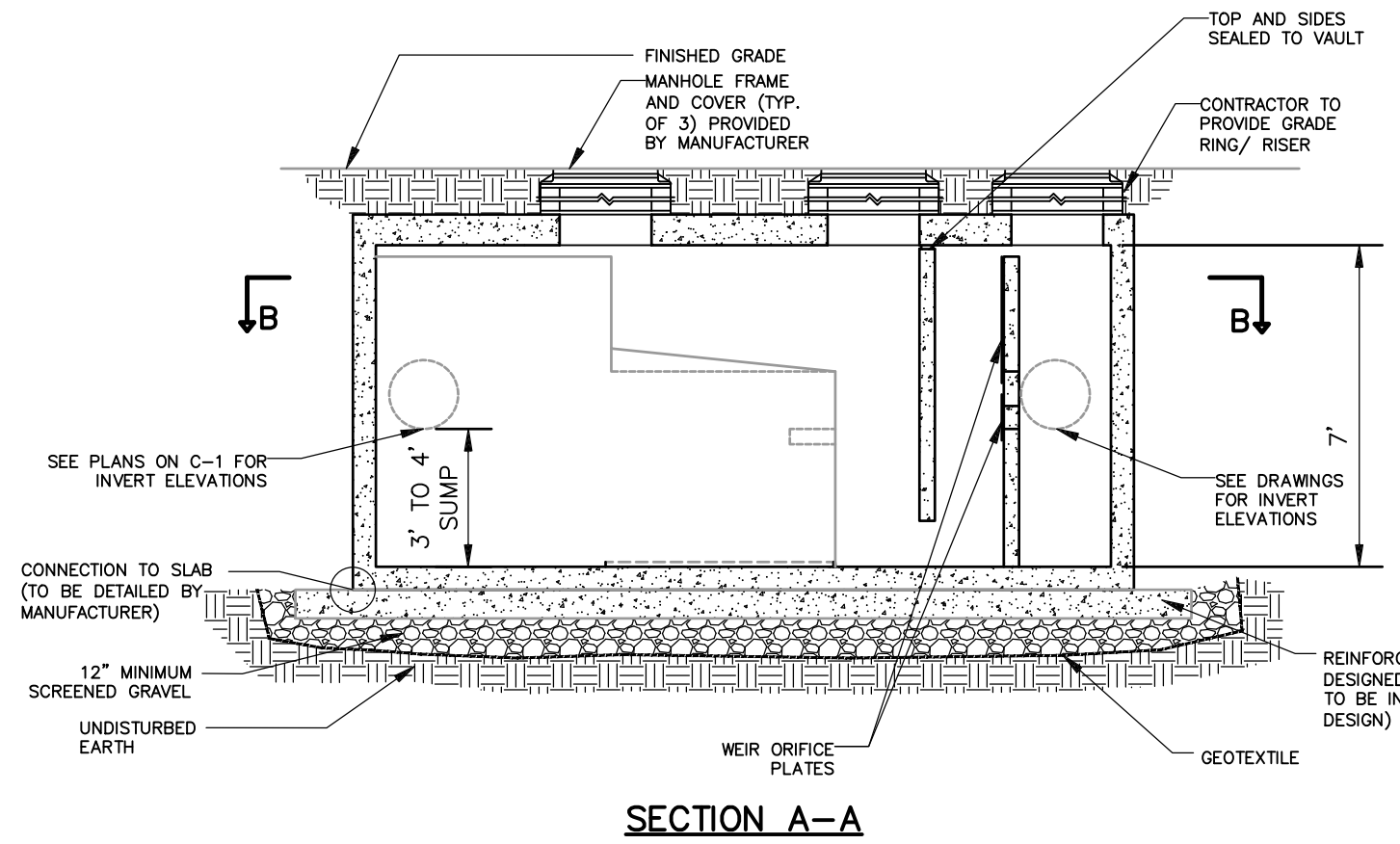
**CATCH BASIN FILTER
 DETAIL A**
 NTS CD-2



SECTION

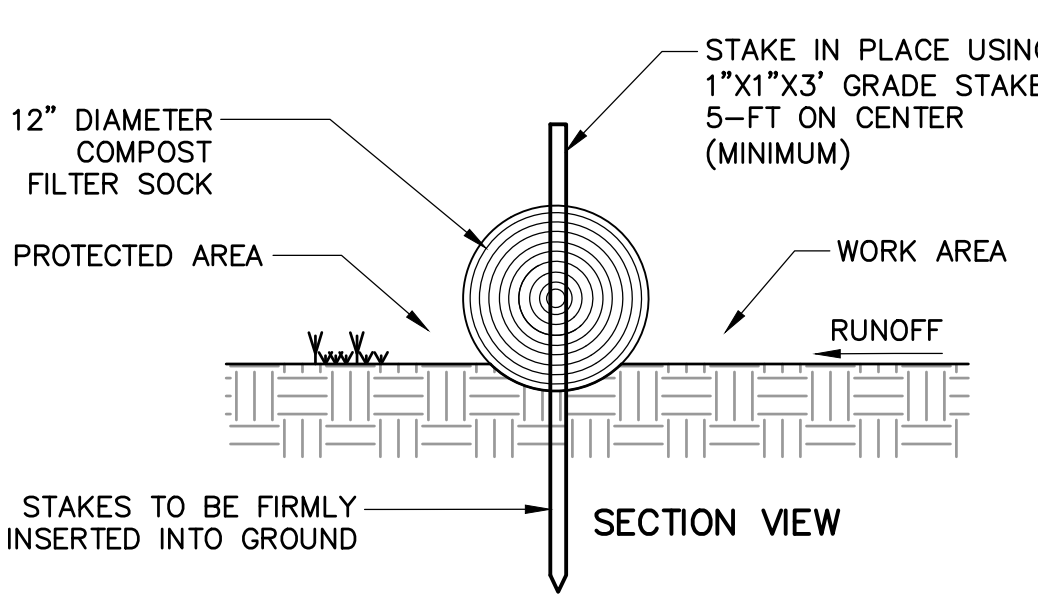


PLAN VIEW B-B

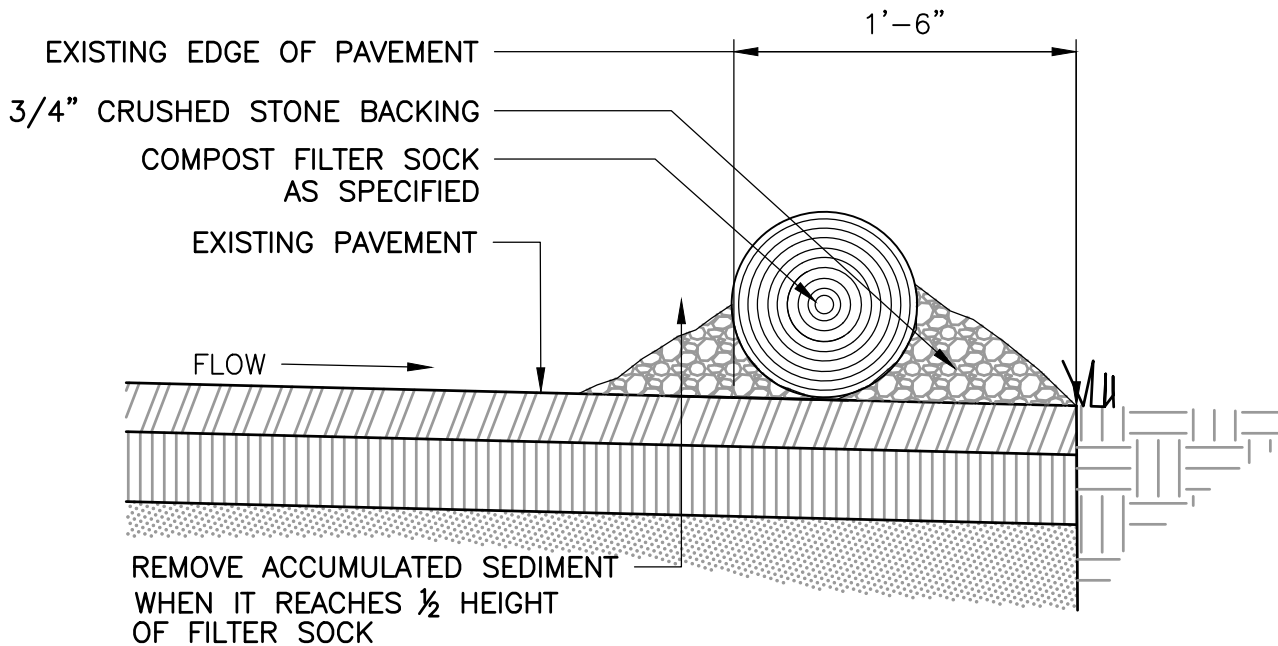


SECTION A-A

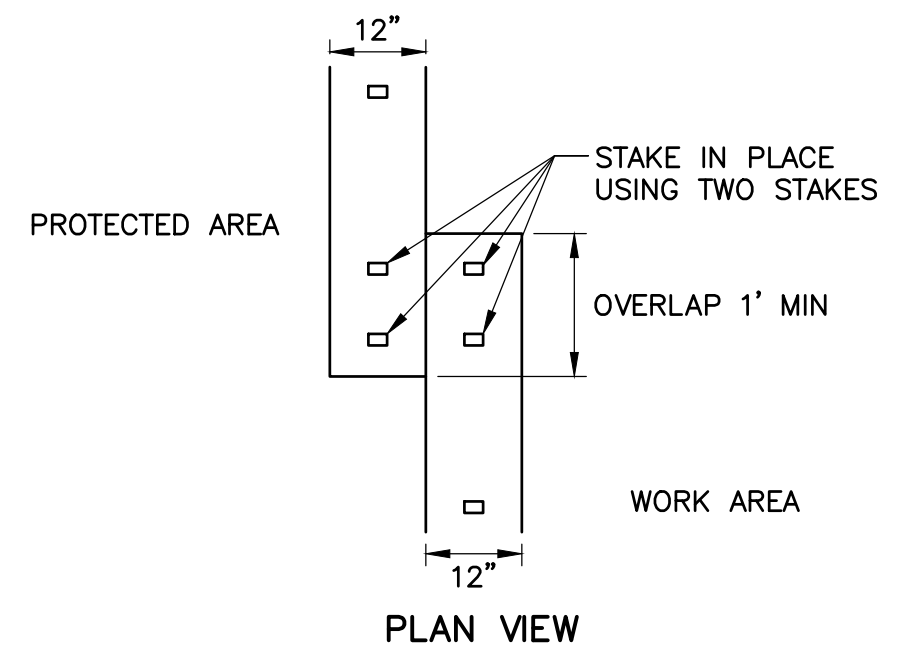
**PARTICLE SEPARATOR
 DETAIL G**
 NTS CD-2



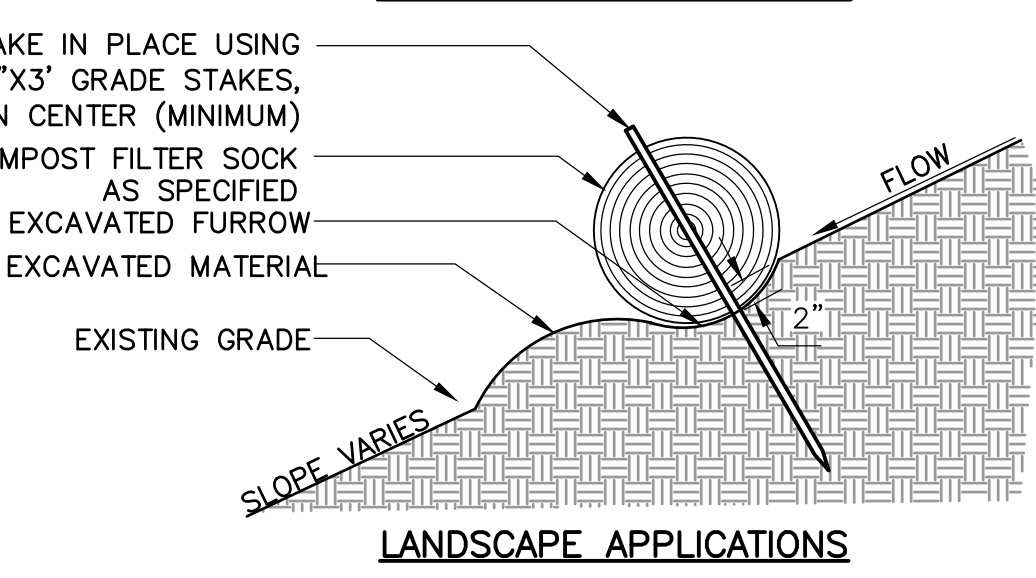
SECTION VIEW



HARDSCAPE APPLICATIONS

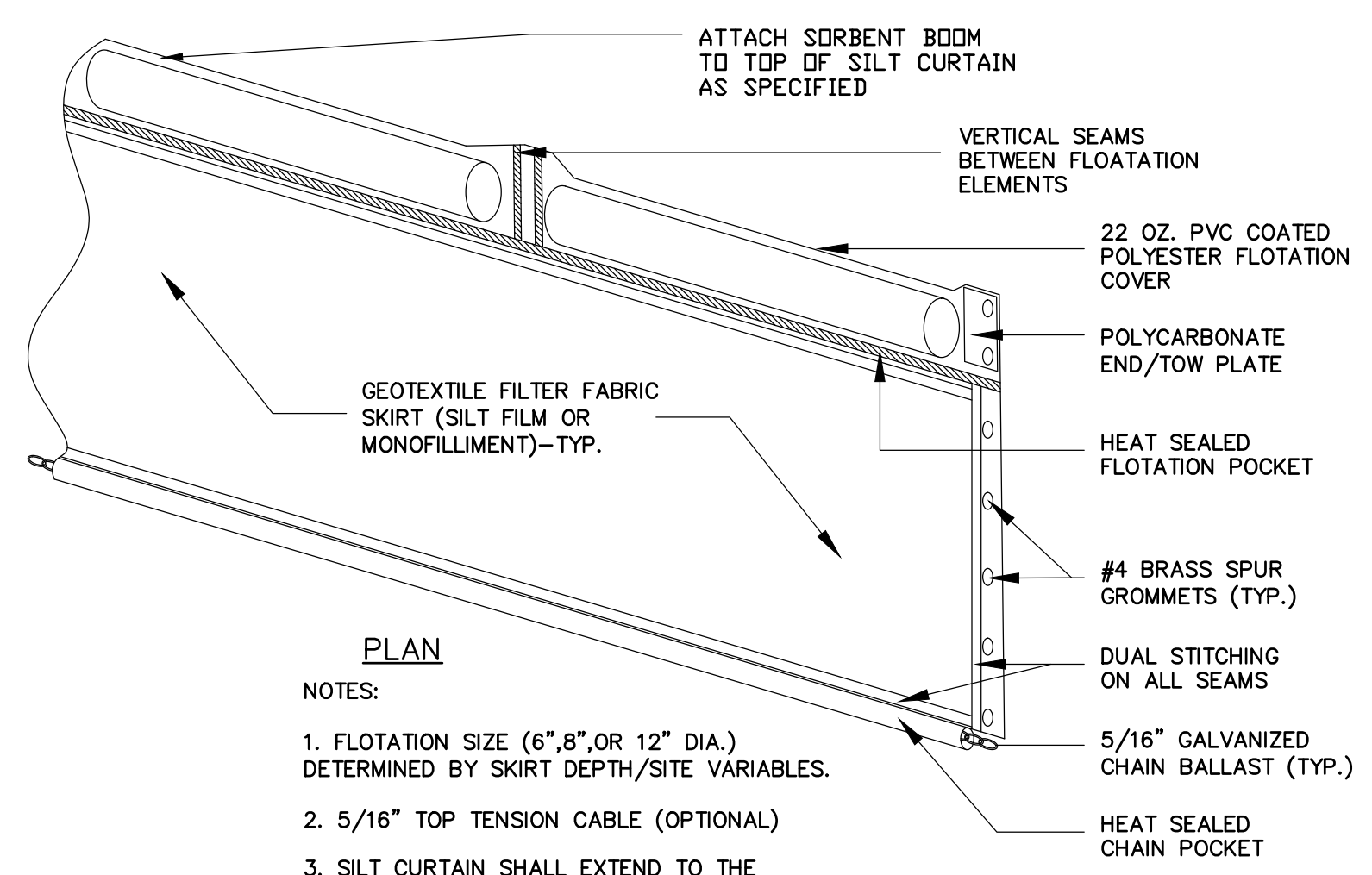


PLAN VIEW



LANDSCAPE APPLICATIONS

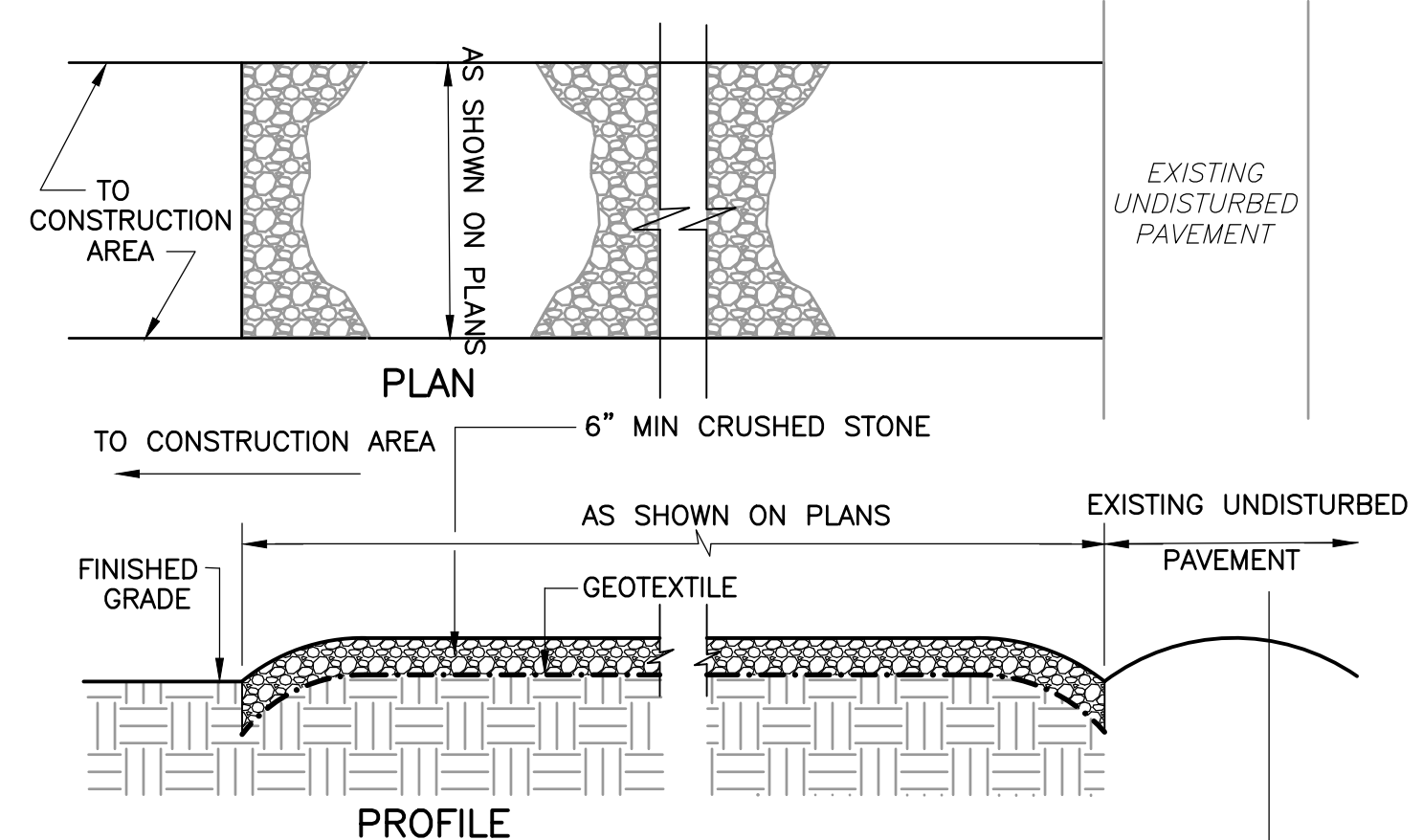
**COMPOST FILTER SOCK
 DETAIL B**
 NTS CD-2



PLAN

NOTES:
 1. FLOTATION SIZE (6", 8", OR 12" DIA.) DETERMINED BY SKIRT DEPTH/SITE VARIABLES.
 2. 5/16" TOP TENSION CABLE (OPTIONAL)
 3. SILT CURTAIN SHALL EXTEND TO THE BOTTOM OF THE POND AND BE WEIGHTED AT BOTTOM TO PREVENT MOVEMENT.
 4. SILT CURTAIN SHALL HAVE A SORBENT BOOM ATTACHED TO THE TOP.

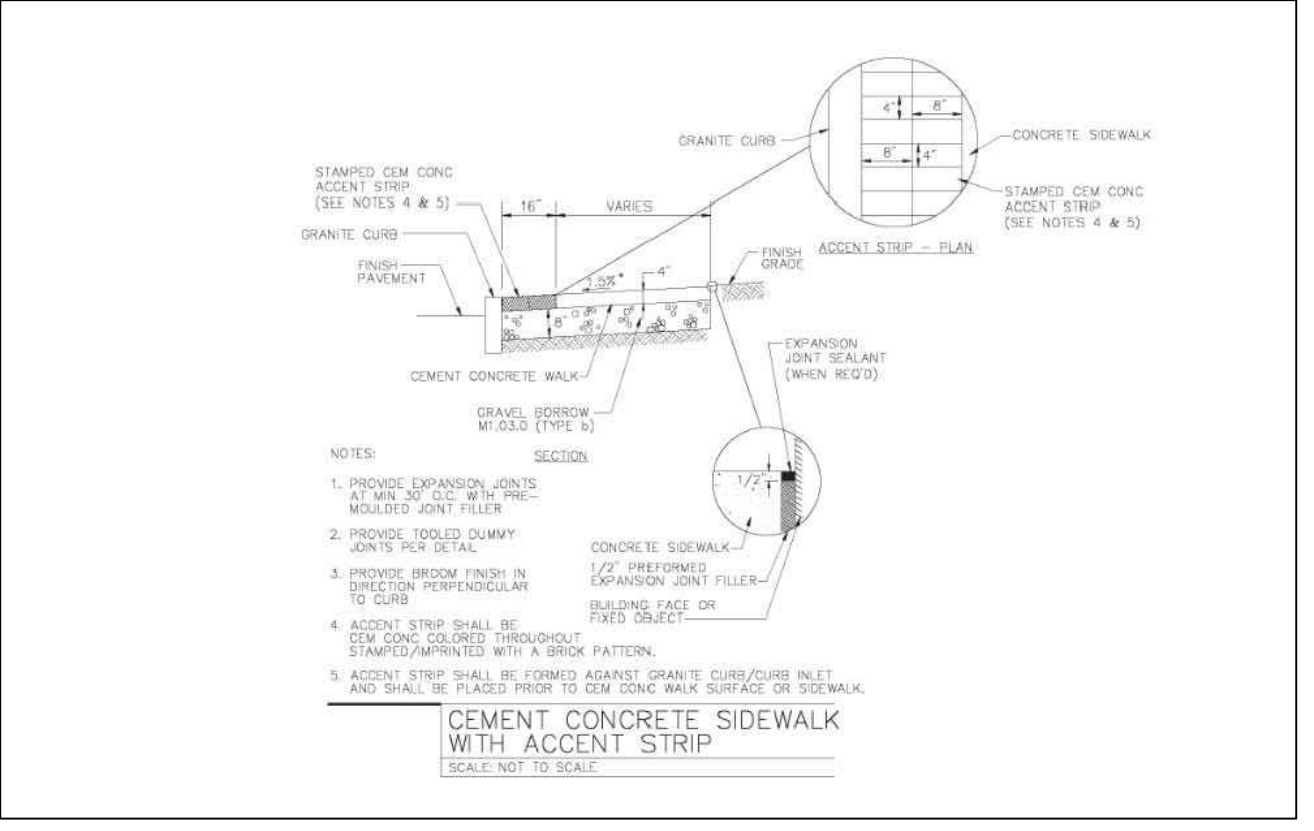
**SILT CURTAIN WITH SORBENT BOOM
 DETAIL E**
 NTS CD-2



PROFILE

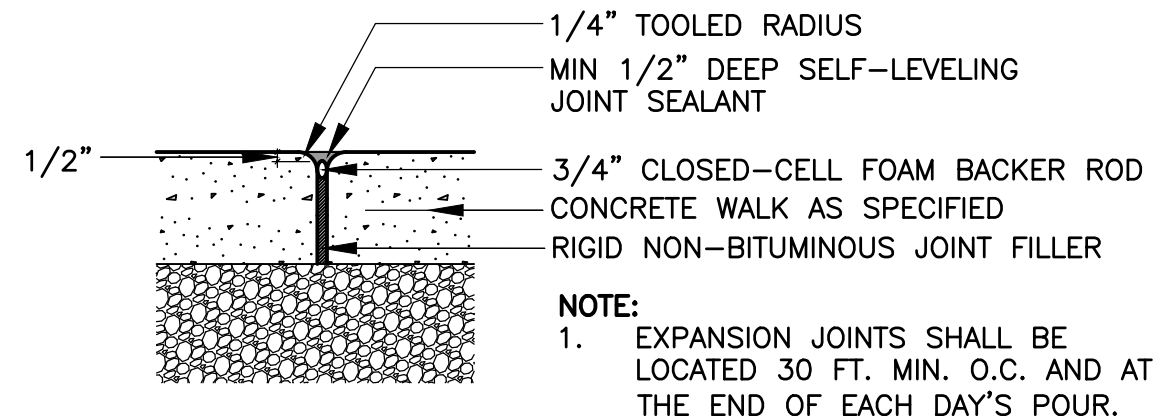
**STABILIZED CONSTRUCTION ENTRANCE
 DETAIL H**
 NOT TO SCALE CD-2

NOTES:
 1. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND UNDISTURBED PAVEMENT.
 2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO UNDISTURBED PAVEMENT.
 3. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDING STONE TO THE LENGTH OF THE ENTRANCE.
 4. REPAIR AND CLEAN OUT MEASURES USED TO TRAP SEDIMENT.
 5. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO UNDISTURBED PAVEMENT SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.

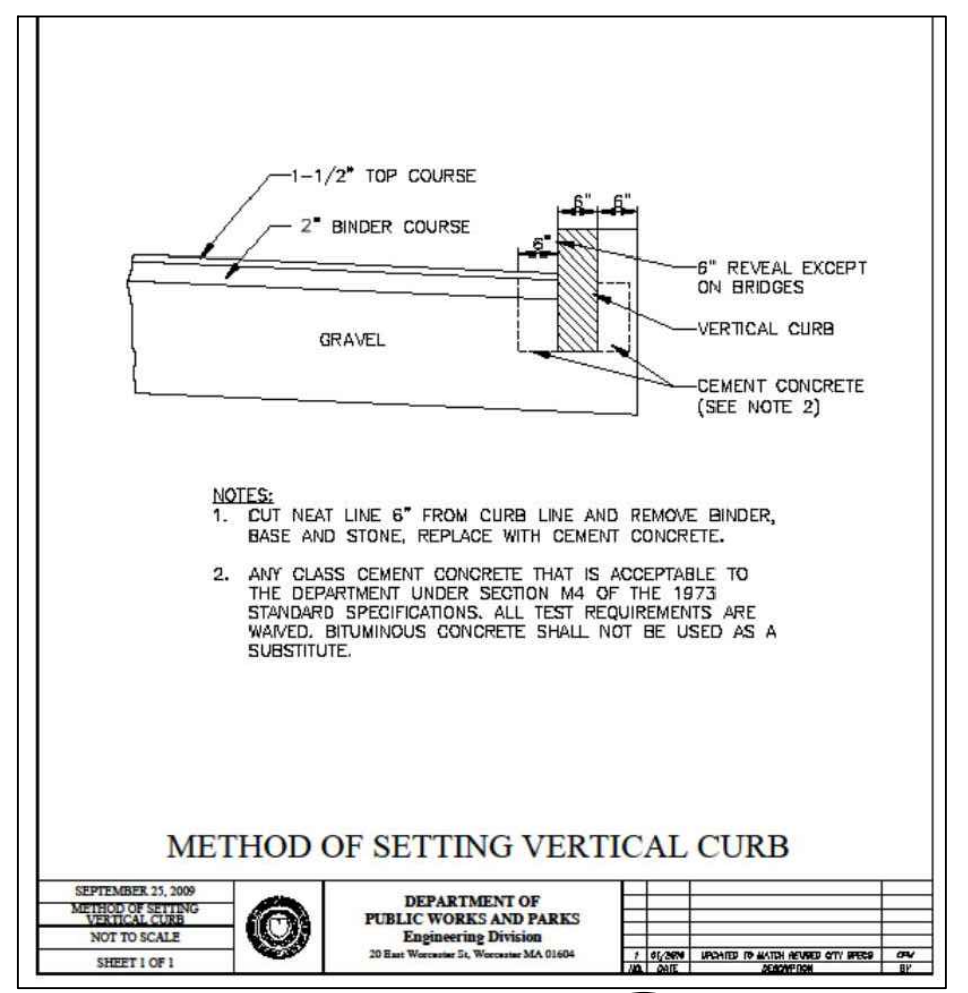


CEMENT CONCRETE SIDEWALK WITH ACCENT STRIP

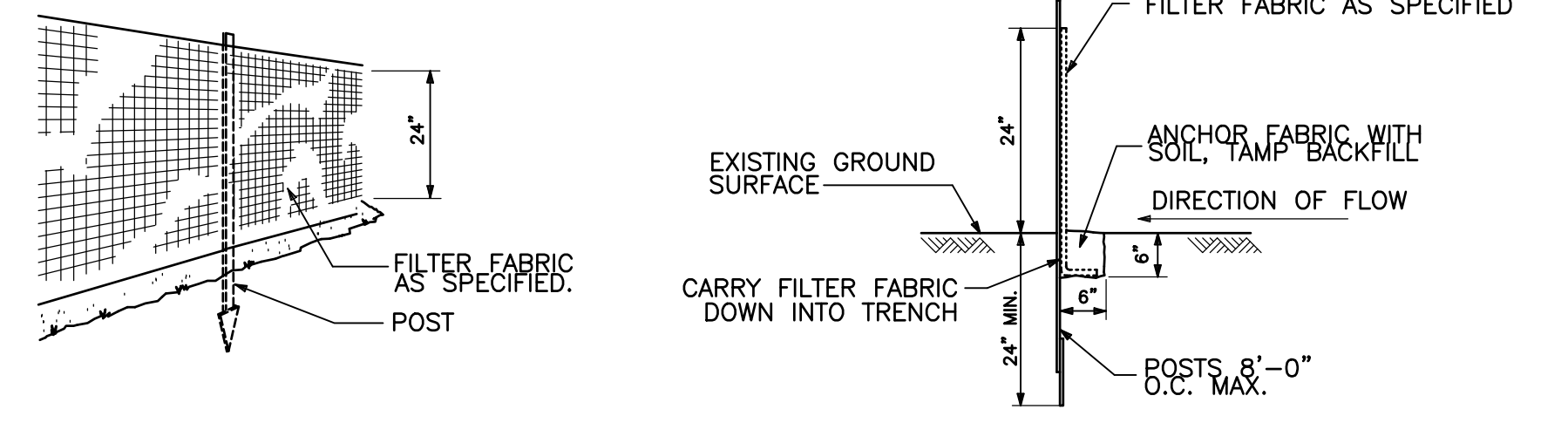
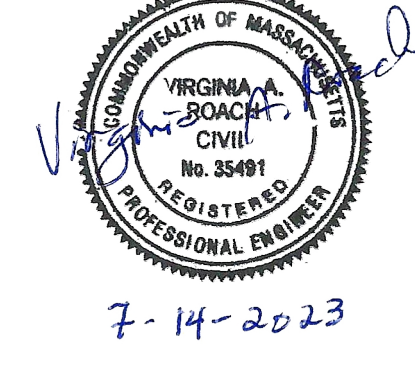
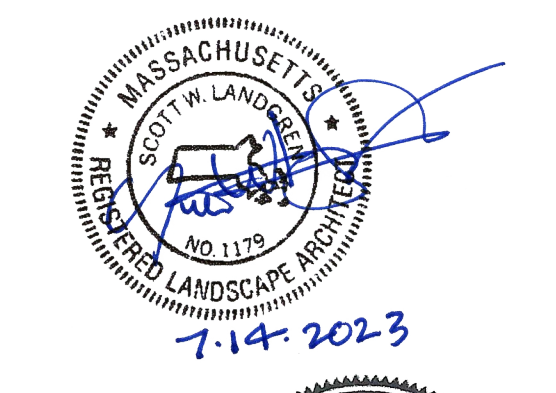
**CONCRETE PAVEMENT
 DETAIL C**
 NTS CD-2



**TYPICAL CONCRETE WALK EXPANSION JOINT
 DETAIL D**
 NOT TO SCALE CD-2



**METHOD OF SETTING VERTICAL CURB
 DETAIL F**
 NTS CD-2



**SILT/SEDIMENT FENCE
 DETAIL I**
 NOT TO SCALE CD-2

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REV. NO.	DATE	DRWN	CHKD	REMARKS

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 DRAWN BY: A. CARRANO
 SHEET CHK'D BY: V. ROACH
 CROSS CHK'D BY: S. LANDGREN
 APPROVED BY: V. ROACH
 DATE: JULY 2023

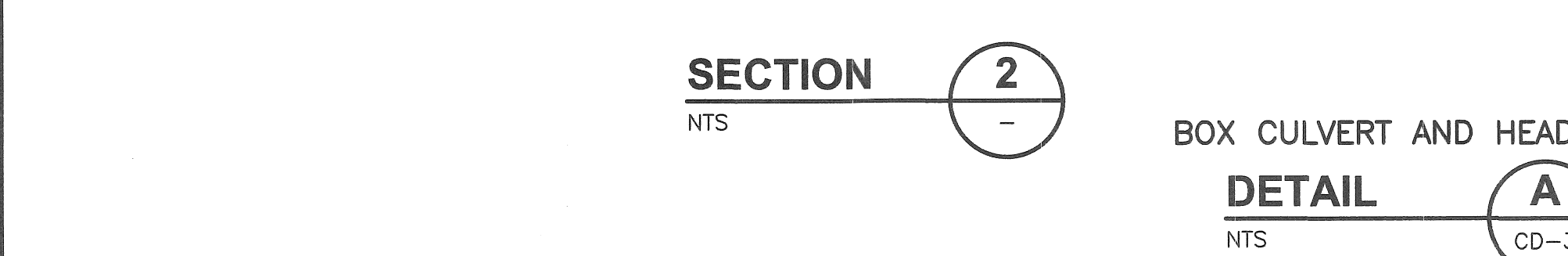
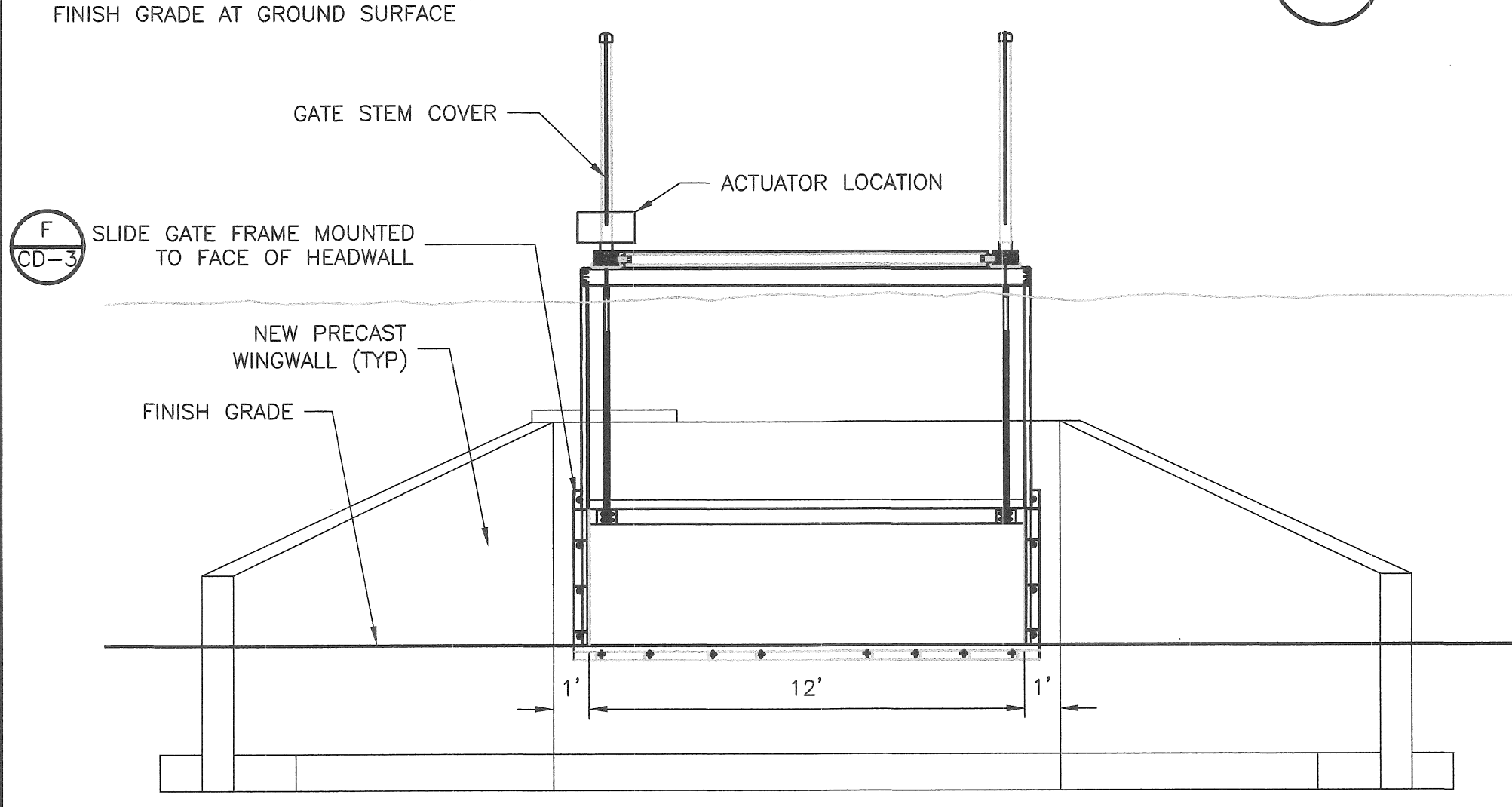
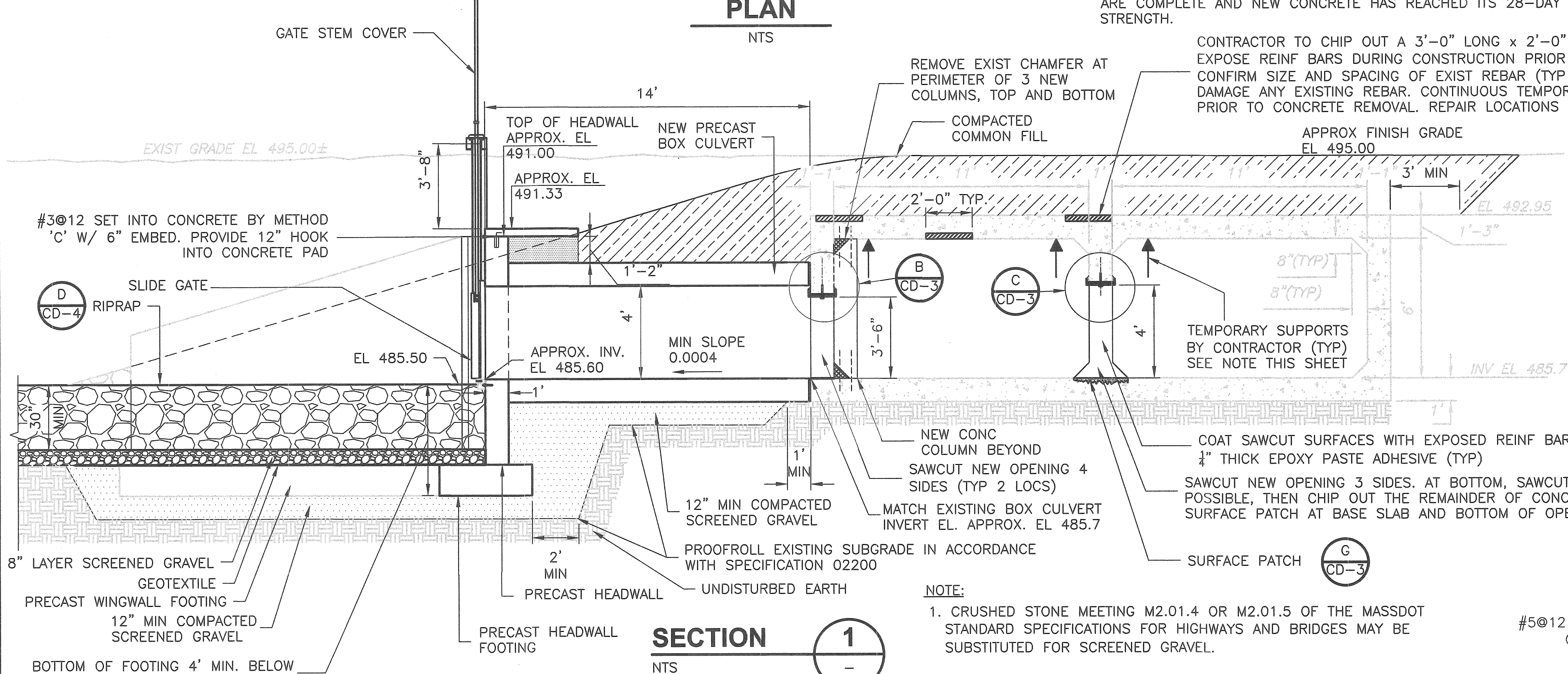
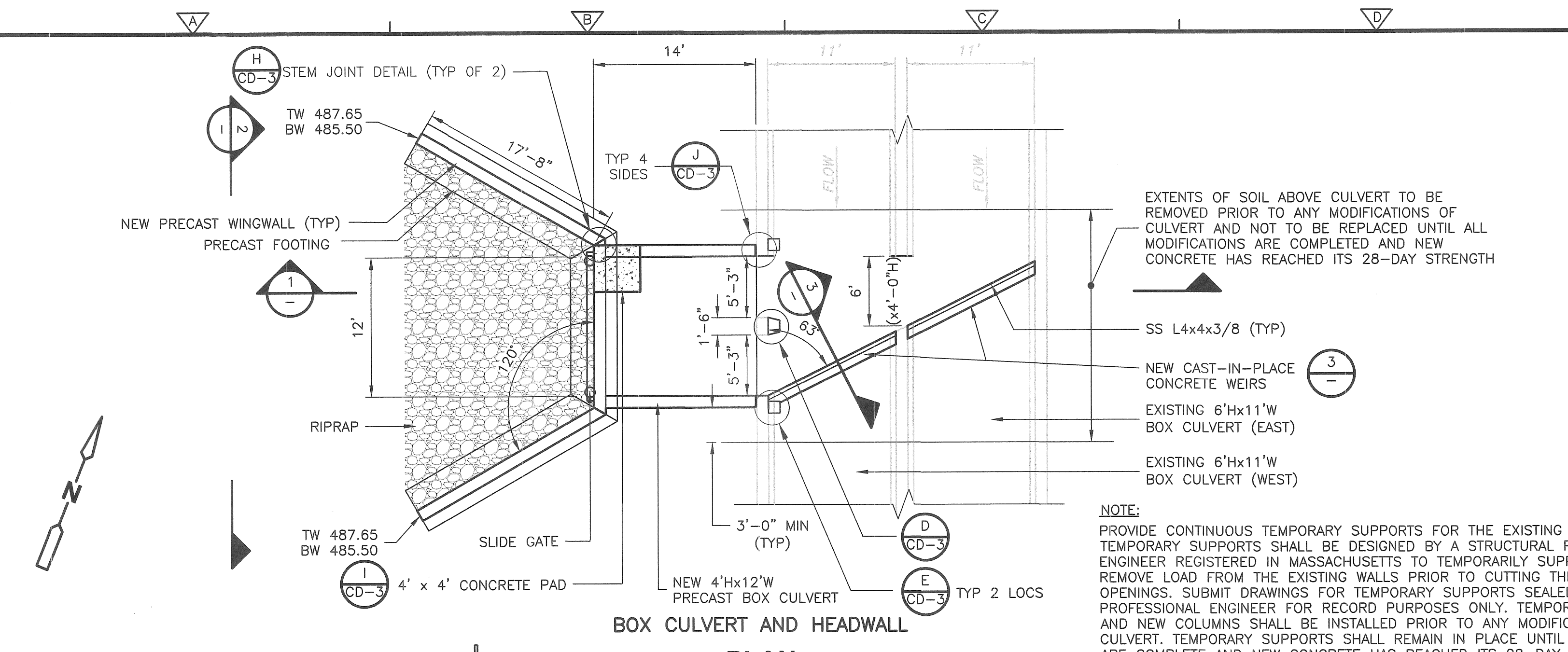
CDM Smith
 75 State Street
 Boston, MA 02109
 Tel: (617) 452-6000

CITY OF WORCESTER, MASSACHUSETTS
SALISBURY POND WATER QUALITY IMPROVEMENTS

MISCELLANEOUS DETAILS II
 CD-2

PROJECT NO. 0198-277460
 FILE NAME: CSDTD002
 SHEET NO. CD-2

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EXTENTS OF SOIL ABOVE CULVERT TO BE REMOVED PRIOR TO ANY MODIFICATIONS OF CULVERT AND NOT TO BE REPLACED UNTIL ALL MODIFICATIONS ARE COMPLETED AND NEW CONCRETE HAS REACHED ITS 28-DAY STRENGTH

SS L4x4x3/8 (TYP)

NEW CAST-IN-PLACE CONCRETE WEIRS

EXISTING 6'Hx11'W BOX CULVERT (EAST)

EXISTING 6'Hx11'W BOX CULVERT (WEST)

NOTE:
PROVIDE CONTINUOUS TEMPORARY SUPPORTS FOR THE EXISTING BOX CULVERT. TEMPORARY SUPPORTS SHALL BE DESIGNED BY A STRUCTURAL PROFESSIONAL ENGINEER REGISTERED IN MASSACHUSETTS TO TEMPORARILY SUPPORT AND REMOVE LOAD FROM THE EXISTING WALLS PRIOR TO CUTTING THE NEW OPENINGS. SUBMIT DRAWINGS FOR TEMPORARY SUPPORTS SEALED BY THE PROFESSIONAL ENGINEER FOR RECORD PURPOSES ONLY. TEMPORARY SUPPORTS AND NEW COLUMNS SHALL BE INSTALLED PRIOR TO ANY MODIFICATIONS OF THE CULVERT. TEMPORARY SUPPORTS SHALL REMAIN IN PLACE UNTIL MODIFICATIONS ARE COMPLETE AND NEW CONCRETE HAS REACHED ITS 28-DAY DESIGN STRENGTH.

CONTRACTOR TO CHIP OUT A 3'-0" LONG x 2'-0" WIDE AREA OF CONCRETE TO EXPOSE REINF BARS DURING CONSTRUCTION PRIOR TO ENGINEER'S INSPECTION TO CONFIRM SIZE AND SPACING OF EXIST REBAR (TYP 3 LOCATIONS). DO NOT CUT OR DAMAGE ANY EXISTING REBAR. CONTINUOUS TEMPORARY SUPPORTS SHALL BE INSTALLED PRIOR TO CONCRETE REMOVAL. REPAIR LOCATIONS BY SURFACE PATCH DETAIL G, CD-3

REMOVE EXIST CHAMFER AT PERIMETER OF 3 NEW COLUMNS, TOP AND BOTTOM

COMPACTED COMMON FILL

APPROX FINISH GRADE EL 495.00

8"(TYP)

8"(TYP)

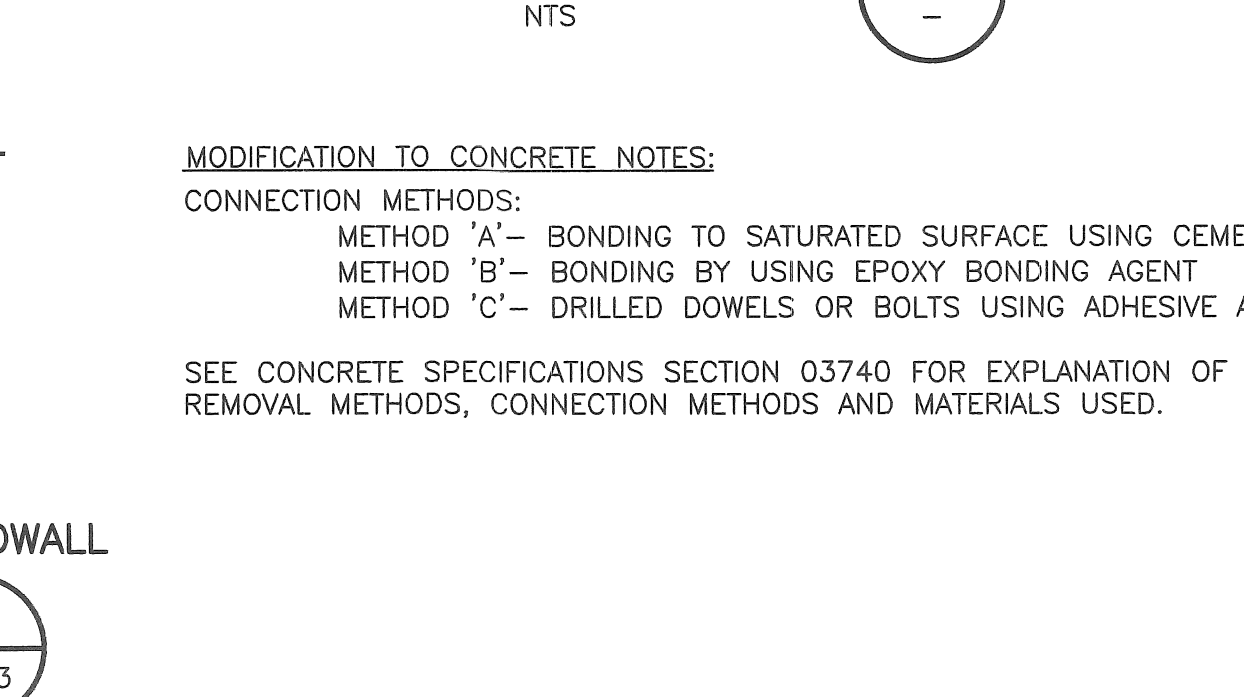
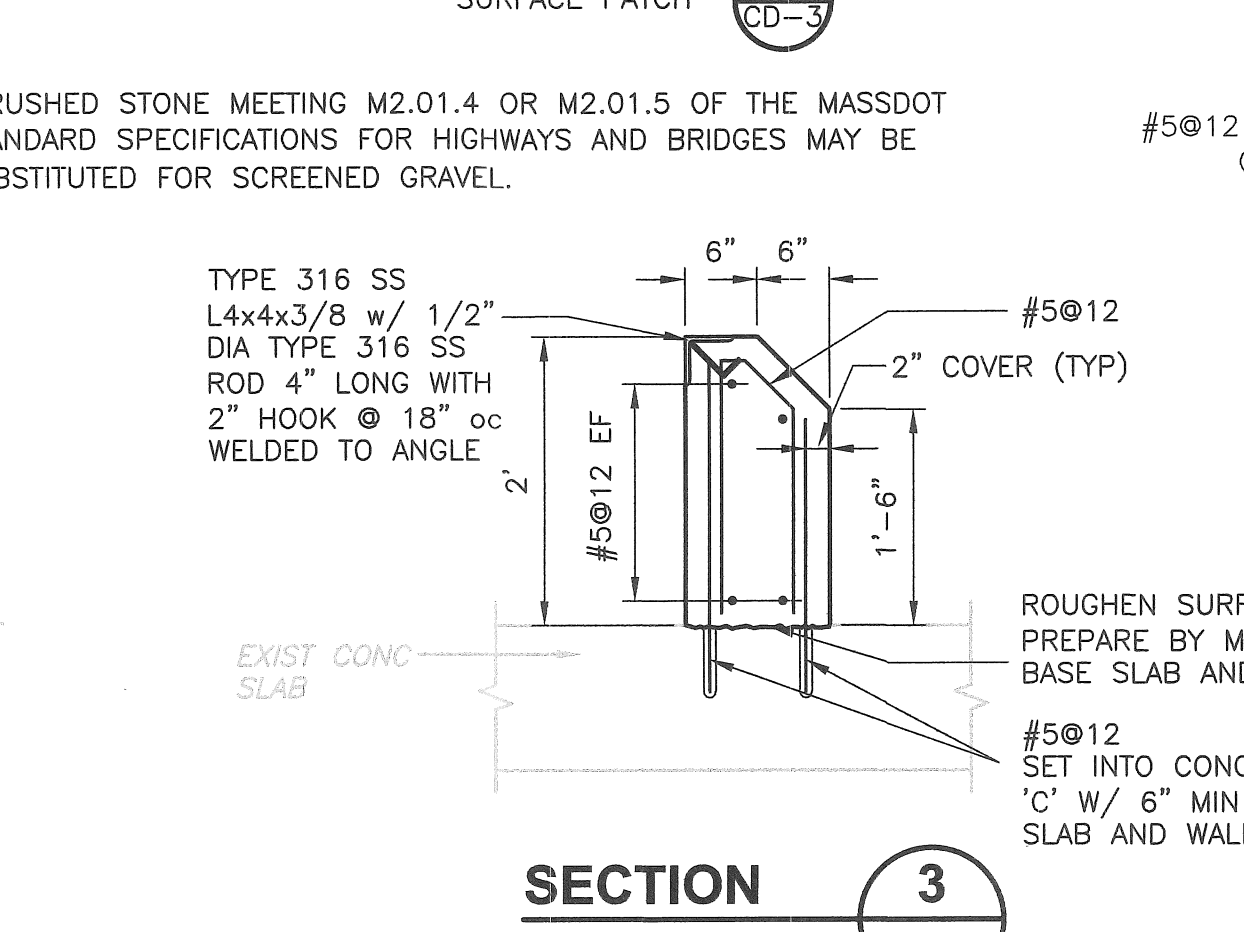
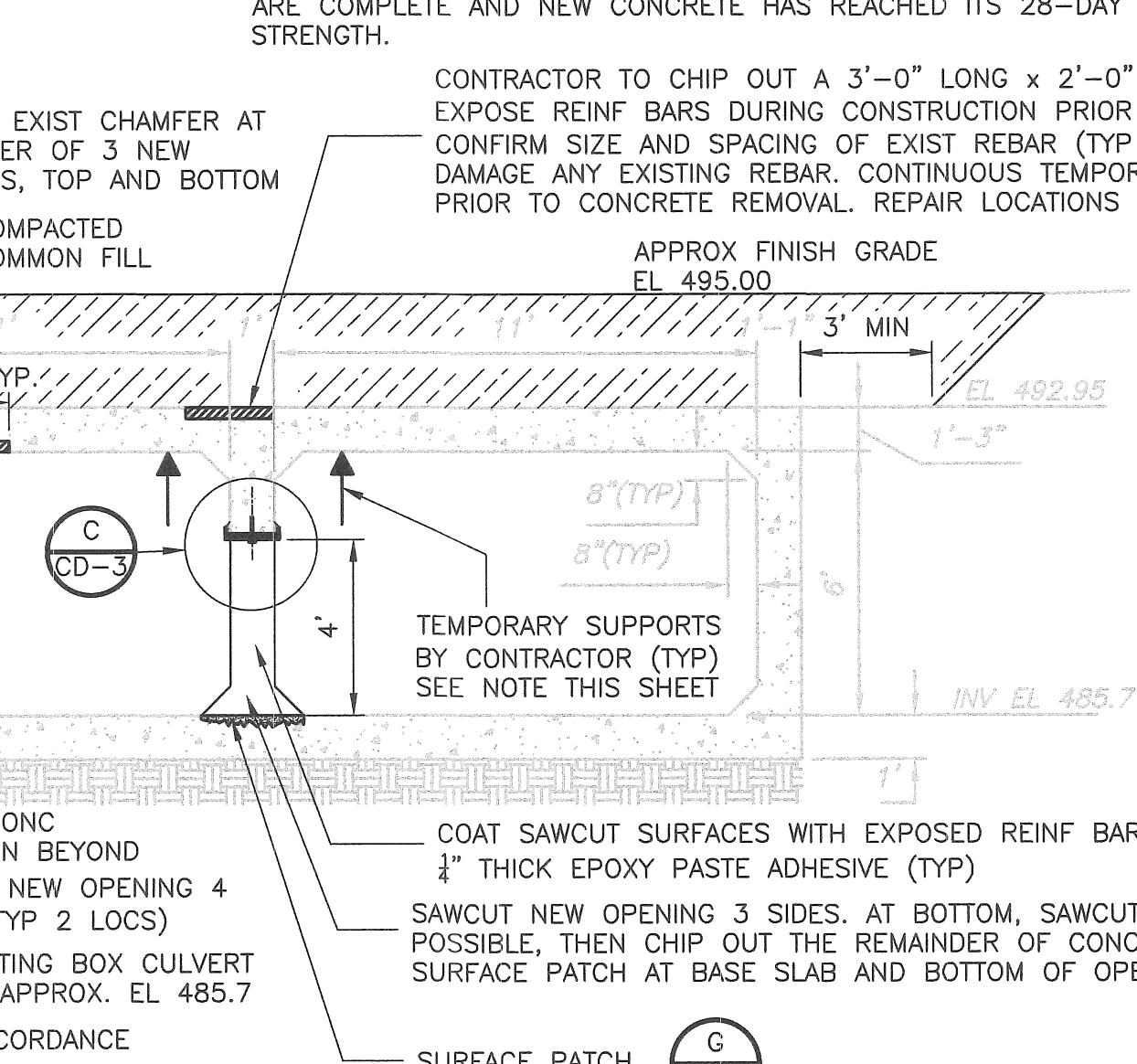
TEMPORARY SUPPORTS BY CONTRACTOR (TYP) SEE NOTE THIS SHEET

COAT SAWCUT SURFACES WITH EXPOSED REINF BARS WITH 1/4" THICK EPOXY PASTE ADHESIVE (TYP)

SAWCUT NEW OPENING 3 SIDES. AT BOTTOM, SAWCUT AS LOW AS POSSIBLE, THEN CHIP OUT THE REMAINDER OF CONCRETE, PROVIDE SURFACE PATCH AT BASE SLAB AND BOTTOM OF OPENING SIDES.

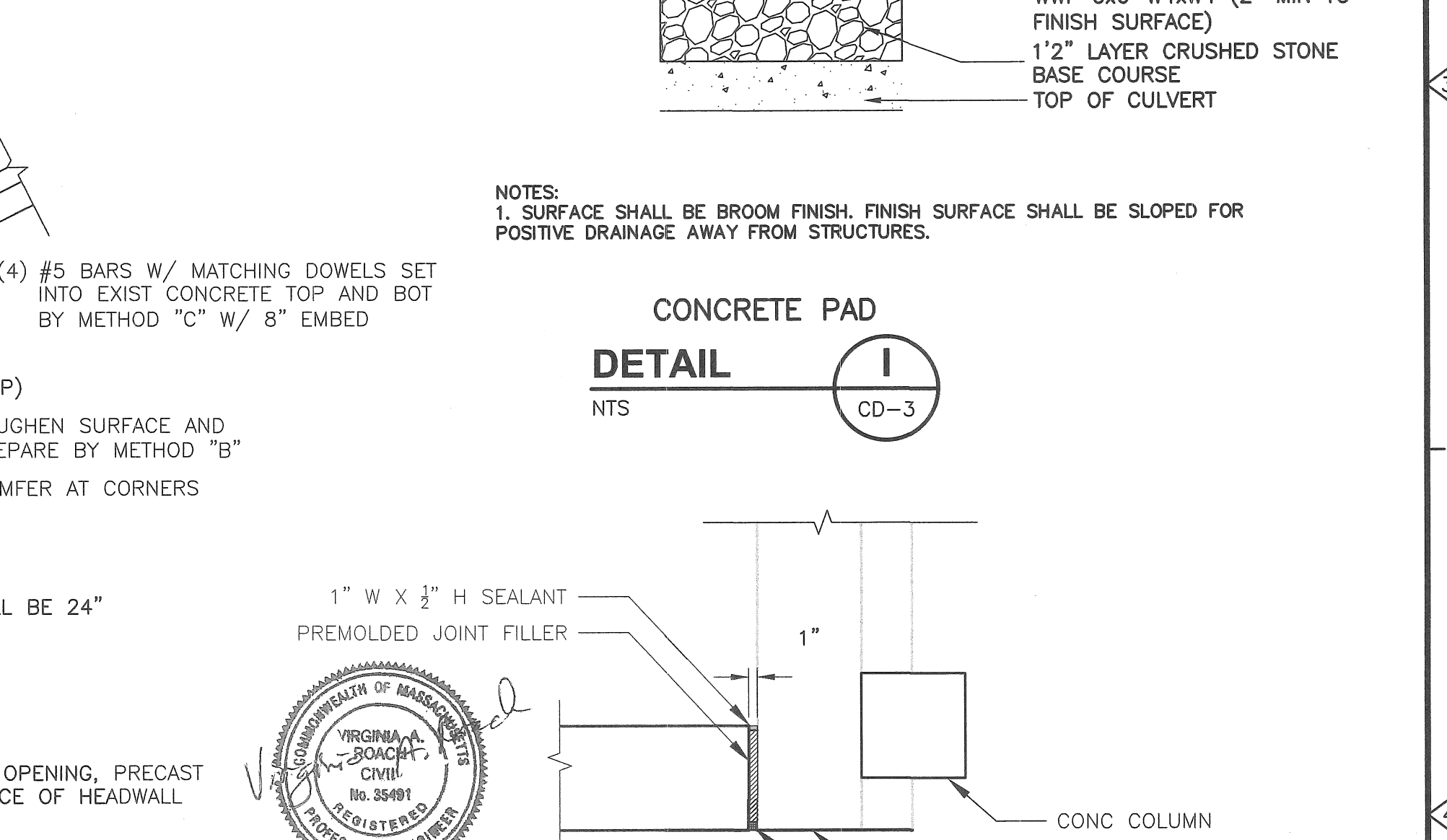
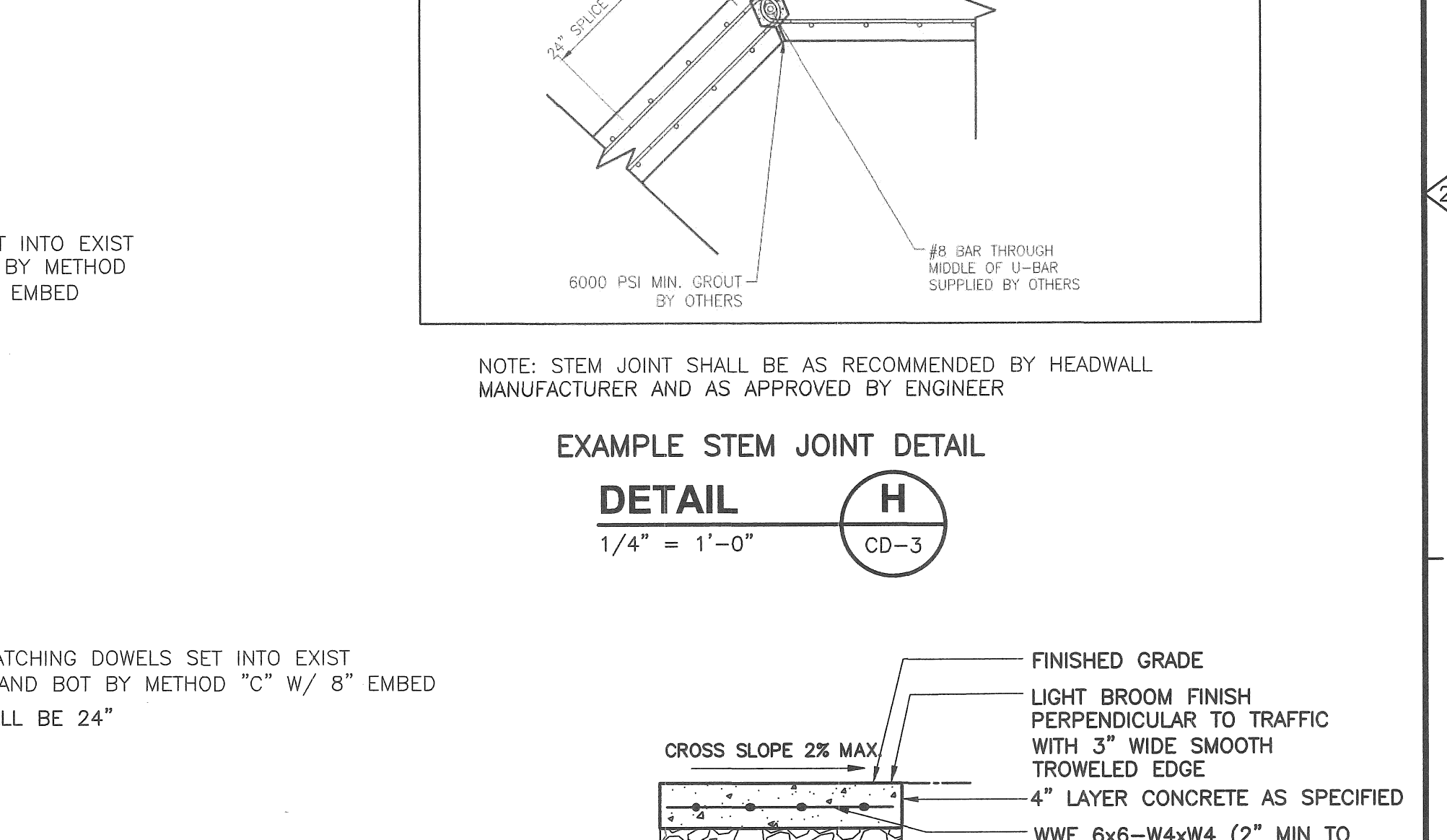
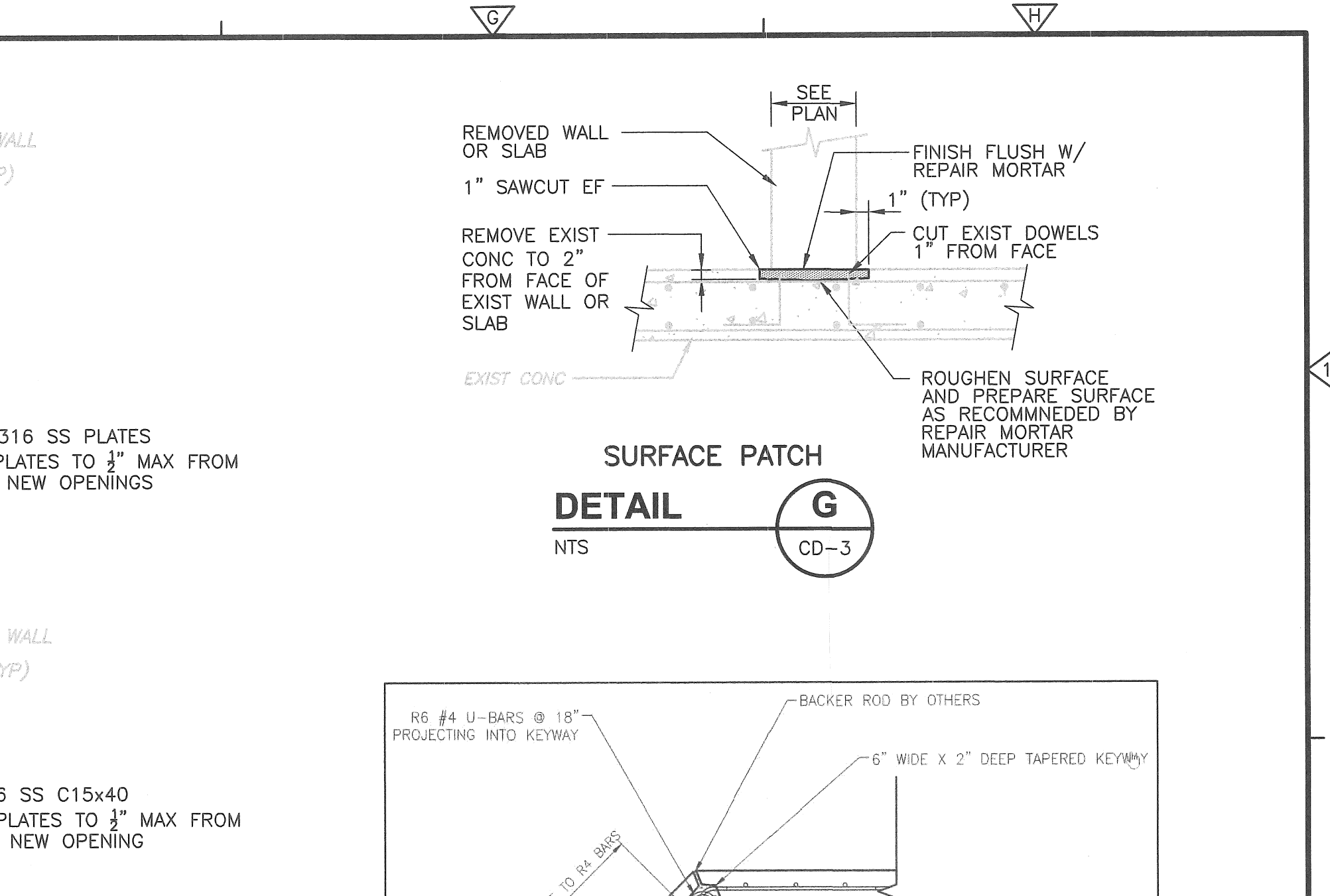
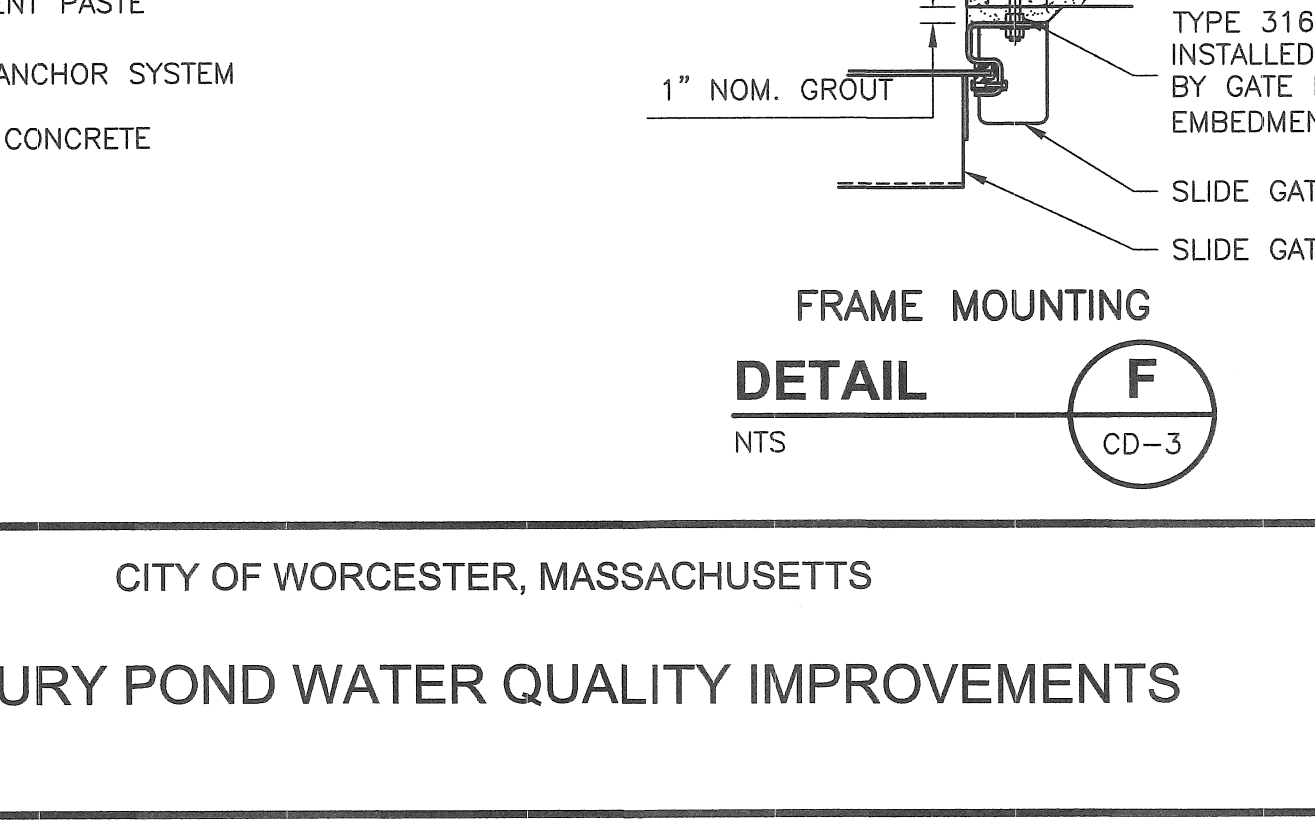
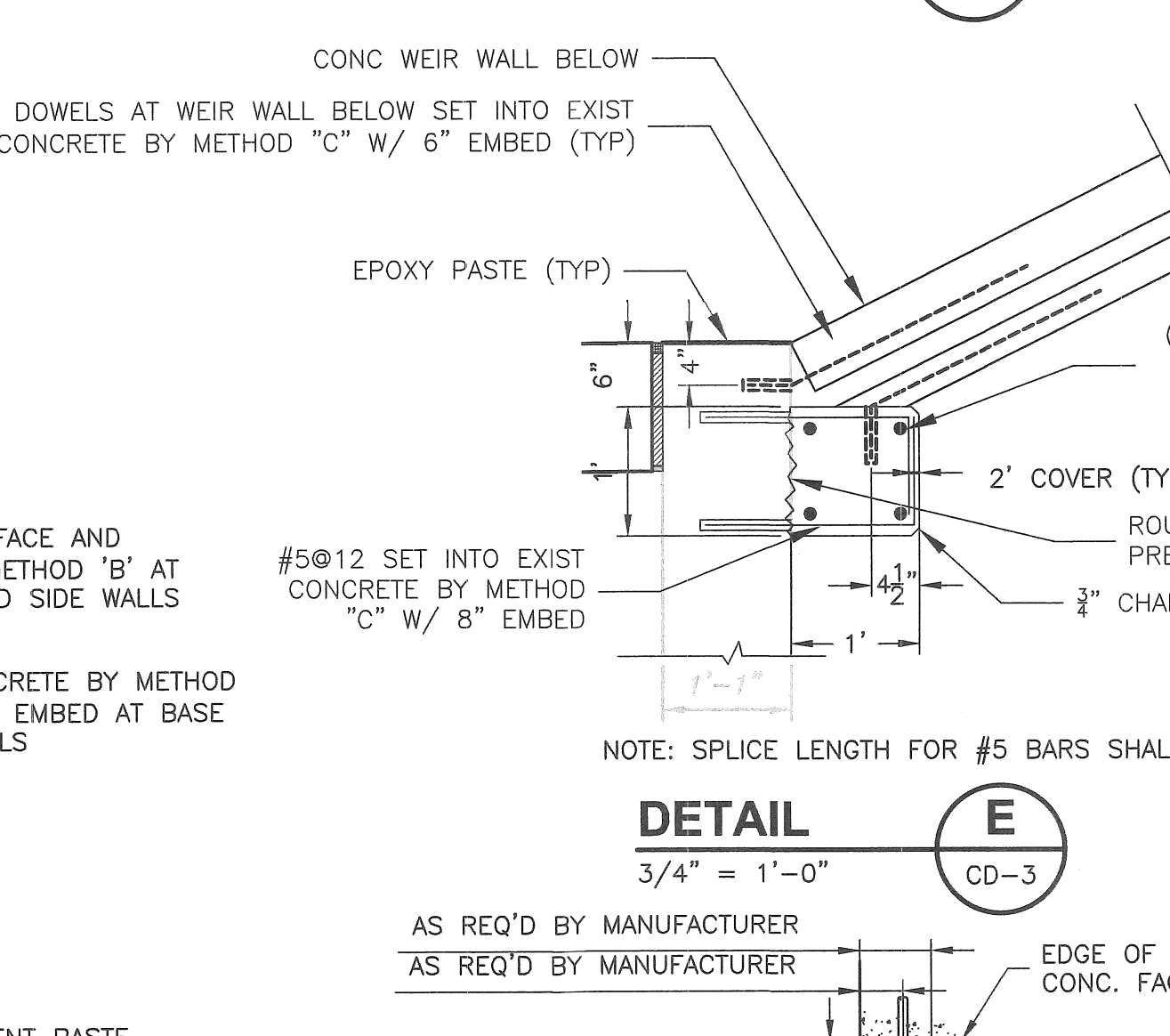
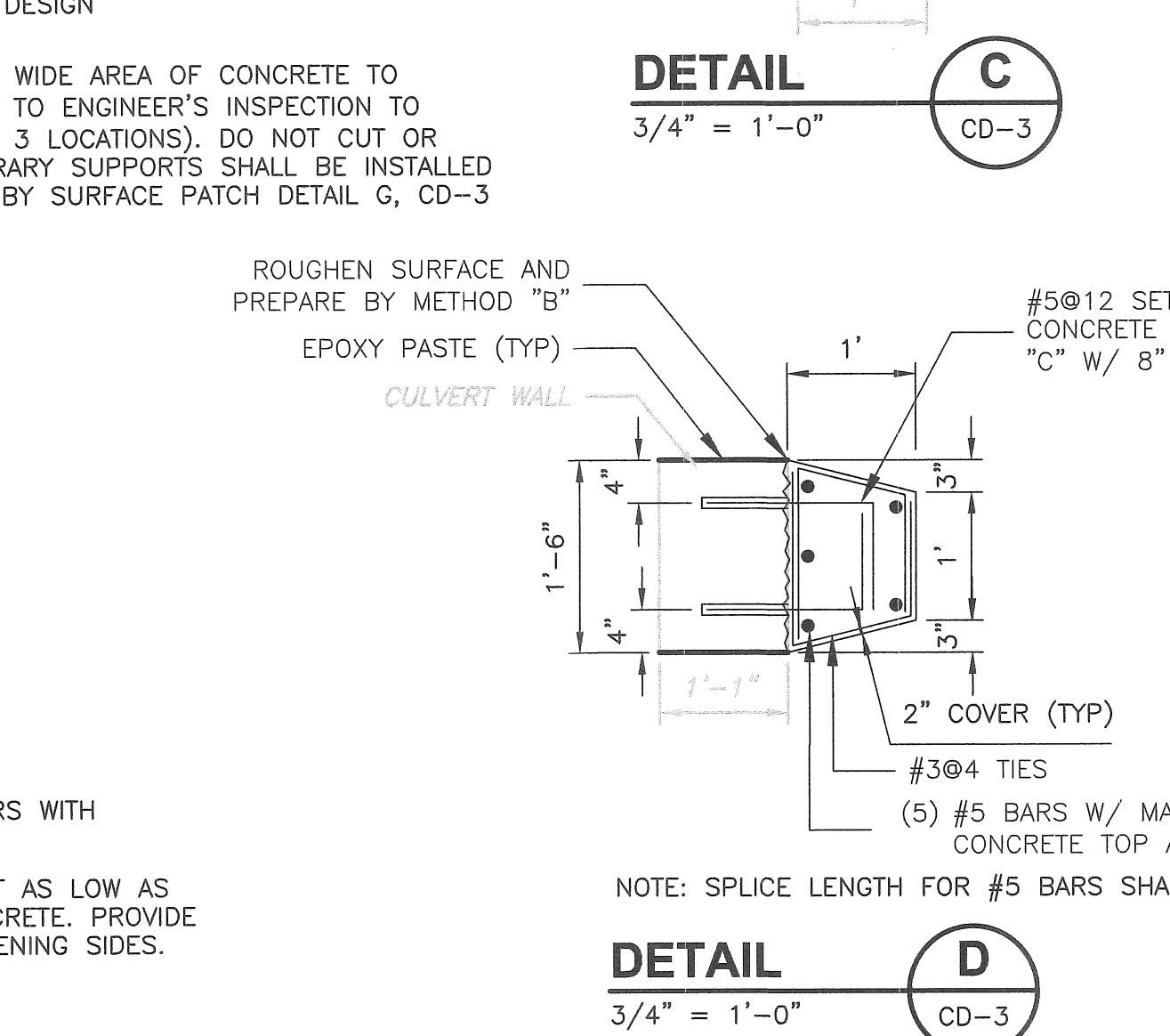
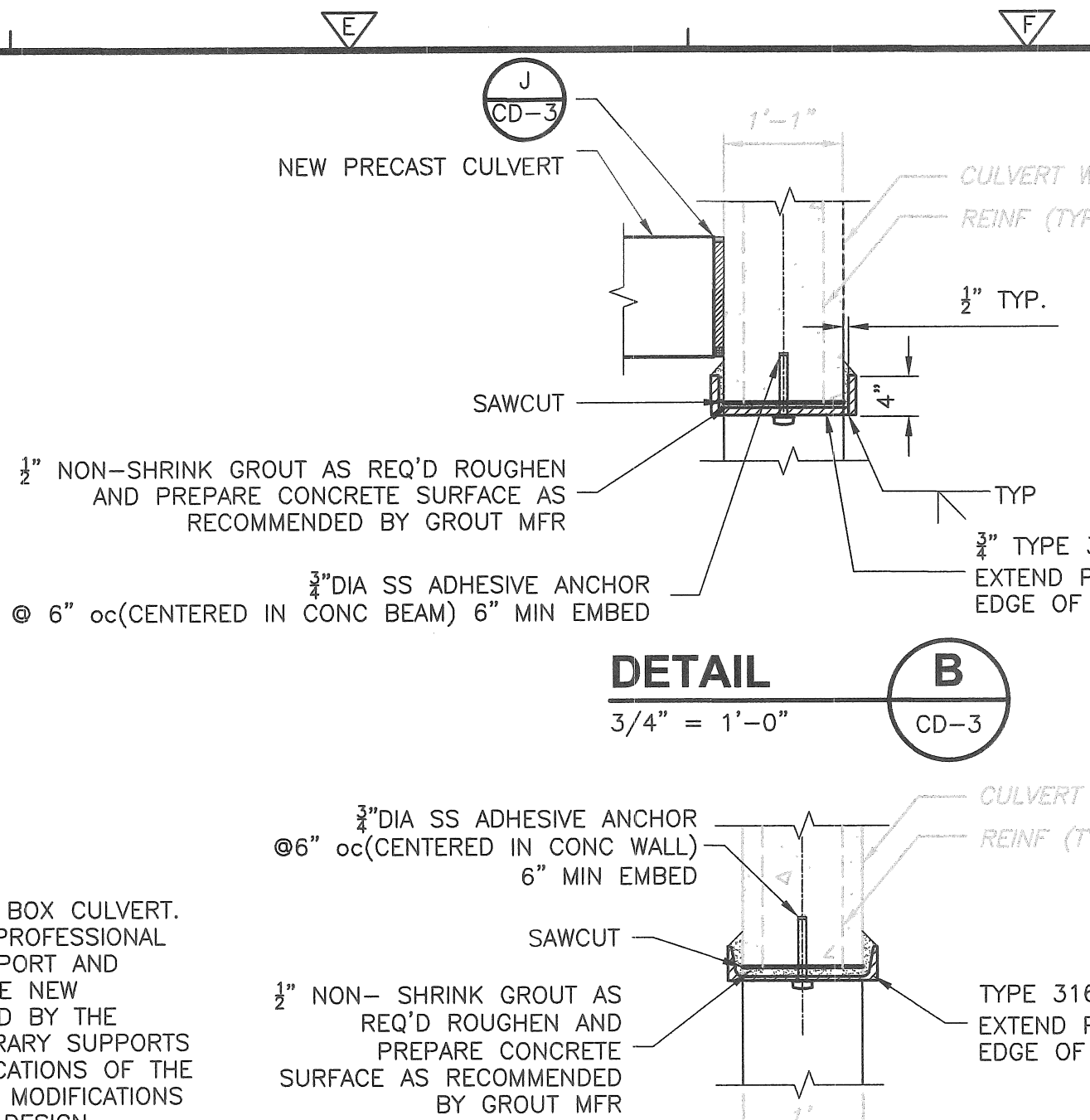
SURFACE PATCH

NOTE:
1. CRUSHED STONE MEETING M2.01.4 OR M2.01.5 OF THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES MAY BE SUBSTITUTED FOR SCREENED GRAVEL.



MODIFICATION TO CONCRETE NOTES:
CONNECTION METHODS:
METHOD 'A'- BONDING TO SATURATED SURFACE USING CEMENT PASTE
METHOD 'B'- BONDING BY USING EPOXY BONDING AGENT
METHOD 'C'- DRILLED DOWELS OR BOLTS USING ADHESIVE ANCHOR SYSTEM

SEE CONCRETE SPECIFICATIONS SECTION 03740 FOR EXPLANATION OF CONCRETE REMOVAL METHODS, CONNECTION METHODS AND MATERIALS USED.



NOTES:
1. SURFACE SHALL BE BROOM FINISH. FINISH SURFACE SHALL BE SLOPED FOR POSITIVE DRAINAGE AWAY FROM STRUCTURES.

NOTE: SEE NOTES FOR ENGINEER'S INSPECTION DURING CONSTRUCTION SHEET G-1

Professional Engineer Seal: Virginia A. Bonchalek, No. 55491, Registered Professional Engineer, 7/18/23

Professional Engineer Seal: Daniel L. Haggard, No. 55491, Registered Professional Engineer, 7/18/23

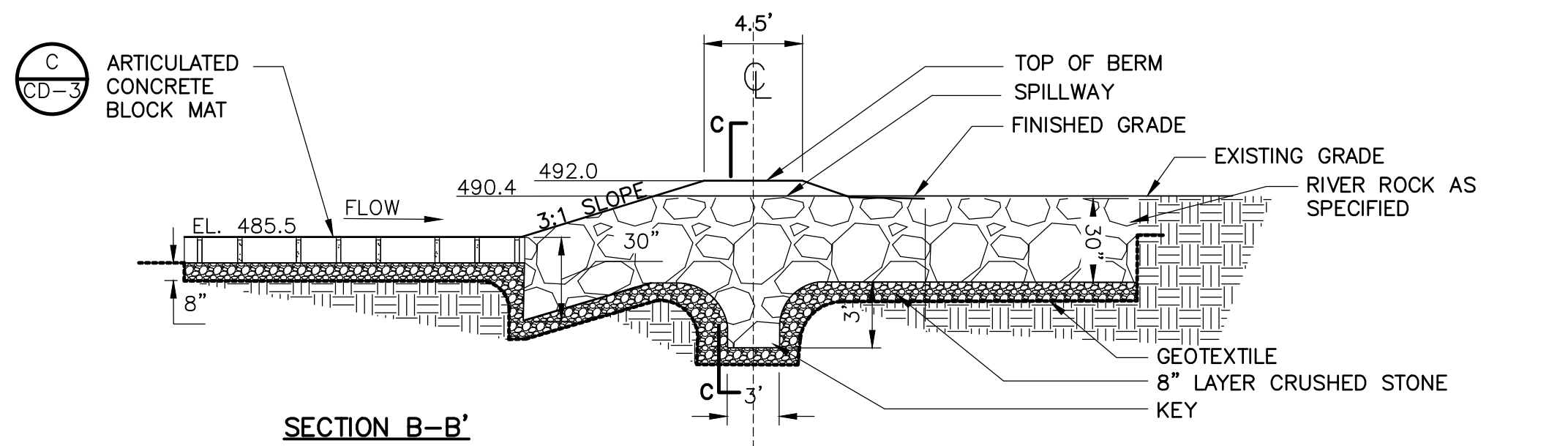
DESIGNED BY: K. GALLERIE
DRAWN BY: A. CARRANO
SHEET CHK'D BY: V. ROACH
CROSS CHK'D BY: D. HARRIS
APPROVED BY: V. ROACH
DATE: JULY 2023

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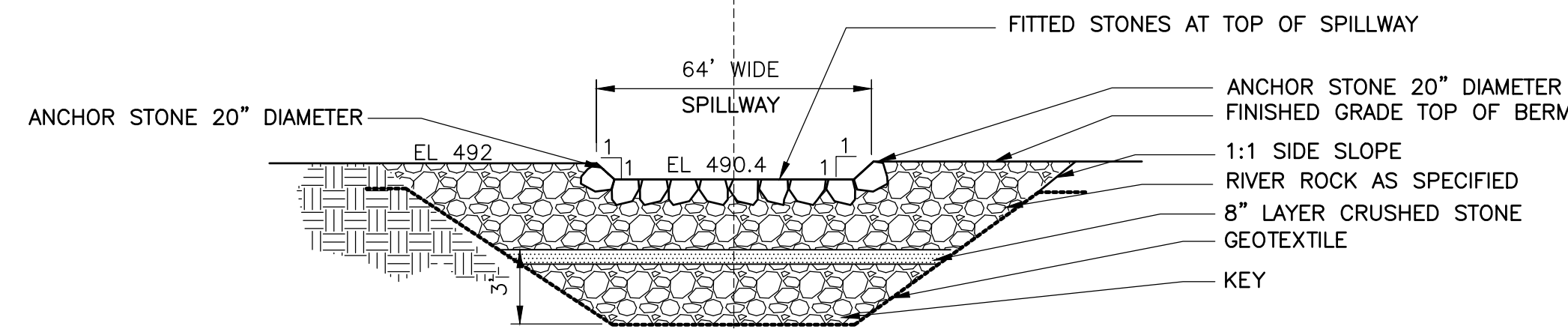
CITY OF WORCESTER, MASSACHUSETTS
SALISBURY POND WATER QUALITY IMPROVEMENTS

MISCELLANEOUS DETAILS III

PROJECT NO. 0198-277460
FILE NAME: CSDTD003
SHEET NO. **CD-3**



SECTION B-B'

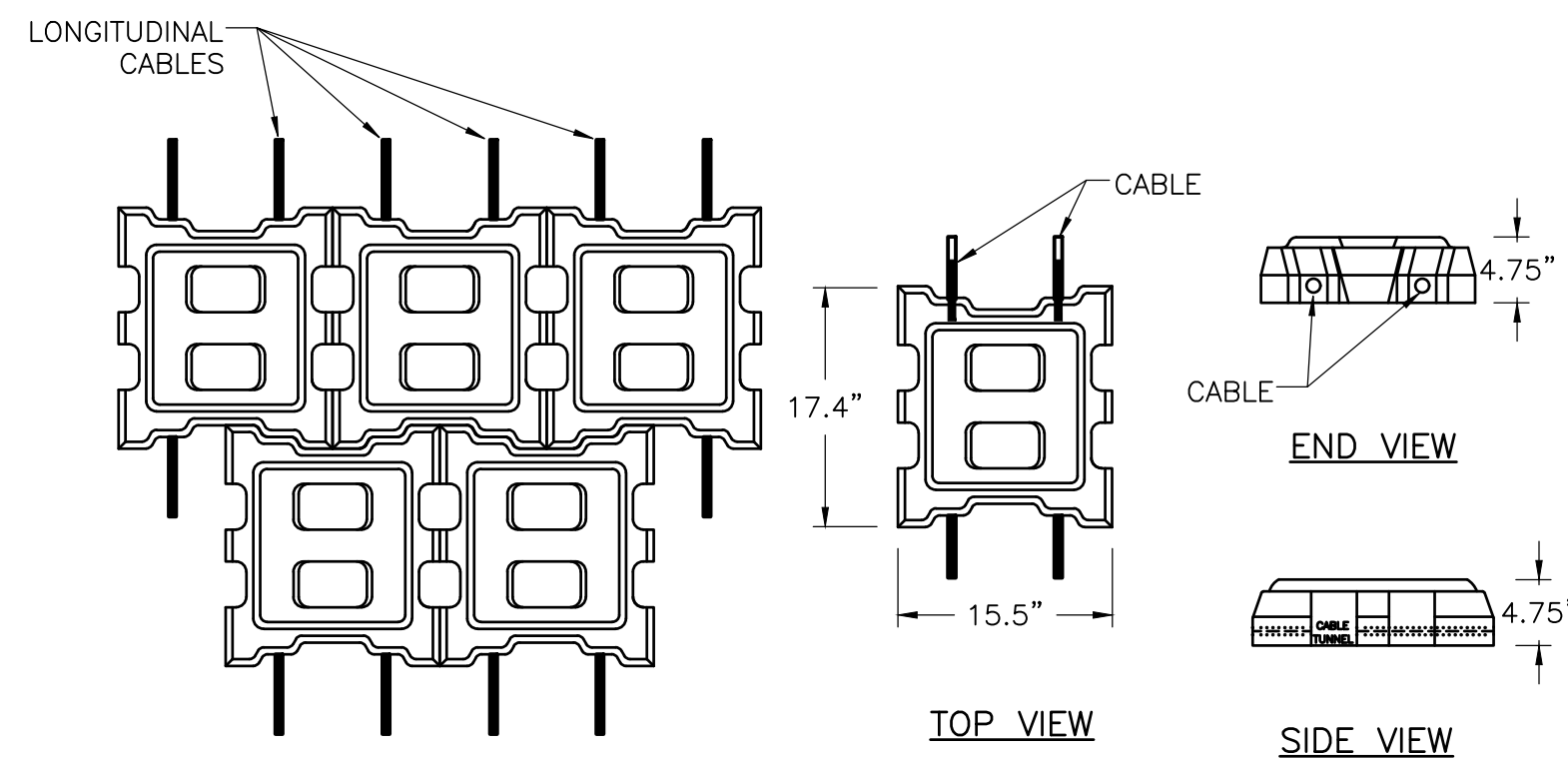


SECTION C-C

NOTE:
ANCHOR STONE AND FITTED STONE INSTALLATION IS INTENDED TO FORM THE SHAPE OF THE 62' WIDE SPILLWAY WITH 1:1 EDGES WITH LIMITED DIVERGENCE FROM THE ELEVATIONS DISPLAYED IN THE DETAIL TO THE GREATEST EXTENT PRACTICABLE. CONTRACTOR SHALL UTILIZE FLAT STONE FACES TO CREATE FINISHED SURFACE AND FIT STONE JOINTS TO MINIMIZE OPEN JOINT SPACE TO THE GREATEST EXTENT PRACTICABLE.

ROCK CHECK DAM

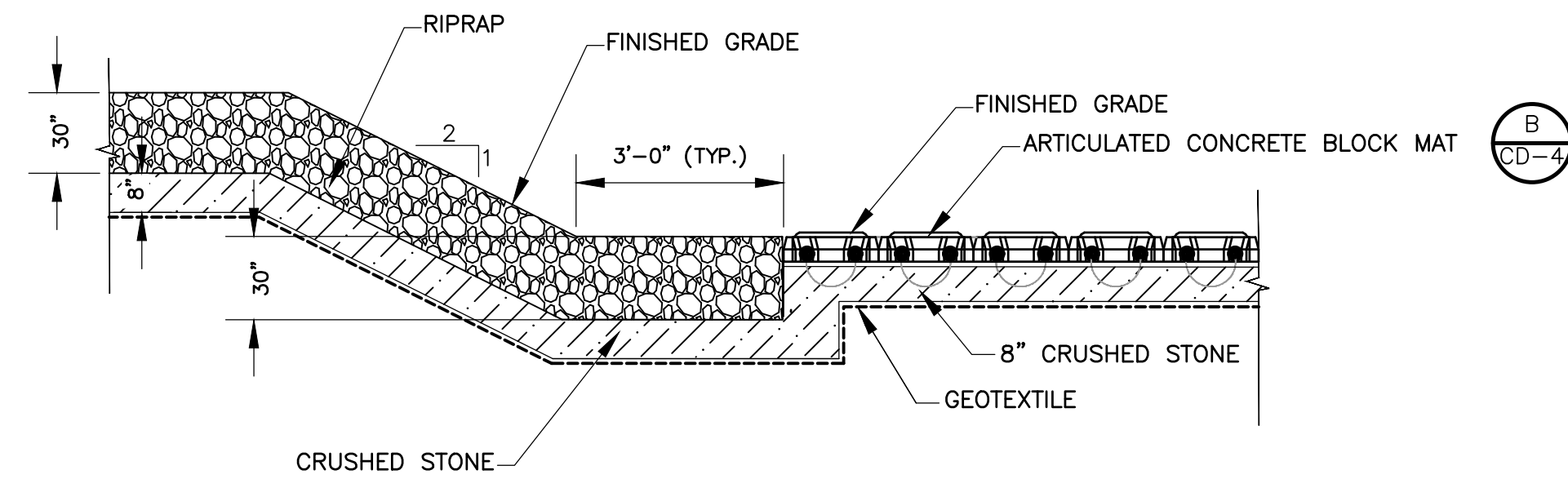
DETAIL A
NTS CD-4



PLAN

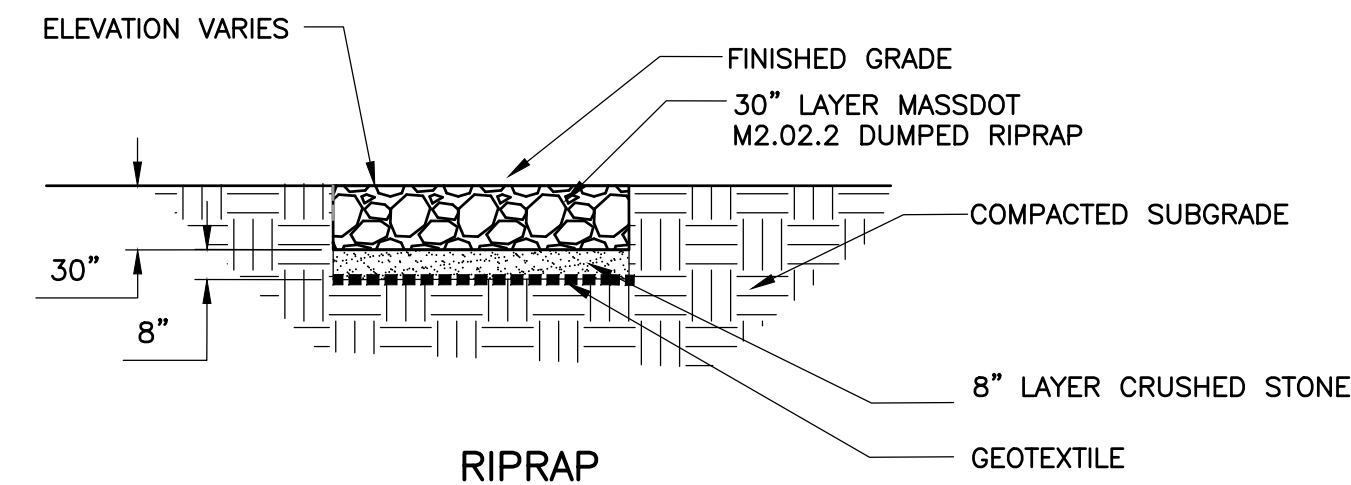
ARTICULATED CONCRETE BLOCK MAT

DETAIL B
NTS CD-4

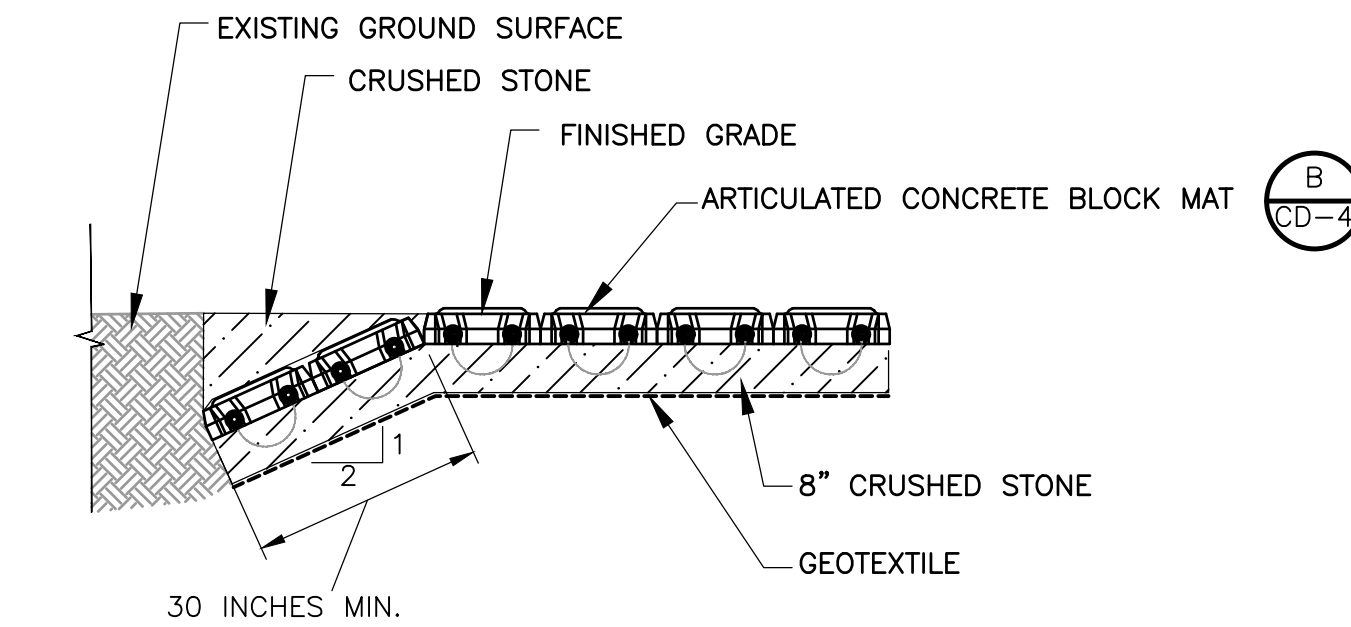


TRANSITION BETWEEN RIPRAP AND ARTICULATED CONCRETE BLOCK

DETAIL C
NTS CD-4

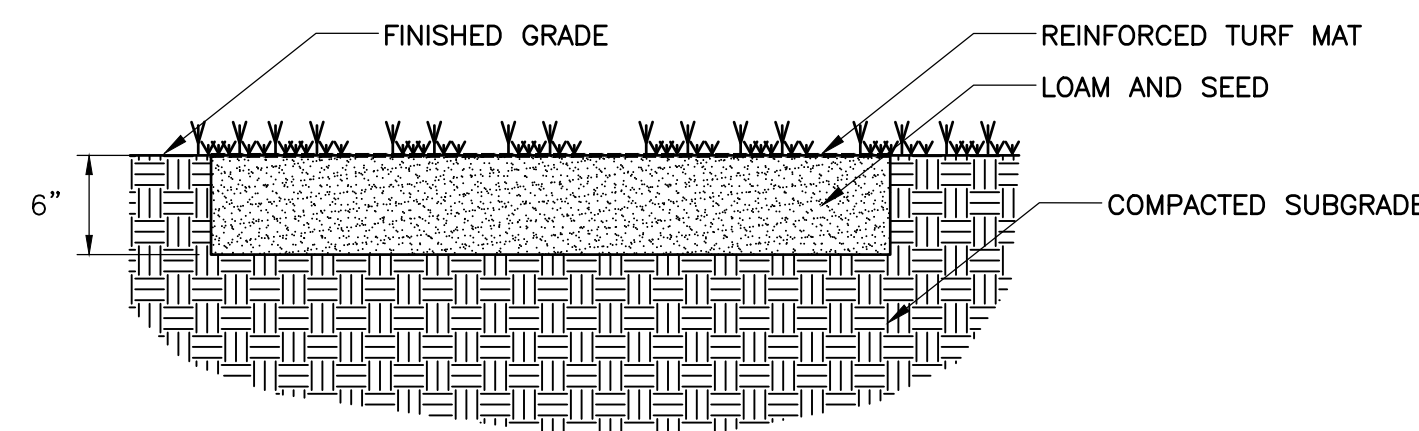


DETAIL D
NTS CD-4

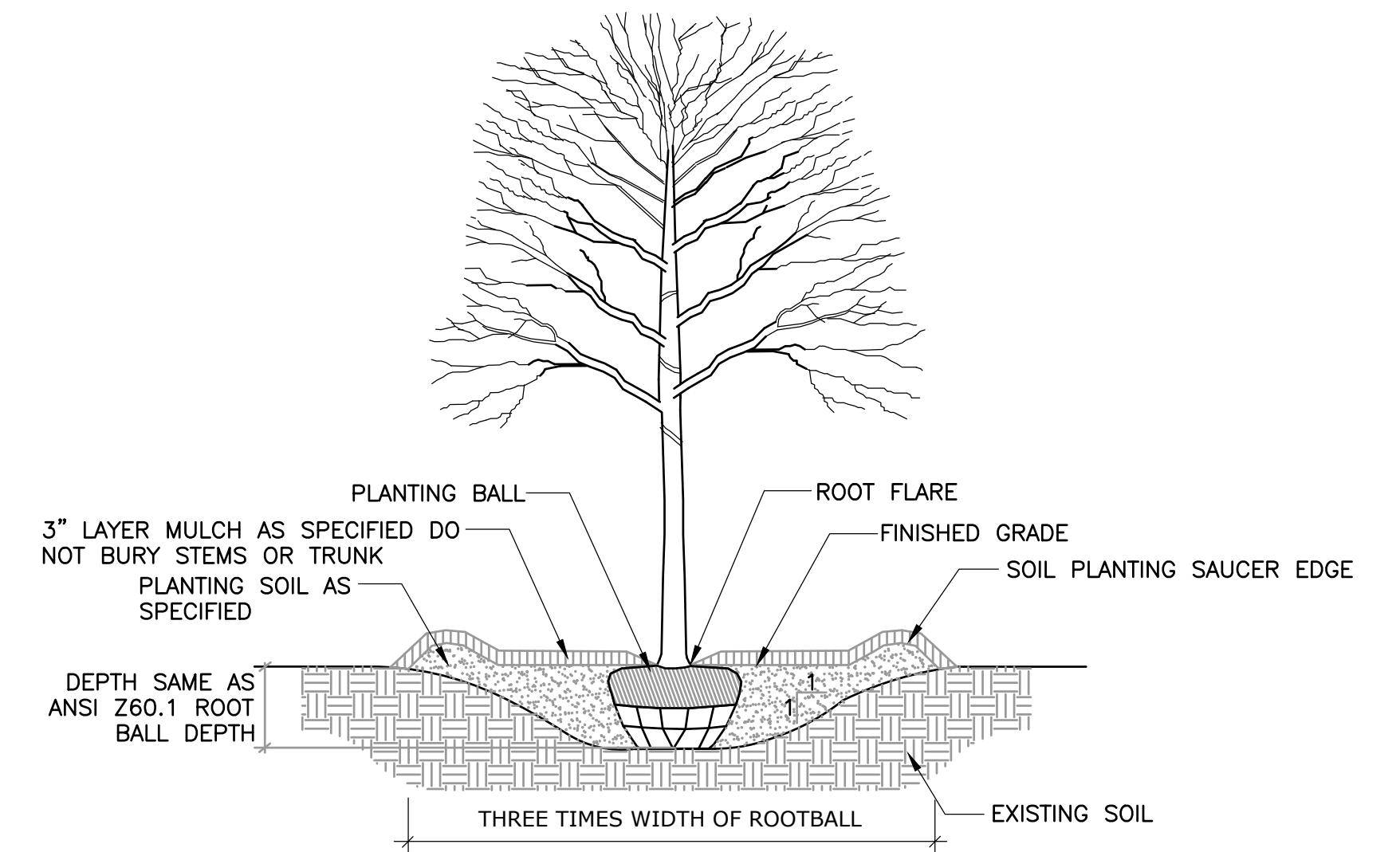


ARTICULATED CONCRETE BLOCK MAT FLANK

DETAIL E
NTS CD-4

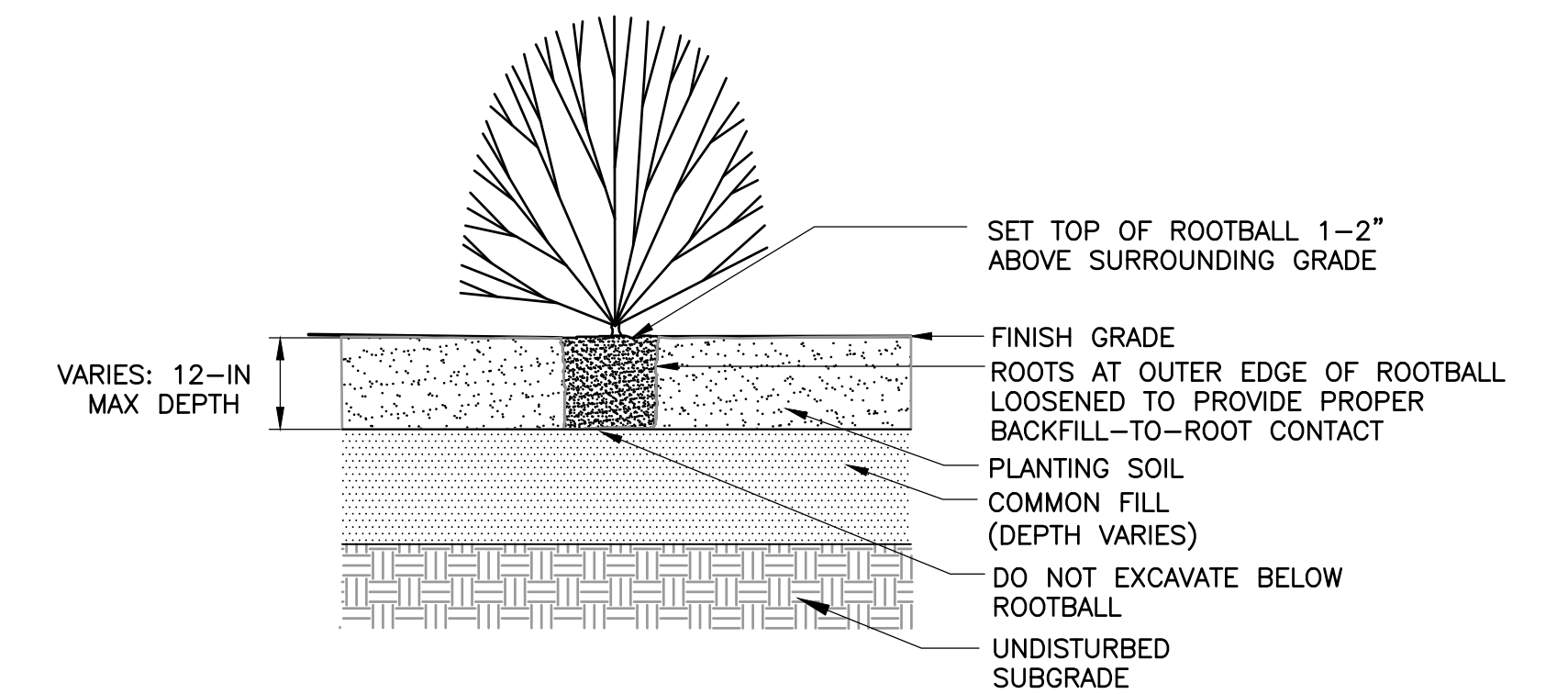


REINFORCED TURF MAT
DETAIL F
NTS CD-4



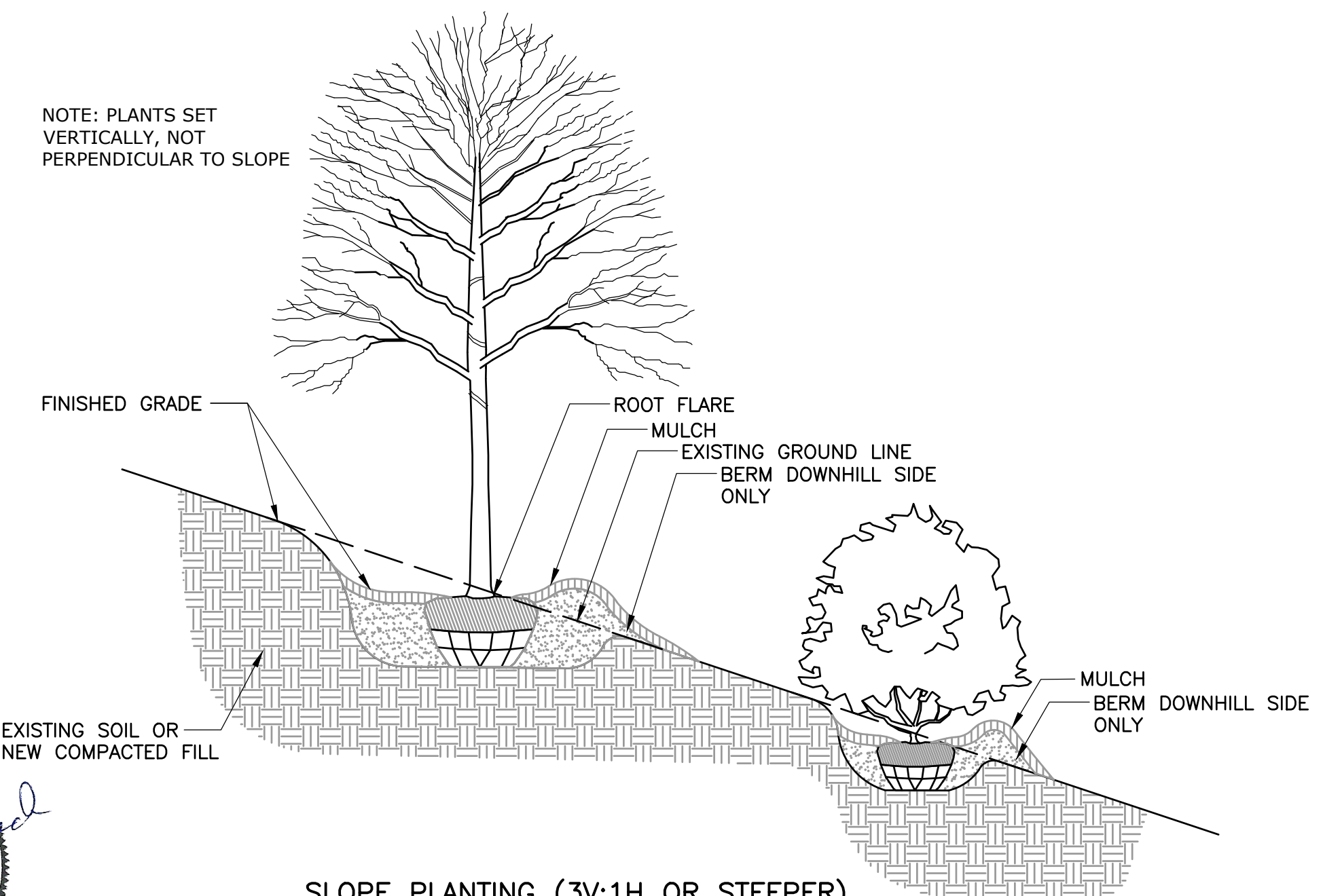
DECIDUOUS TREE PLANTING

DETAIL G
NTS CD-4



SHRUB PLANTING

DETAIL H
NTS CD-4



SLOPE PLANTING (3V:1H OR STEEPER)

DETAIL I
NTS CD-4



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: N. WATKINS
 DRAWN BY: A. CARRANO
 SHEET CHK'D BY: V. ROACH
 CROSS CHK'D BY: S. LANDGREN
 APPROVED BY: V. ROACH
 DATE: JULY 2023



CITY OF WORCESTER, MASSACHUSETTS
 SALISBURY POND WATER QUALITY IMPROVEMENTS

MISCELLANEOUS DETAILS IV
 SHEET NO. CD-4

PROJECT NO. 0198-277460
 FILE NAME: CSDTD004
 SHEET NO. CD-4