

NOTICE OF INTENT DRAWINGS

90 ALLANDALE STREET

BOSTON, MASSACHUSETTS

SHEET INDEX

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SUBMITTED TO THE BOSTON CONSERVATION COMMISSION PURSUANT TO THE
WETLANDS PROTECTION ACT, G.L. c.131. s.40 AND THE BOSTON WETLANDS ORDINANCE
DATE: JANUARY 20, 2021

APPLICANT

STEFECO HOLDINGS, LLC
128 HIGHLAND STREET
WEST NEWTON, MA 02465
WWW.STEFECOBUILDERS.COM
617.340.6352

COUNSEL

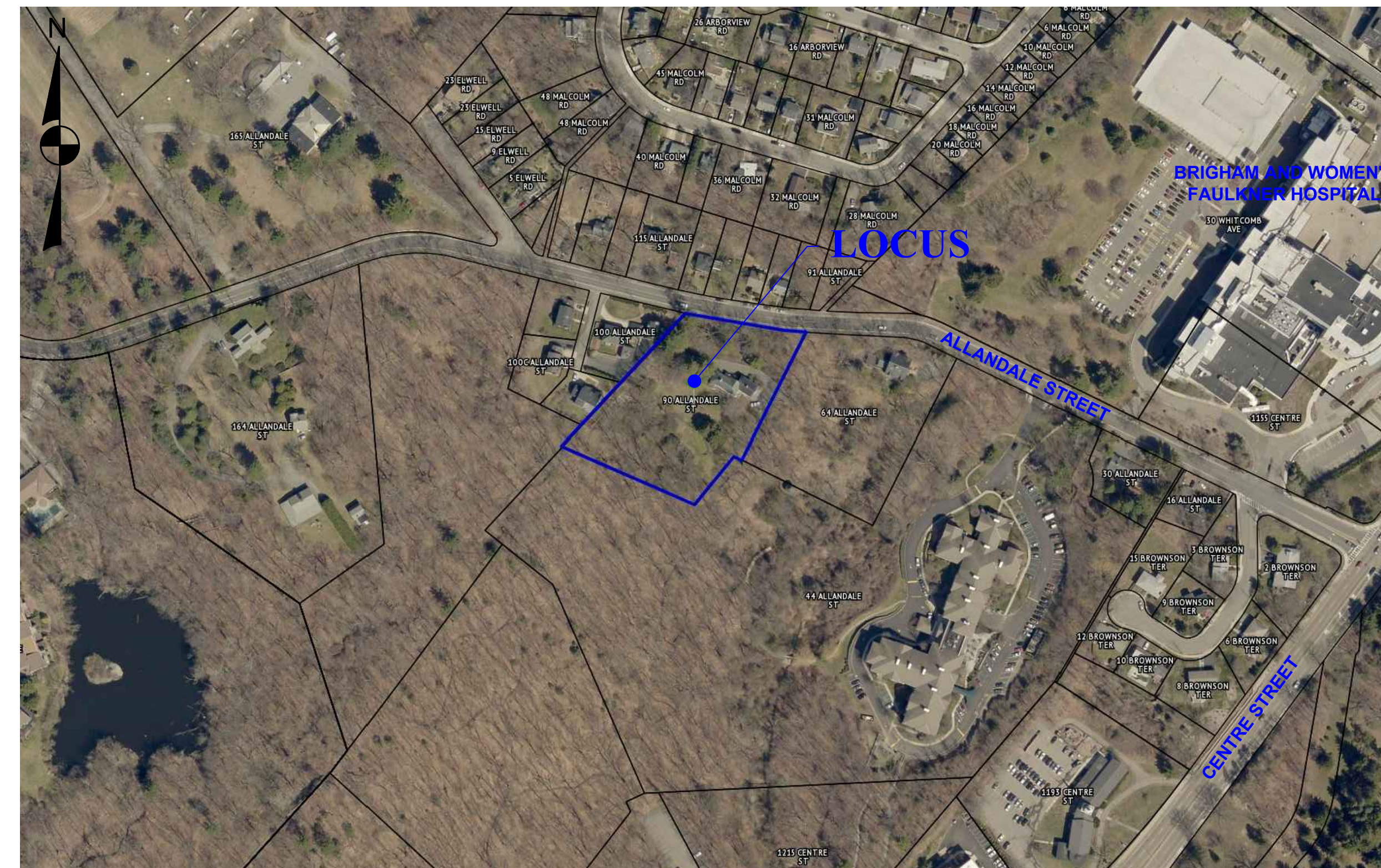
LYNCH, DeSIMONE & NYLEN, LLP
10 POST OFFICE SQUARE, SUITE 970N
BOSTON, MA 02109
WWW.LDNLLP.COM
617.348.4500

WETLANDS CONSULTANT

ECOTEC, INC.
102 GROVE STREET
WORCESTER, MA 01605
WWW.ECOTECINC.US
508.752.9666

CIVIL ENGINEER

DECOULOS & COMPANY, LLC
185 ALEWIFE BROOK PARKWAY
CAMBRIDGE, MA 02138
WWW.DECOULOS.COM
617.489.7795



SOURCE: MASSDOT PICTOMETRY VIEWER
<https://gis.massdot.state.ma.us/dataviewers/pictometry/>

LOCUS MAP

Scale: 1" = 200'

CONCEPT DESIGN

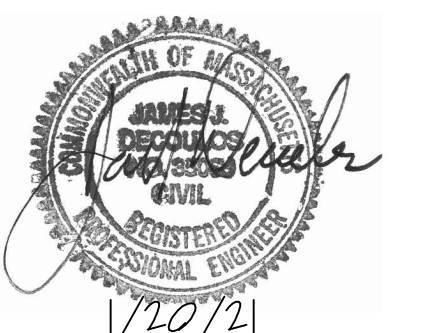
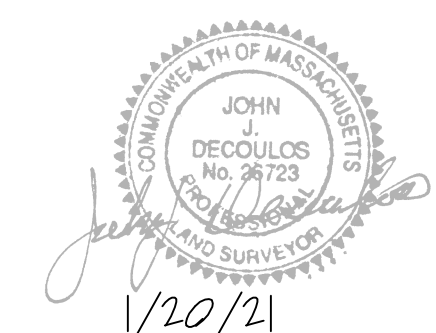
VASSIA VALTCHEV
STEFECO BUILDERS
P.O. BOX 590068
NEWTON, MA 02459

ARCHITECT

HENDREN ASSOCIATES
119 BRAINTREE STREET, SUITE 209
BRAintree, MA 02134
WWW.HENDRENASSOCIATES.COM
617.782.6003

LANDSCAPE ARCHITECT

RYAN ASSOCIATES
144 MOODY STREET
WALTHAM, MA 02453
WWW.RYAN-ASSOC.COM
781.314.0401



LEGEND

- ⊕ HYDRANT
- ⊙ WATER GATE VALVE
- WATER LINE
- UP#37 UTILITY POLE
- ⊙ TELEPHONE MANHOLE
- ⊙ SEWER MANHOLE
- GAS LINE
- ⊙ DRAIN MANHOLE
- ⊙ CATCH BASIN
- 12" S STORMWATER DRAIN LINE

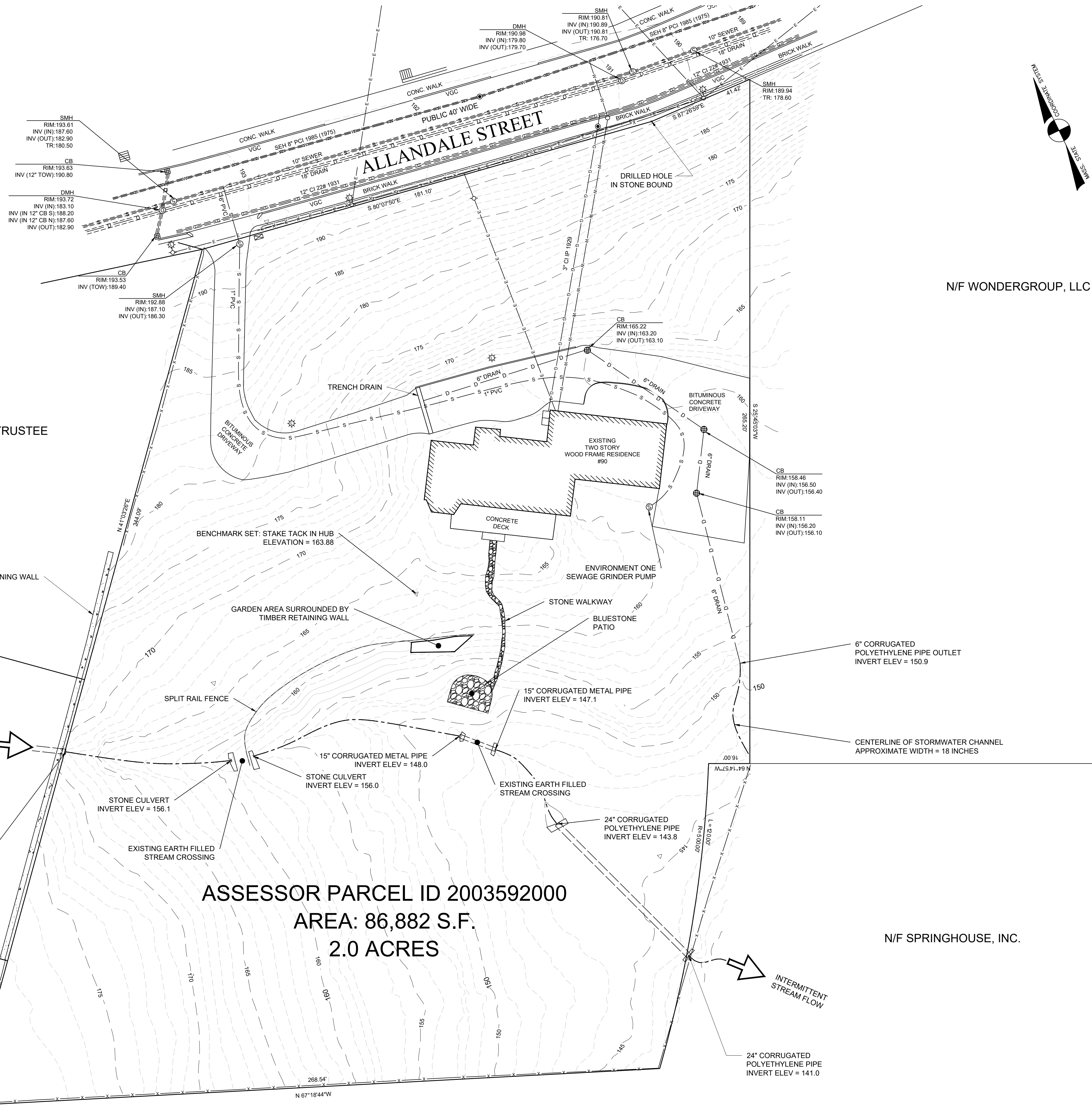
REFERENCES

1. QUITCLAIM DEED FILED WITH THE SUFFOLK COUNTY REGISTRY OF DEEDS AS DOCUMENT NUMBER 99055 AS NOTED ON LAND COURT CERTIFICATE NUMBER 135733 DATED APRIL 1, 2019.
2. LAND COURT PLAN NUMBERS 12247-B AND 12247-H.
3. WETLAND RESOURCE BOUNDARIES ESTABLISHED BY ECOTEC, INC. ON OCTOBER 17, 2019 AND CONFIRMED ON MAY 28, 2020.
4. BOSTON ASSESSOR RECORDS, MAY, 2020.
5. INSTRUMENT SURVEY, MAY 8, 2020.
6. BENCHMARK ESTABLISHED BY DUAL-FREQUENCY GPS STATIC OBSERVATION WITH CORRECTION BY OPUS OF THE NATIONAL GEODETIC SURVEY.
7. ELEVATIONS REFERENCED TO THE BOSTON CITY BASE DATUM, AND ALLANDALE, JURISDICTIONAL INTERMITTENT STREAM PLAN, COM. JUNE 30, 2017.

N/F VIRGINIA A. BETHONEY, TRUSTEE
VAB TRUST

N/F STEPHEN P. BELL
AND JACQUELINE A. LEES

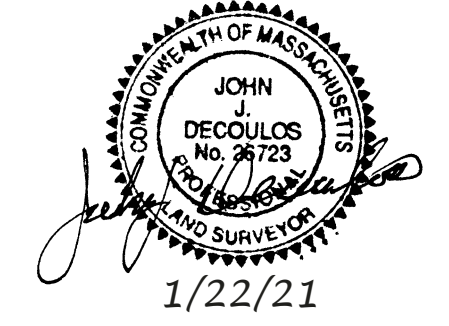
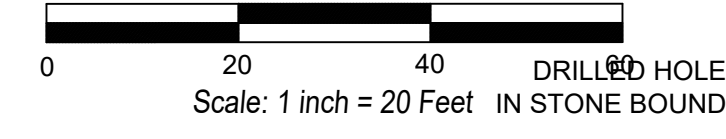
N/F CITY OF BOSTON



ASSESSOR PARCEL ID 2003592000
AREA: 86,882 S.F.
2.0 ACRES

N/F WONDERGROUP, LLC

N/F SPRINGHOUSE, INC.



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617 4897795

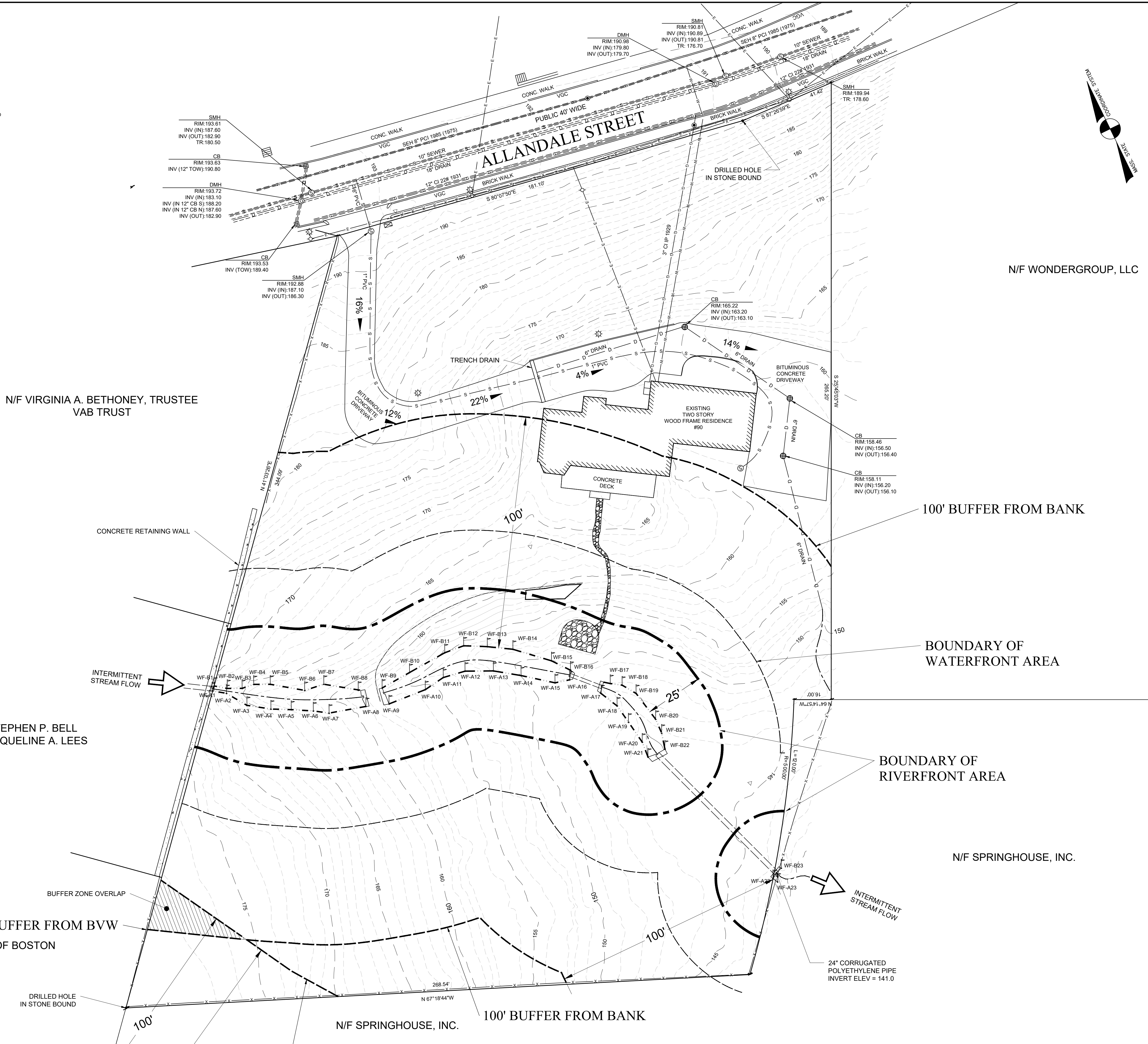
EXISTING CONDITIONS PLAN
90 ALLANDALE STREET
BOSTON, MA

DATE	1-11-21
SCALE	1"=20'
DRWN	TCG
DES	TCG
CHKD	JDD
APRVD	JDD
SHEET NO.	1

NO	DATE	REVISION

- REFERENCES**
- QUITCLAIM DEED FILED WITH THE SUFFOLK COUNTY REGISTRY OF DEEDS AS DOCUMENT NUMBER 862935 AS NOTED ON LAND COURT CERTIFICATE NUMBER 135733 DATED APRIL 1, 2019;
 - LAND COURT PLAN NUMBERS 12247-S AND 12247-H;
 - WETLAND RESOURCE BOUNDARIES ESTABLISHED BY ECOTEC, INC. ON OCTOBER 17, 2019 AND CONFIRMED ON MAY 26, 2020;
 - BOSTON ASSESSOR RECORDS, MAY, 2020;
 - INSTRUMENT SURVEY, MAY 8, 2020;
 - BENCHMARK ESTABLISHED BY DUAL-FREQUENCY GPS STATIC OBSERVATION WITH CORRECTION BY OPUS OF THE NATIONAL GEODETIC SURVEY;
 - ELEVATIONS REFERENCED TO THE BOSTON CITY BASE DATUM, AND
 - ALLANDALE JURISDICTIONAL INTERMITTENT STREAM PLAN, CDM, JUNE 30, 2017.

- LEGEND**
- WETLAND FLAG ESTABLISHED BY ECOTEC, INC., OCTOBER 17, 2019
 - WETLAND RESOURCE BOUNDARY
 - SURVEY CONTROL POINT
 - LIGHT POLE
 - 18" CAST IRON STORMWATER GRATE

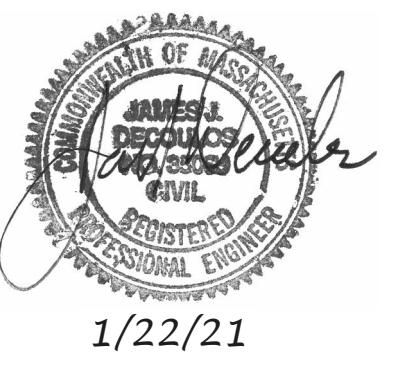


NO	DATE	REVISION

DECOULOS & COMPANY
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 CAMBRIDGE, MA 02138
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 617 489 7795

WETLAND RESOURCE PLAN
90 ALLANDALE STREET
BOSTON, MA

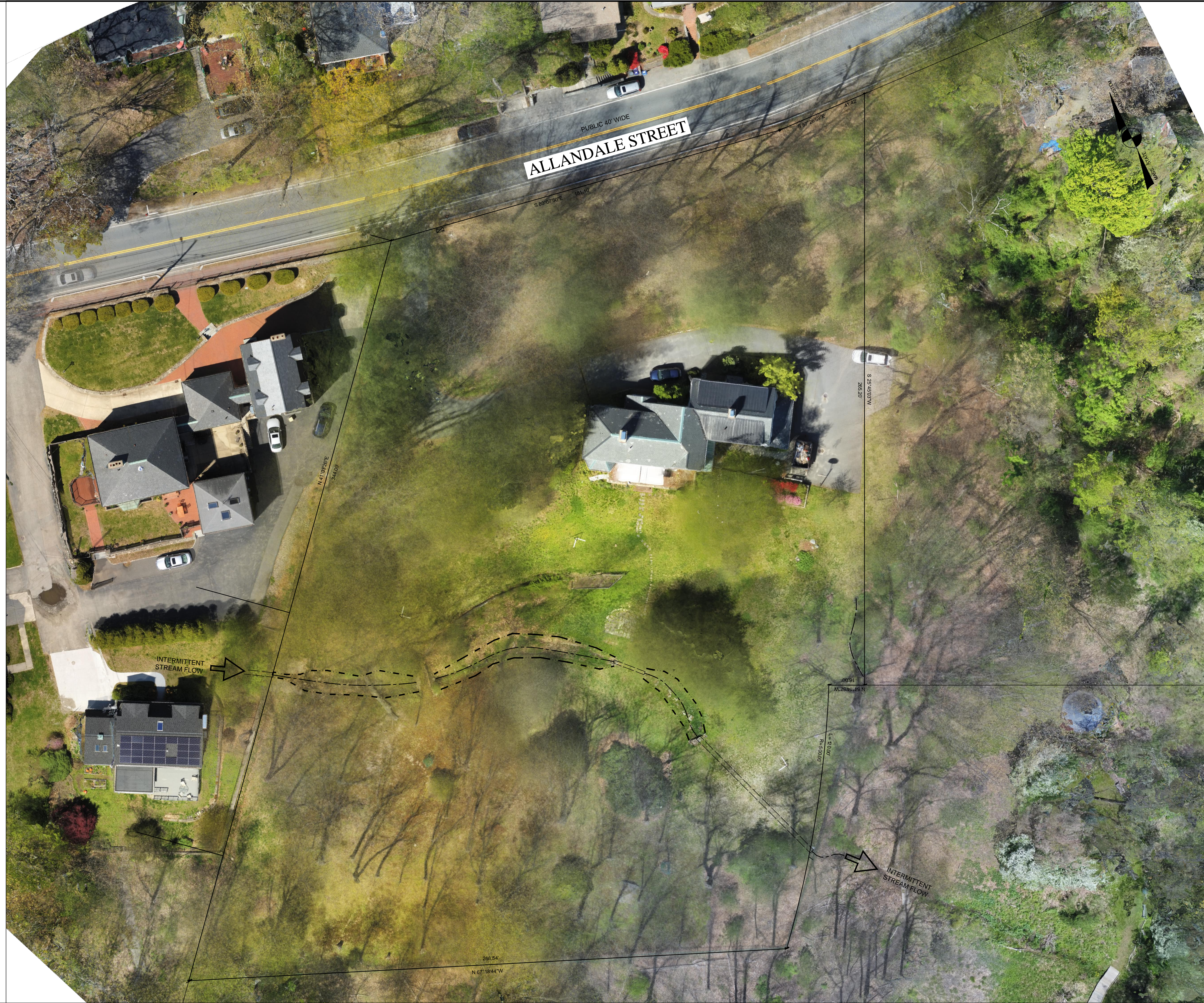
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SCALE	1"=20'
DRWN	TCG
DES	TCG
CHKD	JDD
APRD	JDD
SHEET NO.	2



1/22/21



1/22/21

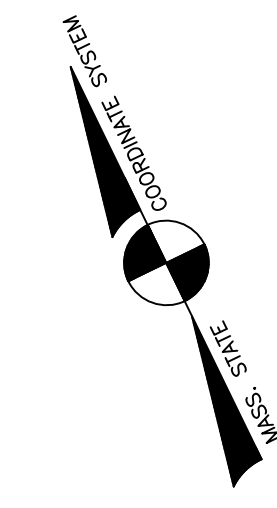
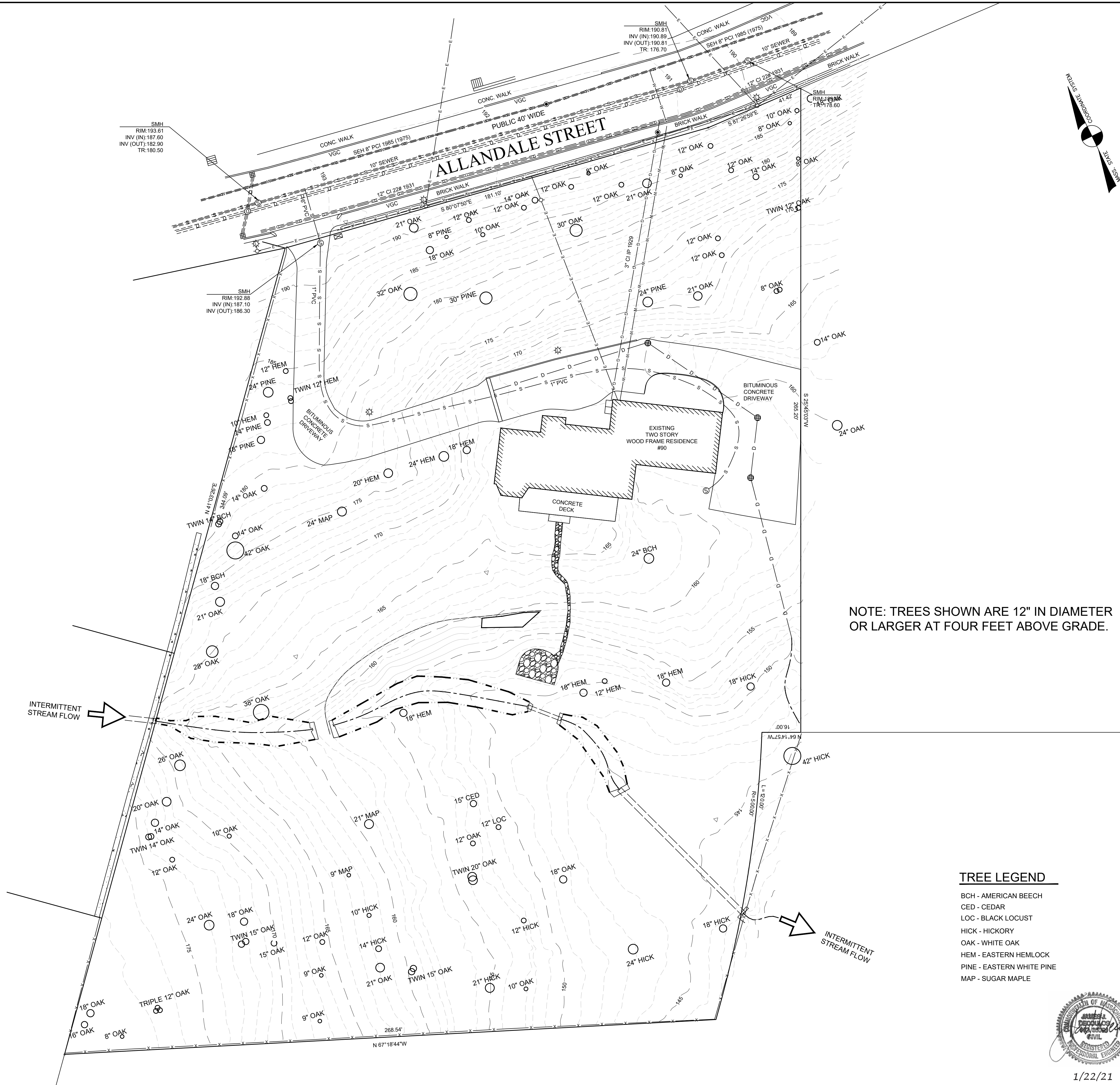


ORTHO PHOTO SITE PLAN
90 ALLANDALE STREET
BOSTON, MA

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 CAMBRIDGE, MA 02138
 WWW.DECOULOS.COM
 617 489 7795

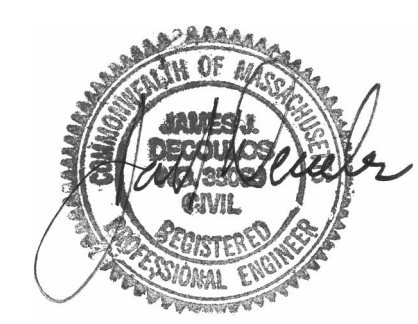
DATE	1-11-21
SCALE	1"=20'
DRWN	TCG
DES	TCG
CHKD	JDD
APRVD	JDD
SHEET NO.	3

NO	DATE	REVISION



NOTE: TREES SHOWN ARE 12" IN DIAMETER OR LARGER AT FOUR FEET ABOVE GRADE.

- TREE LEGEND**
- BCH - AMERICAN BEECH
 - CED - CEDAR
 - LOC - BLACK LOCUST
 - HICK - HICKORY
 - OAK - WHITE OAK
 - HEM - EASTERN HEMLOCK
 - PINE - EASTERN WHITE PINE
 - MAP - SUGAR MAPLE



1/22/21

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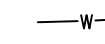






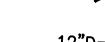
EXISTING TREE PLAN
90 ALLLENDALE STREET
BOSTON, MA

DATE	1-11-21
SCALE	1"=20'
DRWN	TCG
DES	TCG
CHKD	JDD
APRVD	JDD

SHEET NO.
4

NO	DATE	REVISION

LEGEND

-  HYDRANT
-  WATER GATE VALVE
-  WATER LINE
-  UTILITY POLE
-  TELEPHONE MANHOLE
-  SEWER MANHOLE
-  GAS LINE
-  DRAIN MANHOLE
-  CATCH BASIN
-  STORMWATER DRAIN LINE



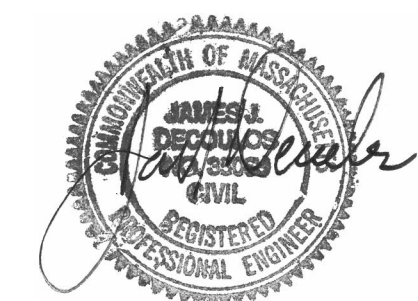
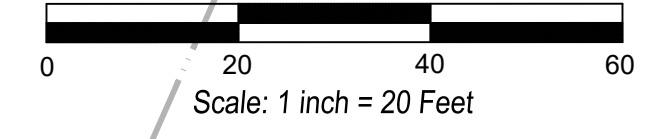
N/F VIRGINIA A. BETHONEY, TRUSTEE
VAB TRUST

N/F STEPHEN P. BELL
AND JACQUELINE A. LEES

N/F CITY OF BOSTON

N/F WONDERGROUP, LLC

N/F SPRINGHOUSE, INC.



1/22/21

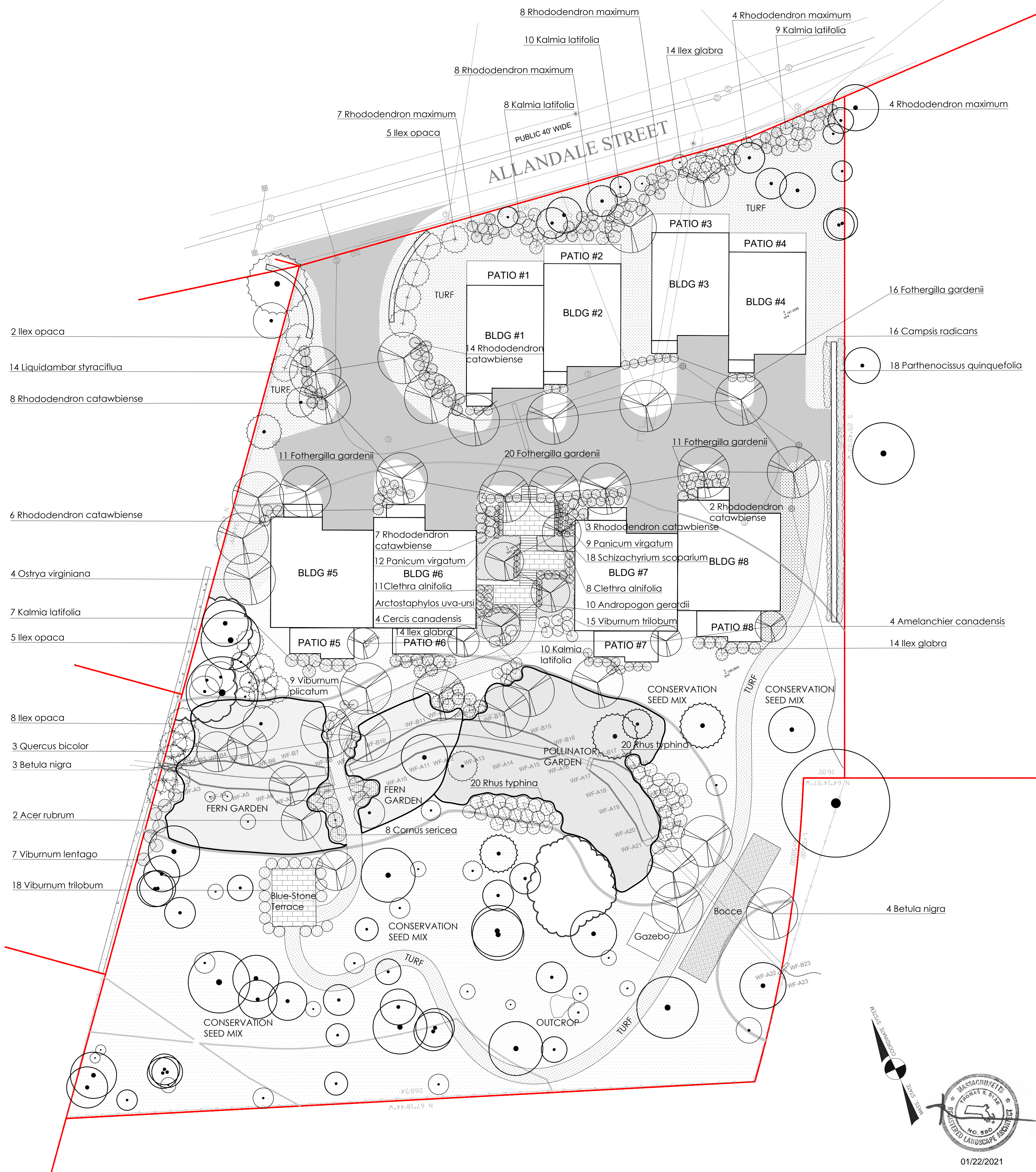
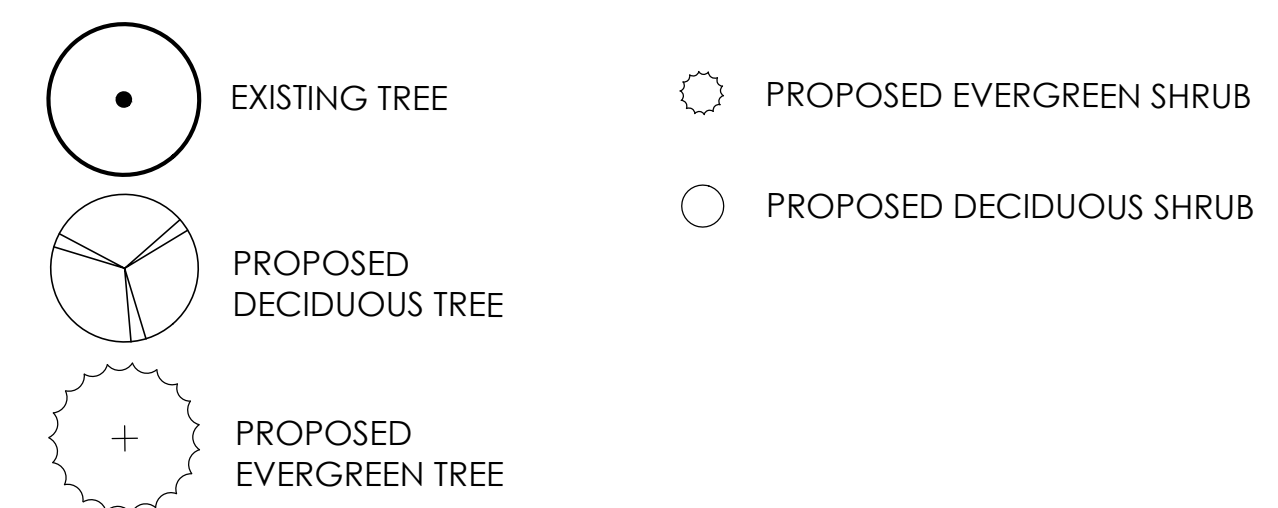
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CAMBRIDGE, MA 02138
WWW.DECOULOS.COM
617 489 7795

LAYOUT AND GRADING PLAN
90 ALLANDALE STREET
JAMAICA PLAIN, MA

DATE	01-20-21
SCALE	1"=20'
DRWN	TCG
DES	TCG
CHKD	JDD
APRVD	JDD
SHEET NO.	6

NO	DATE	REVISION

90 Allendale Street				
Quantity	Botanical Name	Common Name	Size	Condition Notes
UPPER SITE				
TREES				
8	<i>Cercis canadensis</i>	American Redbud	2" - 2 1/2" cal.	B&B
7	<i>Ilex opaca</i>	American Holly	8' - 10' ht.	B&B
14	<i>Liquidambar styraciflua</i>	Sweet Gum	3" - 3 1/2" cal.	B&B branched at 7' ht.
SHRUBS				
20	<i>Clethra alnifolia</i>	Summersweet	2 1/2' - 3' ht	B&B
51	<i>Fothergilla gardenii</i>	Dwarf Fothergilla	2 1/2' - 3' ht	B&B
14	<i>Ilex glabra</i>	Inkberry	3' - 3 1/2' ht	B&B
23	<i>Kalmia latifolia</i>	Mountain Laurel	3' - 3 1/2' ht	B&B
36	<i>Rhododendron catawbiense</i>	Catawba Rhododendron	3' - 3 1/2' ht	B&B
34	<i>Rhododendron maximum</i>	Rhododendron maximum	3' - 3 1/2' ht	B&B
10	<i>Viburnum trilobum</i>	Cranberrybush Viburnum	2 1/2' - 3' ht	B&B
GRASSES				
10	<i>Andropogon gerardii</i>	Big Bluestem	1 gal.	cont.
21	<i>Panicum virgatum</i>	Switchgrass	1 gal.	cont.
18	<i>Schizachyrium scoparium</i>	Little Bluestem	1 gal.	cont.
GROUND COVER				
600	<i>Arctostaphylos uva-ursi</i>	Common Bearberry	1 quart.	cont.
VINES				
16	<i>Campsis radicans</i>	Trumpet Vine	1 gal.	cont.
18	<i>Parthenocissus quinquefolia</i>	Virginia Creeper	1 gal.	cont.
TURF				
Low water use, tall fescue mix				
LOWER SITE				
TREES				
2	<i>Acer rubrum</i>	Red Maple	3" - 3 1/2" cal.	B&B
4	<i>Amelanchier canadensis</i>	Serviceberry	8' - 10' ht.	B&B
6	<i>Betula nigra</i>	River Birch	14' - 16' ht.	B&B clump
3	<i>Quercus bicolor</i>	Swamp White Oak	3" - 3 1/2" cal.	B&B
SHRUBS				
8	<i>Cornus sericea</i>	Redtwig Dogwood	2 1/2' - 3' ht	B&B
24	<i>Ilex glabra</i>	Inkberry	2 1/2' - 3' ht	B&B
13	<i>Ilex opaca</i>	American Holly	2 1/2' - 3' ht	B&B
17	<i>Kalmia latifolia</i>	Mountain Laurel	2 1/2' - 3' ht	B&B
40	<i>Rhus typhina</i>	Staghorn sumac	1 1/2' - 4' ht	B&B/cont./BR mixed sizes
7	<i>Viburnum lentago</i>	Nannyberry Viburnum	2 1/2' - 3' ht	B&B
32	<i>Viburnum trilobum</i>	Cranberrybush Viburnum	2 1/2' - 3' ht	B&B
TURF GRASS				
New England Conservation/Wildlife Mix by New England Wetland Plants Inc.				
FERN GARDEN				
PERENNIALS				
40	<i>Adiantum pedatum</i>	Maidenhair Fern	#1	pot
40	<i>Dennstaedtia punctilobula</i>	Hay Scented Fern	#1	pot
60	<i>Dryopteris marginalis</i>	Marginal Wood Fern	#1	pot
40	<i>Matteuccia struthiopteris</i>	Ostrich Fern	#1	pot
40	<i>Onoclea sensibilis</i>	Sensitive Fern	#1	pot
40	<i>Osmunda cinnamomea</i>	Cinnamon Fern	#1	pot
40	<i>Osmunda regalis</i>	Royal Fern	#1	pot
60	<i>Polystichum acrostichoides</i>	Christmas Fern	#1	pot
40	<i>Thelypteris noveboracensis</i>	New York Fern	#1	pot
Overseed				
Eastern Pollinator seed mix, Applewood Seed Co				
POLLINATOR GARDEN				
PERENNIALS				
Spring				
30	<i>Aquilegia canadensis</i>	Red Columbine	#1	pot
30	<i>Prunella vulgaris</i>	Self Heal	#1	pot
30	<i>Tradescantia ohiensis</i>	Spiderwort	#1	pot
Summer				
30	<i>Asclepias purpurascens</i>	Purple milkweed	#1	pot
30	<i>Echinacea purpurea</i>	Purple Coneflower	#1	pot
30	<i>Eutrochium purpureum</i>	Joe-Pye Weed	#1	pot
Fall				
30	<i>Chelone glabra</i>	Turtlehead	#1	pot
30	<i>Eurybia macrophylla</i>	Big-leaf aster	#1	pot
30	<i>Helianthus divaricatus</i>	Woodland Sunflower	#1	pot
Overseed				
Eastern Pollinator seed mix, Applewood Seed Co				
GRASSES				
60	<i>Tufted Hair Grass</i>	<i>Deschampsia cespitosa</i>	#1	pot



ASSOCIATES
 LANDSCAPE ARCHITECTURE AND PLANNING
 144 Moody Street, Building 4
 Waltham, MA 02453-5332
 ph: 781 - 314 - 0401
 www.ryan-assoc.com



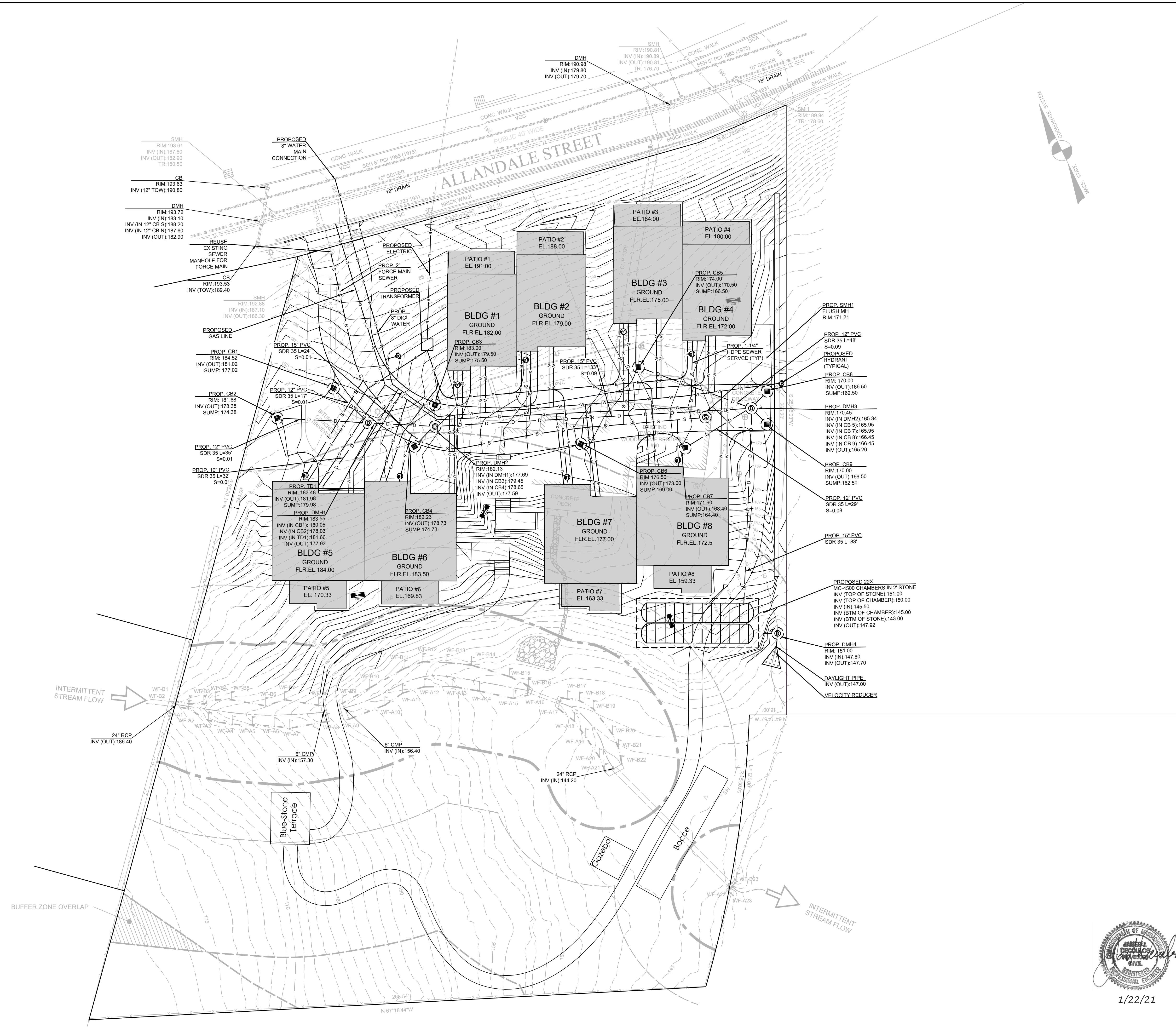
Stefco Holdings, LLC
 90 ALLANDALE ST
 BOSTON, MA

Planting Plan
 SCALE: 1" = 20'-0"

ISSUED	1	2	3	4	5	6

L1.0

- LEGEND**
- HYDRANT
 - WATER GATE VALVE
 - WATER LINE
 - UTILITY POLE
 - TELEPHONE MANHOLE
 - SEWER MANHOLE
 - GAS LINE
 - DRAIN MANHOLE
 - CATCH BASIN
 - STORMWATER DRAIN LINE

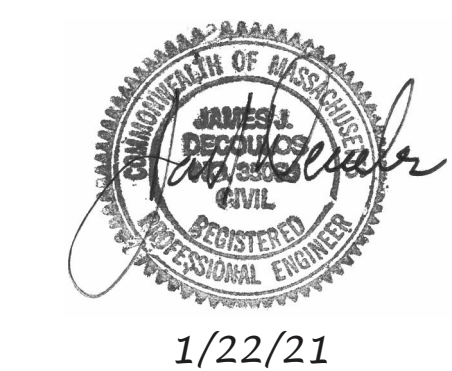


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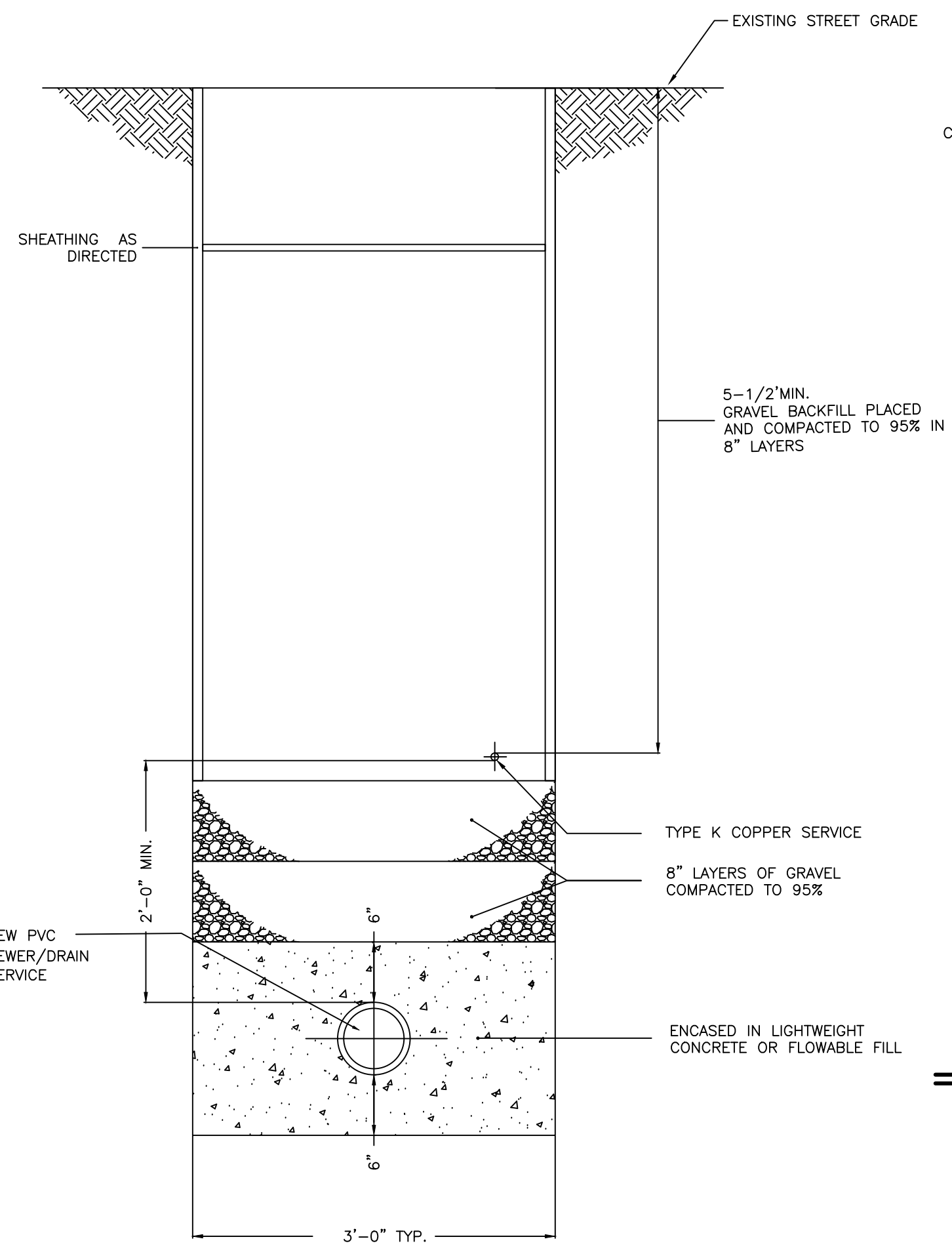
DRAINAGE AND UTILITY PLAN
90 ALLANDALE STREET
BOSTON (ROXBURY), MA

BWSC#:

DATE	1-20-21
SCALE	1" = 20'
DRWN	TCG
DES	TCG
CHKD	JDD
APRVD	JDD
SHEET NO.	7

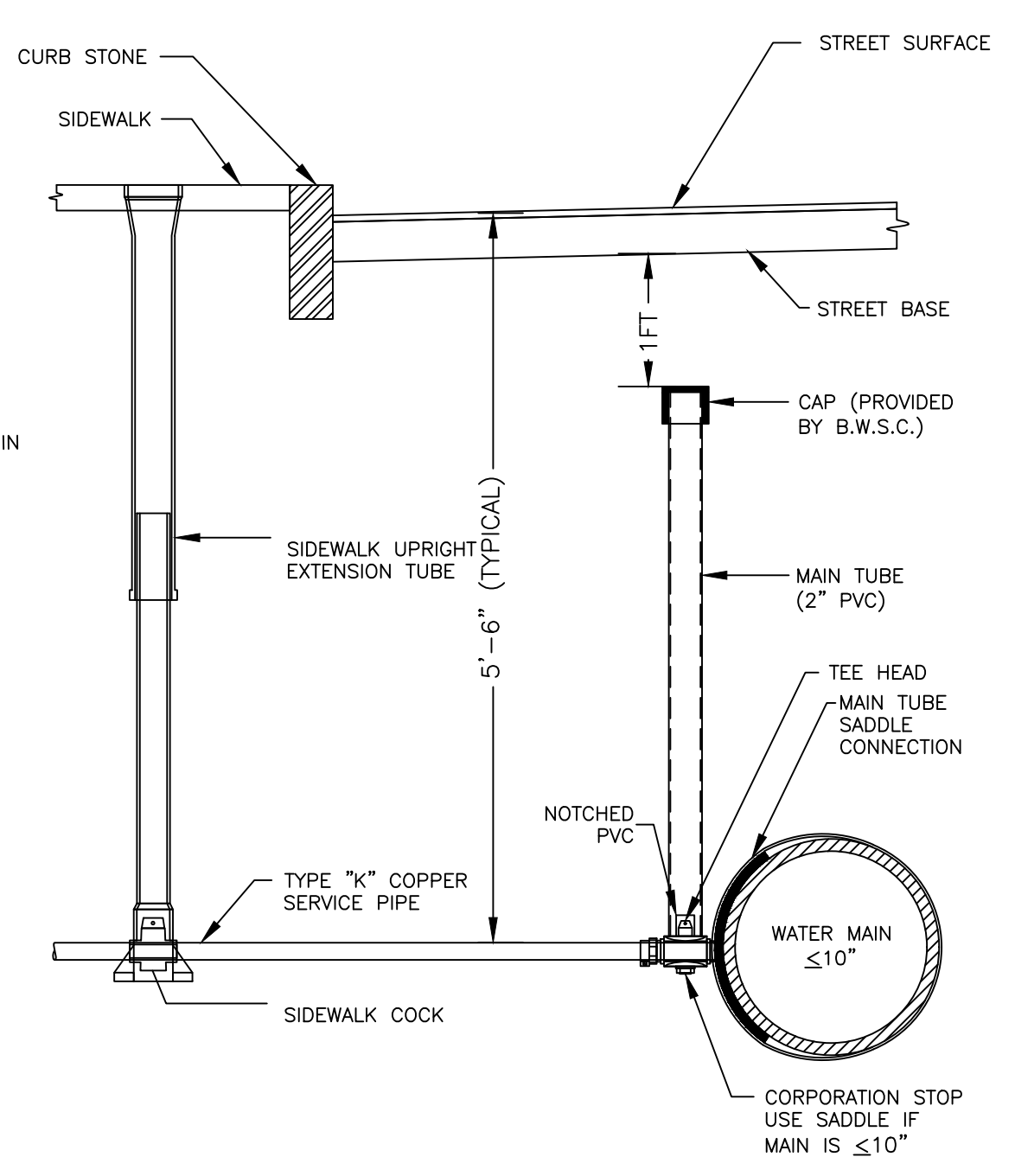


NO	DATE	REVISION



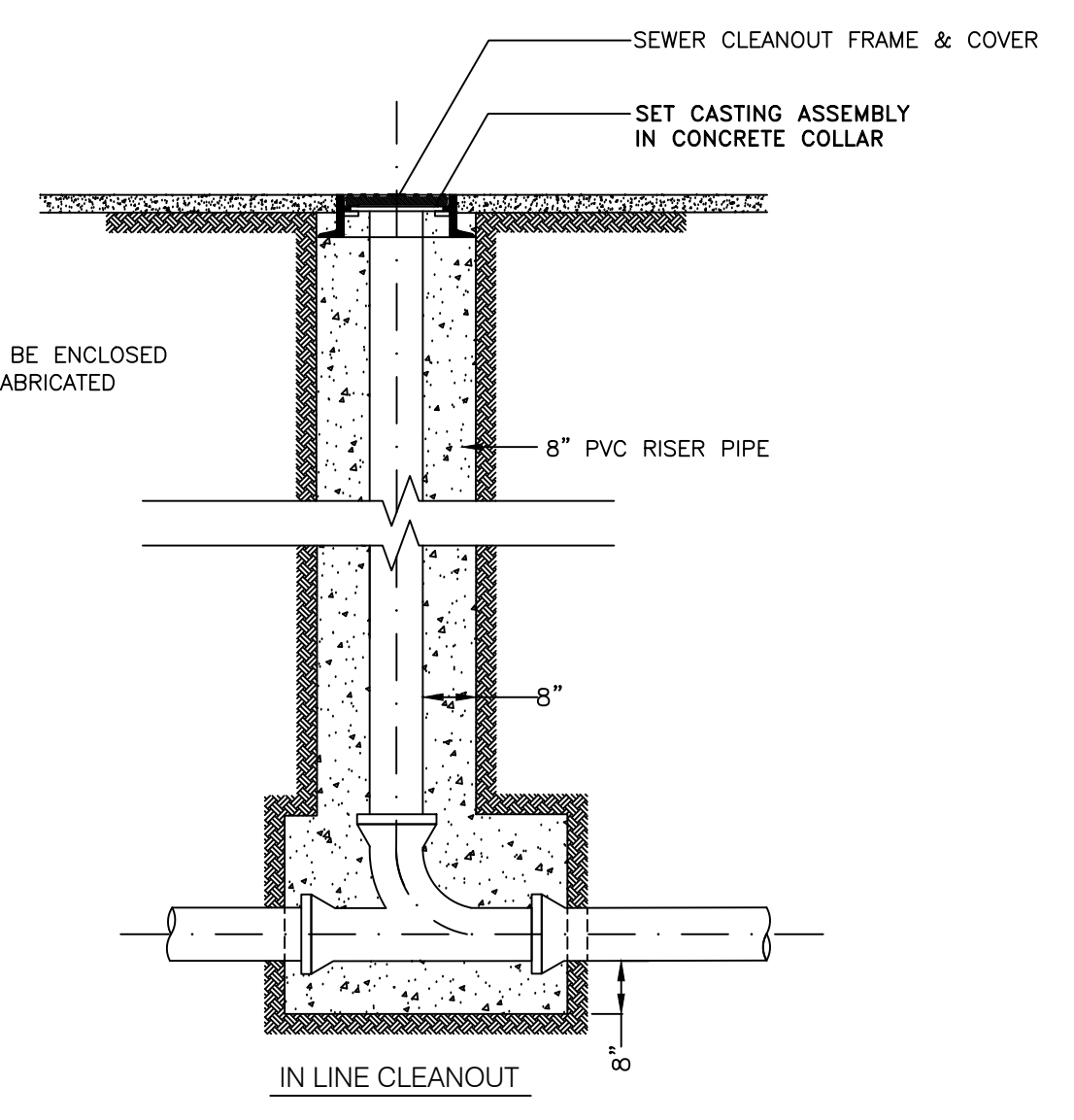
WATER, SEWER, DRAIN TRENCH DETAIL

N.T.S.



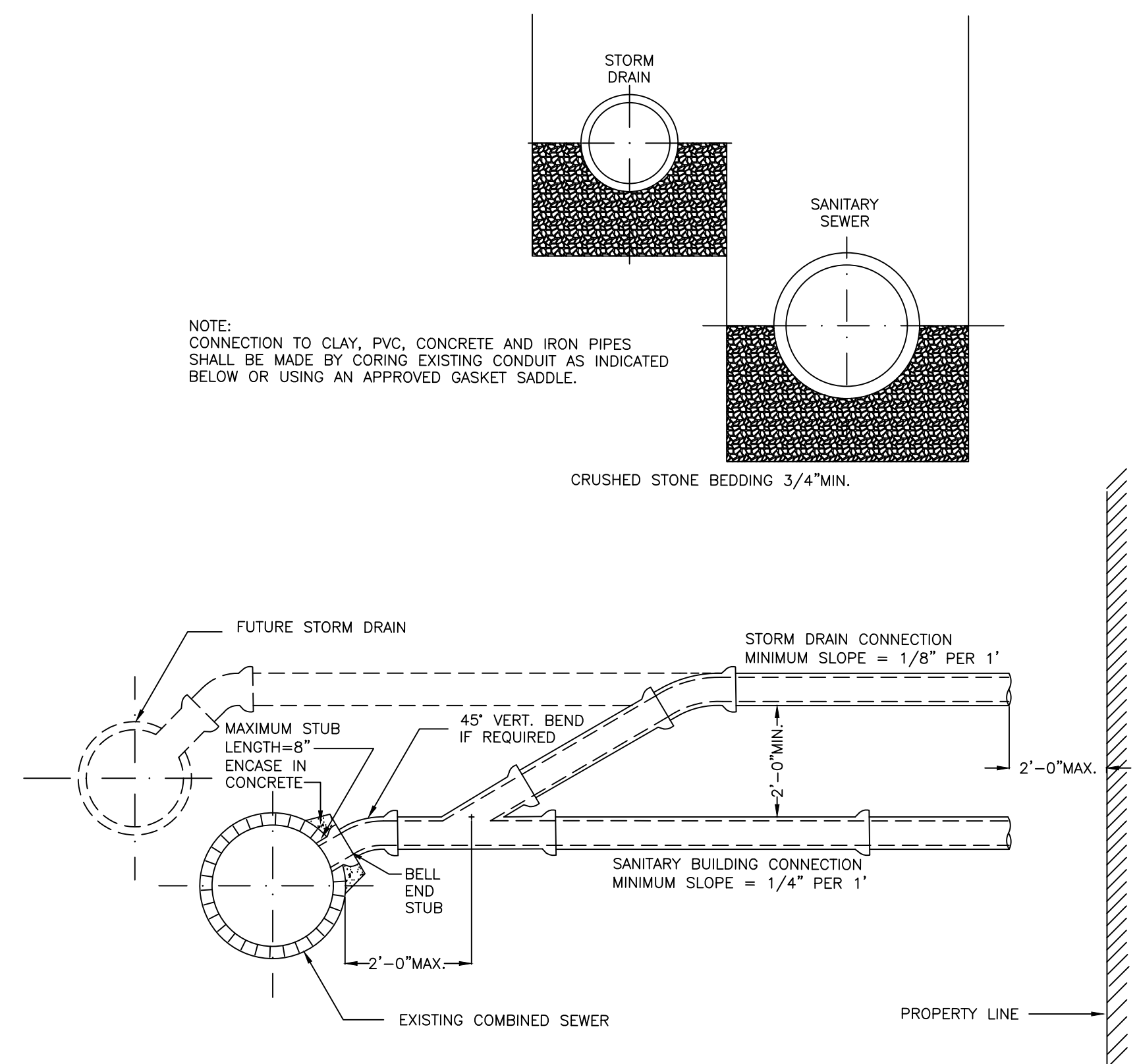
TYPICAL WATER CONNECTION DETAIL

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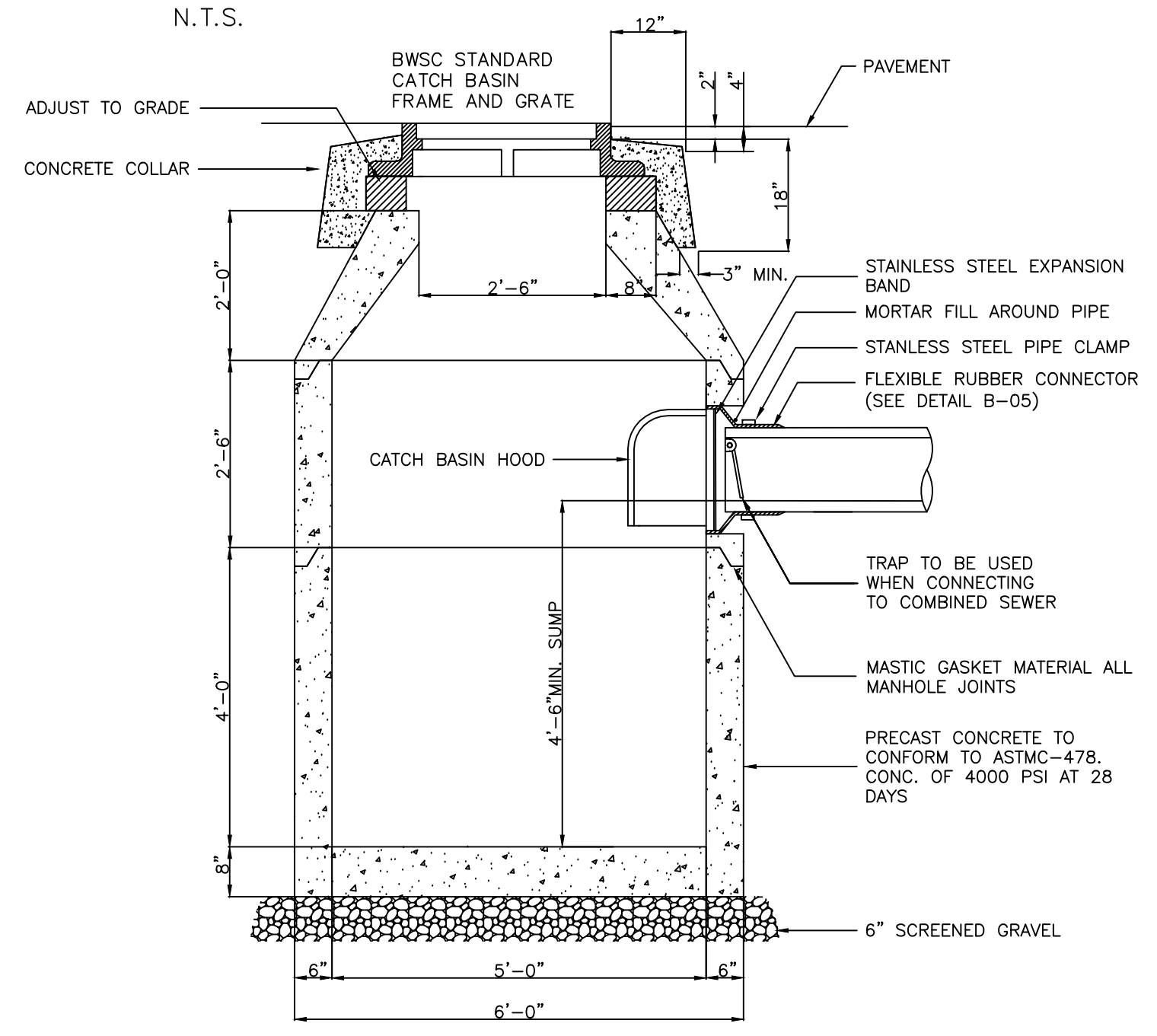
CLEANOUT DETAIL

N.T.S.



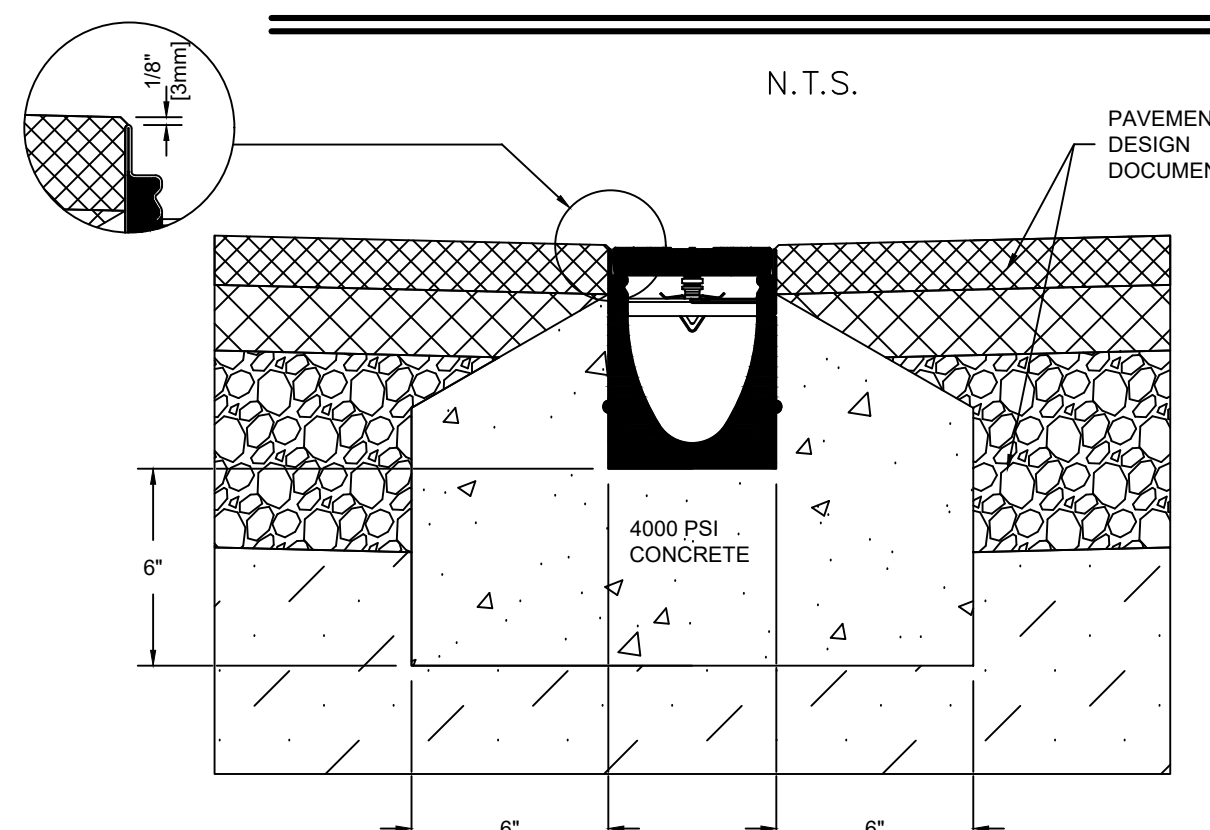
TYPICAL SEWER AND DRAIN CONNECTION DETAIL

N.T.S.



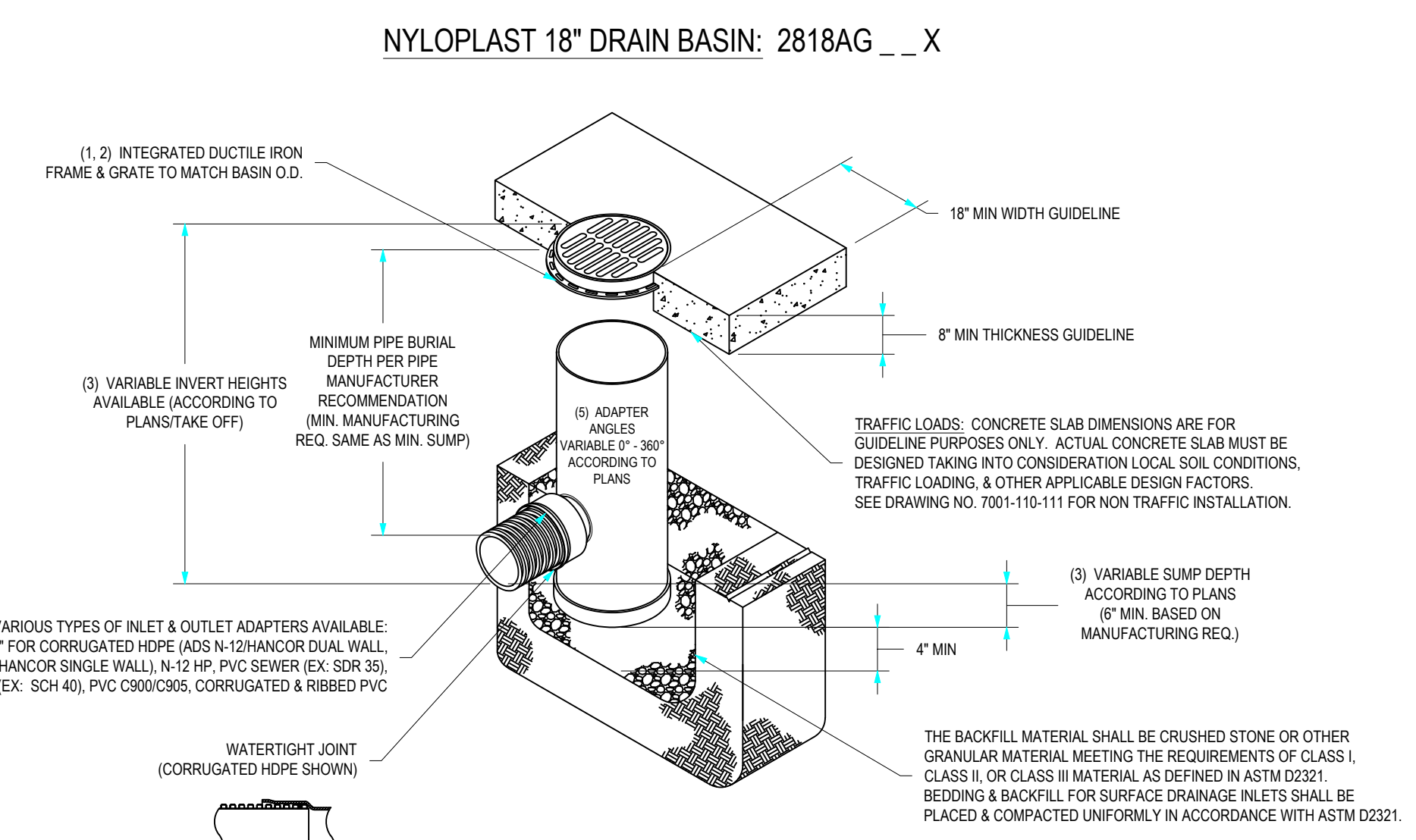
CATCH BASIN DETAIL

N.T.S.



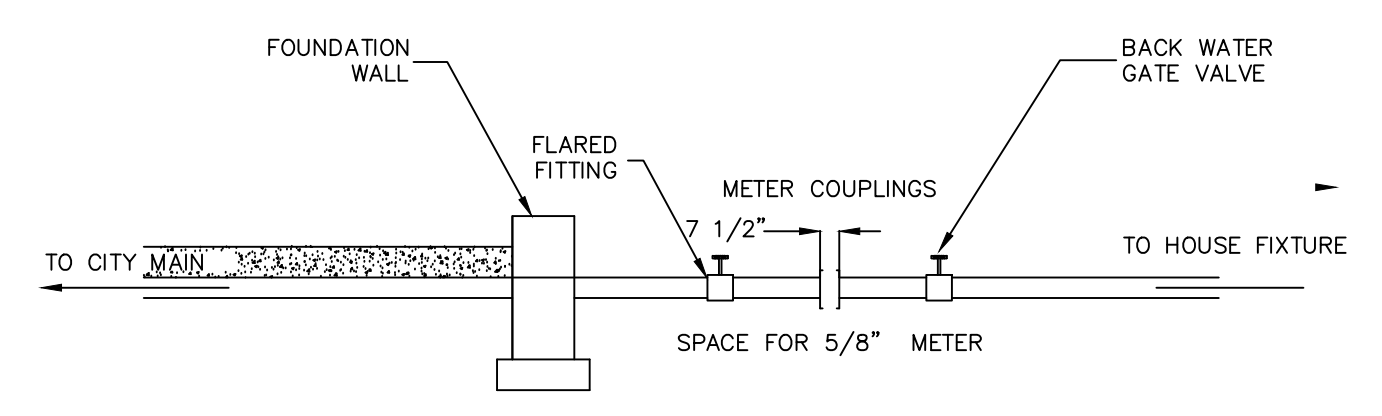
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N.T.S.



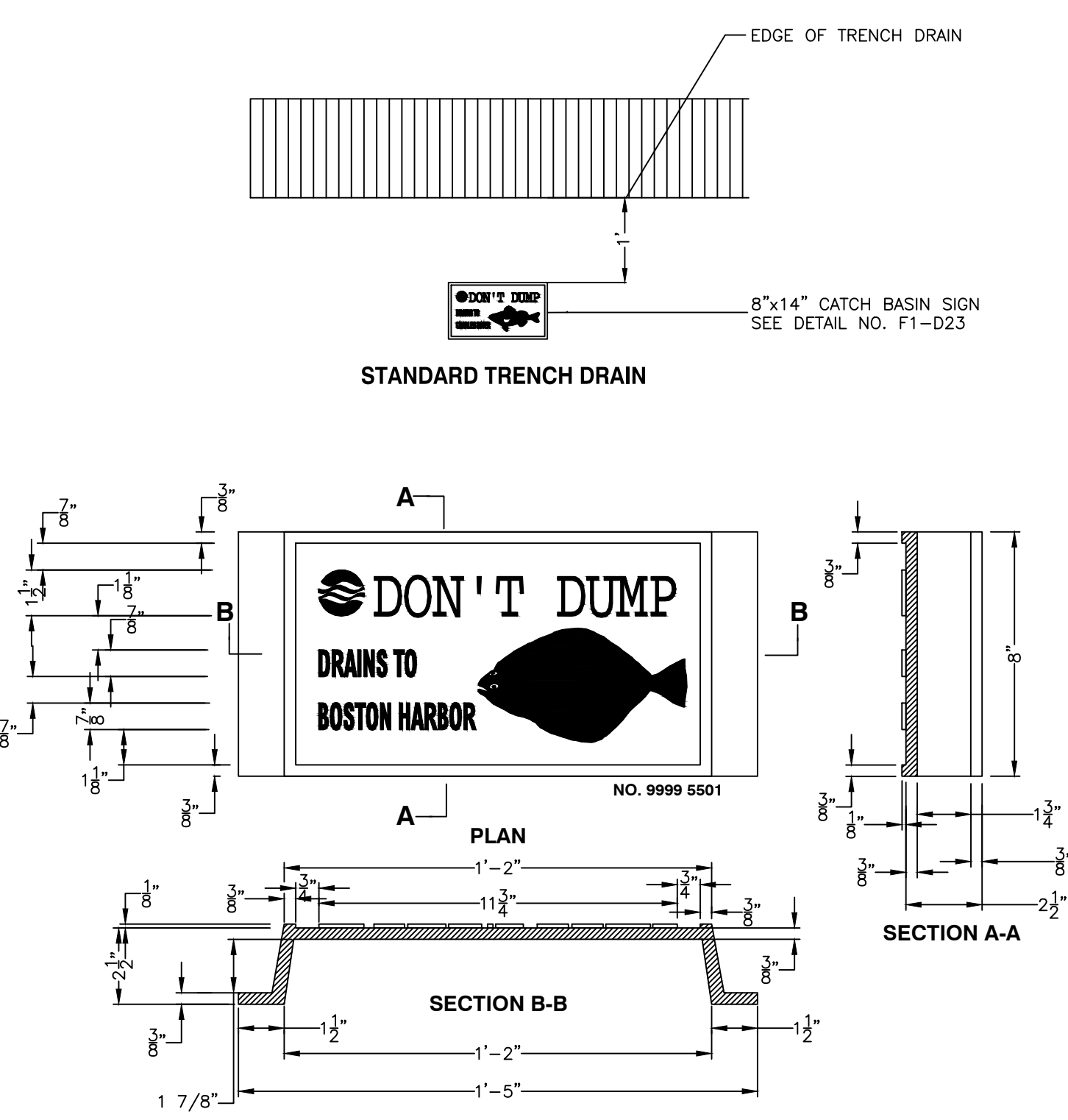
NYLOPLAST AREA DRAIN DETAIL

N.T.S.



CORRECT PLUMBING FOR METER INSTALLATION DETAIL

N.T.S.



8" X 14" CATCH BASIN SIGN DETAIL

N.T.S.

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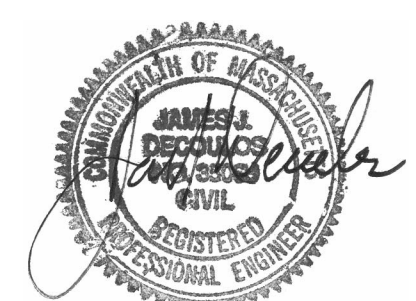
DETAIL SHEET
90 ALLANDALE STREET
BOSTON (ROXBURY), MA

BWSC#:

DATE
1-20-21
SCALE
NTS

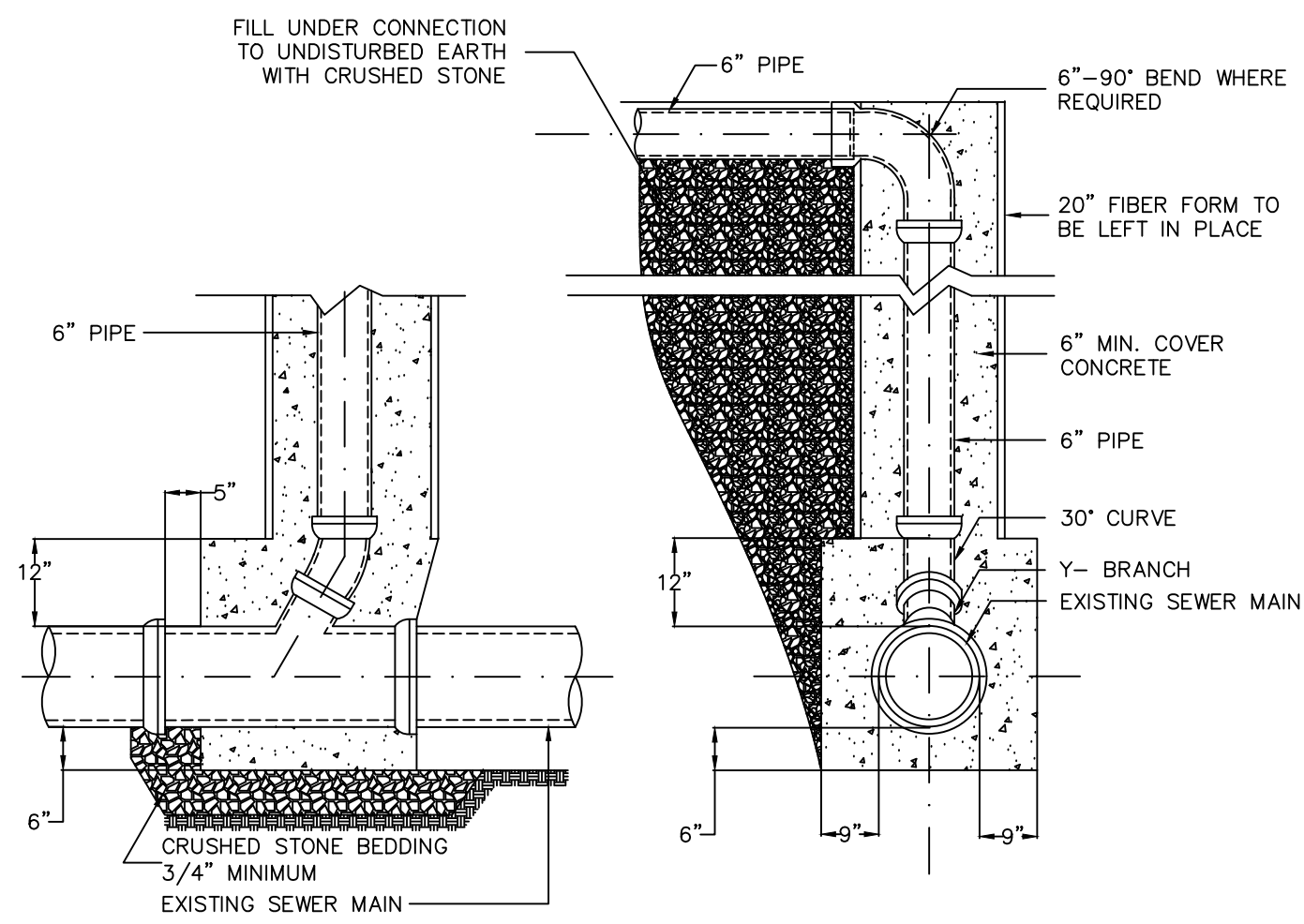
DRWN TCG
 DES TCG
 CHKD JDD
 APRVD JDD

SHEET NO.
8

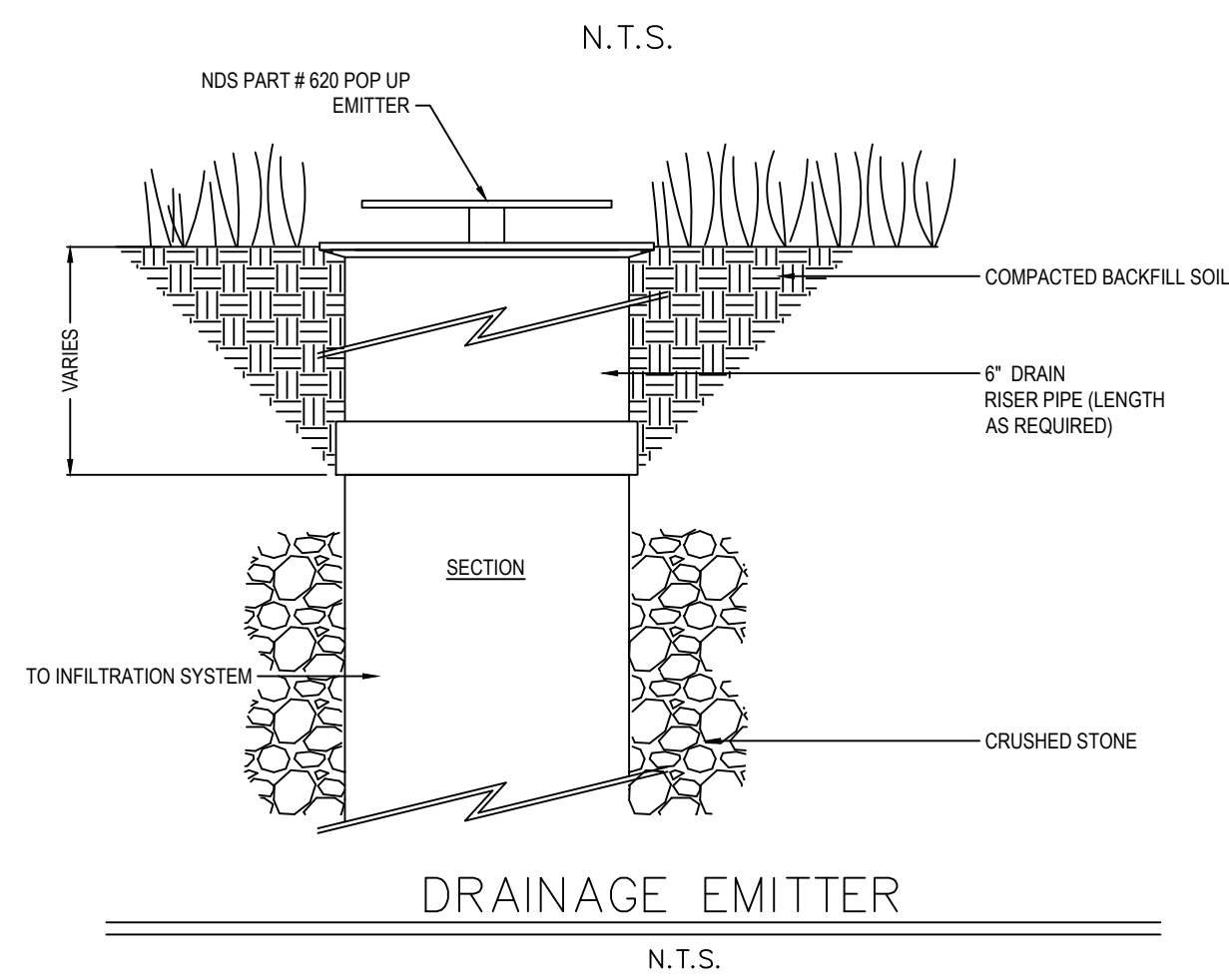


1/22/21

NO.	DATE	REVISION

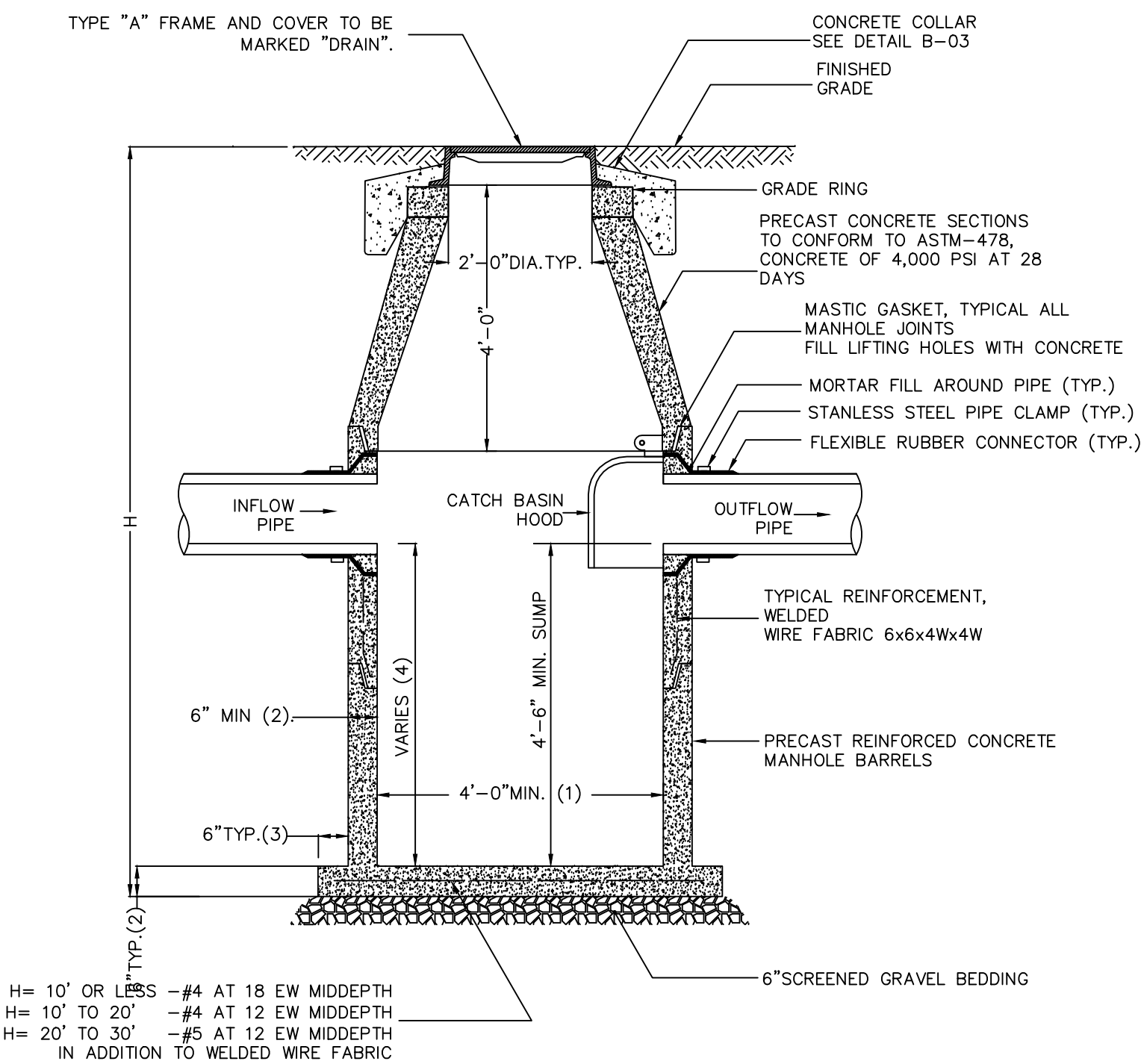


OBSERVATION PORT DETAIL



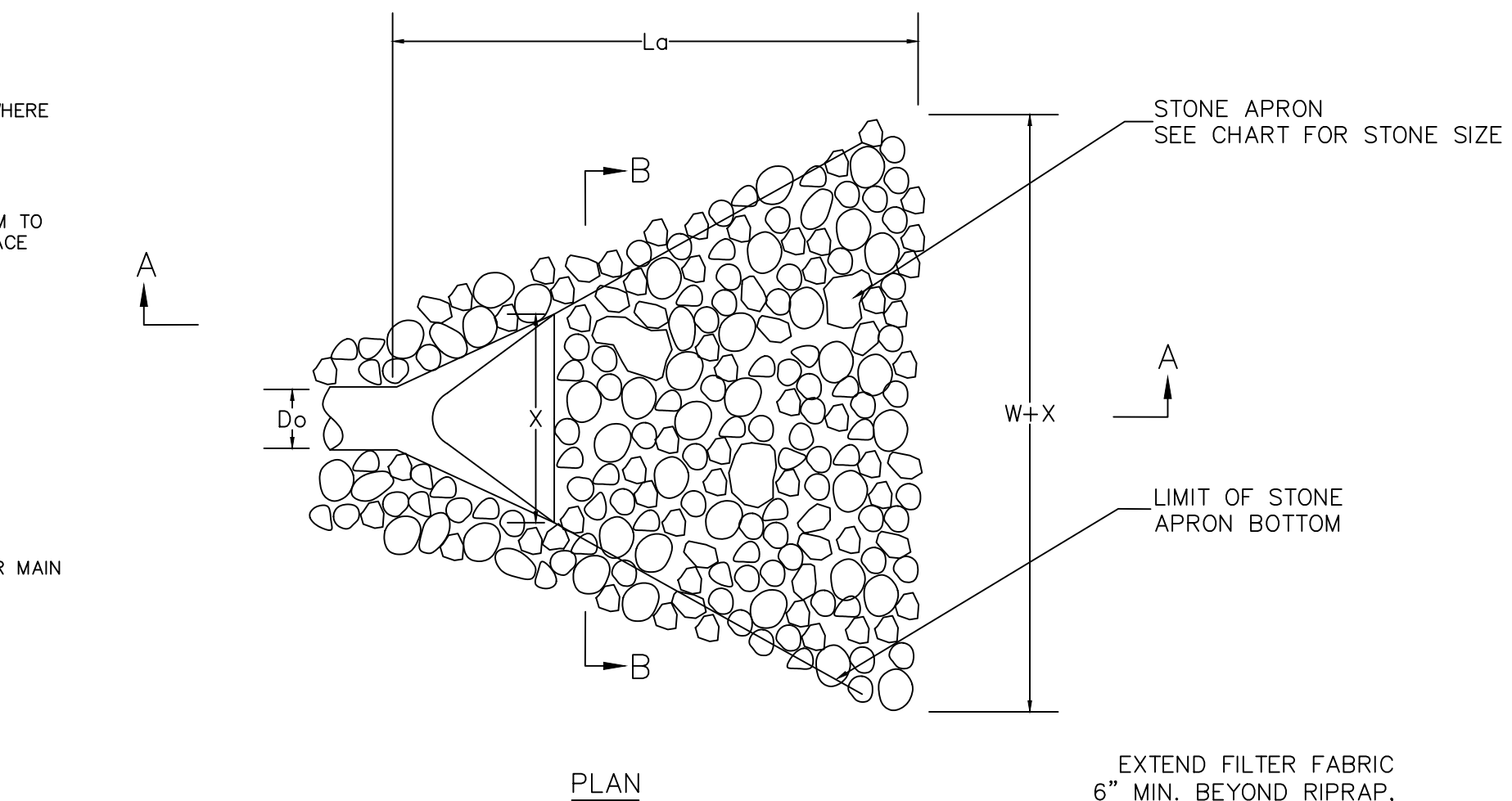
DRAINAGE EMITTER

- NOTES:
- 5'-0" DIAMETER FOR ALL MANHOLE DEPTHS GREATER THAN 20 FEET OR WHEN ORDERED BY THE ENGINEER.
 - 6" MIN. WALL THICKNESS AND 7 INCH MIN. BASE THICKNESS WITH 5'-0" DIAMETER MANHOLES.
 - 6 INCH LIP OPTIONAL UNLESS OTHERWISE NOTED.
 - IN SOME INSTALLATIONS, THE INFLOW PIPE WILL BE LOWER THAN THE OUTFLOW PIPE, AND THE SUMP DEPTH WILL BE GREATER THAN 4'-6" TO MAINTAIN A MINIMUM DISTANCE OF 2'-6" FROM THE INVERT OF THE INFLOW PIPE TO THE BOTTOM OF THE SUMP.

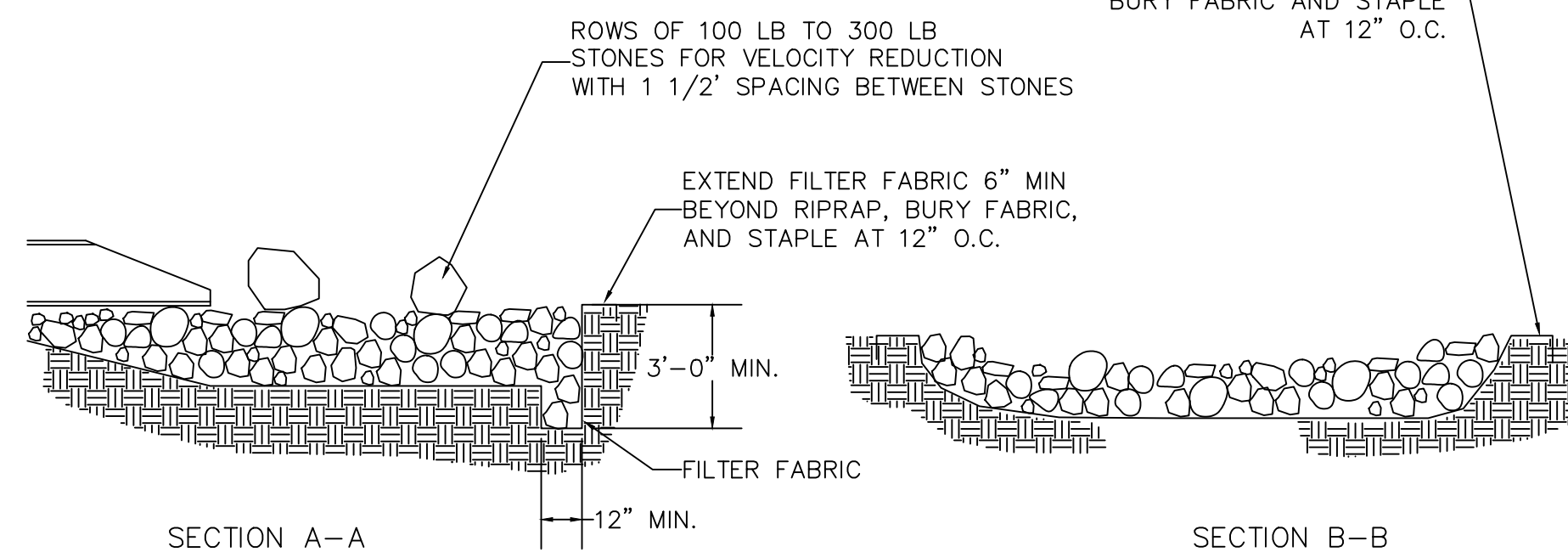


TYPICAL DRAIN SUMP MANHOLE

N.T.S.



PLAN

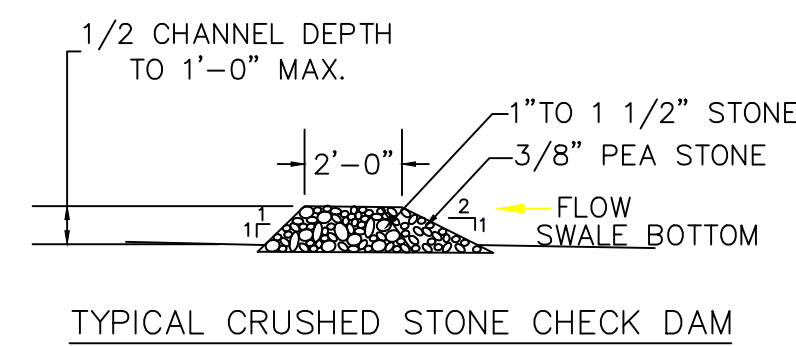


DIAMETER OF PIPE (Do)	MIN. LENGTH OF APRON (Lo)	MIN. WIDTH OF APRON (W+X)	MEDIAN RIP RAP DIAMETER (d50)(ft)
18"	16'-0"	17'-6"	0.6

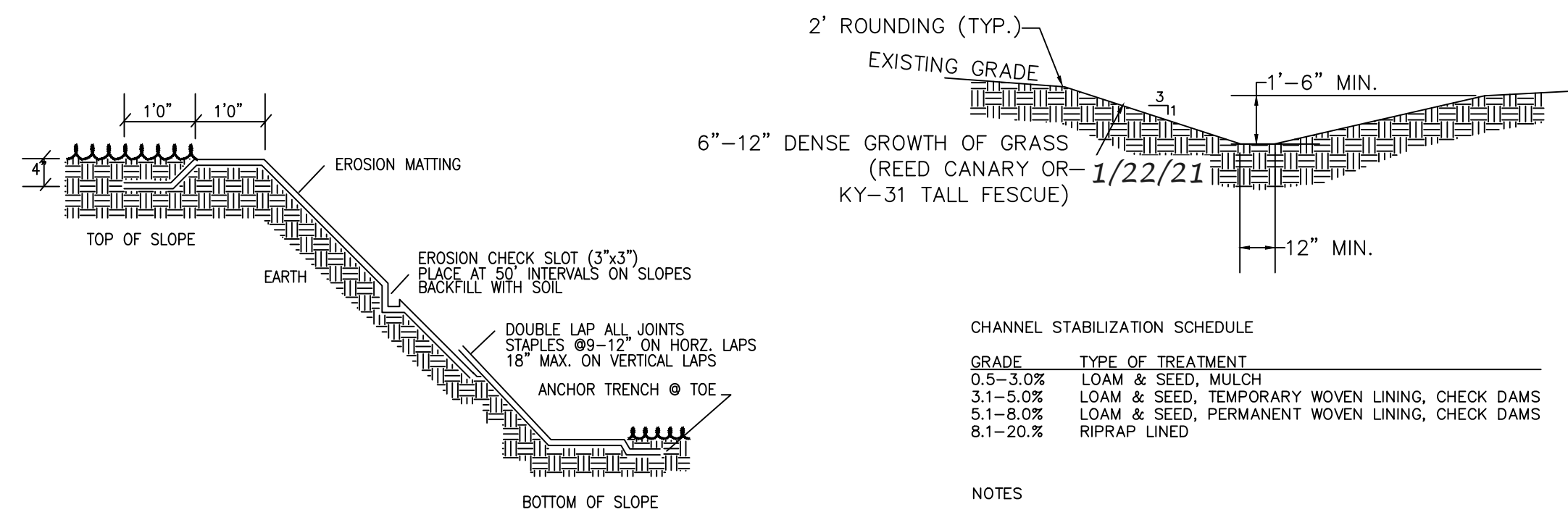
- NOTES:
- SEE EROSION AND SEDIMENT CONTROL PLAN FOR LOCATIONS.
 - FOR CHANNEL DISCHARGE USE, USE Do EQUAL TO DEPTH OF FLOW TO DETERMINE LENGTH OF APRON.
 - FOR WIDTH OF APRON AT CHANNELS USE WIDTH + Lo.

DRAIN OUTFALL WITH VELOCITY REDUCER

N.T.S.

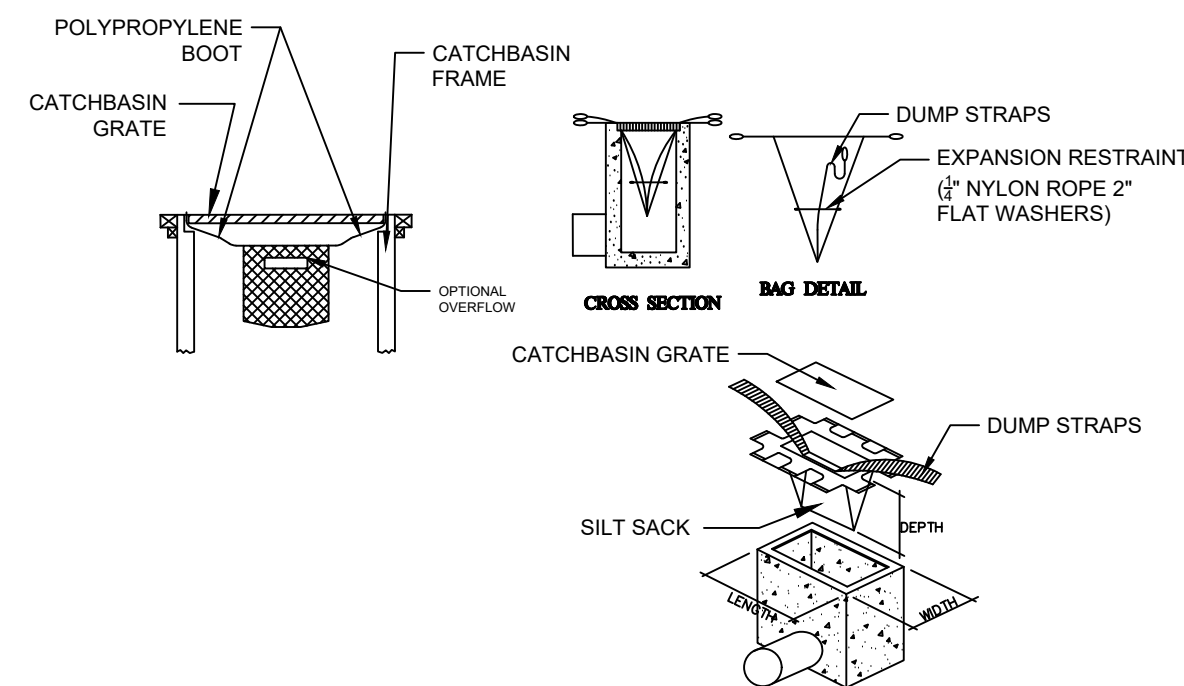


TYPICAL CRUSHED STONE CHECK DAM



EROSION MATTING

N.T.S.



CATCH BASIN SILT SACK DETAIL

N.T.S.

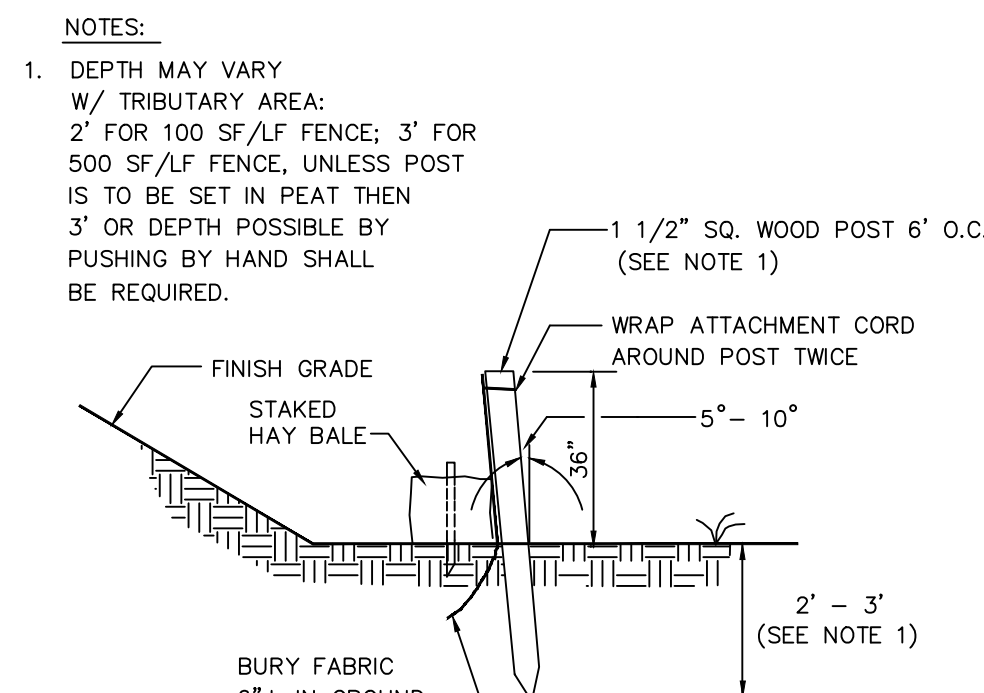
CHANNEL STABILIZATION SCHEDULE

GRADE	TYPE OF TREATMENT
0.5-3.0%	LOAM & SEED, MULCH
3.1-5.0%	LOAM & SEED, TEMPORARY WOVEN LINING, CHECK DAMS
5.1-8.0%	LOAM & SEED, PERMANENT WOVEN LINING, CHECK DAMS
8.1-20%	RIPRAP LINED

- NOTES:
- INSTALL CRUSHED STONE CHECK DAMS ON SWALES WITH SLOPES GREATER THAN 5% AT 100' INTERVALS.
 - SWALE SLOPES AS NOTED ON PLANS ARE MINIMUM SLOPES.

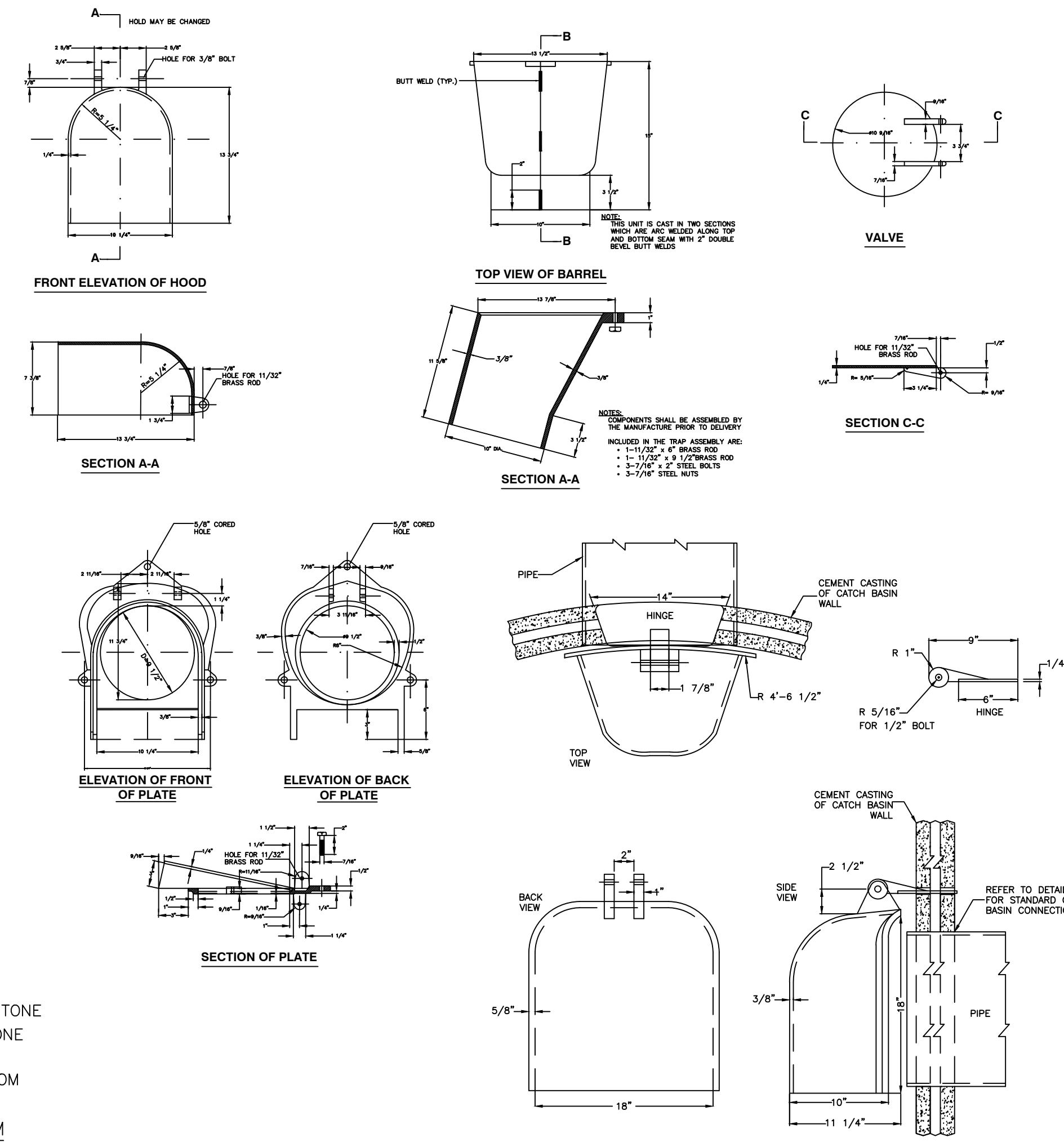
WATER QUALITY SWALE

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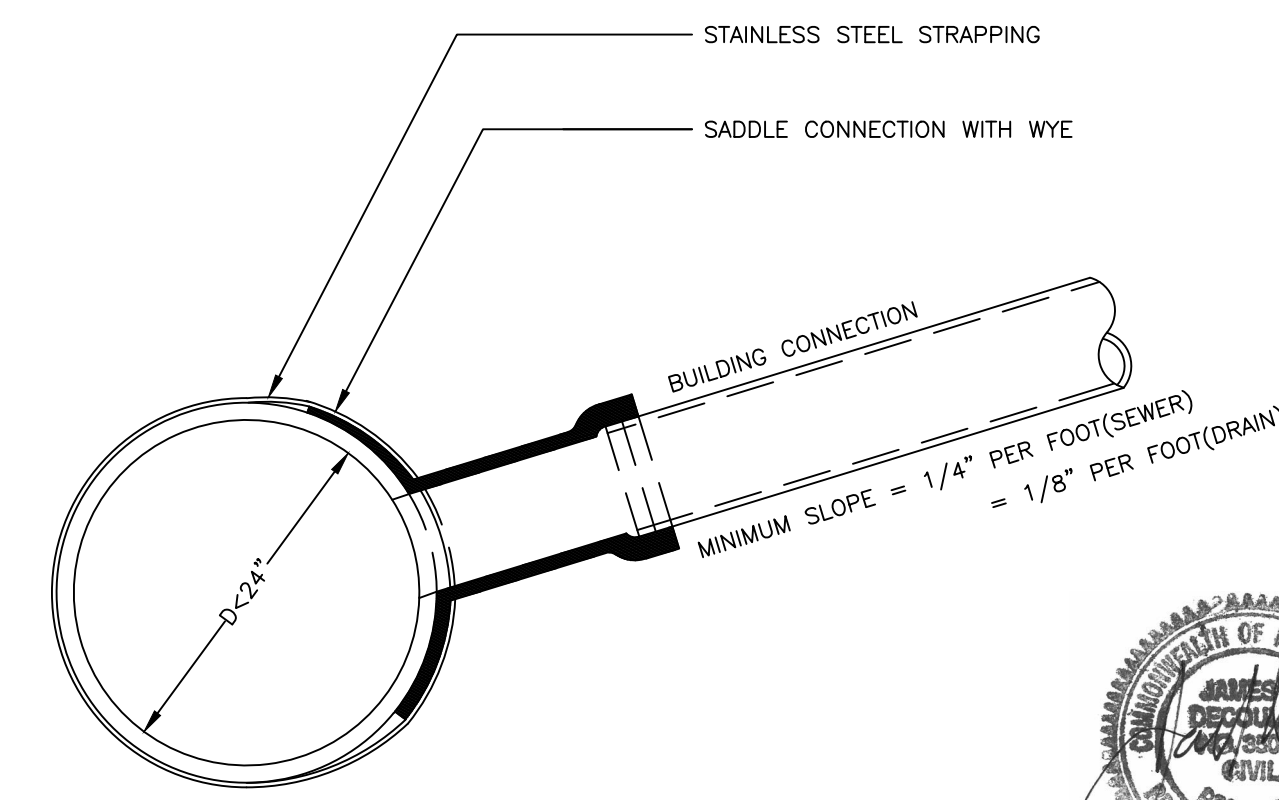
HAY BALE / SILT FENCE DETAIL

N.T.S.



CATCH BASIN HOOD DETAIL

N.T.S.



SEWER SADDLE CONNECTION DETAIL

N.T.S.

- NOTES:
- FULL PVC OR IRON SADDLE MAY BE USED TO CONNECT TO EXISTING PVC, CLAY, CONCRETE, OR IRON PIPE.
 - SADDLES MUST HAVE RUBBER GASKETS AND SHALL BE TIGHTENED WITH STRAPS. SADDLES WILL NOT BE CEMENTED ONTO THE PIPE.
 - FULL WYE CONNECTION FITTINGS MAY BE USED.
 - PIPE SHALL BE CUT TO CONFORM TO THE OPENING IN THE SADDLE.
 - CONNECTIONS DIRECTLY INTO THE EXISTING PIPE WITHOUT A SADDLE OR A FULL WYE FITTING ARE NOT ALLOWED.



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DATE
1-20-21
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DRWN TCG
DES TCG
CHKD JDD
APRVD JDD

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GENERAL NOTES:

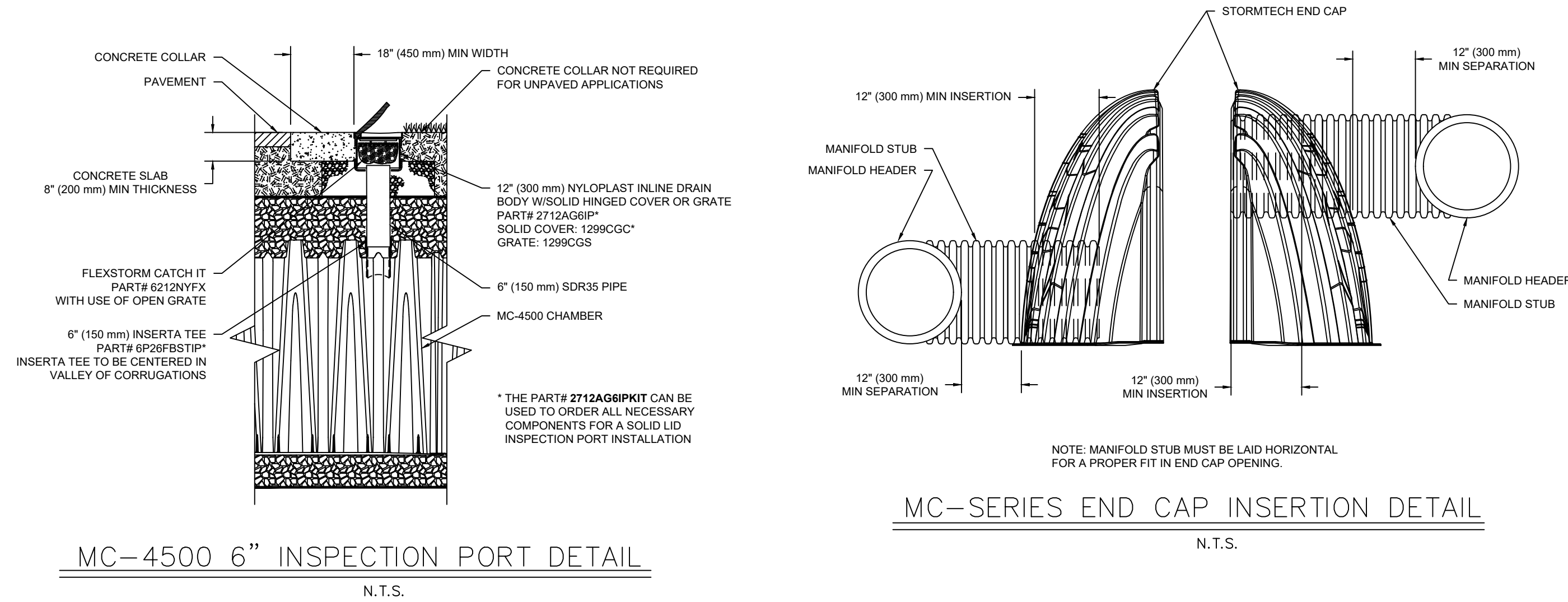
- ALL WORK PERFORMED AS PART OF THIS PROJECT SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE BOSTON WATER AND SEWER COMMISSION (BWSC), BOSTON DEPARTMENT OF PUBLIC WORKS (DPW), BOSTON TRAFFIC AND PARKING DEPARTMENT (BTP) OR ANY OTHER AGENCY WITH AUTHORITY IN THIS AREA.
- NEW WATER LINES SHALL BE A MINIMUM OF TEN FEET AWAY FROM ALL SEWER LINES, EXISTING OR PROPOSED.
- WATER SERVICE SHALL BE INSTALLED WITH A MINIMUM COVER OF FIVE FEET THROUGHOUT.
- SEWER SERVICE AND WATER SERVICE SHALL BE INSTALLED WITH A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION.
- IT IS RECOMMENDED THAT DIGGING WITHIN ONE FOOT OF THE MAIN BE DONE WITH HAND TOOLS ONLY.
- THE CONTRACTOR SHALL SUPPLY THE COPPER SERVICE AND SHALL PERFORM THE TAP AS PART OF HIS CONTRACT.
- IF A PERIMETER DRAIN IS INSTALLED IT MUST BE CONNECTED TO A LEACHING AREA.
- SUBSURFACE TESTING AND FINAL LOCATION OF LEACHING AREA IS THE OWNERS RESPONSIBILITY.
- EXISTING UTILITIES SHOWN ON THIS PLAN ARE COMPILED FROM RECORD INFORMATION AND APPROXIMATE FIELD LOCATION AND THEREFORE, ARE NOT CERTIFIED FOR CONSTRUCTION.
- PRIOR TO ANY EXCAVATION OR CONSTRUCTION, THE CONTRACTOR MUST NOTIFY 'DIG SAFE' SEVENTY TWO HOURS BEFORE COMMENCING WORK. CALL 1-888-344-7233 THE BOSTON WATER AND SEWER COMMISSION IS NOT PART OF DIG SAFE THEREFORE, FIELD LOCATIONS OF WATER AND SEWER LINES MUST BE MARKED BY THE COMMISSION.
- CALL 330-9400, FORTY EIGHT HOURS IN ADVANCE OF ANY EXCAVATION. IF ANY ADDITIONAL SEWER OR WATER SERVICES ARE FOUND DURING CONSTRUCTION THAT ARE NOT SHOWN ON THIS PLAN, THE CONTRACTOR MUST CUT & CAP THE SERVICE AT THE MAIN.
- IF ANY BATHROOM FIXTURES ARE PLANNED FOR THE BASEMENT A BACKWATER VALVE MUST BE USED A PREREQUISITE FOR FILING A GENERAL SERVICE APPLICATION WITH THE BOSTON WATER AND SEWER COMMISSION FOR NEW CONSTRUCTION IS THE ROUGH CONSTRUCTION SIGN-OFF DOCUMENT FROM THE CITY OF BOSTON'S INSPECTIONAL SERVICES DEPARTMENT.
- ALL WORK IN THE CITY OF BOSTON MUST BE PERFORMED BY A LICENSED DRAIN LAYER APPROVED BY THE BOSTON WATER AND SEWER COMMISSION AND MUST MAINTAIN A BOND WITH BWSC THE CONTRACTOR BEARS THE RESPONSIBILITY FOR CONFIRMING THE EXACT LOCATION OF UTILITIES SHOWN ON THIS PLAN AND OTHERS THAT MAY EXIST BUT ARE NOT SHOWN HERE.
- THIS PLAN HAS BEEN PREPARED FOR APPROVAL OF THE WATER, SEWER AND DRAIN CONNECTIONS TO BWSC FACILITIES. IT IS UNDERSTOOD THAT THE RESPONSIBILITY OF OWNERSHIP AND MAINTENANCE OF THE SEWER AND DRAIN CONNECTIONS ON PRIVATE PROPERTY AND/OR PRIVATE AND PUBLIC WAYS SHALL BE THE RESPONSIBILITY OF THE OWNER. IT IS ALSO UNDERSTOOD THAT THE WATER CONNECTION ON PRIVATE PROPERTY INCLUDING PRIVATE WAYS IS ALSO THE RESPONSIBILITY OF THE OWNER.
- IF CONNECTIONS CROSS OR CLOSELY ADJUT PROPERTY LINES, PROVISIONS MUST BE MADE TO ALLOW FOR FUTURE MAINTENANCE OR RECONSTRUCTION.
- THESE PROVISIONS MUST BE INCORPORATED INTO THE DEED AND PURCHASE AND SALE AGREEMENT FOR THE CONVEYANCE OF THIS AND THE ADJUTING PROPERTY.
- THIS PLAN IS NOT INTENDED TO DEPICT EXACT PROPERTY LINE LOCATIONS OR THE EXACT LOCATIONS OF BUILDINGS, EXISTING OR PROPOSED.
- IF, AS A RESULT OF FIELD CONDITIONS, CHANGES TO THIS DESIGN ARE REQUIRED, THE ENGINEER OR PROJECT MANAGER MUST BE NOTIFIED.
- THE COST OF MODIFICATIONS TO THIS PLAN AS A RESULT OF FAILED INSPECTIONS OR UNAUTHORIZED CHANGES ARE TO BE BORNE BY THE CONTRACTOR.
- CUT AND CAP PROCEDURES FOR WATER LINES: THESE ARE GENERAL SPECIFICATIONS. REFER TO THE STANDARD SPECIFICATIONS OF THE BOSTON WATER AND SEWER COMMISSION FOR DETAILED INSTRUCTIONS. FOR WATER SERVICES UNDER FOUR INCHES, THE LINE MUST BE CUT AT THE CORPORATION STOP CLOSEST TO THE MAIN. THE CORPORATION STOP MUST BE LEFT IN THE CLOSED POSITION. THE OPERATING NUT AND ALL OTHER APPURTENANT EQUIPMENT MUST BE REMOVED. THE CURB STOP MUST BE REMOVED AND THE HOLE MUST BE FILLED TO MATCH THE EXISTING SIDEWALK. FOR WATER MAINS FOUR INCHES AND LARGER, WHERE A GATE VALVE HAS BEEN USED, THE GATE VALVE MUST BE REMOVED. THIS PROCEDURE REQUIRES A SHUT DOWN OF THE MAIN. CONTACT BOSTON WATER AND SEWER COMMISSION OPERATIONS DIVISION TO SCHEDULE THE SHUTDOWN FORTY-EIGHT HOURS IN ADVANCE. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL EFFECTED ADJUTERS FORTY-EIGHT HOURS IN ADVANCE, IN WRITING. THE CONTRACTOR MAY NOT SHUT DOWN THE MAIN UNTIL ALL THE EFFECTED ADJUTERS RESPOND AND OPERATIONS PERSONNEL ARE PRESENT TO WITNESS WORK. UNDER NORMAL CONDITIONS, THE MAIN SHOULD BE CUT AND REPAIRED BY INSTALLING A PIECE OF PIPE BY MEANS OF TWO DRESSER TYPE COUPLINGS. WITH WRITTEN PERMISSION FROM THE COMMISSION, A GATE VALVE MAY BE UNBOLTED AND A CAP MAY BE INSTALLED AS LONG AS MEGALUG RESTRAINTS ARE USED. ALL CAPPING MUST BE CONDUCTED IN THE PRESENCE OF A BOSTON WATER AND SEWER INSPECTOR. THE INSPECTOR MAY DIRECT THE CONTRACTOR TO TAKE MEASURES NOT PRESCRIBED HERE. CUT AND CAP PROCEDURES FOR SEWER LINES: WHERE A SEWER LINE IS SCHEDULED FOR REMOVAL OR CUTTING AND A REPLACEMENT LATERAL IS BEING INSTALLED, IF THE LINES ARE THE SAME SIZE, THE EXISTING WYE MAY BE REUSED, IF THE INSPECTOR DEEMS THAT IT IS IN GOOD CONDITION. IF THE WYE MUST BE REMOVED, A SECTION OF PIPE MUST BE INSTALLED AND CONNECTED BY FERNCO TYPE COUPLINGS. IF THE WYE IS IN GOOD CONDITION BUT WILL NOT BE REUSED, THE WYE MAY BE CAPPED BY MEANS OF A RUBBER BOOT AND FERNCO COUPLER, AS DIRECTED BY THE INSPECTOR.

- THESE PLANS WERE PREPARED FOR REVIEW AND TO OBTAIN APPROVAL FROM PUBLIC AGENCIES. THEY ARE NOT INTENDED AS CONSTRUCTION DOCUMENTS.
- THE CONTRACTOR SHALL CONDUCT ALL OPERATIONS IN ACCORDANCE WITH THE MOST RECENT O.S.H.A. GUIDELINES FOR EXCAVATION.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNDERGROUND UTILITY LINES, ACTIVE OR NOT. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY AND COORDINATE ALL WORK WITH THE ASSOCIATED UTILITY COMPANIES 48 HOURS PRIOR TO CONSTRUCTION.
- BEDDING FOR ALL UTILITY PIPE SHALL BE SHAPED TO CONFORM REASONABLY CLOSE TO THE LOWER 10% OF THE PIPE. RECESSES SHALL BE EXCAVATED FOR BELL AND SPIGOT IN ORDER TO INSURE UNIFORM SUPPORT THROUGHOUT THE ENTIRE ALIGNMENT OF THE PIPE. THE FIRST 12 INCHES OF BACKFILL OVER THE PIPE SHALL BE FIRMLY COMPACTED SAND, BANK RUN GRAVEL, OR 3/4 INCH CRUSHED STONE. FOR THE REMAINDER OF THE BACKFILL, NO STONE LARGER THAN 8 INCHES WILL BE PERMITTED.
- IF LEDGE IS ENCOUNTERED DURING TRENCHING, ALL ROCK SHALL BE REMOVED TO A MINIMUM DEPTH OF 6 INCHES BELOW THE LATERAL PIPE AND REPLACED WITH COMPACTED SAND, 3/4 INCH CRUSHED STONE OR GRAVEL BEDDING. CHANGES IN DIRECTION DUE TO LEDGE SHALL BE AVOIDED. THE ROUTE TO THE LATERALS FROM THE MAIN TO THE STRUCTURE BEING CONNECTED TO THE SEWER SHOULD BE AS STRAIGHT AS POSSIBLE.
- WASTE MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND MUNICIPAL REGULATIONS
- CONTRACTOR SHALL MAINTAIN EXISTING TRAFFIC FLOW DURING WORK.
- CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS, PERMITTING, AND LICENSES ISSUED AT THE FEDERAL, STATE AND LOCAL AGENCIES.
- ADAMAAB GRADING COMPLIANCE:

SLOPES:
 THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20.
 THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48.
 ALL SLOPES SHALL BE CONFIRMED WITH A 2 FOOT ELECTRONIC LEVEL.

CHANGES IN LEVEL:
 VERTICAL CHANGES IN LEVEL OF 1/4 INCH (6.4 MM) HIGH MAXIMUM SHALL BE PERMITTED TO BE VERTICAL. ELEVATION DRAWING OF A CHANGE IN LEVEL BETWEEN THE SURFACES OF TWO PARALLEL PLANES WITH A VERTICAL EDGE THAT IS 1/4 INCH (6.4 MM) HIGH MAXIMUM. BEVELED CHANGES IN LEVEL BETWEEN 1/4 INCH (6.4 MM) HIGH MINIMUM AND 1/2 INCH (13 MM) HIGH MAXIMUM SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2.

- THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN NEWLY PLACED AND EXISTING PAVEMENT. EXISTING PAVEMENT AT TRANSITION POINTS SHALL BE SAWCUT.
- PROVIDE SMOOTH TRANSITION AT CHANGES IN GRADE EXCEPT AS INDICATED ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING INFORMATION ON THE GROUND AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER IMMEDIATELY FOR A DECISION PRIOR TO CONSTRUCTION.
- INSTALL TEMPORARY EROSION CONTROL MEASURES PRIOR TO CONSTRUCTION FOR APPROVAL BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH AS-BUILTS OF ALL THE NEWLY INSTALLED LINES. THE AS-BUILT SHALL INCLUDE SWING THE LOCATIONS AND DEPTHS TO ALL PIPES AND STRUCTURES, AND SHALL BE SHOWN ON A SITE PLAN IN AUTOCAD FORMAT.



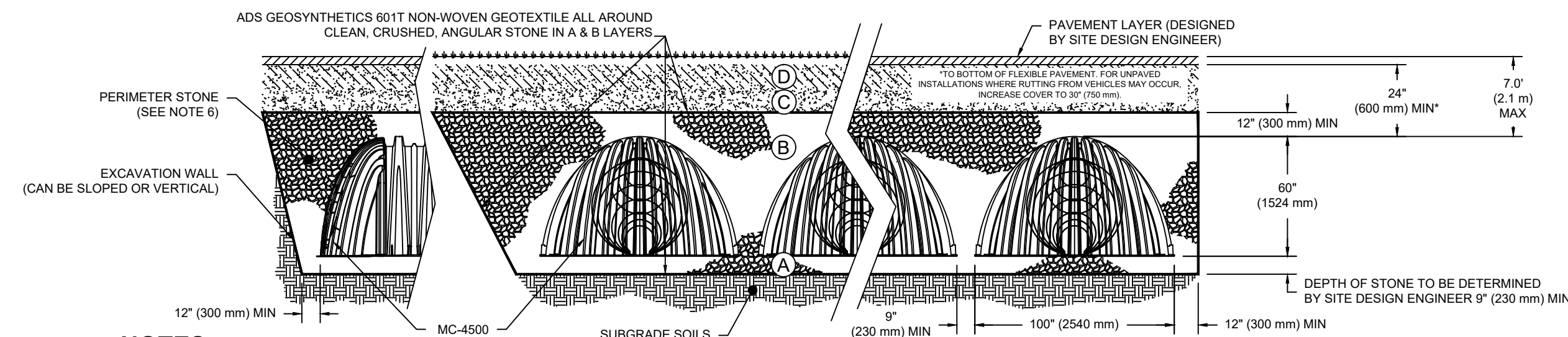
MC-4500 6" INSPECTION PORT DETAIL

N.T.S.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBBASE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145* A-1, A-2.4, A-3 OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 4	NO COMPACTION REQUIRED.
A FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE 2,3

- PLEASE NOTE:**
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

- MC-4500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- *ACCEPTABLE FILL MATERIALS* TABLE ABOVE PROVIDES MATERIAL LOCATIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.

MC-4500 CROSS SECTION DETAIL

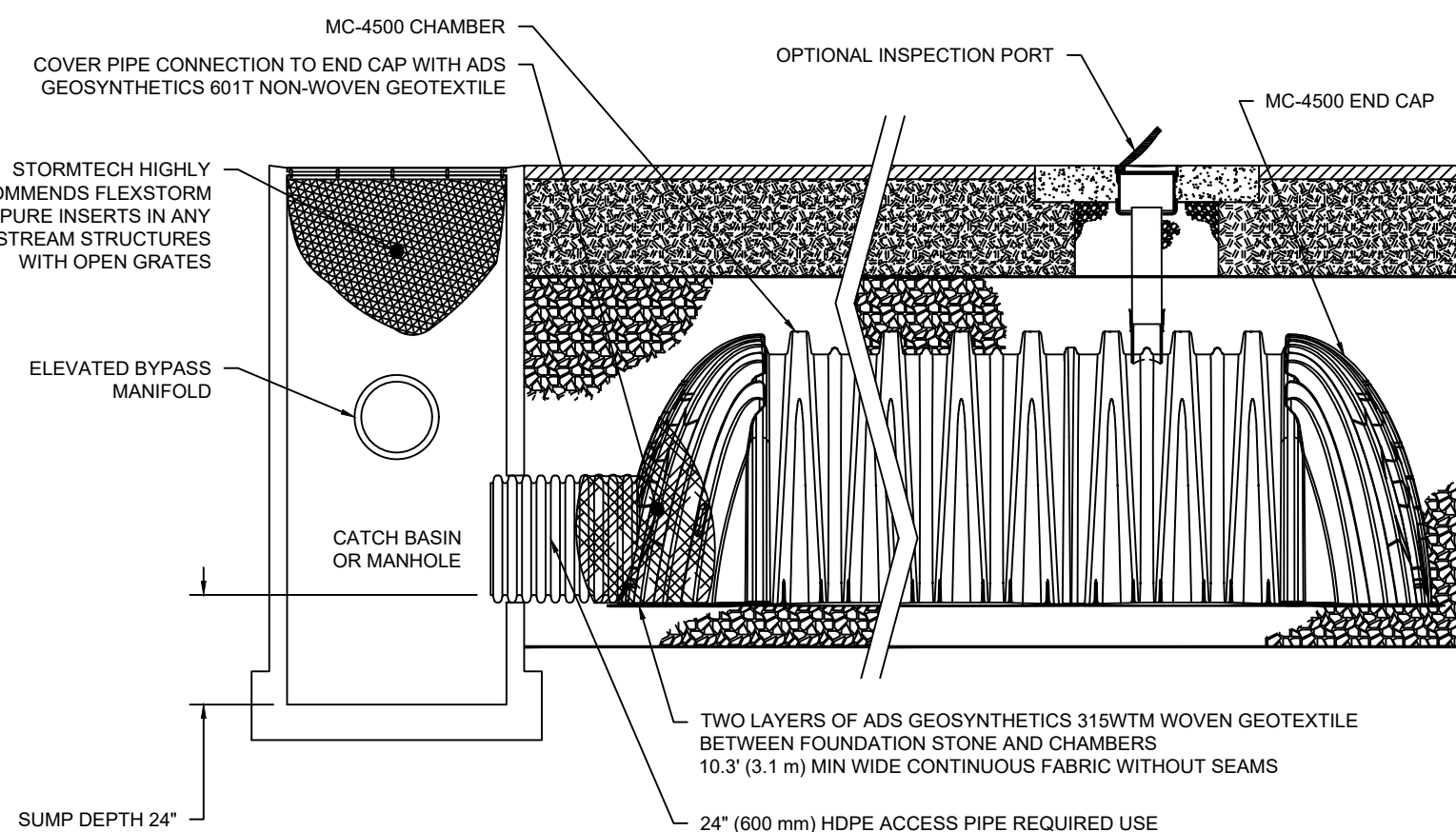
N.T.S.

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT**
- INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 - ALL ISOLATOR ROWS
 - REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS**
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.**
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.**

NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



MC-4500 ISOLATOR ROW DETAIL

N.T.S.

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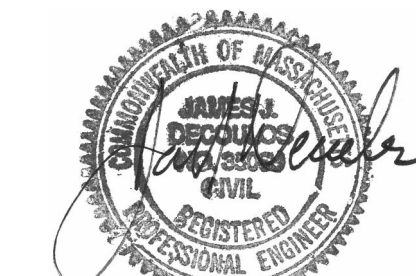
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