

CITY OF NEWTON

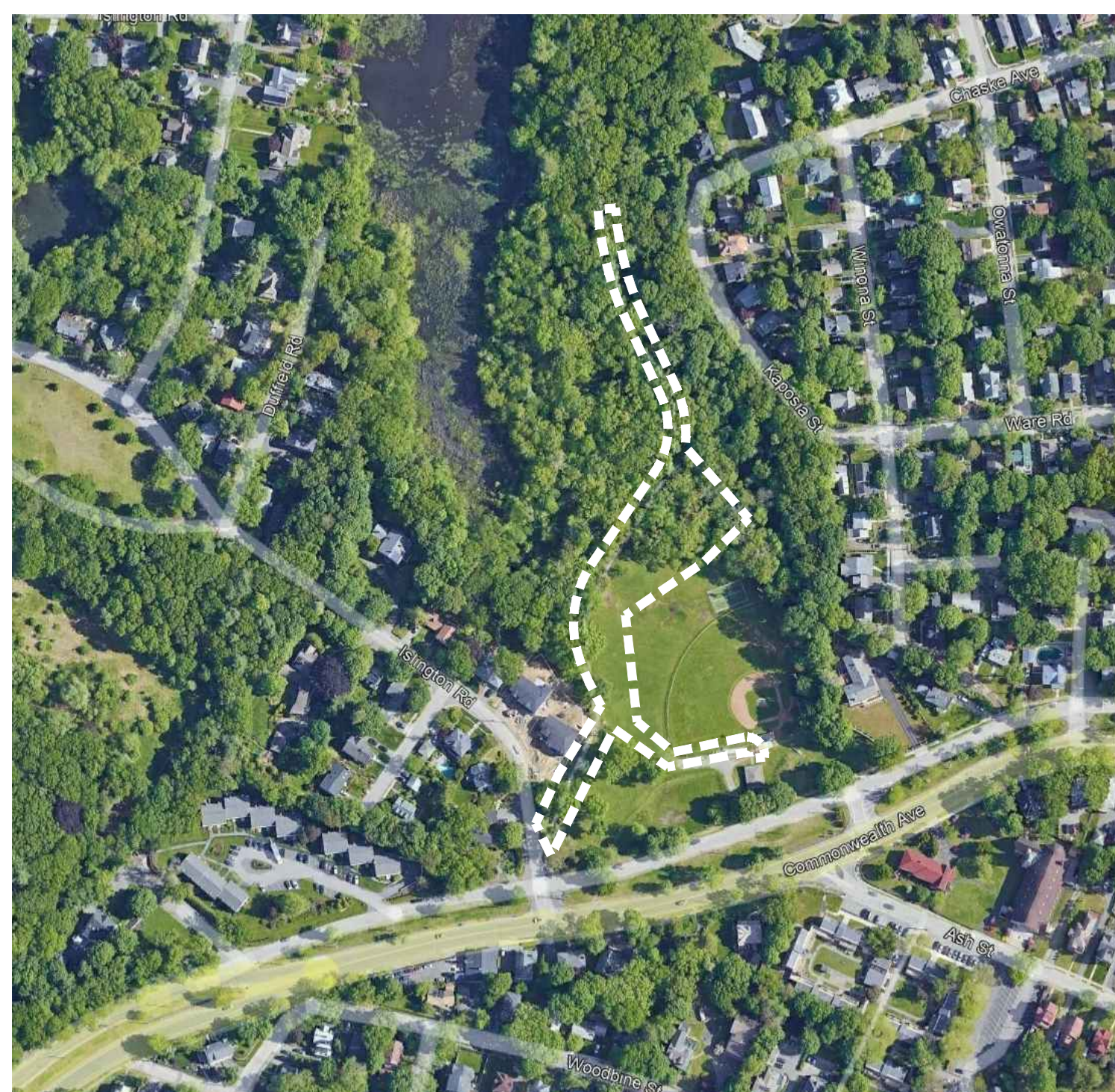
MARTY SENDER GREENWAY RESTORATION PHASE 2

LYONS PARK - COMMONWEALTH AVENUE AND ISLINGTON RD, NEWTON, MA 02460

IFB #23-94

CITY OF NEWTON, MASSACHUSETTS
Ruthanne Fuller, Mayor

Nicole Banks, Commissioner
Newton Parks, Recreation, and Culture Department
246 Dudley Road
Newton, MA, 02459



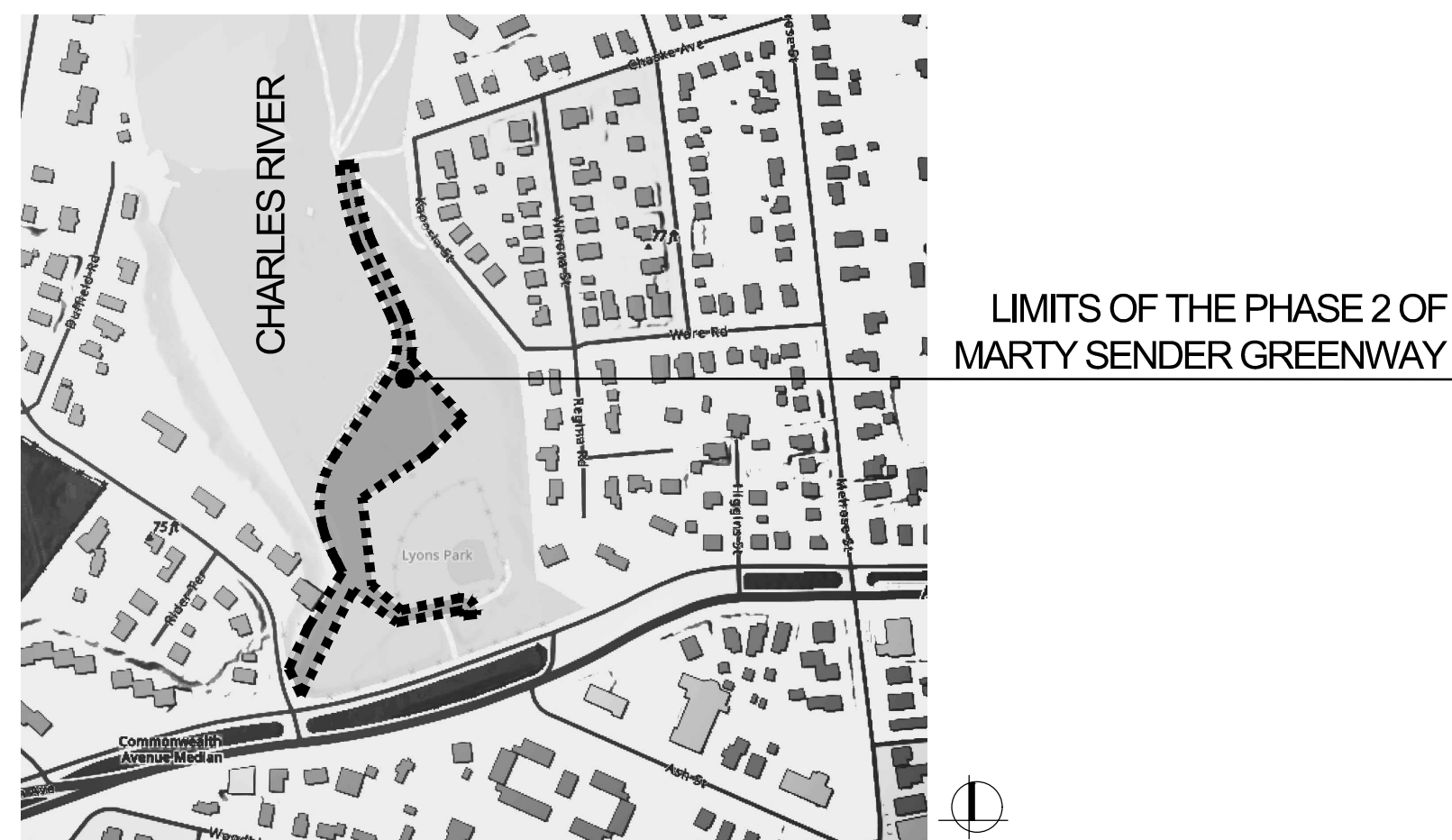
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ADD ALTERNATE #1 - ADDITIONAL STABILIZED STONE DUST SURFACING PATHWAY, COMPLETE

UNDER ADD ALTERNATE NO. 1, THE CONTRACTOR SHALL STRIP AND STOCKPILE TOPSOIL, ADD TREE PROTECTION, AND TEMPORARY CONSTRUCTION FENCING IN PREPARATION FOR THE INSTALLATION OF AN ADDITIONAL 6-FT WIDE PATH. THE CONTRACTOR SHALL INSTALL THIS ADDITIONAL STABILIZED STONE DUST PATHWAY THAT CONNECTS THE PRIMARY (BASE BID) STONE DUST PATHWAY TO THE CONCESSION BUILDING. UNDER THE BASE BID, NO WORK SHALL BE PERFORMED AS IT RELATES TO THE SITE PREPARATION AND INSTALLATION OF THIS ADDITIONAL PATHWAY.

Locus Map



LIMITS OF THE PHASE 2 OF MARTY SENDER GREENWAY

BID DOCUMENTS

APRIL 3, 2023

Prepared By
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LEGEND

	LIMIT OF WORK		APPROX. LOC. UNDERGROUND SANITARY LINE		DEPRESSED CURB
	PROPERTY LINE		APPROX. LOC. UNDERGROUND DRAINAGE LINE		EDGE OF CONC.
	EASEMENT		APPROX. LOC. UNDERGROUND WATER LINE		EDGE OF PAVEMENT
	FEMA FLOODPLAIN 38.3' NAVD88		WATER VALVE		EDGE OF GRAVEL
	EXISTING CONTOUR		WATER METER		MASONRY BLOCK WALL
	EXIST. TOP OF CURB ELEVATION		UNKNOWN VALVE		BUILDING
	EXIST. TOP OF WALL ELEVATION		UNKNOWN MANHOLE		DRILL HOLE FOUND
	EXIST. BOTTOM OF CURB ELEVATION		SANITARY/SEWER MANHOLE		WATER MANHOLE
	EXIST. BOTTOM OF WALL ELEVATION		DRAINAGE/STORM MANHOLE		DECIDUOUS TREE & TRUNK SIZE
	EXIST. BOTTOM OF SILL ELEVATION		CATCH BASINS		CHAIN LINK FENCE
	RIM NAVD 88 (BOROUGH SEWER DATUM)		UTILITY POLE		
	INV. NAVD 88 (BOROUGH SEWER DATUM)		SIGN		
	OVERHEAD WIRES		U-SOLLARD		

SURVEY NOTES:

- SURVEY PERFORMED BY CONTROL POINT ASSOCIATES, INC. IN JULY OF 2022. THIS PLAN IS BASED ON INFORMATION PROVIDED BY CLIENT, AND OTHER REFERENCE MATERIAL AS LISTED HEREON.
- LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. LOCATIONS AND SIZES ARE BASED ON UTILITY MARK-OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD, AND THE MAPS AS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE AS-BUILT PLANS AND UTILITY MARKOUT DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES. CONTROL POINT ASSOCIATES, INC. DOES NOT GUARANTEE THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED.
THE SOURCE OF UNDERGROUND UTILITIES ARE SHOWN UTILIZING A QUALITY LEVEL SYSTEM:
QUALITY LEVEL D - UTILITIES SHOWN BASED UPON REFERENCE MAPPING OR ORAL HISTORY. NOT FIELD VERIFIED.
QUALITY LEVEL C - LOCATION OF UTILITY SURFACE FEATURES SUPPLEMENTS REFERENCE MAPPING. INCLUDES MARKOUT BY OTHERS.
QUALITY LEVEL B - UTILITY LOCATION DATA IS COLLECTED THROUGH GEOPHYSICAL SENSING TECHNOLOGY TO SUPPLEMENT SURFACE FEATURES AND OR REFERENCE MAPPING, INCLUDES MARKOUT BY CONTROL POINT ASSOCIATES, INC.
QUALITY LEVEL A - HORIZONTAL AND VERTICAL LOCATION OF UTILITIES ARE OBTAINED USING VACUUM EQUIPMENT EXCAVATION OR OTHER METHODS TO EXPOSE THE UTILITY. LOCATION SHOWN AT SINGLE POINT WHERE EXCAVATION OCCURRED UNLESS UTILITY WAS LOCATED PRIOR TO FILLING.
- THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS THAT MAY BE CONTAINED THEREIN.
- PROPERTY IS LOCATED IN FLOOD HAZARD ZONE AE SHADED AREAS WITH THE 1% FLOOD (100-YEAR FLOOD), ALSO KNOWN AS THE BASE FLOOD, IN THE FLOOD THAT HAS 1% CHANCE OF BEING EQUALED OR EXCEEDED IN ANY GIVEN YEAR.
- THE EXISTENCE OF UNDERGROUND STORAGE TANKS, IF ANY, WAS NOT KNOWN AT THE TIME OF THE FIELD SURVEY.
- ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), BASED ON GPS OBSERVATIONS UTILIZING THE KEYSTONE VRS NETWORK (KEYNETGPS).
TEMPORARY BENCH MARKS SET:
TBM-A: STONE BOUND FOUND ALONG THE SOUTHERLY SIDE OF LOT AT ELEVATION+ 49.80'
TBM-B: STONE BOUND FOUND ALONG THE NORTHEASTERLY SIDE OF LOT AT ELEVATION+ 59.61'
PRIOR TO CONSTRUCTION IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE BENCHMARKS ILLUSTRATED ON THIS SKETCH HAVE NOT BEEN DISTURBED AND THEIR ELEVATIONS HAVE BEEN CONFIRMED. ANY CONFLICTS MUST BE REPORTED PRIOR TO CONSTRUCTION.
- THE OFFSETS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, PERMANENT ADDITION, ETC.
- THE DELINEATION LINE WAS PLACED IN THE FIELD BY OTHERS, AND SHOWN HEREON PER ELECTRONIC CAD FILE PROVIDED BY CLIENT.
- PROPERTY LINES SHOWN HEREON ARE COMPILED AND SHOWN APPROXIMATE PER CONTRACTUAL AGREEMENT WITH CLIENT.

Project:
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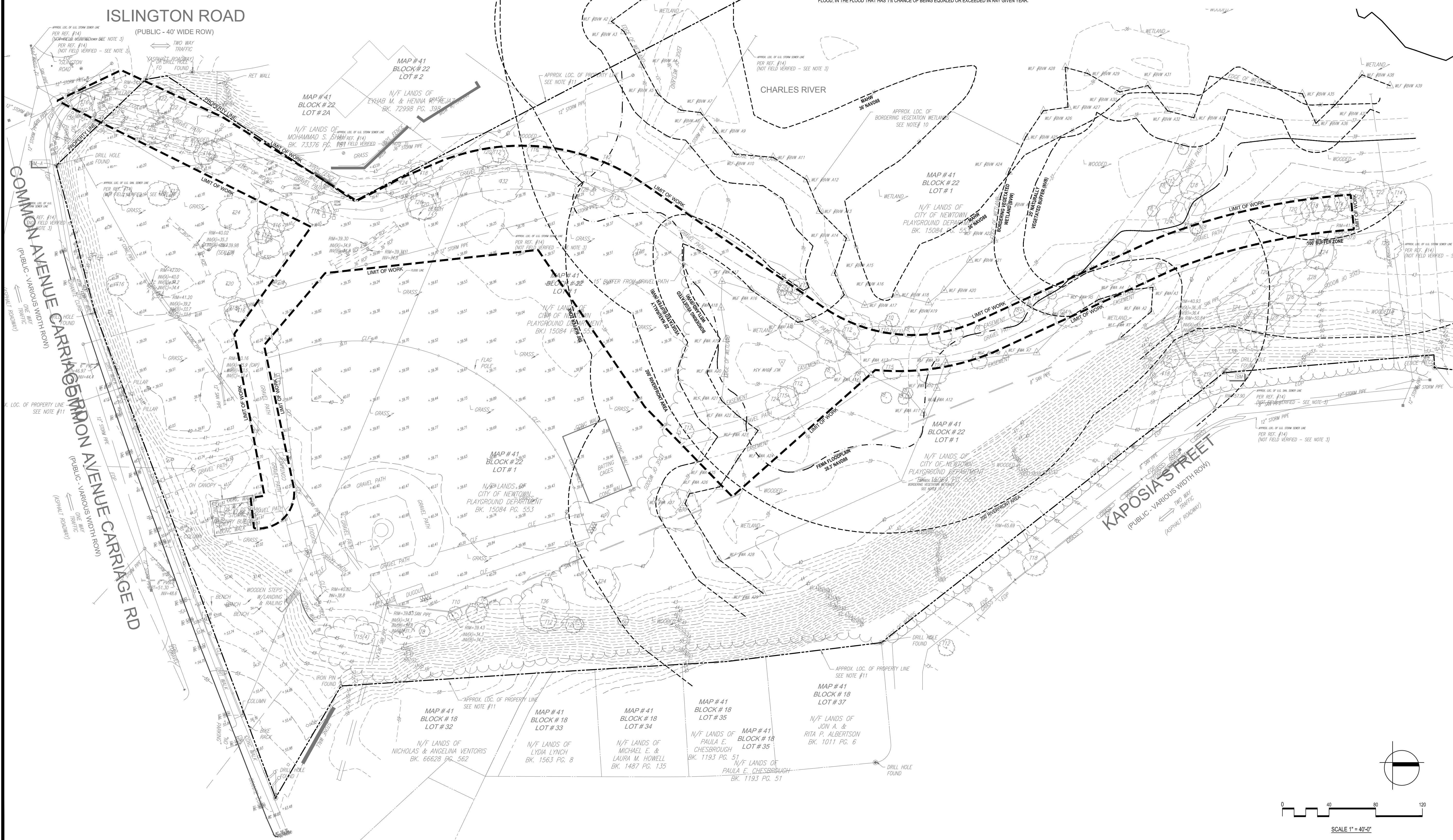
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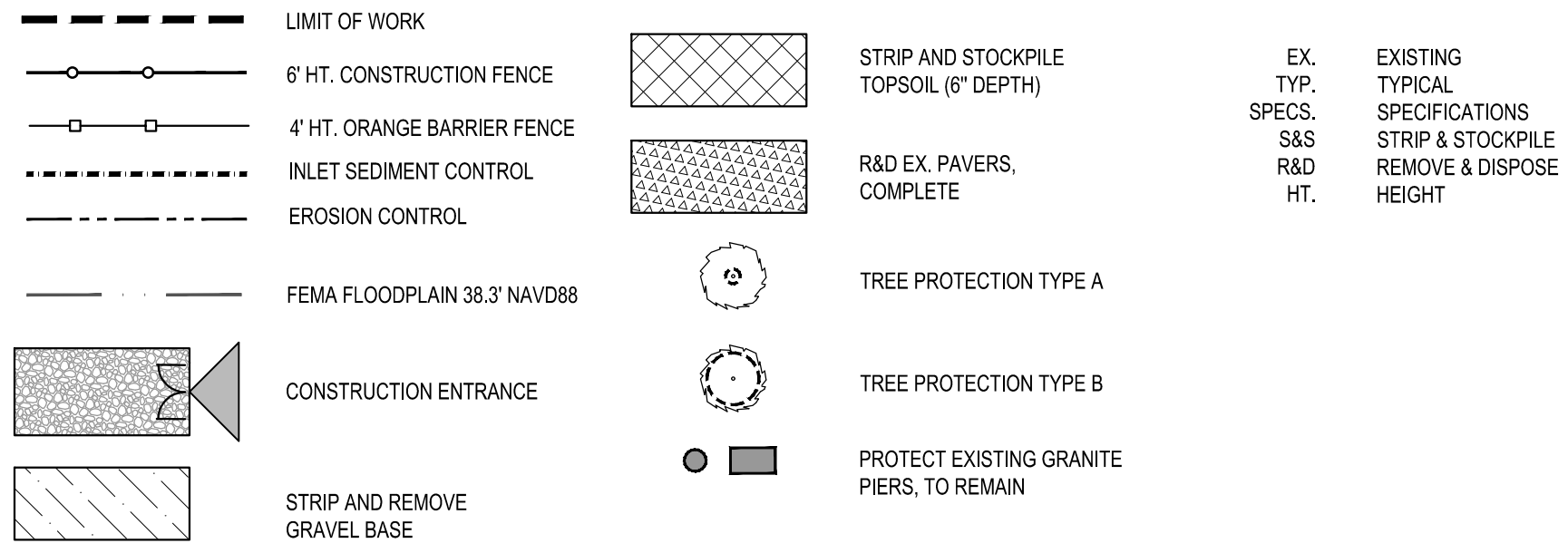
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EXISTING CONDITIONS PLAN

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LEGEND



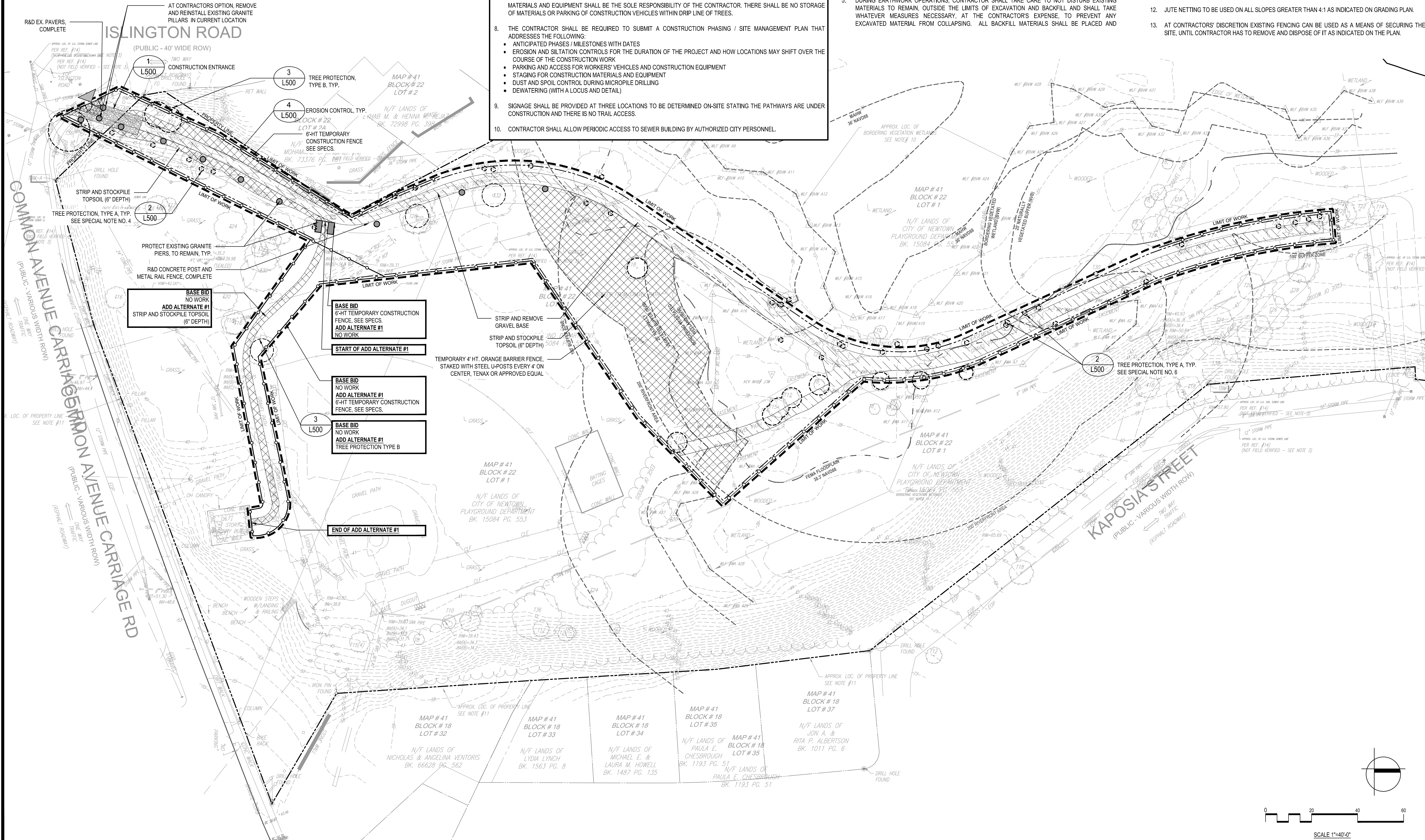
SPECIAL NOTES

- BORDERING VEGETATED WETLAND (BVW) LINE WAS DELINEATED USING VEGETATION BY THE CONSERVATION AGENT.
- TRAIL IS LIKELY UNDERLAIN BY HYDRIC SOILS AS INDICATED BY THE CONSERVATION AGENT.
- CONTRACTOR SHALL BE PERMITTED TO PARK CONSTRUCTION VEHICLES ONLY DURING EACH CONSTRUCTION DAY. VEHICLES MAY NOT BE LEFT OVERNIGHT UNLESS APPROVED BY THE OWNER. ONLY COMMONWEALTH AVENUE (CARRIAGE ROAD) IS ALLOWED AS A PARKING AREA. SIDE STREETS SHALL NOT BE USED FOR CONSTRUCTION VEHICLE PARKING.
- CONTRACTOR SHALL STAKE THE BORDERING VEGETATED WETLAND PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL NOT CLEAN CONCRETE MIXING EQUIPMENT WITHIN THE BUFFER ZONE OR WITHIN ANY LOCATION THAT COULD DRAIN TO A CATCH BASIN OR WETLAND. CLEARING AND WASHOUT OF CONCRETE EQUIPMENT SHALL BE DONE OFF SITE.
- ALL WORK PERFORMED WITHIN THE DRIP LINE / CRITICAL ROOT ZONES OF ADJACENT TREES SHALL BE DONE BY HAND AND WITH LIGHT EQUIPMENT (VACUUM AND AIR SPADE). SEE TREE PROTECTION DETAILS ON SHEET L500 AND SPECIFICATIONS FOR MORE DETAILED REQUIREMENTS.
- THE CONTRACTOR SHALL COORDINATE AND SEEK APPROVAL FROM THE OWNER ON ACCEPTABLE STOCKPILE AND STAGING AREAS. A 12 INCH COMPOST SOCK SHALL WRAP AROUND THE ENTIRE STOCKPILE AND STAGE AREA. CONTRACTOR SHALL PROTECT ALL DRAINAGE STRUCTURES AS DIRECTED BY THE OWNER. PROTECTION OF STORED MATERIALS AND EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THERE SHALL BE NO STORAGE OF MATERIALS OR PARKING OF CONSTRUCTION VEHICLES WITHIN DRIP LINE OF TREES.
- THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A CONSTRUCTION PHASING / SITE MANAGEMENT PLAN THAT ADDRESSES THE FOLLOWING:
 - ANTICIPATED PHASES / MILESTONES WITH DATES
 - EROSION AND SILTATION CONTROLS FOR THE DURATION OF THE PROJECT AND HOW LOCATIONS MAY SHIFT OVER THE COURSE OF THE CONSTRUCTION WORK
 - PARKING AND ACCESS FOR WORKERS' VEHICLES AND CONSTRUCTION EQUIPMENT
 - STAGING FOR CONSTRUCTION MATERIALS AND EQUIPMENT
 - DUST AND SPOIL CONTROL DURING MICROPILE DRILLING
 - DEWATERING (WITH A LOCUS AND DETAIL)
- SIGNAGE SHALL BE PROVIDED AT THREE LOCATIONS TO BE DETERMINED ON-SITE STATING THE PATHWAYS ARE UNDER CONSTRUCTION AND THERE IS NO TRAIL ACCESS.
- CONTRACTOR SHALL ALLOW PERIODIC ACCESS TO SEWER BUILDING BY AUTHORIZED CITY PERSONNEL.

DEMOLITION AND SITE PREPARATION NOTES

- THE CONTRACTOR SHALL INCLUDE IN THE BID THE COST OF REMOVING ANY EXISTING SITE FEATURES AND APPURTENANCES NECESSARY TO ACCOMPLISH THE CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS. THE CONTRACTOR SHALL ALSO INCLUDE IN THE BID THE COST NECESSARY TO RESTORE SUCH ITEMS IF THEY ARE SCHEDULED TO REMAIN AS PART OF THE FINAL SITE IMPROVEMENTS. REFER TO PLANS TO DETERMINE EXCAVATION, DEMOLITION AND TO DETERMINE THE LOCATION OF THE PROPOSED SITE IMPROVEMENTS.
- THE OWNER RESERVES THE RIGHT TO REVIEW ALL MATERIALS DESIGNATED FOR REMOVAL AND TO RETAIN OWNERSHIP OF SUCH MATERIALS. IF THE OWNER RETAINS ANY MATERIAL THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE OWNER TO HAVE THOSE MATERIALS REMOVED OFF SITE AT NO ADDITIONAL COST.
- UNLESS SPECIFICALLY NOTED TO BE REMOVED / STOCKPILED OR REMOVE/ RESET, ALL SITE FEATURES CALLED FOR REMOVE/DISPOSE (R&D) SHALL BE REMOVED WITH THEIR FOOTINGS, ATTACHMENTS, BASE MATERIAL, ETC. TRANSPORTED FROM THE SITE TO BE DISPOSED OF IN A LAWFUL MANNER AT AN ACCEPTABLE DISPOSAL SITE AND AT NO ADDITIONAL COST TO THE OWNER.
- ALL EXISTING SITE FEATURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PERIOD. ANY FEATURES DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST.
- DURING EARTHWORK OPERATIONS, CONTRACTOR SHALL TAKE CARE TO NOT DISTURB EXISTING MATERIALS TO REMAIN, OUTSIDE THE LIMITS OF EXCAVATION AND BACKFILL AND SHALL TAKE WHATEVER MEASURES NECESSARY, AT THE CONTRACTOR'S EXPENSE, TO PREVENT ANY EXCAVATED MATERIAL FROM COLLAPSING. ALL BACKFILL MATERIALS SHALL BE PLACED AND

- COMPACTED AS SPECIFIED TO THE SUBGRADE REQUIRED FOR THE INSTALLATION OF THE REMAINDER OF THE CONTRACT WORK.
- IT SHALL BE THE CONTRACTOR'S OPTION, WITH CONCURRENCE OF THE OWNER, TO REUSE EXISTING GRAVEL IF IT MEETS THE REQUIREMENTS OF THE SPECIFICATIONS FOR GRAVEL BORROW.
 - CLEAR AND GRUB VEGETATION SHALL BE HELD AS A \$10,000 ALLOWANCE AND SHALL ONLY TAKE PLACE UNDER THE APPROVAL OF THE OWNER. THE CONTRACTOR SHALL BRING TO THE ATTENTION OF THE OWNER RECOMMENDED REMOVALS OF SHRUBS AND UNDERBRUSH OF LESS THAN 12" IN HEIGHT THAT ARE LIMITING THE FOR THE WORK TO BE COMPLETED. SEE SPECIFICATIONS.
 - TREES DESIGNATED FOR REMOVAL SHALL BE TAGGED BY CONTRACTOR AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - THE STORAGE OF MATERIALS AND EQUIPMENT WILL BE PERMITTED AT LOCATIONS DESIGNATED BY OWNER OR OWNER'S REPRESENTATIVE. PROTECTION OF STORED MATERIALS AND EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
 - LOAM / TOPSOIL DESIGNATED FOR REUSE AS GENERAL FILL SHALL BE BLENDED WITH SUITABLE BORROW MATERIAL AS SPECIFIED.
 - THE CONTRACTOR SHALL PROTECT EXISTING TREES TO REMAIN. CONTRACTOR SHALL INSTALL TREE PROTECTION BARRIER AFTER CLEARING UNDERBRUSH AND TAKE DUE CARE TO PREVENT INJURY TO TREES DURING CLEARING OPERATIONS.
 - JUTE NETTING TO BE USED ON ALL SLOPES GREATER THAN 4:1 AS INDICATED ON GRADING PLAN.
 - AT CONTRACTORS' DISCRETION EXISTING FENCING CAN BE USED AS A MEANS OF SECURING THE SITE, UNTIL CONTRACTOR HAS TO REMOVE AND DISPOSE OF IT AS INDICATED ON THE PLAN.



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Drawing Title:

SITE DEMOLITION AND PREPARATION PLAN

Sheet Number:

L110

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LEGEND

- LIMIT OF WORK
- EX. EXISTING TYP. TYPICAL SPECS.
- PLANT PROTECTION FENCE
- FEMA FLOODPLAIN 38.3' NAVD88
- STABILIZED STONE DUST PAVEMENT
- BOARDWALK
- WET MEADOW SEED MIX PLANTING SEE SPECS
- LOAM AND SEED DISTURBED AREA
- WET MEADOW PLANTING SEE PLANT SCHEDULE

PLANT SCHEDULE

TREES (BY CITY FOR REFERENCE ONLY)						
CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	NOTES
CC	2	CARPINUS CAROLINIANA	IRONWOOD	2"-2.5" CAL.	B&B	
BN	1	BETULA NIGRA	RIVER BIRCH	12-14' HEIGHT	B&B	MULTI-TRUNK
QR	1	QUERCUS RUBRA	RED OAK	2"-2.5" CAL.	B&B	FALL DIG HAZARD
TOTAL	4					
SHRUBS						
CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	NOTES
AM	9	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	BLACK CHOKEBERRY	#3	CONTAINER	
CO	19	CEPHALANTHUS OCCIDENTALIS	BUTTON BUSH	#3	CONTAINER	
CA	8	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	#3	CONTAINER	

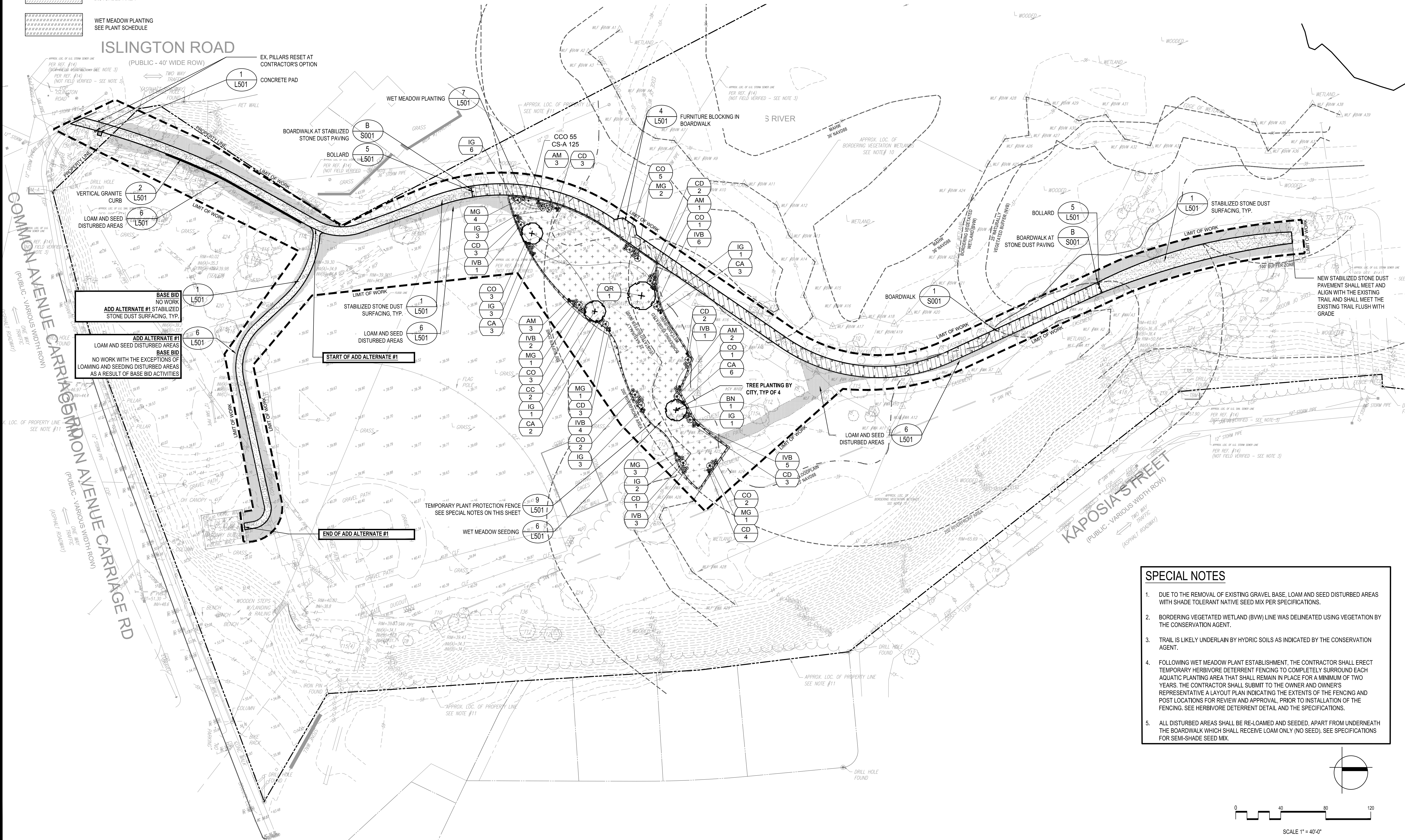
IG	18	ILEX GLABRA	INKBERRY	#3	CONTAINER	
IVB	20	ILEX VERTICILLATA 'NANA' RED SPRITE	WINTERBERRY HOLLY	#3	CONTAINER	FEMALE CULTIVAR
MG	15	MYRICA GALE	SWEETGALE	#3	CONTAINER	
CD	18	CORNUS CANADENSIS	CREeping DOGWOOD	#2	CONTAINER	
TOTAL	115					
WET MEADOW PLANTING						
CCO	55	CAREX COMOSA	BEARDED SEDGE	2" PLUGS		SPACE 18" O.C.
CS-A	125	CAREX STRICTA	TUSSOCK SEDGE	2" PLUGS		SPACE 12" O.C.
TOTAL	180					

WET MEADOW SEEDING NOTES

- SEEDING AREAS SHALL BE GUARANTEED UNTIL FINAL ACCEPTANCE OF THE PROJECT, OR, IN THE CASE OF LATE SUMMER OR FALL PLANTING, THE GUARANTEE PERIOD SHALL EXTEND THROUGH THE FOLLOWING SPRING.
- NEWLY SEEDING AREAS SHALL BE WATERED DAILY FOR A MINIMUM OF THREE WEEKS WHEN RAINFALL DOES NOT OCCUR UNLESS OTHERWISE SPECIFIED BY SUPPLIER.
- SEED MIX SHALL BE AS SPECIFIED.

PLANTING NOTES

- THE DEPTH OF TOPSOIL LOAM FOR ALL PROPOSED LAWN AREAS SHALL BE 6" MINIMUM. ALL DISTURBED AREAS SHALL BE RESTORED WITH LOAM AND SEED UNLESS OTHERWISE NOTED.
- ALL REFERENCES TO LOAM AND SEED (L&S) REFER TO HYDROMULCH SEEDING LAWN. SEE SPECIFICATIONS.



SPECIAL NOTES

- DUE TO THE REMOVAL OF EXISTING GRAVEL BASE, LOAM AND SEED DISTURBED AREAS WITH SHADE TOLERANT NATIVE SEED MIX PER SPECIFICATIONS.
- BORDERING VEGETATED WETLAND (BVW) LINE WAS DELINEATED USING VEGETATION BY THE CONSERVATION AGENT.
- TRAIL IS LIKELY UNDERLAIN BY HYDRIC SOILS AS INDICATED BY THE CONSERVATION AGENT.
- FOLLOWING WET MEADOW PLANT ESTABLISHMENT, THE CONTRACTOR SHALL ERECT TEMPORARY HERBIVORE DETERRENT FENCING TO COMPLETELY SURROUND EACH AQUATIC PLANTING AREA THAT SHALL REMAIN IN PLACE FOR A MINIMUM OF TWO YEARS. THE CONTRACTOR SHALL SUBMIT TO THE OWNER AND OWNER'S REPRESENTATIVE A LAYOUT PLAN INDICATING THE EXTENTS OF THE FENCING AND POST LOCATIONS FOR REVIEW AND APPROVAL, PRIOR TO INSTALLATION OF THE FENCING. SEE HERBIVORE DETERRENT DETAIL AND THE SPECIFICATIONS.
- ALL DISTURBED AREAS SHALL BE RE-LOAMED AND SEEDING, APART FROM UNDERNEATH THE BOARDWALK WHICH SHALL RECEIVE LOAM ONLY (NO SEED). SEE SPECIFICATIONS FOR SEMI-SHADE SEED MIX.

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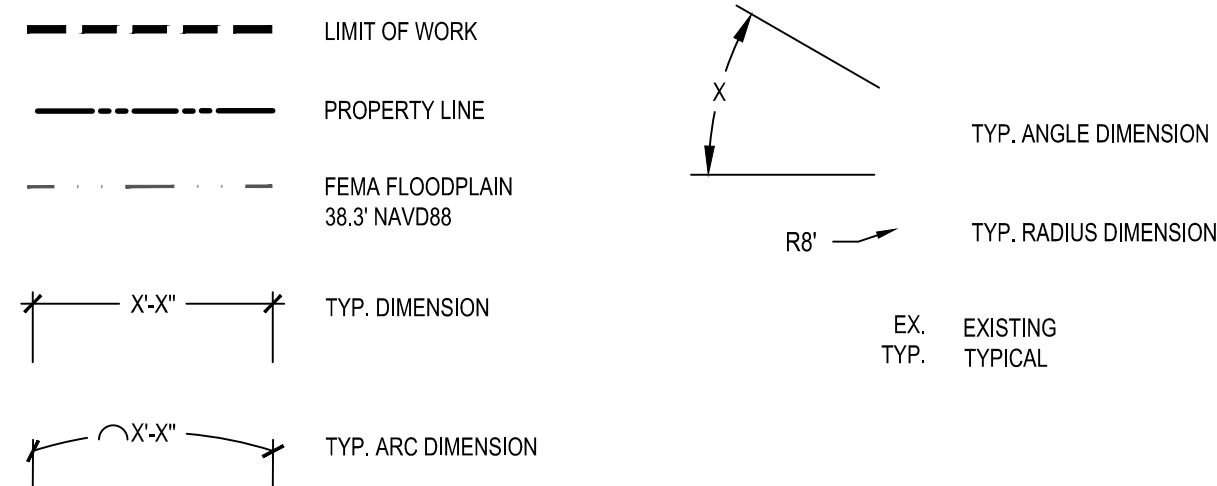
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MATERIAL AND PLANTING PLAN

Sheet Number:
L120

LEGEND



LAYOUT NOTES:

- REFER TO EXISTING CONDITIONS PLANS FOR SURVEY INFORMATION (SHEET L100).
- COORDINATE ALL LAYOUT ACTIVITIES WITH THE SCOPE OF WORK CALLED FOR BY DEMOLITION, GRADING AND UTILITIES OPERATIONS ENCOMPASSED BY THIS CONTRACT. SET, PROTECT AND REPLACE REFERENCE STAKES AS NECESSARY OR AS REQUIRED BY THE OWNER'S REPRESENTATIVE.
- ALL PROPOSED PAVEMENTS SHALL MEET THE LINE AND GRADE OF EXISTING ADJACENT PAVEMENT SURFACES. ALL BITUMINOUS CONCRETE SHALL BE TREATED WITH AN RS-1 TACK COAT AT POINT OF CONNECTION. ALL PATHWAY WIDTHS SHALL BE AS NOTED ON THE LAYOUT AND MATERIALS PLAN.
- SURVEY CONTROL POINTS AND COORDINATES ARE INDICATED ON THE PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT OR CREATE HIS OWN PROTECTED CONTROL POINTS FROM THIS INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL LAYOUT POINTS ARE CONSISTENT WITH CONTROL INFORMATION. RESETTling OF DAMAGED OR MISSING LAYOUT MARKERS AS NECESSARY IS AT NO ADDITIONAL COST TO THE OWNER.
- ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.

- ALL PAVEMENT, SURFACING, AND SITE FEATURES SHALL BE STAKED OUT FOR REVIEW BY THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF WORK.
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCY IN THE SITE SURVEY TO THE ENGINEER PRIOR TO THE START OF WORK.
- ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE CITY.
- CONTRACTOR SHALL ALIGN NEW EARTHWORK AND PAVING SMOOTHLY INTO EXISTING SURFACES TO REMAIN, PROVIDING VERTICAL CURVES OR ROUNDING AT ALL TOP AND BOTTOM OF SLOPES. ALL WORK TO MEET APPLICABLE ACCESSIBILITY REGULATIONS (TYP.).

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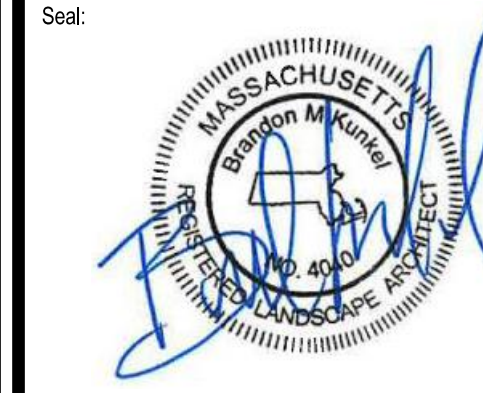
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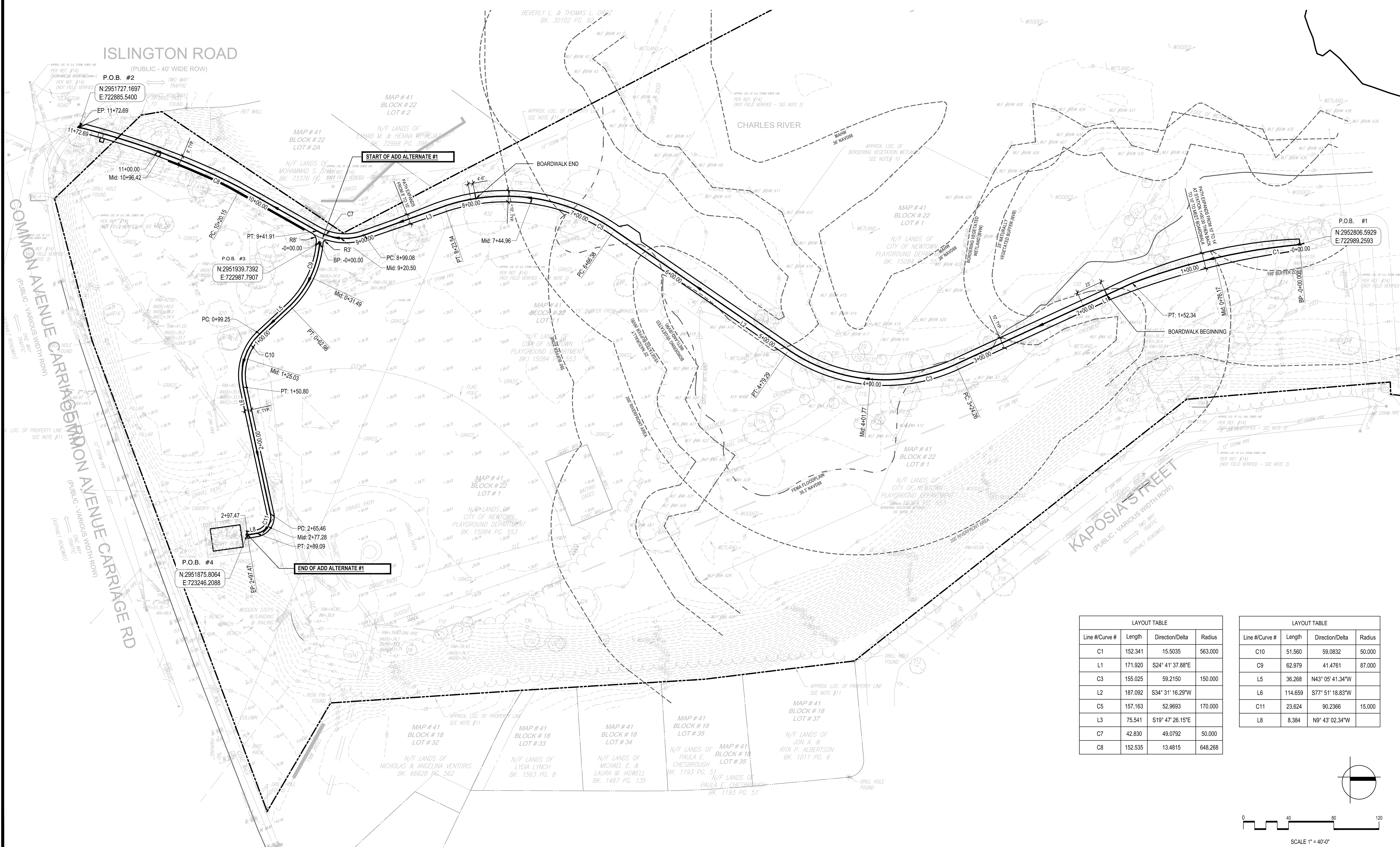
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LAYOUT PLAN

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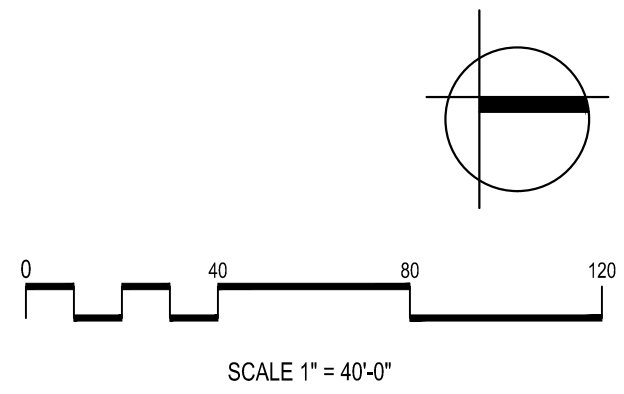


LAYOUT TABLE

Line #/Curve #	Length	Direction/Delta	Radius
C1	152.341	15.5035	563.000
L1	171.920	S24° 41' 37.88"E	
C3	155.025	59.2150	150.000
L2	187.092	S34° 31' 16.29"W	
C5	157.163	52.9693	170.000
L3	75.541	S19° 47' 26.15"E	
C7	42.830	49.0792	50.000
C8	152.535	13.4815	648.268

LAYOUT TABLE

Line #/Curve #	Length	Direction/Delta	Radius
C10	51.560	59.0832	50.000
C9	62.979	41.4761	87.000
L5	36.268	N43° 05' 41.34"W	
L6	114.659	S77° 51' 18.83"W	
C11	23.624	90.2366	15.000
L8	8.384	N9° 43' 02.34"W	



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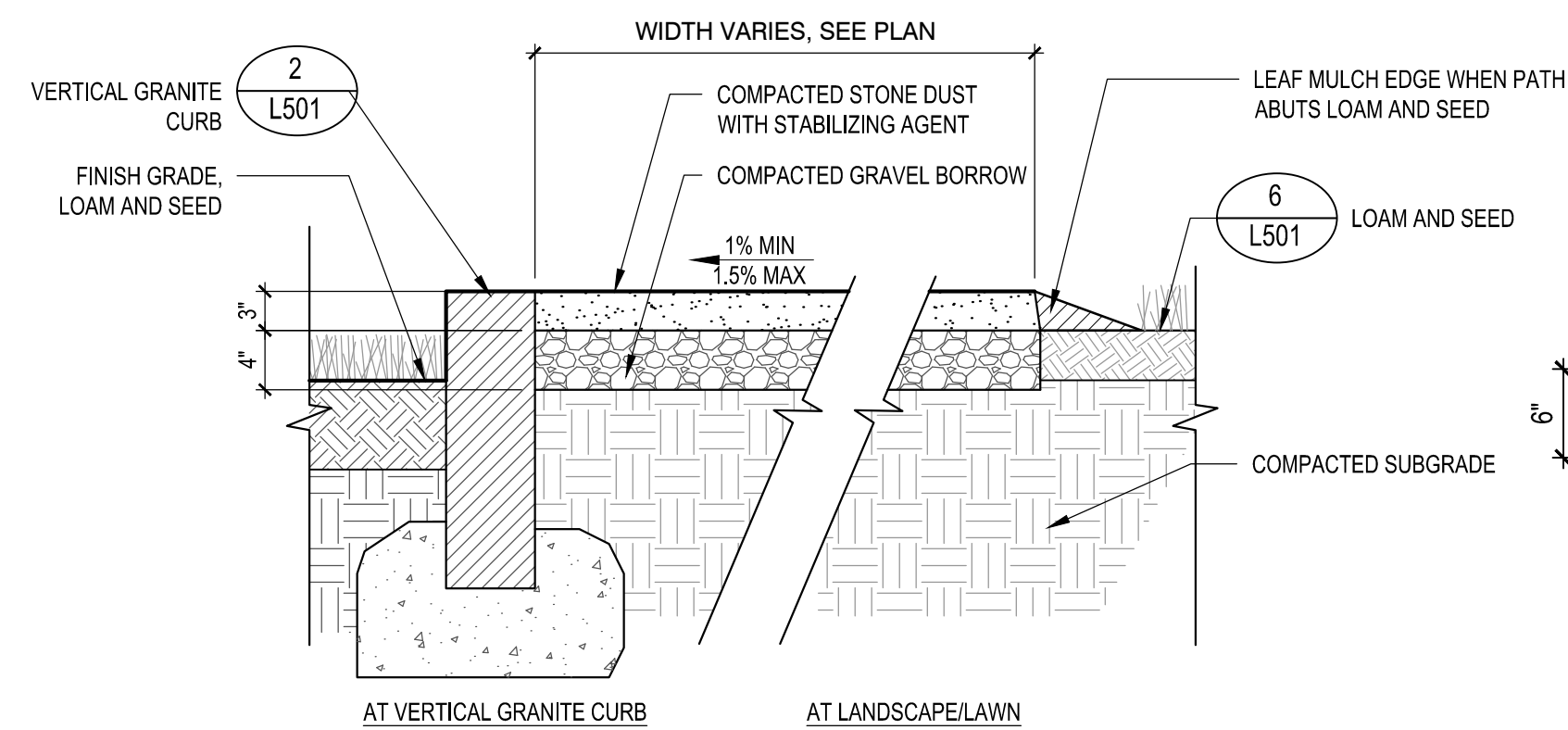
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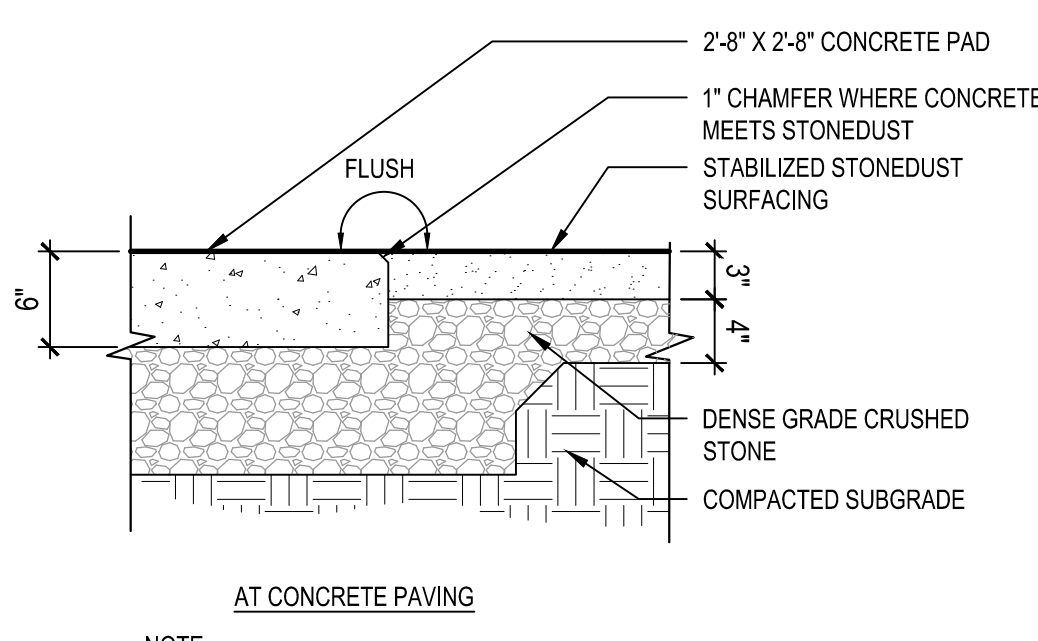
**CONSTRUCTION
DETAILS**

Sheet Number:
L501



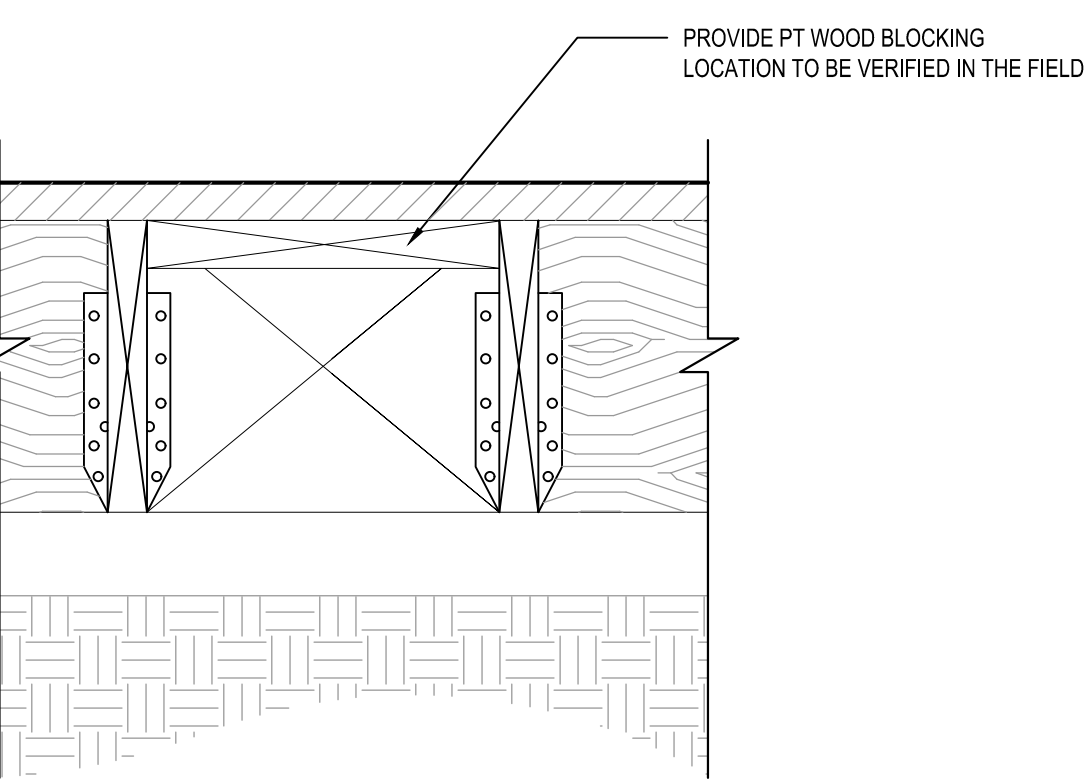
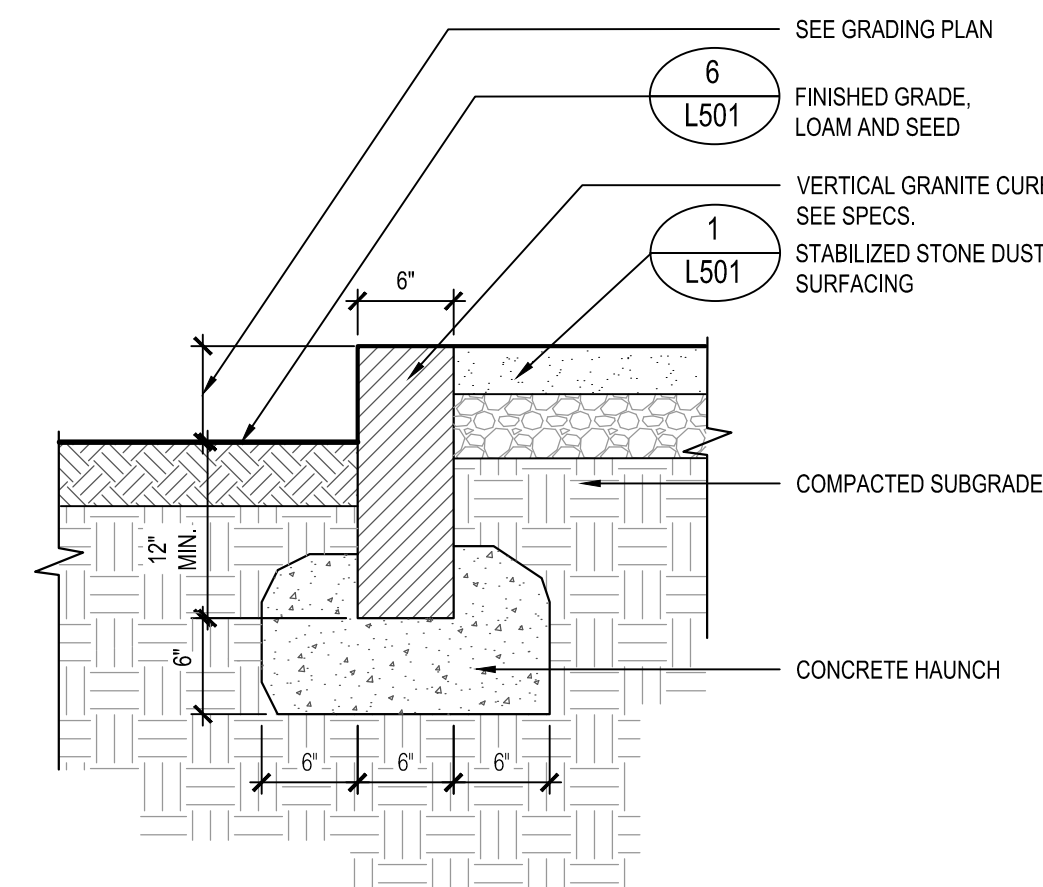
NOTE:
1. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ACROSS THE PATHWAY TOWARD LYONS FIELD.

1 STABILIZED STONE DUST SURFACING
SCALE: N.T.S.



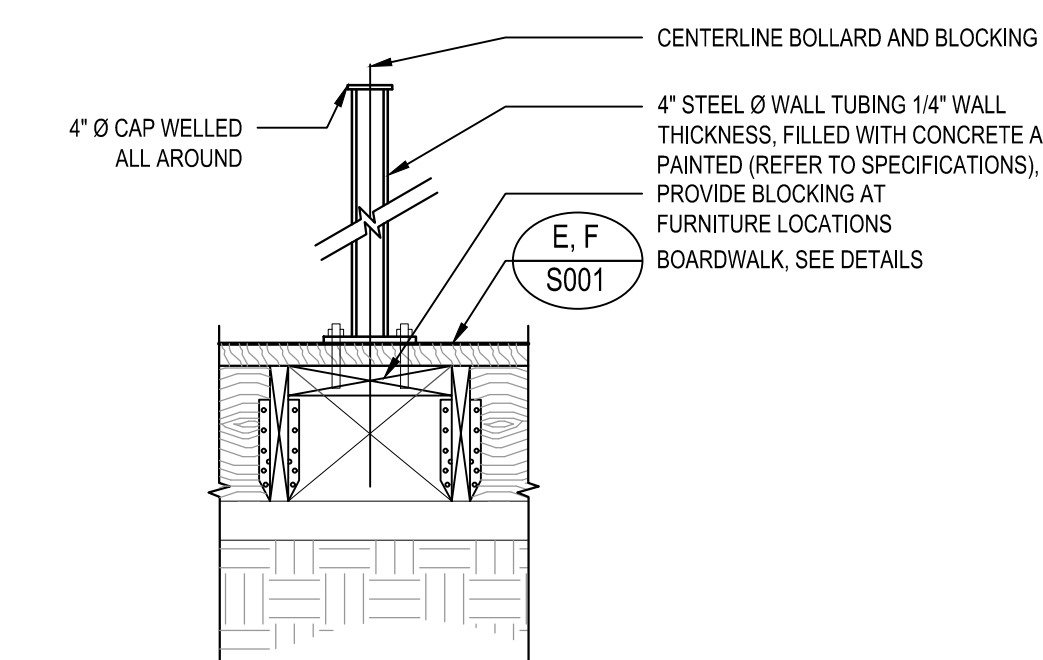
NOTE:
1. WHERE STABILIZED STONE DUST MEETS EXISTING SURFACING (CONCRETE, TRAIL SURFACING, OR OTHERWISE), THE STABILIZED STONEDUST SHALL ALIGN FLUSH WITH GRADE. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE WHERE NEW SURFACING MEETS EXISTING SURFACING.

2 VERTICAL GRANITE CURB
SCALE: N.T.S.



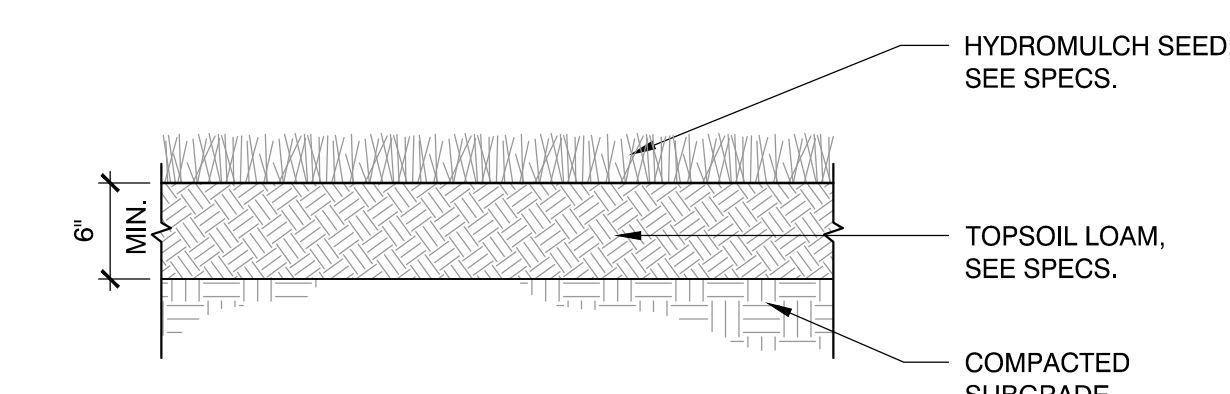
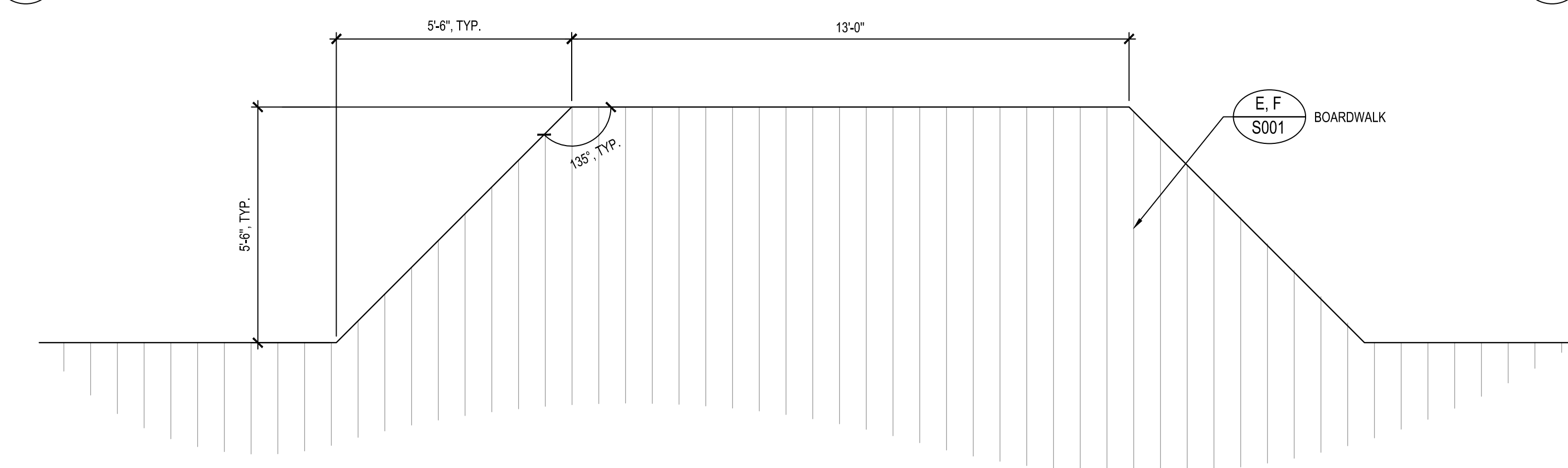
NOTE:
1. SITE FURNITURE SHALL BE INSTALLED BY THE CITY.
2. CONTRACTOR TO COORDINATE WITH THE CITY ON FURNITURE MOUNT LOCATIONS.

3 BLOCKING AT BOARDWALK FOR FUTURE FURNITURE INSTALL
SCALE: N.T.S.



NOTE:
1. SEE SPECIFICATIONS FOR PRODUCT INFORMATION.

5 COLLAR
SCALE: N.T.S.



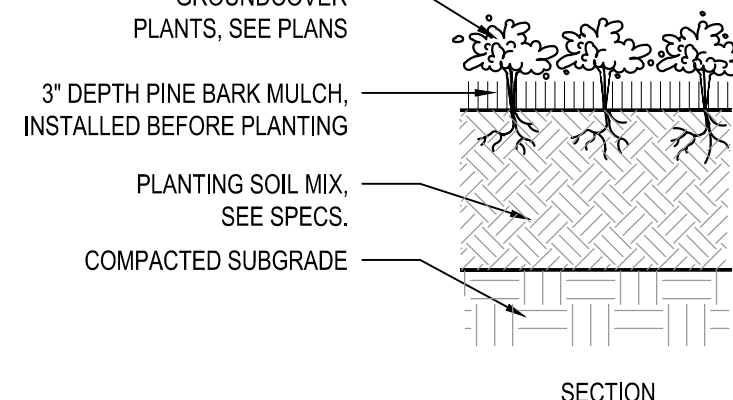
NOTE:
1. PROVIDE SLOPE EROSION PROTECTION ON ALL SLOPES, SEE SPECS.

6 LOAM AND SEED
SCALE: N.T.S.

4 BOARDWALK BUMPOUT
SCALE: N.T.S.

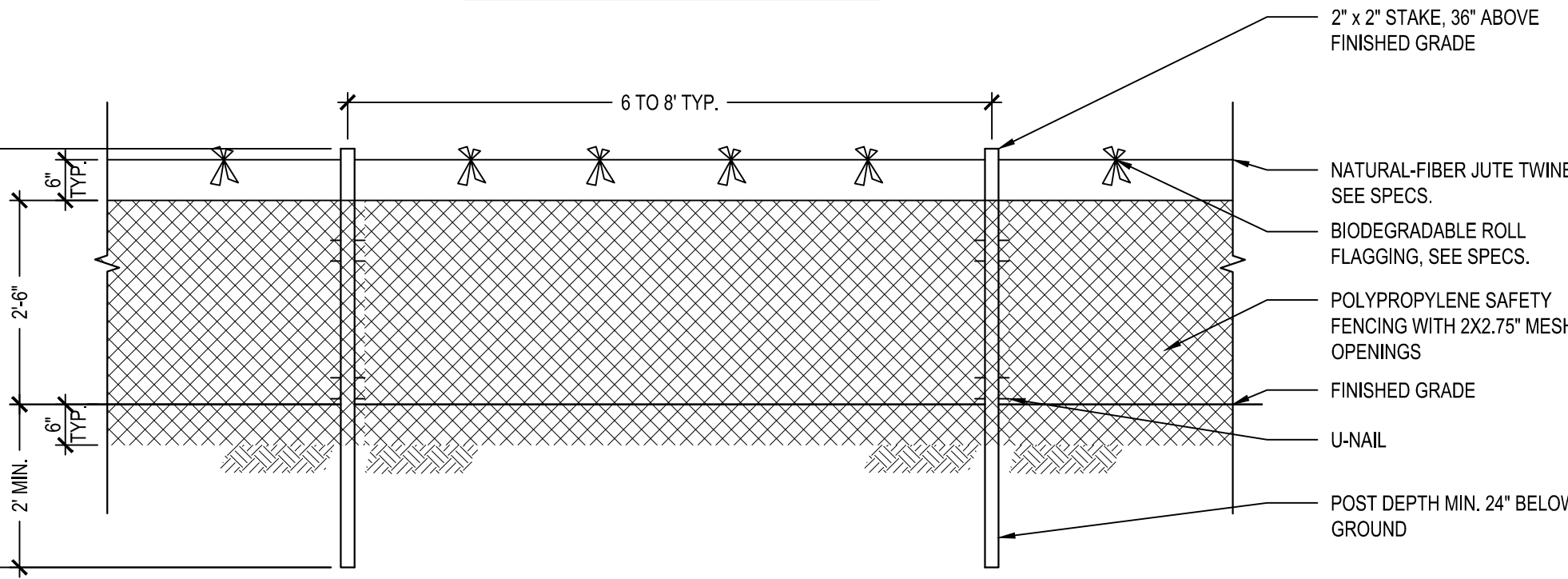
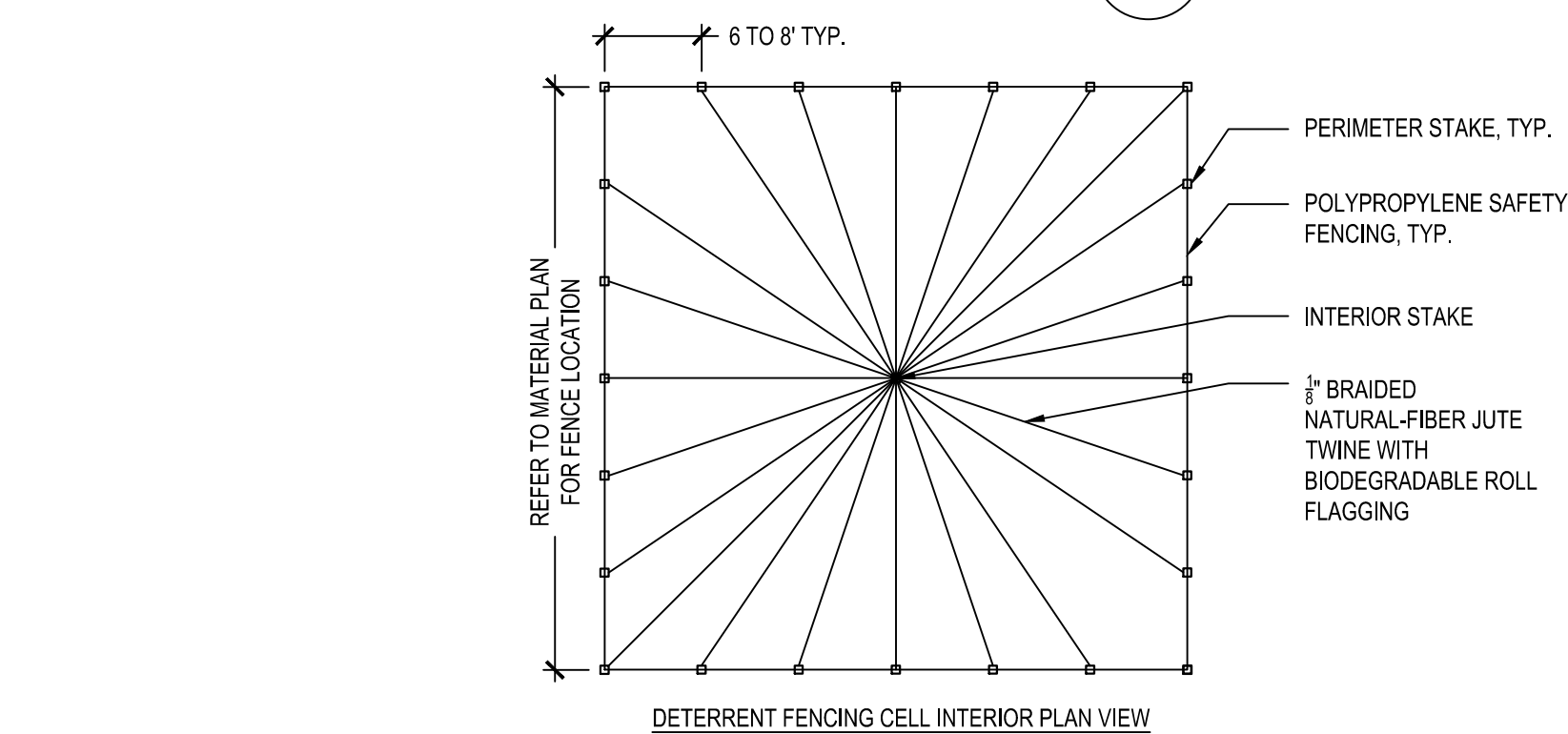
GROUNDCOVER SPACING TABLE (ROUNDED)

PLANT SPACING "A"	PLANT SPACING "B"	PLANTS	AREA UNIT
6" O.C.	5"	5	1 SQ. FT.
8" O.C.	7"	3	1 SQ. FT.
10" O.C.	9"	2	1 SQ. FT.
12" O.C.	10"	1	1 SQ. FT.



NOTES:
1. ALL GROUNDCOVERS TO BE PLANTED IN TRIANGULAR PATTERN. SEE PLANTING SCHEDULE FOR SPACING.
2. EROSION CONTROL MATTING SHALL BE USED ON ALL SLOPES 3:1 OR GREATER, SEE SPECS.

7 WET MEADOW PLANTING
SCALE: N.T.S.



NOTES:
1. THE TEMPORARY PLANT PROTECTION FENCE SHALL BE PLACED FULLY SURROUNDING THE WET MEADOW AREA IMMEDIATELY FOLLOWING AQUATIC PLUG INSTALLATION.
2. PROVIDE ONE ACCESS GATE PER AREA.
3. PRIOR TO AQUATIC PLUG INSTALLATION, THE CONTRACTOR SHALL PROVIDE A SHOP DRAWING OF THE LAYOUT OF EACH TEMPORARY HERBIVORE DETERRENT FENCING AREA, INCLUDING POST LOCATIONS, TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL. THE GRID FORMAT OF THE TYPICAL PLAN IN THIS DETAIL MAY BE MODIFIED TO REDUCE THE SIZE OF THE OVERALL FENCING ZONE AROUND THE PERIMETER OF THE AQUATIC PLANTING AREA. PLUG INSTALLATION SHALL NOT COMMENCE UNTIL FENCING LAYOUT IS APPROVED.
4. SEE SPECIFICATIONS.

9 TEMPORARY PLANT PROTECTION FENCE
SCALE: N.T.S.

8 SHRUB PLANTING
SCALE: N.T.S.

BOARDWALK STRUCTURAL NOTES

- FIELD VERIFY DIMENSIONS AND EXISTING CONDITIONS BEFORE PROCEEDING WITH FABRICATION OR CONSTRUCTION. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
- SHOP DRAWINGS FOR STRUCTURAL TIMBER SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL BEFORE FABRICATION. ERECTION SHALL BE PERFORMED PER APPROVED SHOP DRAWINGS.
- DETAILS SHOWN ARE TO BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
- FOR DIMENSIONS NOT SHOWN ON THE DRAWINGS, REFER TO SITELANDSCAPING LAYOUT DRAWINGS.
- STABILIZE ALL STRUCTURAL MEMBERS AND FRAMING DURING ALL PHASES OF CONSTRUCTION.
- THREADED ROD SHALL CONFORM TO ASTM A193 GRADE B7 OR EQUAL, AND BE HOT DIPPED GALVANIZED (HDG).
- GEOTEXTILE FABRIC SHALL BE NON-WOVEN TYPE WITH A MINIMUM WEIGHT OF 8 OZ./SQ. YD. OR APPROVED EQUAL.

DESIGN LOADS

- DESIGN LOADS ARE AS FOLLOWS:
 - DEAD LOAD: SELFWEIGHT = 10 PSF
 - LIVE LOAD: 90 PSF
 - GROUND SNOW LOAD: 40 psf
- REFER TO GEOTECHNICAL REPORT BY WESTON & SAMPSON DATED 8/16/2022 FOR AND FOUNDATION REQUIREMENTS.

TIMBER

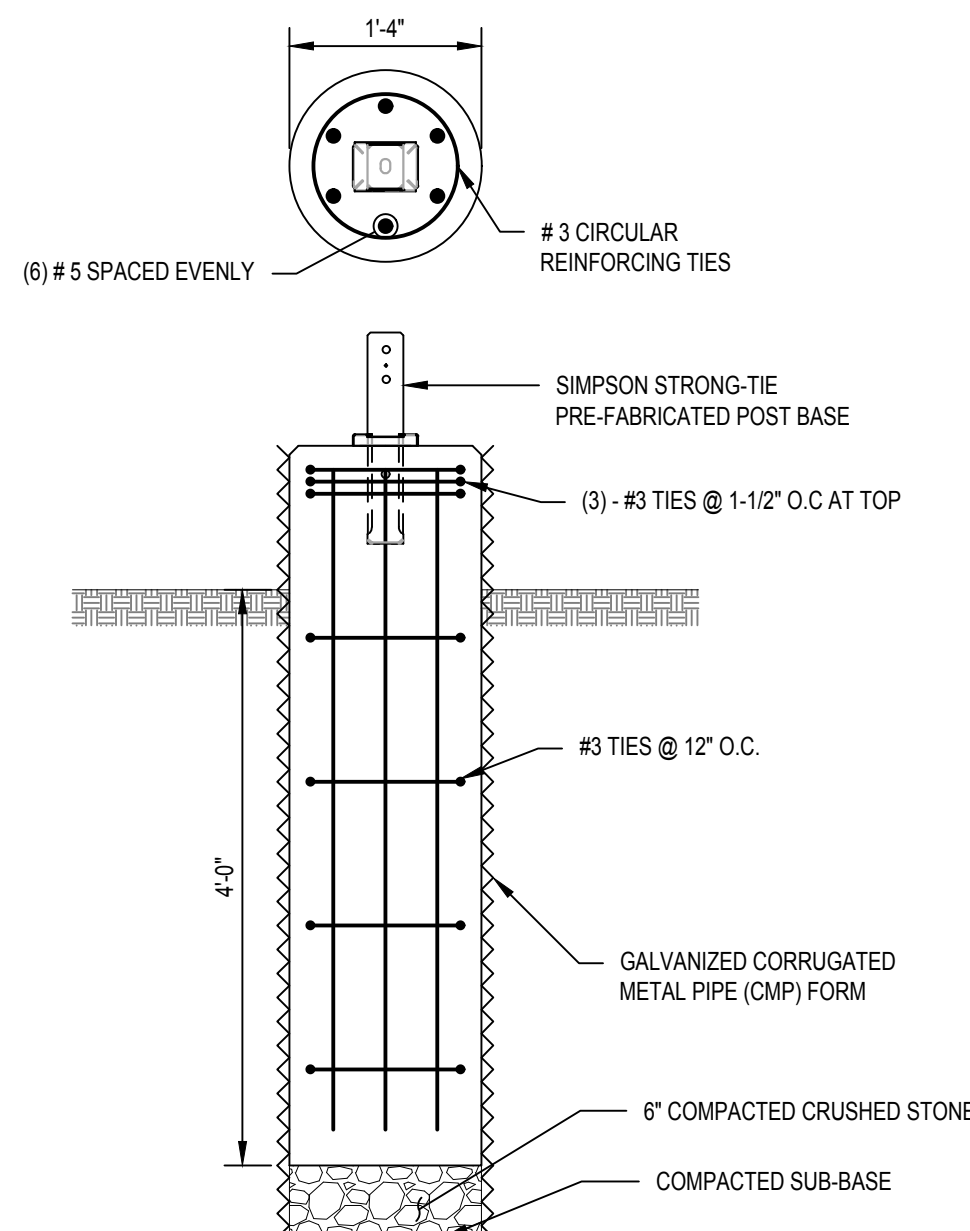
- TIMBER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN WOOD COUNCIL (AWC) "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" 2015 EDITION.
- WOOD FRAMING SHALL BE SOUTHERN PINE NO. 1 UNLESS NOTED OTHERWISE. MINIMUM ALLOWABLE BENDING STRESS SHALL BE 1,100 PSI BEFORE ADJUSTMENT FACTORS.
- ALL TIMBER SHALL BE PRESSURE TREATED (P.T.) WITH A WOOD PRESERVATIVE TO A TO MEET AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) USE CATEGORY 3B. FOR FRAMING IN CONTACT WITH THE GROUND, MEET AWPA USE CATEGORY 4A. FRAMING SHALL NOT BE INCISED WITHOUT PRIOR APPROVAL BY THE ENGINEER.
- FIELD TREAT NEWLY CUT SURFACES OR DRILLED HOLES OF PRESSURE TREATED TIMBER WITH PRESERVATIVE PER MANUFACTURER'S RECOMMENDATIONS.
- DECKING SHALL BE ABLE TO SUPPORT DESIGN LOADS AS SPECIFIED.
- ALL HARDWARE AND FASTENERS SHALL BE HOT DIPPED GALVANIZED (HDG) PER ASTM A653 CLASS G185 UNLESS NOTED OTHERWISE.
- SUBMIT TIMBER FRAMING MATERIALS AND PRODUCT DATA FOR APPROVAL.

CONCRETE

- REINFORCED CONCRETE CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) 318-05 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
- CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI WITH A MAXIMUM WATER CEMENT RATIO OF 0.40. CONCRETE. MAXIMUM AGGREGATE SIZE SHALL BE 3/4 INCH.
- CONCRETE SHALL BE AIR-ENTRAINED TO 6% ±1.5%.
- REINFORCING SHALL CONFORM TO ASTM A615 GRADE 60.
- PROVIDE 3 INCHES MINIMUM COVER FOR REINFORCING.
- SUBMIT CONCRETE MIX DESIGN AND CONCRETE PRODUCT DATA FOR APPROVAL.

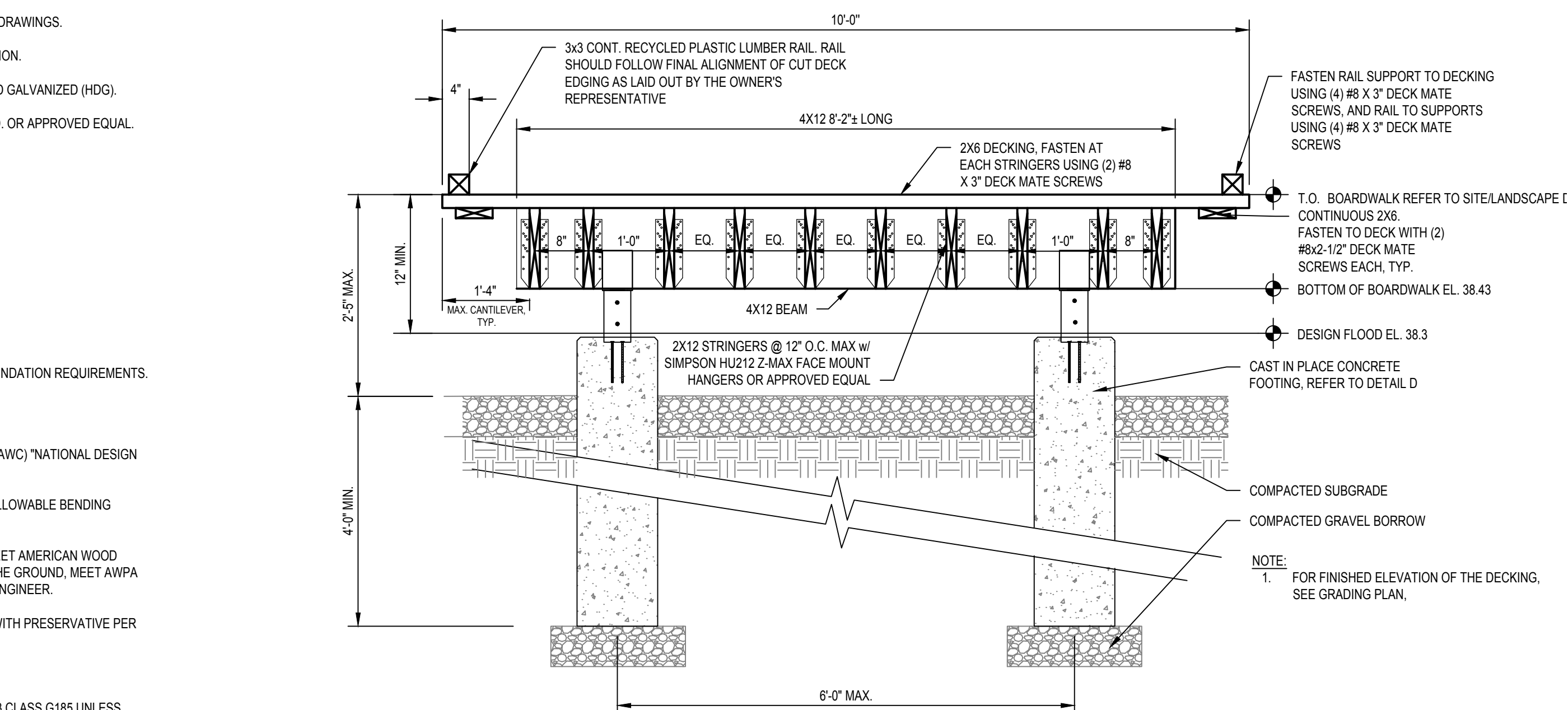
STEEL

- STRUCTURAL STEEL ANGLES AND PLATES SHALL CONFORM TO ASTM A36.
- BOLTS SHALL CONFORM TO ASTM 307.
- STRUCTURAL STEEL, INCLUDING FASTENERS SHALL BE HOT-DIPPED GALVANIZED (HDG) PER ASTM-123 AND ASTM A-153 UNLESS NOTED OTHERWISE.

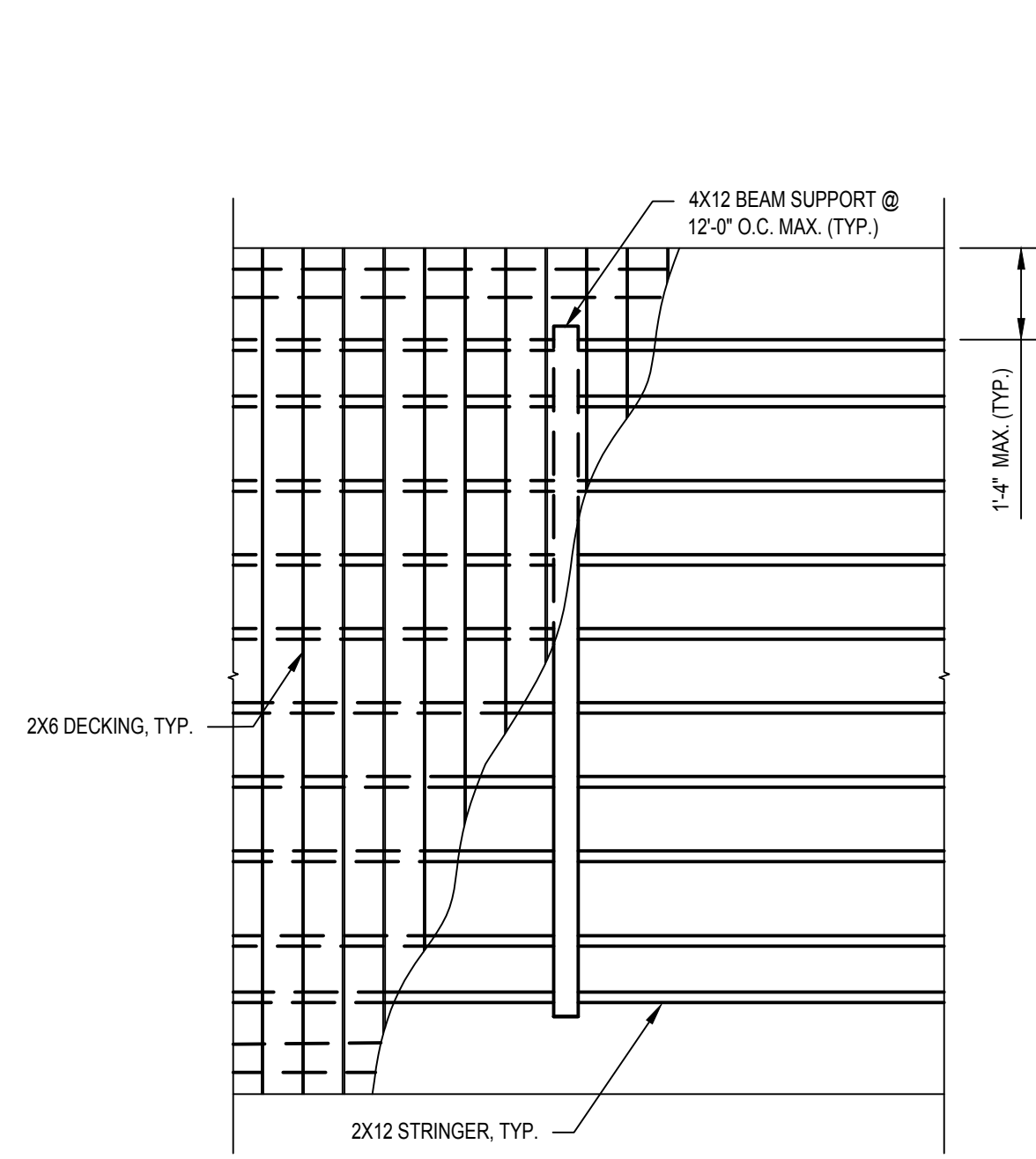


- RECOMMENDED INSTALLATION SEQUENCE IN WET AREAS:**
- DRIVE CMP TO 4'-0" MIN. BELOW FINISH GRADE OR TO TOP OF ROCK.
 - REMOVE SOIL FROM INSIDE OF FORM AND DE-WATER.
 - INSTALL REINFORCING.
 - PRIOR TO CONCRETE PLACEMENT, BASE AND REINFORCING TO BE INSPECTED AND APPROVED BY ENGINEER.
 - PLACE CONCRETE. USE TREMIE METHOD IN STANDING WATER.

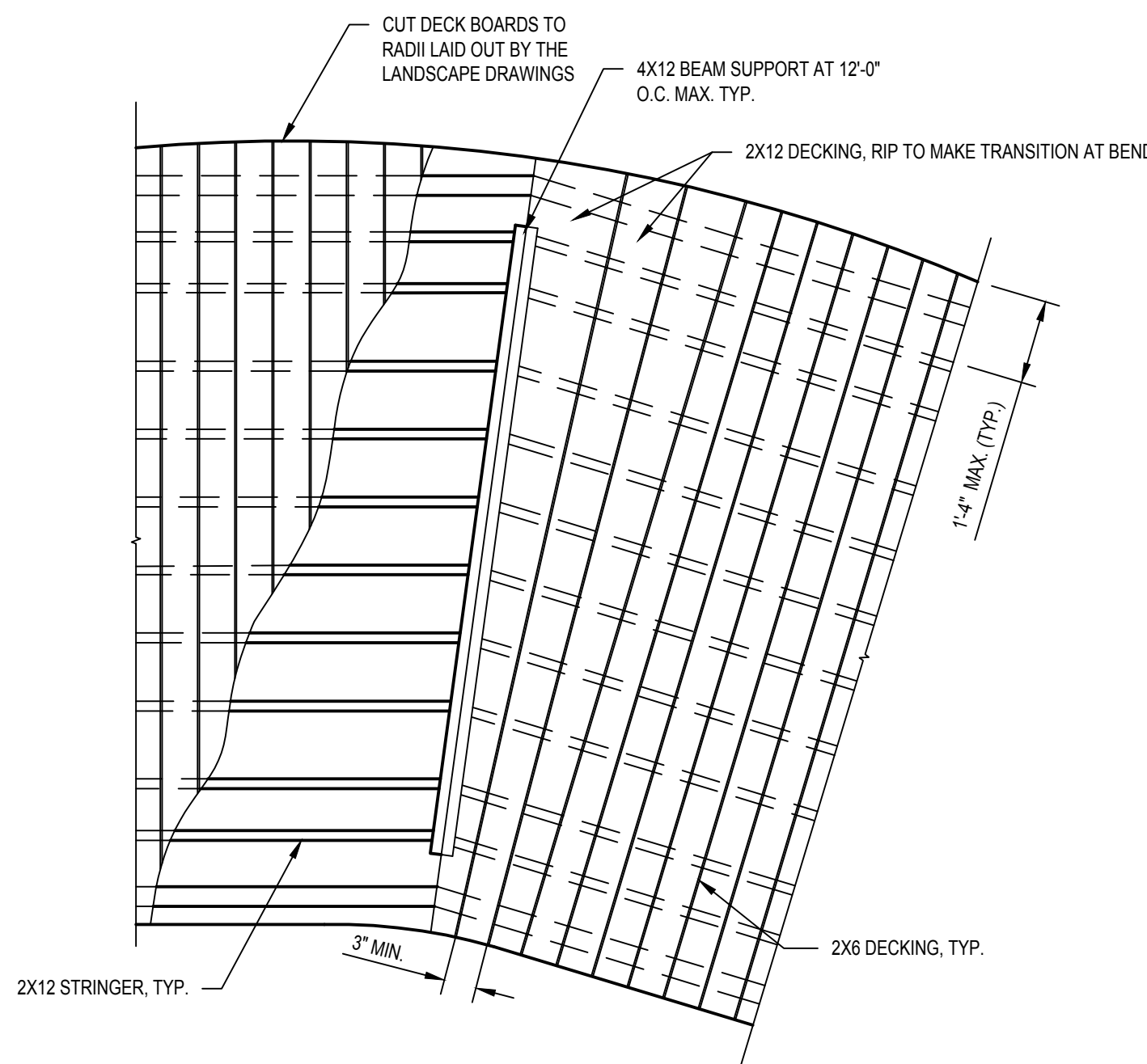
CONCRETE PIER DETAIL
SCALE: 3/4" = 1'-0"



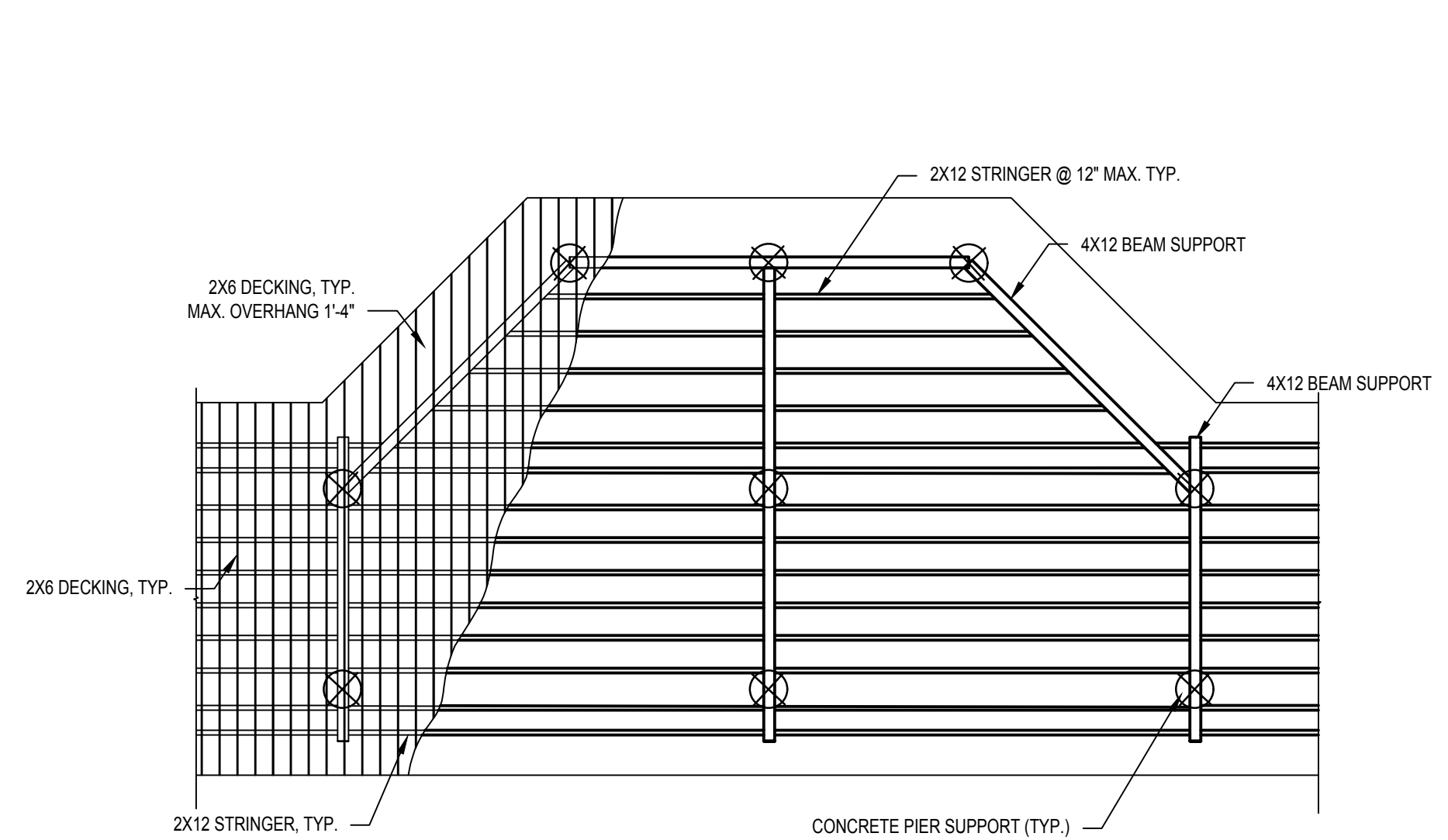
TYPICAL BOARDWALK SECTION AT PIERS
SCALE: 3/4" = 1'-0"



BOARDWALK PLAN VIEW AT BEND
SCALE: 1/2" = 1'-0"

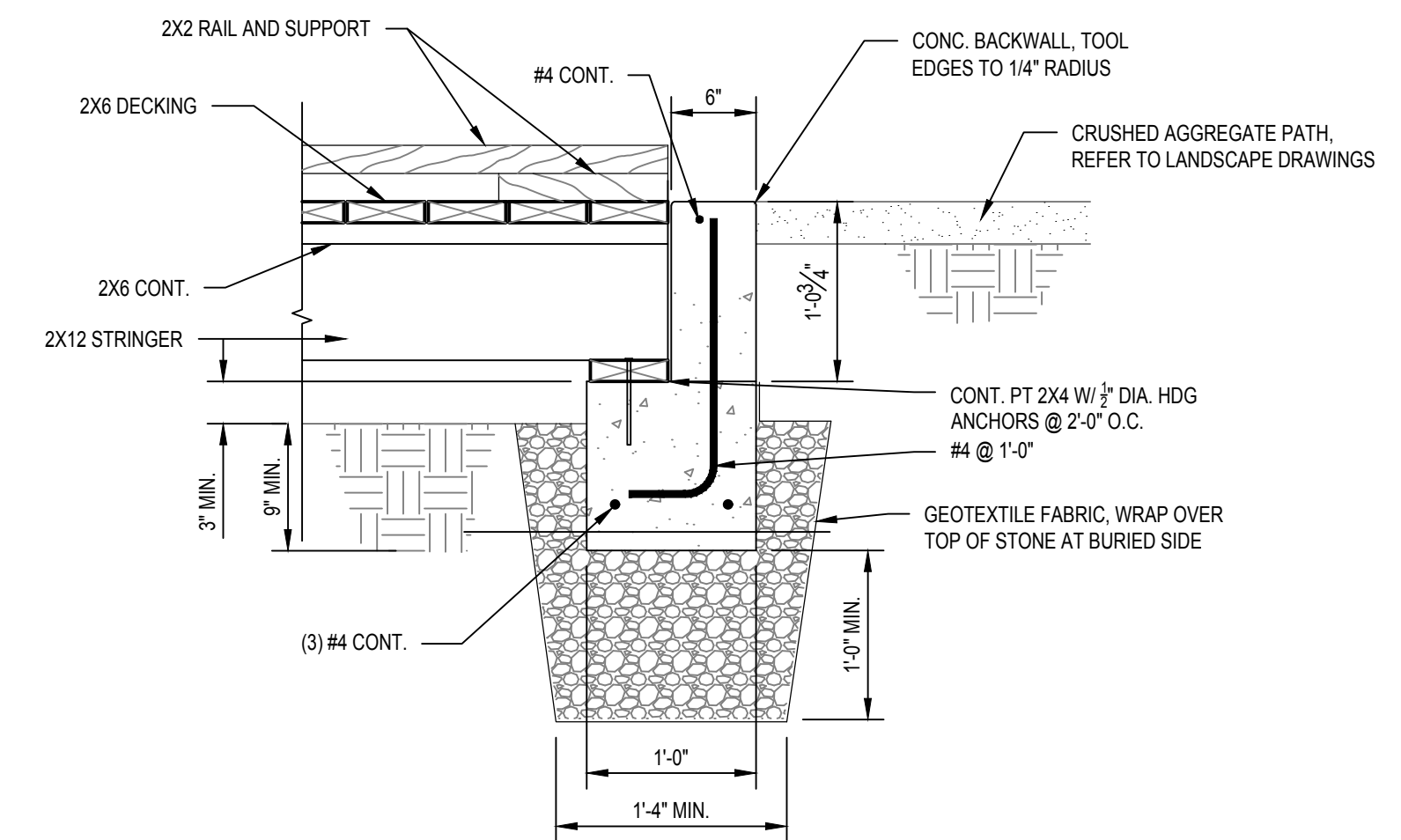


BOARDWALK PLAN VIEW AT BEND
SCALE: 1/2" = 1'-0"



- NOTES:**
- REFER TO SITE LAYOUT/LANDSCAPE DRAWINGS FOR DIMENSIONS.

BOARDWALK LAYOUT AT BUMP OUT
SCALE: 1/4" = 1'-0"



TYPICAL BOARDWALK SECTION AT TRANSITION TO PATH
SCALE: 1" = 1'-0"

Project:
MARTY SENDER GREENWAY RESTORATION PHASE 2

LYONS PARK - COMMONWEALTH AVENUE AND ISLINGTON ROAD, MA 02460

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Consultants:

Revisions:

No.	Date	Description

COA:

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 Approved By: NMS
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Drawing Title:

GENERAL NOTES AND DETAILS

Sheet Number:

S001